

EXPLANATORY MEMORANDUM TO THE
The Environmental Noise (England) Regulation 2006

2006 No. [2238]

1. This explanatory memorandum has been prepared by the Department for Environment, Food and Rural Affairs and is laid before Parliament by Command of Her Majesty.

2. Description

2.1 These Regulations transpose the provisions of Directive 2002/49/EC of the European Parliament and of the Council of 25 June 2002 relating to the assessment and management of environmental noise from transport and industry.

3. Matters of special interest to the Joint Committee on Statutory Instruments

3.1 The Environmental Noise (England) Regulations 2006, transposing the requirements in a Directive, are made under section 2(2) of the European Communities Act 1972 (the *Act*). The Directive requires, amongst other things, the identification of noise sources that will be the subject of mapping and action planning. The Department has transposed this obligation by means of regulation 3, which provides that the Secretary of State must identify the noise sources in the form of regulations. The Department considers that it is arguable that identification of noise sources is legislative in nature, and that to purport to confer the power to identify noise sources in these Regulations could offend against the rule on sub-delegation. Paragraph 1(1)(c) of Schedule 2 to the Act prohibits the conferring of any power to legislate by means of subordinate instrument.

3.2 The Department considers that regulation 3 as drafted does not breach the rule on sub-delegation. Regulation 3 does not itself confer the power to make the further regulations. That power must come from somewhere else, and in the Department's view the source of that power will be section 2(2) of the European Communities Act 1972 also.

3.3 A similar drafting approach was taken in regulation 14(1) of the Justification of Practices Involving Ionising Radiation Regulations 2004 (S.I. 2004/1769). A copy of that provision and the accompanying explanatory memorandum can be found at the following weblinks: <http://www.opsi.gov.uk/si/si2004/20041769.htm> and http://www.opsi.gov.uk/si/em2004/uksiem_20041769_en.pdf.

4. Legislative Background

4.1 These Regulations are made under section 2(2) of the European Communities Act 1972.

4.2 A Transposition Table is attached as an Annex to this memorandum.

5. Extent and application

5.1 This instrument extends only to England.

6. European Convention on Human Rights

6.1 As the instrument is subject to negative resolution procedure and does not amend primary legislation, no statement is required.

7. Policy background

7.1 The EU Green Paper on Future Noise and Policy¹ stated that environmental noise caused by traffic, industry and recreation is one of the main local environmental problems in Europe.

7.2 The European Community has a long history of working to reduce emission from sources of noise. For example it has adopted Directives controlling noise emissions from aircraft, motor vehicles and industrial plant. Legislation and technological progress have achieved significant reductions of noise from individual sources such as an 85% reduction of noise from individual cars and a 90% reduction from lorries since 1970. However data covering the past 15 years do not show significant improvements in exposure to environmental noise except from aircraft. While these initiatives have been successful in reducing source levels, it is believed that in many areas there has been no significant reduction in exposure levels because of an increase in the number of sources.

7.3 In the UK, policy and legislation to control transport and industrial noise has been developed over a number of decades. There is no provision in the legislation for the comprehensive assessment of environmental noise that would allow a fully integrated approach to its management.

7.4 The UK National Noise Incidence Study (NIS) 2000/1², undertaken by BRE, carried out a national study of environmental noise levels in England & Wales by generating objective estimates of the pattern of noise exposure of the population based on 24 hour measurements outside over 1,000 dwellings. Based on extrapolating this sample data, the study estimates that 55% (range 52% to 58%)³ of the population of England and Wales live in dwellings exposed to external day-time noise levels above about 55 dB LA_{eq,day}. The same study also found that 68% (range 65% to 71%) of the population of England and Wales live in dwellings exposed to external night-time noise levels above 45 dB LA_{eq,night}.

¹ "The Green Paper on Future Noise Policy" (COM(96) 540). European Commission. November 1996

² Source: The National Noise Incidence Study 2000, BRE, Feb 2002.

³ The ranges quoted here and below represent the 95% confidence interval.

7.5 Furthermore, the 1999/2000 National Survey of Attitudes to Environmental Noise⁴, which surveyed nearly 10,000 people and looked at different noise sources, also indicated a large proportion of respondents were adversely affected by noise. The proportion of respondents in England & Wales reporting being adversely affected by the following transport noise sources were: road traffic (one or more specific sources) at 30%, aircraft at 17% and trains or railways at 4%. A further breakdown of the data shows the proportion of respondents reporting being adversely affected by private cars/vans at 13% (up from 11% in 1991/2), heavy lorries at 12% (no significant change from 1991/2) and motorways at 3% (up from 1% in 1991/2). 'Adversely affected' means that the respondent reported one or more of the following reactions to noise: (i) personally object, (ii) irritate, (iii) disturb, (iv) personally concerned, (v) annoys or upsets at times and (vi) nuisance to you personally. Hence, both the National Noise Incidence Study and the National Survey of Attitudes to Environmental Noise indicate that the current level of noise in some areas does adversely affect the quality of life and hence impose a burden (and costs) on society.

7.6 The Environmental Noise Directive requires the following actions:

- the use of harmonised noise indicators and computational measures so that data can be collected and compared in a standardised way;
- common protocols and systems for noise mapping;
- the drawing up of noise maps;
- making information available for the public;
- the drawing up of local action plans; and

collection of data by the Commission to inform future Community policy.

7.7 The Regulations will help identify:

- whether there are any people unnecessarily exposed to high noise levels, suffering accordingly and causing a cost to society; and
- what areas of relative quiet we might or could have, thus enabling us to develop measures to protect them and not have the noise environment inadvertently eroded.

7.8 This information will enable us to understand better how the noise environment near major roads, railways and airports is changing. Policies can be developed that will enable strategic noise management to be carried out alongside the processes and procedures that already exist to address individual situations.

7.9 The Regulations require noise mapping and action planning process to be taken forward on a five-year rolling programme. The first round of mapping and action planning applies to the largest of the agglomerations (including the industries and ports within them), the busiest major roads and railways and all major airports. For the first round maps must be produced by 30 June 2007. In 2008 action plans 'designed to manage noise issues and effects, including noise reduction if necessary' based on the noise maps must be developed to address the noise climate established

⁴ 'The 1999/2000 National Survey of Attitudes to Environmental Noise', Building Research Establishment (BRE). Prepared for DEFRA, the National Assembly for Wales, the Scottish Executive and the Department of the Environment for Northern Ireland . 2001.

during the mapping process. During the second round (2012-13) all agglomerations, major roads, major railways and major airports as defined in the Regulations will be mapped and action plans revised or developed for them. The action plans must contain a complete description of the measures to be taken to reduce noise pollution. A number of formal minimum requirements have been specified for the action plans, but there are no deadlines for when the various initiatives in the action plans have to be implemented.

7.10 These Regulations have been drawn up in consultation with other government departments including the Department of Health, Department for Transport, Ministry of Defence, Department of Trade and Industry and the Devolved Administrations.

7.11 A three month written public consultation on the transposition of the Environmental Noise Directive aimed at addressing policy issues such as the designation of competent authorities and the processes for producing and publishing noise maps and action plans was carried out in February 2005. The document was also available on the Defra website. Those consulted included industry, regulators, local authorities, professional bodies and environmental groups. There were 136 responses. A more limited technical consultation on the proposed regulations was also carried out in November 2005. The final text of the Regulations takes into account comments made during the consultation.

8. Impact

8.1 A Regulatory Impact Assessment is attached to this memorandum.

9. Contact

9.1 Wendy Hartnell at the Department for Environment, Food and Rural Affairs
Tel: 020 7082 8410 or e-mail: wendy.hartnell@defra.gsi.gov.uk can answer any queries regarding the instrument.

DIRECTIVE 2002/49/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF 25 JUNE 2002 RELATING TO THE ASSESSMENT AND MANAGEMENT OF ENVIRONMENTAL NOISE.

TRANSPOSITION NOTE

This Transposition Note sets out how the Environmental Noise (England) Regulations 2006 transpose into UK law the main elements of Directive 2002/49/EC.

Directive
Directive 2002/49/EC of the European Parliament and of the Council of 25 June 2002 relating to the assessment and management of environmental noise.

Articles	Objectives	Implementation	Responsibility
Article 1(1)	Sets out the main objectives of the Directive.	The objectives in Art 1(1) are achieved through other specific articles in the Directive, mainly Articles 7, 8 and 9. It is these articles that have been transposed (see below) rather than Article 1(1).	See relevant articles below.
Article 2	Set out the scope of the Directive.	Regulations 1(4),1(5) and 3.	N/A.
Article 3	Sets out the main definitions in the Directive.	Regulation 2(2) sets out the general definitions. More specific definitions are limited to the provisions in which they appear. Regulation 2(1) is a catch-all provision that imports Directive definitions and meanings that are not specified in the Regulations.	N/A.

Article 4(1)	Requires Members States to designate CAs with responsibility for implementing the Directive.	<p>Regulation 6 makes the Secretary of State (<i>SoS</i>) the CA for strategic noise mapping in relation to agglomerations, major roads, major railways and major airports designated under section 80 for the purposes of section 78 of the Civil Aviation Act 1982.</p> <p>Regulation 10 makes the airport operators the CA for airports not designated under section 80 for the purposes of section 78 of the Civil Aviation Act 1982.</p> <p>Regulation 16 makes the SoS CA for action plans in relation to noise sources other than airports.</p> <p>Regulation 18 makes the airport operator CA for action plans in relation to airports.</p> <p>Regulations 23 and 24 make the SoS CA for the adoption of strategic noise maps and action plans respectively.</p>	Responsibility for carrying out the obligations under the Regulations falls to the relevant CA described in the previous column.
Article 5(1) first paragraph	Requires the use of the noise indicators L_{den} and L_{nig} for the preparation and revision of strategic noise maps in accordance with Article 7.	Regulation 4(2)(a) and the regulations implementing Article 7.	The CAs under Regulations 6, 10 and 23.
Article 5(1) second paragraph	Allows existing national noise indicators and related data to be used and converted into L_{den} and L_{night} .	Regulations 4(4) and 4(5).	The CAs under Regulations 6,10 and 23.
Article 5(2)	Allows for the use of supplementary noise indicators for special cases.	Regulation 4(2)(b) and Schedule 3. Regulation 4(6)	The CAs under Regulations 6 and 10.
Article 6(1)	Prescribes methods to assess L_{den} and L_{night} .	Regulation 4(3) and Schedule 2.	The CAs under Regulations 6 and 10.

Article 6(2)	Allows MSs to adapt national assessment methods to calculate L_{den} and L_{night} until common assessment methods are adopted.	Regulation 4(3) and Schedule 2.	The CAs under Regulations 6 and 10.
Article 7(1) first paragraph	Requires MSs to make and adopt strategic noise maps for agglomerations, major roads, major railways and major airports over specified thresholds.	Regulations 7(1), 11(2), 12(2), and 23.	The CAs under Regulations 6, 10 and 23.
Article 7(2) first paragraph	Requires MSs to make and adopt strategic noise maps for agglomerations, major roads and major railways.	Regulations 7(2), 12(3) and 23.	The CAs under Regulations 6, 10 and 23.
Article 7(3)	Together with Annex IV sets out minimum requirements for strategic noise maps.	Regulation 4 and Schedule 1.	The CAs under Regulations 6 and 10.
Article 7(4)	Requires neighbouring MSs to cooperate on producing strategic noise maps near borders.	Although there is no MS bordering England, see Regulation 22 regarding cooperation between devolved administrations neighbouring England. The NI Regulations will need to address the neighbouring position with the Irish Republic.	The CAs under Regulations 6 and 10.
Article 7(5)	Strategic noise maps must be reviewed, and revised if necessary, at least every five years.	Regulations 7 (2), 7 (3), 11 (2), 11 (3) and 12 (3), (4).	The CAs under Regulations 6 and 10.
Article 8(1) first paragraph	Action plans should be drawn up to manage noise issues and effects, including noise reduction if necessary.	Regulation 15(1)(b).	The CAs under Regulations 16 and 18.

Article 8(1)(a) & (b)	Requires MSs to draw up action plans for (i) places near to major roads which have more than six million vehicle passages a year, major railways which have more than 60,000 passages per year, and major airports; (ii) agglomerations with over 250,000 inhabitants, and places near major airports. Also requirement to protect quiet areas in agglomerations from an increase in noise.	Regulations 15(1)(c), and 17(1), 19(1)	The CAs under Regulations 16 and 18.
Article 8(1) final paragraph	Clarifies that action plans should address priorities and apply in particular to the most important places identified on strategic noise maps	Regulation 15(1)(d) and (e).	The CAs under regulations 16 and 18.
Article 8(2)	Requires MSs to draw up a second round of action plans for agglomerations, as well as for places near to major roads and major railways. Action plans must address identified priorities.	Regulation 17(2).	The CA under regulation 16.
Article 8(3)	Requires MSs to inform the Commission of criteria used to prioritise actions in action plans.	N/A. Obligation addressed directly to MS so does not need transposing. However, see regulation 14.	The SoS.
Article 8(4)	Requires action plans to meet the minimum standards in Annex V of the Directive.	Regulation 15(f) and Schedule 4.	The CAs under Regulations 16 and 18.
Article 8(5)	Requires action plans to be reviewed and revised if necessary at least every five years and sooner if there is a major development.	Regulations 17(3), 17(4) , 19(4) and 19(5).	The CAs under Regulations 16 and 18.

Article 8(6)	Requires MSs to cooperate on action plans for border regions.	Although there is no MS bordering England, see Regulation 22 regarding cooperation between devolved administrations neighbouring England. The NI Regulations will need to address the neighbouring position with the Irish Republic.	The CAs under Regulations 16 and 18.
Article 8(7)	Sets out the public consultation requirements in relation to action plans	Regulation 20.	The CAs under Regulations 16 and 18.
Article 9	Sets out requirements in relation to the provision of information to the public.	Regulation 29. Information will be made available and disseminated in accordance with Council Directive 90/313/EEC on the freedom of access to information on the environment.	The SoS
Annex I	Technical requirements in relation to noise indicators.	Regulation 4(2)(a) incorporating Annex I by reference. See also Schedule 3.	The CAs under Regulations 6 and 10.
Annex II paragraph 1	Introduction to assessment methods for noise indicators – giving option of computation or measurement.	Regulation 4(3) and Schedule 2(1).	The CAs under Regulations 6 and 10.
Annex II – paragraphs 2 and 3	Computation and measurement assessment methods for noise indicators.	Regulation 4(3) and Schedule 2. As a result of Article 6(2), mostly national assessment methods will be used. Thus only some parts of Annex II paragraph 2.2 have been transposed in relation to aircraft and industrial noise sources.	The CAs under Regulations 6 and 10.
Annex IV	Minimum requirements for strategic noise mapping.	Regulation 4 and Schedule 1.	The CAs under Regulations 6 and 10.
Annex V	Minimum requirements for action plans.	Regulation 15 and Schedule 4.	The CAs under Regulations 16 and 18.

<p>Annex VI (other than 1.8 and 2.8)</p>	<p>Data to be sent to Commission.</p>	<p>These obligations are imposed on the MS – thus they do not need to be transposed.</p> <p>However, see Schedule 1 paragraphs 3(2) and 4(2) which incorporate most of Annex VI by reference.</p>	<p>MS.</p>
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Full Regulatory Impact Assessment

Title of proposal

1. Implementation of Directive 2002/49/EC relating to the assessment and management of environmental noise in the UK.

1.1 In England transposition will be by way of The Environmental Noise (England) Regulations 2006 under section 2(2) of the European Communities Act 1972. The END is being implemented separately in Scotland, Wales, Northern Ireland and Gibraltar. For the purposes of the RIA costs and benefits are shown for the whole of the United Kingdom.

Purpose and intended effect

Objective

2. The objective of the legislation is to transpose EU Directive 2002/49/EC (the Environmental Noise Directive (END)) accurately, transparently and in the least onerous manner consistent with the END's requirements. The objective of the END is to provide for the comprehensive collection and analysis of data to prevent further deterioration in the environmental noise climate and to improve it where possible. The data collection and analysis would allow Member States and the European Commission to determine at each level:

- how much noise is affecting how many people; and
- the most cost effective measures or combinations of instruments to reduce the level of environmental noise affecting people.

2.1 The Directive requires the following actions:

- the use of harmonised noise indicators and computational measures so that data can be collected and compared in a standardised way;
- common protocols and systems for noise mapping;
- the drawing up of noise maps;
- making information available for the public;
- the drawing up of local action plans; and
- collection of data by the Commission to inform future Community policy.

2.2 The noise mapping and action planning process is to be carried out every five years. The first round of mapping and action planning applies to the largest agglomerations, and the busiest roads and railways and airports. First round of mapping has to be completed by 30 June 2007 and action planning by 18 July 2008. During the subsequent rounds smaller agglomerations, and the busiest roads and railways which meet the minimum criteria set by the END will be mapped and action plans will be developed for them.

Background

3. The EU Green Paper on Future Noise and Policy⁵ stated that environmental noise caused by traffic, industry and recreation is one of the main local environmental problems in Europe.

3.1 The European Community has a long history of working to reduce emissions from sources of noise. For example it has adopted Directives controlling noise emissions from aircraft, motor vehicles and industrial plant. Legislation and technological progress have achieved significant reductions of noise from individual sources such as an 85% reduction of noise from individual cars and a 90% reduction from lorries since 1970. However data covering the past 15 years do not show significant improvements in exposure to environmental noise except from aircraft. While these initiatives have been successful in reducing source levels, it is believed that in many areas there has been no significant reduction in exposure levels because of an increase in the number of sources.

3.2 In the UK, policy and legislation to control transport and industrial noise has been developed over a number of decades. There is no provision in the legislation for the comprehensive assessment of environmental noise that would allow an integrated approach to its management.

3.3 'Environmental noise' is defined in the END⁶ as: 'unwanted or harmful outdoor sound created by human activities, including noise emitted by means of transport, road traffic, rail traffic, air traffic, and in agglomerations noise from industry and ports'⁷.

3.4 The END applies to environmental noise to which humans are exposed, but it specifically excludes noise created by the exposed person, noise from domestic activities, neighbour noise, noise at workplaces, noise inside means of transport and noise from military activity in military areas.

3.5 The END was adopted by the European Parliament and the Council of the European Union on 25 June 2002 and had to be transposed into UK law by 18 July 2004. Regrettably it has not been possible to comply with this deadline. The delay in transposition is not expected to impinge on our ability to meet other deadlines in the Directive.

3.6 The Directive sets out the elements that must be included in the Action Plans but does not make any action mandatory. Article 11 requires the Commission to report, by the end of 2009, to the European Parliament and Council on the implementation of the END. The report will include a review of

⁵ "The Green Paper on Future Noise Policy" (COM(96) 540). European Commission. November 1996

⁶ See END document at:

http://europa.eu.int/eur-lex/pri/en/oj/dat/2002/l_189/l_18920020718en00120025.pdf

⁷ Sites of industrial activity defined in Annex I to Council Directive 69/61/EC of 24 September 1996 concerning integrated pollution prevention and control.

the case for setting quality objectives for environmental noise and propose a strategy to achieve them. Such a strategy would consider the setting of goals for the reduction of the number of people affected by noise from specific sources and any measures that are necessary to reach the goals. There is a risk that these measures might require disproportionate expenditure by Member States and/or disproportionate costs to their economies. However, further legislation would be required for setting noise quality objectives and the UK would seek to ensure that the benefits of any future proposals are fully justified by the costs. Currently, the UK would oppose the imposition of limit values for noise.

Rationale for government intervention

4. Noise in the environment affects all people and, moreover, affects many of them sufficiently that most express an opinion about it. At one extreme the noise can be loud enough to feel physically uncomfortable and, if persistent enough can lead to a direct deterioration in health through noise induced hearing loss and tinnitus. Although such high and persistent noise levels tend not to occur externally from transport or industrial sources, noise from these sources can cause conversation to be disrupted, sleep disturbance or simply generate feelings of annoyance. Consequently, the enjoyment of homes, gardens and open spaces can be adversely affected by this environmental noise. Concern has been raised about the effects of noise on mental health, cardiovascular and physiological functions and effects on performance such as learning acquisition by children.

4.1 The UK National Noise Incidence Study (NIS) 2000/1⁸, undertaken by BRE, carried out a national study of environmental noise levels in England & Wales by generating objective estimates of the pattern of noise exposure of the population based on 24 hour measurements outside over 1,000 dwellings. Based on extrapolating this sample data, the study estimates that 54% (range 51% to 57%)⁹ of the population of the UK live in dwellings exposed to external day-time noise levels above about 55 dB LA_{eq,day}. The same study also found that 67% (range 64% to 70%) of the population of the UK live in dwellings exposed to external night-time (between 11pm and 7 am) noise levels above 45 dB LA_{eq,night}.

4.2 Furthermore, the 1999/2000 National Survey of Attitudes to Environmental Noise¹⁰, which surveyed nearly 10,000 people and looked at different noise sources, also indicated a large proportion of respondents were adversely affected by noise. 84% of the respondents heard road traffic noise and 40% were bothered, annoyed or disturbed to some extent. 28% of respondents reported that road traffic had got worse in the past five years and 10% said that it had got better. 71% of respondents heard noise from aircraft, and 20% were bothered, annoyed or disturbed to some extent. The survey contains detailed comparative data for England and Wales for 1990 and 1999, but includes the rest of the UK for 2000. The Scottish sample was not

⁸ http://www.defra.gov.uk/environment/noise/research/nis0001/pdf/nis_4m.pdf.

⁹ The ranges quoted here and below represent the 95% confidence interval.

¹⁰ http://www.defra.gov.uk/environment/noise/research/nas9900/pdf/nas1_methodology.pdf.

significant and therefore the figures quoted are UK responses. 'Adversely affected' means that the respondent reported one or more of the following reactions to noise: (i) personally object, (ii) irritate, (iii) disturb, (iv) personally concerned, (v) annoys or upsets at times and (vi) nuisance to you personally. Hence, both the National Noise Incidence Study and the National Survey of Attitudes to Environmental Noise indicate that the current level of noise in some areas does adversely affect the quality of life and hence impose a burden (and costs) on society.

4.3 Prior to the implementation of this Directive, noise tended to be assessed only when a change is expected to occur or has occurred. Environmental Impact legislation requires potential new noise making developments to be assessed, the impact understood and where necessary appropriate mitigation measures to be applied. When new noise sensitive developments are proposed, for example, housing or schools, legislation and guidance require that an assessment is made regarding the extent the prevailing noise would impact on the new development. This then requires the development to be designed to reflect the prevailing noise environment. In some instances, permission for such development is refused because the existing noise is such that the location is unsuitable for the development proposed.

4.4 Noise is also investigated when complaints are made. Again, there has been a change. People who apparently were content with the noise environment are no longer content, and express their views by complaining. Such complaints may be directly related to a change in the noise environment that has been noticed, or, for some reason, people may have suddenly become aware of, and disturbed by a noise that has actually existed for some time.

4.5 Implementation of the END will provide information on the noise environment without any specific proposal or change in mind. It will provide data on the nature and extent of the noise impact and help identify:

- whether there are any people unnecessarily exposed to noise levels above 55dB for noise from road, rail, air traffic and industrial sources, suffering accordingly and causing a cost to society; and
- what areas of relative quiet we might or could have, thus enabling us to develop measures to protect them and not have the noise environment inadvertently eroded.

4.6 This information will enable us to understand better how the noise environment in our agglomerations and near our major roads, railways and airports is changing. Policies can be developed that will enable strategic noise management to be carried out alongside the processes and procedures that already exist to address individual situations.

4.7 Unlike air quality legislation, which sets limit values for specific pollutants, the Environmental Noise Directive does not set limits for noise in the environment. However, we anticipate that there will be pressure for limit

values for certain sectors, e.g. airports to be included when the Directive is reviewed in the future.

Consultation

Within government

5. The European Commission has already undertaken extensive consultation with the Member States and stakeholders. All member states consulted on the draft proposals fully supported the need for proposals to address the issue of environmental noise. Regulations have been drawn up in consultation with other government departments including the Department of Health, Department for Transport, Ministry of Defence, Department of Trade and Industry and the Devolved Administrations.

Public consultation

5.1 A three month written public consultation on the transposition of the Environmental Noise Directive aimed at addressing policy issues such as the designation of competent authorities and the processes for producing and publishing noise maps and action plans was carried out in February 2005¹¹. The document was also available on the Defra website. Those consulted included industry, regulators, local authorities, professional bodies and environmental groups. There were 136 responses. A further more limited technical consultation on the proposed regulations was also carried out in November 2005.

5.2 The Department of the Environment in Northern Ireland issued an initial consultation on the Directive in June 2003 and followed this with a full consultation in June 2005. In Scotland a consultation on proposals for transposition and Implementation of the Directive was carried out between March and June 2005. In Wales a 12 week public consultation on the implementation of END was carried out between 22 February 2005 and 16 May 2005.

Options

6. *The following are options for implementation of the END:*

Option 1: Do nothing. Detailed noise mapping was completed in Birmingham as a pilot project in 1999. Major airports such as Heathrow have been producing aircraft noise contours for some time and the Highways Agency will carry on mapping the noise impacts of the strategic road network. Defra is currently undertaking noise mapping research which will provide an important baseline for the Government's development of a strategy to tackle noise. Detailed mapping of road traffic noise in London has been completed and the mapping of noise from major roads elsewhere in England is nearing completion. Projects are underway to map other sources of transport

¹¹ <http://www.defra.gov.uk/environment/noise/ambient.htm>

and industrial noise. However, in combination, this mapping activity would not fully meet the requirements of the END.

Option 2: To undertake mapping to meet the requirements of the END, deriving the maps from individual measurement. In principle, the proposed Directive would allow for mapping by noise measurements, a method requiring less technical expertise than deriving maps from computer-based predictions.

Option 3: To undertake mapping to meet the requirements of the END, deriving the maps from computer-based noise modelling. The Government proposes that the Secretary of State should be the competent authority for developing the noise maps and subsequent action plans, except in the case of airports. It is likely that the Government would engage consultants or other parties to prepare the maps on the Secretary of State's behalf but the Secretary of State would retain the legal responsibility. This is the recommended option.

6.1 Option 2 goes beyond the requirements of the END and is likely to cost significantly more than Option 3 due to the labour intensive method for collecting data. Option 3 is recommended on the basis that it is the most cost effective, and least burdensome on businesses, way of ensuring we meet the mapping requirements under the END.

Sectors and groups affected

7. Sectors and groups affected include;

- a) All those living near sources of environmental noise; such as major roads, airports and industry would ultimately benefit from measures to reduce noise in these sources.
- b) Airport authorities would be responsible for producing strategic noise maps and implementing action plans.
- c) Local authorities would be required to train staff in the procedures of implementing action plans for monitoring and reducing environmental noise.

Benefits

8. Noise mapping will not in itself reduce or control human exposure to noise and therefore offers no direct noise or health benefits. Its value lies in providing a tool to assess the noise climate, identify areas where action is most needed and which solutions would be most cost effective. The mapping will facilitate the formulation of action plans that can be used to improve or stabilise environmental noise. Mapping can also be used to evaluate the effectiveness of current measures and monitor the outcome of future measures.

8.1 The benefits of the options for implementation are presented below:

Option 1: Do nothing option. The costs of transposition, and in the short term, of implementation, would be avoided.

Option 2: To undertake mapping to meet the requirements of the END, deriving the maps from individual measurement. In principle, the proposed Directive would allow for mapping by noise measurements, a method requiring less technical expertise than deriving maps from computer-based predictions. However, there are a number of practical and theoretical difficulties with this approach. Capturing sufficient information at the necessary resolution through measurement would involve an extremely large survey that would be very resource intensive. Furthermore, unattended measurements, except in so far as peaks can be accurately attributed to known events, are indiscriminate and a noise level meter will measure the total noise at a location and not just the noise from one source in that area. It would not be possible to provide the level of detail required by the END through measurement alone.

Option 3: To undertake mapping to meet the requirements of the END, deriving the maps from computer-based noise modelling. The benefit of using computer-based modelling to produce noise maps is that it is significantly less resource intensive than using only individual measurements. Furthermore, it allows information to be gathered separately for the four sources of noise: road, rail, air traffic and industry, as required by the END. Computer-based noise modelling has been used for several years, in particular, as part of noise impact assessments for proposed noise-generating developments. Thus, the process itself is well established. This is the most cost effective option to meet the requirements of the END.

8.2 The END requires Member States to designate a competent authority or authorities to make noise action plans for agglomerations. For England and Scotland the SoS will be the competent authority for action plans for roads, railways and industry within agglomerations and each major airport operator (including the designated airports) will be the competent authority for making action plans. However, organisations other than airport authorities may be required to undertake duties to fulfil this role.

8.3 There are a number of options for designating competent authorities, but the preferred option of designating the Secretary of State in England as competent authority for strategic noise maps (with the exception of major non-designated airports where the airport operator is designated competent authority) and action plans in all cases (with the exception of major airports where the airport operator is designated competent authority) has a number of benefits. The advantages are:

- having one organisation co-ordinating the mapping process which avoids duplication and ensures consistency in the quality and form of the data collected;

- providing consistency with the approach proposed to map the different transport sources and agglomerations;
- one organisation co-ordinating the effort of different organisations involved in the production of action plans for the major transport sources and agglomerations;
- in the case of agglomerations it avoids those bodies with no overall responsibility for agglomerations being given duties beyond the scope of those which they already have; and
- enabling the Secretary of State to ensure that the END's requirements are met with respect to noise mapping and the production of actions plans.

8.4 This approach to the regulations would also allow flexibility to address wider issues relating to noise mapping and the development of noise action plans.

8.5 It is recognised that there are disadvantages in designating the Secretary of State as the competent authority in England and Scotland including the fact that by not designating local authorities as the competent authorities, the potential for achieving effective co-ordination with local development plans may not be fully appropriated (except in the case of airports); and the responsibility for mapping and action planning is not given to those authorities with the most direct control over action at local level and the greater degree of local knowledge. However, these disadvantages would be overcome by the full involvement of those authorities responsible for the different transport sources and agglomerations. In England the Government proposes to give a greater role to local authorities and transport agencies in future rounds of mapping once greater experience has been built up.

8.6 In Northern Ireland the competent authorities for producing noise maps and implementing action plans will be the relevant process operator. In this instance that will be the Department for Regional Development for all roads, the Department of the Environment for industry and ports, the Northern Ireland Transport Holding company for rail and the relevant airport owners for Belfast International Airport and Belfast City Airport. The Department of the Environment for Northern Ireland will also be the competent authority for collating the noise maps and approval of action plans. In Wales the National Assembly for Wales will be responsible for preparing, reviewing and revising noise maps, except for maps applying to noise from non-designated major airports, where the airport operators will fulfil this role.

Costs

9. The costs of the options for implementation are presented below.

Option 1: Do nothing option. There would be no costs in the initial stages. However, this would be a breach of Community law and ultimately result in infraction proceedings against the UK. Failure to transpose the Directive into UK law is likely to also incur penalties from the Commission, which could run into several million Euros.

Option 2: To undertake mapping to meet the requirements of the END, deriving the maps from individual measurement. The cost of completing the mapping by measurement would depend on the level of accuracy to be achieved. This is largely determined by the number of measurements taken in the area to be mapped, but even a minimal level of accuracy would be far more expensive to produce by this method than by computational methods. Actual costings data is scarce but an important example is provided by a project undertaken by the City of Birmingham. The computer-based mapping undertaken by the City of Birmingham in 2000, cost £211,000. To produce a map of this accuracy covering a similar area by measurements alone would require 3.3 million measurements costing between £300 and £400 each, i.e. a total of over £900 million. Hence the costs of mapping the requirements for the END for the UK would be considerable under this option.

Option 3: To undertake mapping to meet the requirements of the END, deriving the maps from computer-based noise modelling. The following presents a detailed analysis of the estimated costs for Option 3 for:

- (i) Costs of mapping using computer-based methods
- (ii) Costs of producing noise action plans.

Total cost for the UK is shown in Table 4.

Cost of noise maps by computer-based predictions

9.1 Defra commissioned environmental consultants Bureau Veritas to provide estimated costs for undertaking noise mapping to enable the UK to meet the requirements of the Environmental Noise Directive. These detailed costings relate to the first round of mapping in 2007 only. Although costings for the second round were provided in the partial RIA it has now become evident that there are too many uncertainties surrounding costings in future years to give an accurate estimate (although it is expected that these will be offset by economies of scale and savings arising from systems set up for the first round, despite the scope of the mapping and action planning becoming wider). Total cost of future years are therefore expected to be lower than in 2007.

9.2 The following section describes the approach used and their results. It should be noted that the costs presented in this section represent total costs, assuming a baseline for comparison of no existing mapping. Whilst in reality, there are a number of mapping programmes in existence in England (e.g. by major airports and the Highways Authority), it is not clear that such existing programmes would fully meet the requirements of the END. Therefore total costs are presented throughout, even though incremental costs may be lower.

9.3 Analysis has been undertaken to cost the following aspects of noise mapping, as set out by the END requirements:

- The cost of mapping roads;
- The cost of mapping railways;
- The cost of mapping authorised industrial processes;
- The cost of action planning;
- The cost for collating mapping results and undertaking exposure analysis.

Approach

9.4 The costs for noise mapping have been produced in a variety of manners. Where possible costs have been based upon available mapping costs from projects which have been undertaken within the UK and applied to information on the extent and location of noise sources.

9.5 Where detailed costs have proven to be unobtainable, judgements about the likely costs have been derived from costs for mapping similar types of feature. This relates to the costs for mapping rail noise and ports, which have been based upon roads and Part A1 industry respectively.

9.6 Where detailed information has been unobtainable for particular areas of the UK, costs have been extrapolated from data available for other areas of the UK where information is available. This relates to industrial process inside agglomerations in Scotland.

9.7 The overall costs for mapping have been broken down to enable the following details to be seen:

- The costs for mapping England, Scotland, Wales and Northern Ireland;
- The total costs for mapping in 2007;
- The costs of mapping individual noise sources (roads, rail, industry, ports and aviation);
- The costs for mapping inside and outside agglomerations;

9.8 Costs for undertaking noise mapping to enable Northern Ireland to meet the requirements of the Environmental Noise Directive in 2007 have been derived separately from previous work carried out by Casella Stanger¹² and are inclusive of costs for population exposure but do not include costs for action planning. It is unlikely there will be additional agglomerations that will require mapping under the Directive in 2012. The mapping costs for various sources for Northern Ireland are shown in the summary in Table 5.

9.9 The agglomeration datasets used for the partial RIA was from 1991 data opposed to the 2001 data used for this RIA. This, coupled with a more

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[http://www.ehsni.gov.uk/pubs/publications/END%20Mapping%20Data%20Study%20Final%20Report%20Feb05%20\(2\).pdf](http://www.ehsni.gov.uk/pubs/publications/END%20Mapping%20Data%20Study%20Final%20Report%20Feb05%20(2).pdf)

accurate baseline technical approach and more recent cost data used for this exercise, has resulted in a significant difference in overall costs for some noise sources, particularly road and rail.

9.10 An agglomeration is a part of a territory having a population in excess of 100,000 persons and a population density such that the Member States considers it to be an urbanised area. For England and Wales agglomerations were defined using the ODPM data published in 2003. For Scotland agglomerations were derived by Bureau Veritas using the Government Registers' Office Settlement data. The agglomeration boundary for the Belfast Metropolitan Urban Area was supplied by the Department of the Environment. Agglomerations with a population greater than 250,000 are classified as Round 1 agglomerations to be mapped in 2007.

9.11 A study in 2001 from AEA Technology¹³ identified the options available for determining population exposure to noise and identifying agglomerations. Three alternative methods were investigated for defining agglomerations. These were based on:

- The population density of Local Authorities;
- The population density of ward or similar level administrative boundaries; and
- The total population of discrete areas of continuous urban land (the Air Quality Daughter Directive Approach).

9.12 It was assumed that for practical purposes of noise mapping for END, the geographical extent of agglomerations to be mapped should be restricted to urbanised areas (or non-urban areas entirely surrounded by built-up areas) and where residential houses, schools and hospitals are most likely to be located. As a result, the urban area approach was identified as the approach likely to deliver the most appropriate definition of urban agglomerations in order to implement the END. This approach has the advantage of maintaining consistency with previous Government work and policies such as the implementation of the first Air Quality Directive.

9.13 Population exposure costs relate to the cost of estimating the number of people living in dwellings that are exposed to each of the bands of noise levels set out in the END for road, rail, air traffic and industrial sources. The costs have been estimated at two thirds the rate of the estimated costs for action planning.

9.14 The cost for producing action plans in 2008 has been calculated on the basis of previous estimates in the partial RIA and additional information. The costs shown in the summary table are the midpoint of + or – 20% range in anticipated costs given the uncertainty surrounding overall costs of action planning at this stage.

¹³ <http://www.defra.gov.uk/environment/noise/research/agglomeration/index.htm>

Presentation of mapping cost information

(A) Mapping Roads

9.15 The cost of mapping roads was estimated from the length of road to be mapped. The length of roads within agglomerations was calculated from 2005 Ordnance Survey mapping datasets. The cost of mapping roads inside agglomerations has been derived from the Central Data Service (CDS) data acquisition contract and the current Noise Mapping England Roads projects being undertaken by Defra.

9.16 The length of major roads outside agglomerations was estimated from road data provided by the DfT TSR Major Roads Links 2003 dataset made available through the Road Transport Statistics Unit. The dataset contains all roads at and above A-road classification. The unit cost of mapping major roads outside agglomerations has been derived from the CDS and the current Noise Mapping England Roads projects being undertaken by Defra. This is shown in Table 1 below.

Table 1. Road length (km) and estimated cost of mapping roads by Devolved Administration under the Environmental Noise Directive within the UK.

2007				
	Length of roads inside agglomerations (km)	Length of Major Roads (km)	Total length (km)	Cost (rounded to nearest '000 £)
England	72,525	24,951	97,476	6,319,000
Scotland	6,554	2,378	8,932	700,000
Wales	2,211	1,585	3,796	269,000
Total	81,290	28,914	110,204	7,288,000
Additional cost: manipulation of data ¹⁴				50,000
Grand Total ¹⁵	81,290	28,914	110,204	7,338,000

(B) Mapping Railways

9.17 The length of railway within agglomerations was calculated from 2005 Ordnance Survey mapping datasets. The length of railway outside agglomerations was estimated from the flow data provided by AEAT 2003

¹⁴ Estimated additional cost for the manipulation of major roads mapping data for the reporting of required information to the Commission.

¹⁵ The figures for Northern Ireland have been calculated on a separate basis (see paragraph 9.8) and appear as a summary in table 5

Rail/Rail Track flow dataset. For the first round the END requires railways within agglomeration and major railways which have more than 60,000 train passages per year, to be mapped.

9.18 Costs for mapping the railway network are based on ongoing discussions with Network rail.

9.19 The projected costs for mapping Network Rail do not provide for preparing the data for mapping sources such as Tramways, London Underground, and the Channel Tunnel Rail Link. The estimated total length for these sources is approximately 586km and the cost of mapping these sources is estimated at £299,000. An additional £10,000 is projected to be required to include the railway wheel roughness correction into the mapping process. The projected costs are shown in Table 2 below.

Table 2. Table setting out estimated cost of mapping rail noise by Devolved Administration.

<i>2007</i>				
	Length of rail inside agglomerations (km)	Length of major railways (km)	Total length of railways (km)	Cost (rounded to nearest '000 £)
England	2,343	1,244	3,587	1,212,000
Scotland	277	110	387	208,000
Wales	87	35	122	65,000
TOTAL	2,707	1,389	4,096	1,485,000
Additional costs:				299,000
Tramways				
wheel roughness correction				10,000
GRAND¹⁶ TOTAL	2,707	1,389	4,096	1,794,000

(C) Mapping Aviation

9.20 The cost of mapping aviation was estimated from the number of airports required to be mapped in 2007. The number of major airports (being defined as a airport with total movements of greater than 50,000 per annum) was determined from Aircraft Movements 'UK Airport and Statistics 2004' published by the Civil Aviation Authority (CAA).

¹⁶ The figures for Northern Ireland have been calculated on a separate basis (see paragraph 9.8) and appear as a summary in table 5

9.21 In addition to major airports, airports inside or within 5 km of an agglomeration have been included in the costs of mapping. In order to determine the number of such airports the 2005 Ordnance Survey dataset was used.

9.22 The cost of mapping airports has been based on past noise mapping projects undertaken by the CAA and other noise mapping projects. A maximum estimated cost per airport of £40,000, based on current mapping conditions has been applied to all airports.

Table 3. Table setting out the cost of mapping aviation noise sources for the Environmental Noise Directive within the UK.

2007			
	Number of Major Airports	Number of airports within 5 km of agglomerations	Cost (rounded to nearest '000 £)
England	18	13	1,240,000
Scotland	3	0	120,000
Wales	0	0	£0
TOTAL	21	13	1,360,000

(D) Mapping Industry and Ports

9.23 Final costs for mapping industrial and port noise within the UK have been derived from estimated costs presented in Casella Stanger Report CS/AQ/CSIS/2197¹⁷. The work and proposed methods of implementing the Directive indicated estimated costs of £400,000 for England , Scotland and Wales.

9.24 In the summary costs by Devolved Administration the total estimates costs have been apportioned to each administration according to the proportion of the number of Part A industrial sites that require mapping under the END.

Cost of Action Plans

9.25 The END requires the competent authorities, designated by the Member States to develop and adopt action plans 'designed to manage, within their territories, noise issues and effects, including noise reduction if necessary' (Article 8, paragraph 1). The END also lists the minimum which each plan should contain (Annex V). This includes:

- a description of the agglomeration or major noise source to be considered;
- the authority responsible;

¹⁷Casella Stanger Report CS/AQ/CSIS/2197, WG-AEN Good Practice Guide Toolkit: Industrial Noise Mapping Feasibility Study, Draft Report, 21 June 2004

- the legal context; any limit values in place;
- a summary of the results of the noise mapping;
- an evaluation of the estimated number of people exposed to noise, identification of problems and situations which need to be improved;
- a record of the public consultation;
- current noise reduction measures in force or in preparation;
- actions which the competent authorities intend to take in the next five years (including preservation of quiet areas);
- long-term strategy;
- financial information (this includes cost effectiveness); and
- provisions for evaluation of the action plans.

9.26 The approach to developing action plans, for all the sources considered, is likely to consist of 5 steps:

- To carry out a more detailed noise assessment of areas which appear as high noise areas on the strategic noise maps.
- Once priorities for noise reduction are identified, the Secretary of State should appoint a key body to investigate potential actions considering the effectiveness of any actions and appropriate cost-benefit analysis in consultation with certain stakeholders.
- After drawing up initial options, there would be a public consultation as required by the END (Article 8, paragraph 7).
- To publicise the revised action plans in light of the consultation.
- To review the action plan every five years, as required by the END.

9.27 The costs of the action plans will vary depending on the source of noise and whether it is an action plan for an agglomeration. For agglomerations, an estimate of the costs of action plans is discussed below and presented in Table 4. The costs of action plans for roads, rail and air traffic are more uncertain and it is important that these estimated cost figures are considered alongside the specific uncertainties and caveats discussed below.

(A) Agglomerations

9.28 Costs of producing action plans are difficult to accurately predict given lack of knowledge of what such action plans would contain following the noise mapping exercise in 2007. However, the approach set out in the partial RIA, accompanying the END consultation in 2005,¹⁸ estimates this cost based on previous experience with producing actions plans for other policy areas. This is used a basis to illustrate the estimated costs.

9.29 It should be noted that although similar, the costs of generating action plans in other policy areas are not directly comparable to the costs of producing noise action plans for agglomerations for mainly two reasons:

¹⁸ http://www.dft.gov.uk/stellent/groups/dft_aviation/documents/divisionhomepage/029650.hcsp

- the area defined as an agglomeration for the purposes of the END is not consistent with Local Authority boundaries, since an agglomeration may be comprised of several parts of local authorities; and
- the costs of other actions plans are not directly comparable because action plans covering different policy areas involve different processes and occur over different timescales.

9.30 The estimated costs of actions plans for agglomerations include:

- the costs of developing a draft local action plan (consultant fees or Local Authority staff costs);
- the staff costs to a local authority of undertaking administration, consultation and stakeholder meetings; and
- the costs to Defra of approving the action plans.

9.31 In order to apply the information gathered to agglomerations these costs were broken down to a per capita basis and multiplied up by the populations in agglomerations¹⁹. The estimated costs are presented in Table 4 below.

Table 4: Costs of Noise Action Plans for Agglomerations

2007 Agglomerations >250,000	Population	Total (rounded to nearest '000 £)
England	21,832,841	£1,622,000
Scotland	1,731,776	£129,000
Wales	579,360	£43,000
Northern Ireland	475,987	£35,000
<i>Total</i>	24,619,964	£1,829,000

(B) Roads

9.32 The production of action plans for major roads outside agglomerations would be the responsibility of the Secretary of State. However, the Secretary of State may enter into agreements with the Highways Agency and local highway authorities, to carry out the action plans or consult on them, as these authorities have the power to implement any actions arising from the plans.

9.33 The cost of producing action plans for roads outside agglomerations is likely to be significantly lower than the costs of producing action plans for agglomerations as the production of the actions plans is likely to be carried out by a single organisation (the Secretary of State or the Highways Agency) reducing the costs of coordinating a number of bodies and administration

¹⁹ <http://www.defra.gov.uk/environment/noise/research/agglomeration/index.htm>. The definition of agglomerations used in this document is the one the Government is proposing to use for the purposes of the END.

costs. The cost for producing action plans for roads is, however, uncertain due to lack of data and precedent for such an undertaking.

(C) Rail

9.34 Similar to the action plans for roads, the production of action plans for major railways outside agglomerations would be the responsibility of the Secretary of State. However, the Secretary of State may enter into agreements with or consult relevant organisations including:

- Network Rail;
- operators of other guided rail systems;
- Office of the Rail Regulator; and
- train operating companies (passenger and freight).

9.35 The cost of producing actions plans for rail is, however, uncertain due to the lack of data and precedent for such an undertaking.

(D) Air Traffic

9.36 The Government favours the airport operators being designated as the competent authority for the production of action plans relating to major airports. In practice, airports already act as the day-to-day regulators of operational noise from aircraft, by monitoring and enforcing adherence to their noise control procedures and the Government believes that those with the powers to implement measures to control noise are best placed to draw up the action plans. In the case of air noise, this would mean that the airport operators for both the designated and non-designated airports would draw up the plan or plans to manage noise for the airports for which they are responsible – in the former case, of course, the action plan must be consistent with the airport's legal duties under s.78 of the Civil Aviation Act 1982.

9.37 The cost of producing actions plans for air traffic is also uncertain due to the lack of data and precedent for such an undertaking. This uncertainty is reflected by the cost range in Table 5 below.. The cost, however is likely to be smaller than the cost of producing agglomeration action plans as each airport operator will have to produce and implement an action plan for just one airport. Hence, there will not be a need to coordinate a number of different bodies, nor to draw up action plans for a number of different sources. In any case, the White Paper 'The Future of Air Transport'²⁰ paragraphs 12.7 – 12.9 requests airport operators to produce master plans. These plans should include detailed proposals for environmental controls, including noise controls. Assuming, therefore, that airports do produce and maintain such plans, as we are confident they will, the incremental cost of ensuring that the noise-related element conforms with the END requirements for action plans, should be relatively modest.

Summary of total estimated costs of Option 3

²⁰ White Paper 'The Future of Air Transport'. Department for Transport, December 2003.

Table 5 Summary of costs for 2007 by Source and Devolved Administration (figures rounded to nearest '000)

	England	Scotland	Wales	Northern Ireland	United Kingdom
Road	£6,319,000	£700,000	£269,000	£295,000	£7,583,000
Rail	£1,212,000	£208,000	£65,000	£106,000	£1,591,000
Aviation	£1,240,000	£120,000	£0	£39,000	£1,399,000
Industry (inc. Ports)	£348,000	£31,000	£21,000	£153,000	£553,000
Population Exposure	£1,333,000	£106,000	£36,000	-	£1,475,000
Action Plans*	£2,000,000	£159,000	£54,000	£44,000	£2,257,000
Additional costs	-	-	-	-	360,000
TOTAL	£12,452,000	£1,324,000	£445,000	£637,000	£15,218,000

* The costs for action plans represent a mid-point of a +/- 20% range given the anticipated uncertainty in costs

Small Firms Impact Test

10. The costs of the proposals in England and Scotland will fall mainly on the Secretary of State and Scottish Ministers as the designated competent authority. In Wales the financial implications of implementing the END rest with the National Assembly of Wales as the designated competent authority major airport operators. Other organisations that may bear some of the costs, are large organisations such as the Highways Agency, Network Rail, Local Authorities and major airport operators and Transport Scotland. It is anticipated that the role of other industrial organisations will be limited to those that operate major plants and would only involve participation in any consultation on the formulation of action plans. The costs for noise mapping and action planning will lie with the relevant competent authorities.

10.1 Hence, the implementation of the proposed Directives is not expected to have a direct impact on small businesses or airports which have fewer than 50,000 aircraft movements per annum.

10.2 Belfast City Airport has fewer than 50,000 ATMs, but will be designated as a competent authority by virtue of its location within the agglomeration of Belfast. Therefore it will be required to cover the cost of noise mapping and action planning at the airport.

Competition Assessment

11. The competition filter has been applied to the options considered in this RIA and it is not anticipated that the implementation of the proposed Directive will have any significant impact within any affected markets.

Enforcement, sanctions and monitoring

12. It is intended that transposition will be by way of regulations under section 2(2) of the European Communities Act 1972. Hence, the Secretary of State, through legislation' will be responsible for ensuring the requirements of the END are being met, or the Government will ultimately face infraction proceedings in the European Court of Justice.

12.1 Monitoring whether the requirements of the END have been met will be undertaken by the European Commission as the outputs of the noise mapping and the action planning are submitted .

12.2 The strategic noise maps will be reviewed and revised if necessary, at least every five years after the date of their preparation.

Implementation and delivery plan

13. Devolved Administrations are responsible for ensuring implementing Regulations are in place to meet the various deadlines for mapping and action planning set out in the END.

Post-implementation review

14. The END will be formally reviewed in 2009 after the first round of noise maps and action plans have been completed. This could result in changes to the approach required to implement the second round of mapping and action planning. It is also envisaged that a review of the designated competent authorities will take place.

Summary and recommendation

15. On the basis of the results of this RIA, the Government recommends Option 3, mapping by computer-based noise modelling, for the implementation of the Environmental Noise Directive.

15.1 Of the technical options – mapping by computation or by measurement – the former would be the most cost effective and useful. It is a less resource intensive method of collecting data and enables information to be gathered separately for the four sources of noise, as required by END. The estimates of costs using computer-based modelling are far lower than by individual measurement. Furthermore, the costs of mapping by computation are likely to fall in the future, as data acquisition and management becomes more consistent across the organisations involved in the strategic mapping process.

15.2 The proposition that the Secretary of State be designated the competent authority will minimise the organisational costs by avoiding duplication and ensuring consistency of the data collected. The impact on business will also be minimised as most of the cost will fall on the Secretary of State.

Table 6 – Summary of costs and benefits for the proposed options

Option	Costs	Benefits
Option 1: Do nothing	Initially no costs would be borne, however, directive requirements would not be met which would ultimately result in infraction proceedings that could lead to penalties running into several million Euros, against the UK	None
Option 2: To undertake mapping to meet the requirements of the END in 2007 and 2012, deriving the maps from <u>individual measurement</u> .	Considerable costs. For example, noise mapping within the City of Birmingham using individual measurement was estimated at >£900M compared to £211,000 using computer-based modelling. This implies costs for mapping across the UK would be very substantial. <ul style="list-style-type: none"> • Resource intensive and would not satisfy all the END's requirements. 	Requires less technical expertise than computer-based methods, though less detailed.
Option 3: To undertake mapping to meet the requirements of the END in 2007 and 2012, deriving the maps from <u>computer-based noise</u> modelling. And produce noise action plans.	Estimated total costs 2007-08 – £15,218,000	Meets the END's requirements at least cost and least resources. Designating the Secretary of State as the competent authority avoids duplication of resources and ensures consistency in the mapping.

Declaration and publication

I have read the regulatory impact assessment and I am satisfied that the benefits justify the costs

Signed ...Ben Bradshaw...

Date8th August 2006..

Ben Bradshaw, Minister for Local Environment, Defra

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