



Department
for Environment
Food & Rural Affairs

www.gov.uk/defra

Noise Action Plan: Railways

Environmental Noise (England) Regulations 2006

2 July 2019

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Formal adoption

I formally adopt this Noise Action Plan covering railways as required by the Environmental Noise (England) Regulations 2006, as amended.



.....

Thérèse Coffey MP, Parliamentary Under Secretary of State for the Department for Environment, Food and Rural Affairs, on behalf of the Secretary of State

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Executive summary

This Action Plan has been developed by the Department for Environment, Food and Rural Affairs (Defra) as the Competent Authority for preparing and adopting this Action Plan under the terms of the Environmental Noise (England) Regulations 2006, ('the Regulations'). The Regulations implement the Environmental Noise Directive in England. The Environmental Noise Directive requires, on a five year cycle:

- The determination, through noise mapping, of exposure to environmental noise from major sources of road, rail and aircraft noise and in urban areas (known as agglomerations).
- Provision of information to the public on environmental noise and its effects.
- Adoption of Action Plans, based upon the noise exposure assessment results, which are designed to manage environmental noise and its effects, including noise reduction if necessary.
- Preservation of environmental noise quality where it is good, particularly in urban areas.

This Action Plan applies to noise from railway sources that were covered by the third round of strategic noise mapping undertaken during 2017. It accompanies two additional Action Plans, which are being published at the same time, covering the management of noise within agglomerations and from road sources. Responsibility for preparing airport Noise Action Plans rests with the relevant airport operators.

In line with the Government's policy on noise, this Action Plan aims to promote good health and good quality of life (wellbeing) through the effective management of noise. It is intended that this Action Plan will assist the management of environmental noise in the context of Government policy on sustainable development. This means that those authorities responsible for implementing this Action Plan will need to balance any potential action to manage noise with wider environmental, social and economic considerations, including cost effectiveness.

This Action Plan will be of relevance to the Department for Transport, the rail industry, and local authorities including those with environmental, transport and planning responsibilities, and interested members of the public.

It has been estimated that the number of people immediately associated with the Important Areas (noise 'hotspots') identified through the process described in this Action Plan for the major railways outside agglomerations is around 5,000. This is expected to correspond to about 20 entirely new Important Areas. The equivalent figures for Important Areas within agglomerations can be found in the Agglomerations Action Plan.

Glossary and definition of acronyms, abbreviations and terms

A glossary of acoustical and technical terms is at **Appendix A**.

Table 1: Glossary and Definition of Acronyms, Abbreviations and Terms

Term	Definition
Agglomeration	An area having a population in excess of 100,000 persons and a population density equal to or greater than 500 people per km ² and which is considered to be urbanised.
Competent Authority	Defra (Department for Environment, Food and Rural Affairs)
NPSE	Noise Policy Statement for England
Regulations	The Environmental Noise (England) Regulations 2006, as amended
Round 1	The noise mapping which took place in 2007 and the subsequent Action Plans that were adopted in 2010
Round 2	The noise mapping which took place in 2012 and the subsequent Action Plans that were adopted in 2014.
Round 3	The noise mapping which took place in 2017 and this Action Plan.

Part A: General issues

1. Policy and Legal Context

- 1.1 This Action Plan has been developed by the Department for Environment, Food and Rural Affairs (Defra) as the Competent Authority under the terms of the Environmental Noise (England) Regulations 2006, ('the Regulations'). The Regulations implement the Environmental Noise Directive (2002/49/EC) in England. Noise is a devolved matter and the Environmental Noise Directive is implemented separately within the Devolved Administrations.
- 1.2 On 23 June 2016, the EU referendum took place and the people of 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 outcome of these negotiations will determine what arrangements apply in relation to EU legislation in future once the UK has left the EU.
- 1.3 Environmental noise, in the context of the Environmental Noise Directive, mainly consists of noise from transport such as road, rail and aviation as well as noise from industry. While noise is a natural consequence of a mature and vibrant society, it can have serious implications for human health, quality of life, economic prosperity and the natural environment. The World Health Organisation¹ (WHO) recognises environmental noise as one of the top environmental hazards to health and well-being in Europe. It causes sleep disturbance, annoyance and there is growing evidence that long-term exposure to high levels of environmental noise is associated with illnesses like heart attacks and strokes².

¹ <http://www.euro.who.int/en/publications/abstracts/environmental-noise-guidelines-for-the-european-region-2018>

² For summary see: http://www.noiseandhealth.org/article.asp?issn=1463-1741;year=2015;volume=17;issue=75;spage=57;epage=82;aulast=Basner;aid=NoiseHealth_2015_17_75_57_153373.

1.4 The Government's policy on noise is set out in the Noise Policy Statement for England³. The Noise Policy Statement for England's vision is to:

“Promote good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development.”

Its aims are to

- avoid significant adverse impacts on health and quality of life;
- mitigate and minimise adverse impacts on health and quality of life; and
- where possible, contribute to the improvement of health and quality of life.

1.5 The Noise Policy Statement for England provides the policy framework to assist the implementation of the Environmental Noise Directive and the Regulations. Whilst the Noise Policy Statement for England is not legislation and local authorities are not legally bound by it Defra has an expectation that local authorities will take it into account in relevant situations.

1.6 The Environmental Noise Directive seeks to manage the impact of environmental noise through strategic noise mapping and the preparation and implementation of noise Action Plans. In particular the Environmental Noise Directive requires, on a five year cycle:

- The creation of **strategic noise maps** which estimate people's exposure to environmental noise from road, rail and aviation.
- Adoption of **action plans** based on the results of noise mapping data, which are designed to manage environmental noise and its effects, including noise reduction if relevant.
- **Preservation of environmental noise quality** where it is good, particularly in urban areas.

³ The Noise Policy Statement for England can be viewed at:
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69533/pb13750-noise-policy.pdf.

- **Provision of information to the public** on environmental noise and its effects.

- 1.7 Under the terms of the Environmental Noise Directive, Defra has completed the third round of strategic noise mapping, the results of which underpin this Action Plan.
- 1.8 This Action Plan is designed to address the management of environmental noise issues and effects.
- 1.9 Two complementary Action Plans are being published covering the management of noise within agglomerations and from road sources⁴.

2. Scope of this Action Plan

- 2.1 This Noise Action Plan is designed to address the management of noise issues and effects from railways (including “Major Railways”⁵) in England under the terms of the Regulations.
- 2.2 This Action Plan covers those railways that were included in the Round 3 noise assessment and supersedes the previous Railways Noise Action Plan.
- 2.3 When identifying possible actions, account should be taken of the principles that already exist in current legislation and guidance.
- 2.4 A glossary of acoustical and technical terms can be found at **Appendix A**.

3. Implementing this Action Plan

- 3.1 The responsibility for the management of noise from railway sources lies with various authorities. The Department for Transport (DfT) has ultimate responsibility for ensuring that the measures set out in this plan to manage rail noise are implemented, but relies on experts to do the work on its behalf, including the Rail Safety and Standards Board and others in the rail industry. The implementation of this Action Plan forms part of their existing responsibilities in this area.

⁴ The ‘Noise Action Plan: Roads’ and ‘Noise Action Plan: Agglomerations’ can be viewed at www.gov.uk/defra.

⁵ A major railway is defined in the Environmental Noise (England) Regulations 2006, Regulation 3(10) as a railway which has more than 30,000 train passages a year.

4. Monitoring and review

- 4.1 Defra will monitor the progress of this Action Plan through liaison with the relevant authorities responsible for implementation. The Regulations require that this Action Plan will be reviewed at least once every five years.

5. Financial information

- 5.1 As this Action Plan describes a framework for the management of noise, the process does not impose any additional material costs on the rail industry, or relevant authorities. Instead it enables these organisations to target action to the worst affected areas and to develop proposals for assisting the management of noise as appropriate, including taking account of budgetary and other considerations. Any specific action identified will be based on local decisions - taking into account its cost and benefit.

Part B: Approach to managing railway noise

6. Current approach to noise management

- 6.1 The management structure of the railway industry is complex with many bodies having various roles and responsibilities.
- 6.2 Network Rail is undertaking various activities during the current “control period” (CP5⁶), including rail profile grinding and electrification projects, that have supported mitigation of the noise impacts identified during the previous Action Planning cycle.
- 6.3 The rail industry also has a Noise Policy Working Group which has reviewed research in relation to acoustic track quality, to supplement the noise mapping work and recorded data on areas affected by railway noise. A related initiative is considering the potential development of a new Calculation of Road and Railway Noise standard to supersede current national methods⁷. Defra will continue working on this with the BSI Committee on Transport Noise taking into account research and developments in this area.
- 6.4 The Office of Road and Rail states that they will monitor Network Rail’s progress and continue to engage with the Noise Policy Working Group to address railway noise in the worst affected areas across Great Britain.
- 6.5 For any particular location, there is a wide range of measures that can be implemented to provide improved management of the railway noise and/or noise reduction. These include:
 - control of noise at source (including railway vehicle emission limit values and track maintenance techniques). This should be considered first;
 - planning controls – through the operation of the national and local transport and land use planning system;

⁶ Control Period 5 (expected to run from 1 April 2014 to 31 March 2019).

⁷ Calculation of Road Traffic Noise (Department of Transport, 7th June 1988, HMSO) ISBN 0115508473, known as CRTN and Calculation of Railway Noise (Department of Transport, 13th July 1995, HMSO) ISBN 0115517545, known as CRN.

- compensation and insulation - in the case of new, additional or altered works;
 - noise barriers and façade insulation.
- 6.6 For all these potential measures, the overall costs and benefits need to be considered, including any associated benefits such as improvements in air quality. Potential dis-benefits, such as visual intrusion from noise barriers, should also be taken into account.
- 6.7 Some of the possible measures are described in more detail below.

Source levels

- 6.8 Noise from individual new railway vehicles are controlled through EU legislation which sets limits for noise emissions from rail vehicles and other equipment used on the railway.
- 6.9 The Technical Specification for Interoperability⁸ is a suite of binding EU technical standards required to satisfy the essential requirements of interoperability. The noise-related Technical Specification for Interoperability include limits for starting noise, noise from stationary vehicles and pass-by noise for conventional and high-speed rolling stock. Many vehicles have already been introduced that meet these limits, and a recent review at the European Union Agency for Railways considered the application of the Noise Technical Specifications for Interoperability to existing freight wagons.
- 6.10 The Technical Specification for Interoperability covering conventional and high speed rolling stock currently adopts a two-step approach to reduce the noise emission limits over time. Furthermore, disc brakes or composite brake blocks are installed on the majority of passenger vehicles and freight vehicles, which reduces noise emissions in comparison with cast iron brake blocks.
- 6.11 The replacement of diesel trains with electric stock as electrification progresses across the network also contributes to reducing noise at source. The government is committed to electrification of railways where it delivers benefits and value for money, but will also take advantage of new technologies, such as bi-mode trains, which have

⁸ TSI Commission Regulation 1304/2014.

potential to make improvements without as much disruptive engineering work.

- 6.12 Routinely, railhead grinding occurs as part of the general maintenance of the track. Such grinding has been found to reduce the rolling noise emitted from the wheel and track and, hence, has the benefit of providing noise reduction. Additionally replacing old jointed tracks with newer quieter continuously welded tracks can make further overall sound reductions to railway noise, while modern switch and crossing units are manufactured to much finer tolerances meaning that gaps at joints are much smaller and are therefore quieter in use. Other control measures for rolling noise can include optimum selection of under-rail pads as well as the use of tuned rail absorbers.
- 6.13 Curve squeal at specific locations with curves of small radius can potentially be reduced by the use of rail lubrication and rail-head friction modifiers.

Planning controls

- 6.14 When proposing the construction of a new railway, or additional lines to an existing rail corridor, a noise impact assessment must be carried out. Mitigation such as optimising the track construction and alignment and the use of noise barriers, either through landscaping or purpose built walls or fences, are considered in the design to minimise any adverse noise impact.
- 6.15 Once the basic data regarding the potential impact of the proposals has been obtained (including predicting the noise from the new or altered railway), an estimate of the likely numbers of people to be affected is made. In addition, through the Transport Appraisal Guidance⁹, the noise impact can be monetised as a means of evaluating the overall merits of the proposal.
- 6.16 Through the operation of the land use planning system, a noise assessment would normally be carried out for any proposed residential development that may be affected by railway noise.
- 6.17 A recent research project on “reducing the impact of noise on future residents of line-side developments” was managed by Rail Safety and Standards Board on behalf of the rail industry. It has identified several

⁹ <https://www.gov.uk/guidance/transport-analysis-guidance-webtag>.

areas where rail industry stakeholders could achieve improved outcomes once a planning application has been submitted, including greater use of statutory consultation processes and enhanced liaison and information exchange between the industry, local planning authorities and developers on potential noise and vibration impacts from all aspects of railway operation. Guidance has been drafted for dissemination to all relevant parties in order to encourage and facilitate this improved approach.

Compensation and insulation

- 6.18 If certain criteria are met for new or additional works to a railway system, the promoter of the scheme can offer secondary glazing and alternative ventilation for habitable rooms of dwellings so affected¹⁰. If the criteria are met for altered works, the promoter has a power, but not an obligation, to offer such treatment.
- 6.19 In addition, Part 1 of the Land Compensation Act provides for monetary compensation to those home owners affected by the new or altered railway recognising any loss in value of the home that has occurred by the opening of the new or improved railway. This assessment is purely subjective, carried out by surveyors, and claims have to be made within a certain time period.

Noise Barriers or other similar methods

- 6.20 The use of barriers to reduce the propagation of noise from a railway to a sensitive receptor can be used where appropriate. These include absorbing barriers, angled barriers, capped barriers and covering barriers and earth berms.

Façade Insulation

- 6.21 Effective noise management in the interior of a building can often be achieved through the careful design of the sound insulation. This can either occur at the design stage of a new structure or by improving the insulation of an existing building. The sound insulation of closed windows or walls can be very effective and can achieve reductions in the order of 30 dB. Special sound reducing windows can reduce

¹⁰ The Noise Insulation (Railways and Other Guided Transport Systems) Regulations 1996 (SI 1996/428).

emissions by up to 40 dB¹¹ although this does depend on the characteristics of the building and the windows and is only operative when the windows are closed. This is not a preferred option, however, because there are no secondary beneficiaries and outdoor areas remain unaffected by this measure. Where necessary, alternative ventilation is provided so that windows can be kept closed but with ventilation still available. In new buildings and where changes are made to existing ones it is important that Approved Documents E and F of the Building Regulations are followed to ensure noise and vibration sources are mitigated, so far as is reasonably practical¹².

- 6.22 It should be noted that mitigation measures may not always be appropriate or possible, and may involve trade-offs and considerations which must be weighed up by the various relevant authorities

¹¹ “EC Science for Environment Policy – Future Brief: Noise abatement approaches”,(April 2017).
http://ec.europa.eu/environment/integration/research/newsalert/pdf/noise_abatement_approaches_FB17_en.pdf.

¹² The complete list of all the Approved Documents of the Building Regulations 2010 can be found at <https://www.gov.uk/government/collections/approved-documents>

Part C: Summary of noise mapping results

7. Summary of the results of the noise mapping, including an evaluation of the estimated number of people exposed to noise from railways

7.1 The Regulations require that noise level information be determined in terms of several noise indicators¹³ (see also **Appendix A**). These are:

- L_{den}
- L_{day}
- $L_{evening}$
- L_{night}
- $L_{Aeq,16h}$
- $L_{Aeq,18h}$
- $L_{Aeq,6h}$

7.2 Of these indicators, L_{den} and L_{night} are specified by the Environmental Noise Directive and $L_{Aeq,18h}$ is currently used for identification of important areas (see section 8). For the major railways covered by the Round 3 mapping, the estimated number of people¹⁴ (rounded to the nearest thousand) located outside agglomerations and falling within various noise level bands¹⁵ from the strategic mapping of **noise from those major railways alone** are shown in tables 2 – 4 below.

¹³ The Environmental Noise (England) Regulations 2006 (SI 2006/2238), Regulation 4(2) and Schedule 3(3).

¹⁴ The Round 3 noise mapping for railways is based on Round 2 noise mapping data. The number of people has been determined by assigning population information from the 2015 mid-census estimates to residential building locations and rounded to the nearest 1,000.

¹⁵ The noise levels throughout this document refer to free-field levels at a height of 4m at the facades of dwellings.

Table 2: Estimated number of people above various noise levels due to noise from major railways outside agglomerations, L_{den}

Noise Level (L_{den}) (dB)	Number of People
≥55	404,000
≥60	226,000
≥65	114,000
≥70	46,000
≥75	11,000

Table 3: Estimated number of people above various noise levels due to noise from major railways outside agglomerations, L_{night}

Noise Level (L_{night}) (dB)	Number of People
≥50	308,000
≥55	166,000
≥60	76,000
≥65	27,000
≥70	5,000

Table 4: Estimated number of people above various noise levels due to noise from major railways outside agglomerations, $L_{Aeq,18h}$

Noise Level ($L_{Aeq,18h}$) (dB)	Number of People
≥55	242,000
≥60	124,000
≥65	50,000
≥70	12,000
≥75	1,000

7.3 For results for railways inside agglomerations, please see the Noise Action Plan: Agglomerations

Part D: The Action Plan process

8. Identification of problems and situations that need to be investigated (Important Areas)

- 8.1 The Regulations require that this Action Plan should: “*apply in particular to the most important areas as established by the strategic noise maps*”¹⁶.
- 8.2 This Action Plan continues to follow the principles used for identifying Important Areas in Round 1 and 2.

How important areas are identified

- 8.3 Important Areas with respect to noise from major railways outside agglomerations are where the 1% of the population¹⁷ that are affected by the highest noise levels from major railways are located according to the results of the strategic noise mapping¹⁸. This approach has been taken because the population at these locations is likely to be at the greatest risk of experiencing a significant adverse impact to health and quality of life as a result of their exposure to railway noise.
- 8.4 For railways in agglomerations, the Important Areas with respect to railway noise in an agglomeration are where the 1% of the population¹⁹ that are affected by the highest noise levels from those railways mapped in the agglomeration are located according to the results of the strategic noise mapping²⁰. This approach has been taken because the population at these locations is likely to be at the greatest risk of experiencing a significant adverse impact to health and quality of life as a result of their exposure to railway noise.

¹⁶ The Environmental Noise (England) Regulations 2006 (SI 2006/2238) Regulation 15(1)(e).

¹⁷ The total population is the number of people within the 50 dB $L_{Aeq,18h}$ contour from major railways outside agglomerations according to the 2011 census.

¹⁸ At some locations, there may be an opportunity to investigate beyond the top 1% of the population but there is no requirement to investigate those dwellings where the $L_{Aeq,18h}$ is below 65 dB according to the results of the strategic noise mapping.

¹⁹ The total population is the number of people in the agglomeration within the 50 dB $L_{Aeq,18h}$ contour from those railways in the agglomeration that were mapped, according to the results of the strategic noise mapping and the 2011 census.

²⁰ In some agglomerations, there may be an opportunity to investigate beyond the top 1% of the population but there is no requirement to investigate those dwellings where the $L_{Aeq,18h}$ is below 65 dB according to the results of the strategic noise mapping.

- 8.5 The $L_{Aeq,18h}$ indicator was used for identifying Important Areas in the action plans associated with Rounds 1 and 2 of strategic noise mapping. For consistency, Defra has continued to use the $L_{Aeq,18h}$ indicator as the basis for identify Important Areas to be investigated for potential action.
- 8.6 At the time the previous Round 2 Action Plan was published, a dedicated Noise Action Plan Support Tool was used to facilitate communication on Important Areas between Defra and the relevant noise making and noise receiving authority(s). Since then, as part of Defra's Open Data initiative, the datasets identifying the Important Areas were made available online. This made the Noise Action Plan Support Tool largely redundant and it was closed in March 2016.
- 8.7 For Round 3, Defra will once again publish an online dataset showing the location of Important Areas and draw it to the attention of the relevant local authorities (in particular those authorities with environmental health responsibilities). This dataset is published alongside this Action Plan to enable the relevant authorities to identify any noise management measures that may be required through the process described in the following.
- 8.8 Given the strategic nature of the noise mapping, there may be situations where DfT with the rail industry considers that an additional location, not identified through this process, should be added to the list of Important Areas. The action planning process allows these organisations to identify such locations as Important Areas (see also point 8.10).

Roles and responsibilities

- 8.9 As with previous Rounds, DfT and the rail industry will be responsible for examining the Important Areas and forming a view about what measures, if any, might be taken in order to assist with the implementation of the Government's policy on noise. In doing so, they should also take account of any existing plans (e.g. any local transport plans or land-use plans) or any specific noise mitigation schemes that are already in preparation that may affect the Important Areas.
- 8.10 If a certain length of railway is associated with several Important Areas, DfT and the rail industry should consider measures that could address the noise issues at all the locations concurrently. Important Areas may be merged or divided as appropriate by DfT and the rail

industry, where this allows for a more comprehensive and beneficial approach to be taken to the management of noise risks. No residential dwellings should be excluded as a result of this approach. For example, a number of Important Areas along the same stretch of track could be treated as one Important Area in terms of the cost-benefit analysis for installing a barrier.

- 8.12 In developing plans for managing rail related noise the Department for Transport will consult and be advised by a cross-industry Noise Policy Working Group. This group will be facilitated by the Rail Safety and Standards Board and involve Network Rail, train owners, the rail supply industry and passenger and freight operators.
- 8.13 For each Important Area, DfT and the rail industry will identify proposed actions that will meet the vision and aims set out in the Government's policy on noise, unless they are satisfied that no further action can or needs to be taken in order to meet this objective.
- 8.14 In forming their view their view about possible action, DfT and the rail industry should take account of any benefit that might also be achieved for any other noise sensitive premises either in the vicinity of the Important Area being investigated or elsewhere. Consideration should also be given to integrating noise management actions at an Important Area with the concurrent implementation of other environmental or related initiatives for example in managing air quality, or protecting any formally identified quiet areas.
- 8.15 Any Important Area identified through the Round 1 and 2 action planning process that has either not yet been investigated, or has been investigated with an outcome identifying future mitigation work, will remain an Important Area regardless of whether they meet the Round 3 screening criteria.

Outcomes and Actions

- 8.16 It is expected that these deliberations will result in six general outcomes and actions:
- A: It is possible to be able to implement an action and there are financial resources immediately available to do so.

Action: If it is clear that the proposed action will provide the expected benefit, then DfT and the rail industry will determine a timetable for implementation. Outcome A also covers work that may have started

before the Round 3 mapping was carried out but not finished at the time of the mapping.

B: It is possible to be able to implement an action but there are no immediately available financial resources to do so.

Action: DfT and the rail industry will make arrangements to secure financial resources to carry out this work in the future. This might be achieved by either:

- securing new resources for this work; or
- re-prioritising existing budgets to enable the funds for the action to become available

Once the budget has been secured, a timetable for implementation should be determined.

C: It is not possible to implement any action because there is no scope for doing so, or there is some overriding technical issue that prevents implementation.

Action: The relevant local authority will be informed that this is the case, appropriately justified.

D: It is not possible to implement any action because there would be large adverse non-acoustics effects that could not be accommodated by the proposed measure.

Action: The relevant local authority will be informed that this is the case, appropriately justified.

E: Nothing further needs to be done as the noise level at each dwelling in the Important Area is below 65 dB(A), $L_{Aeq,18h}$, ignoring the effect of reflection from the facade of the relevant dwelling.

Action: It will be demonstrated to the relevant local authority that this is the case.

A/B: Both Outcomes A and B apply.

9. Liaison with the relevant local authorities

9.1 DfT and the rail industry will liaise with the relevant local authorities as appropriate about progress in addressing Important Areas and the outcomes achieved. This liaison should cover information about the

proposed schedule of investigation, and implementation of possible actions.

- 9.2 Noise mapping is strategic and will not always identify all locations that could be considered as Important Areas. The action planning process therefore allows the relevant local authority to identify separately locations that are not currently identified as Important Areas for further investigation and possible noise management actions. The local authority can request that consideration be given by DfT and the rail industry to including them in the action planning schedule.
- 9.3 One of the aims of the Action Plan for Agglomerations is to protect formally identified quiet areas in agglomerations. In considering measures to address Important Areas, railway authorities should take account of the need to protect any such quiet areas, or any other spaces valued for their tranquillity.

10. Liaison with the public

- 10.1 DfT and the rail industry should, at the appropriate time, liaise with those members of the public who are likely to be most affected by any proposed new noise management proposal.

11. Implementation and Monitoring

- 11.1 The Regulations state that any actions identified during this process are regarded as forming part of the policy of the relevant public authority, and hence need to be implemented as indicated.
- 11.2 Defra will monitor the progress of this Action Plan through liaison with the relevant authorities.

Implementation of Round 2 Noise Action Plans

- 11.3 The Important Areas associated with major railways outside agglomerations identified during the Round 2 noise action planning process were located throughout England. There were approximately 4,000 estimated people directly affected at the time.
- 11.4 In late 2017, Defra invited DfT and the rail industry, as the responsible transport authorities for rail important areas, to provide an update on what actions had been undertaken in accordance with the criteria set out in “Outcomes and Actions” section above (which equates to

paragraph 10.11 of the Round 2 Rail Noise Action Plan)²¹. The resulting information will be used to produce an updated data-set of Round 2 Important Areas. This dataset is published alongside the final version of this Action Plan.

Implementation of Round 3 Noise Action Plans

- 11.5 It has been estimated that the number of people immediately associated with the Important Areas identified through Round 3 mapping for the major railways outside agglomerations is around 5,000. This is expected to correspond to about 20 entirely new Important Areas. The equivalent figures for Important Areas within agglomerations can be found in the Agglomerations Action Plan.
- 11.6 Supporting maps indicating the location of the Important Areas are published on the GOV.UK website alongside this Action Plan.
- 11.7 Defra will continue to monitor the progress of this Action Plan through liaison with the relevant authorities.

²¹

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/276238/noise-action-plan-railways-201401.pdf

Part E: Long term strategy

- 12.1 Previous Noise Action Plans have set the long term strategy regarding the management of railway noise. This section provides an update on progress and information on future policy development and actions.
- 12.2 In January 2018 the Government published “A Green Future: Our 25 Year Plan to Improve the Environment” in support of its vision of being the first generation to leave the environment in a better state than we found it²². The Plan provides a framework for environmental improvement over the next 25 years and is a living document which will be regularly refreshed and updated with additional policies.
- 12.3 The 25 Year Environment Plan makes clear that noise needs to be managed effectively. In this context the Government has begun engaging with stakeholders on long-term priorities for noise management in England and options for addressing them. The opportunities presented by EU exit will be a key part of these considerations going forward. The Government will work closely with stakeholders to ensure that our future approach to managing environmental noise in England best addresses the country’s needs.
- 12.4 On the 23rd June 2016, the EU referendum took place and the people of 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 outcome of these negotiations will determine what arrangements apply in relation to EU legislation in future once the UK has left the EU.
- 12.5 The UK has transposed Directive 2015/996/EC into national legislation²³. This new noise assessment methodology is mandatory for the next round of noise mapping which is due to commence in 2020. The Directive will establish a common methodology for assessing environmental noise across Europe but other requirements of the Directive will remain unchanged.

²² <https://www.gov.uk/government/publications/25-year-environment-plan>.

²³ <http://www.legislation.gov.uk/uksi/2018/1089/made/data.html>

- 12.6 Defra will continue working with the British Standards Institution Committee on Transport Noise considering the development of a revised UK method for the Calculation of Road and Rail Noise, taking into account research and developments in this area.
- 12.7 Defra has worked has worked with DfT and the rail industry to maintain a clear framework of responsibility so that noise from rail traffic is managed in the context of the Government's policy on noise in a way that is clearly understood by the public. Defra will continue to implement this framework including through:
- the provision and dissemination of the results of the Round 3 mapping; and
 - monitoring the implementation of this Action Plan.
- 12.8 Defra continues to engage with colleagues in other Government departments, with the European Commission and other relevant organisations on initiatives that seek to reduce the noise from rail traffic at source.
- 12.9 Similarly the Department for Transport Freight Strategy Review for Railways is supporting the development and deployment of new commercial freight railway trains, which will be required to comply with the EU Technical Specifications for Interoperability. This will ensure that stationary, accelerating and pass-by noise levels from locomotives are generally significantly lower than those produced by older stock. This has potential to lead to improvements in the local noise environment and as well as benefitting air quality.
- 12.10 Defra will continue to liaise with relevant national and local policy making bodies to support effective consideration of noise management issues in policy development.
- 12.11 Defra will continue to engage with Ministry of Housing, Communities and Local Government on the development of guidance to support the revised National Planning Policy Framework²⁴, which was published on 24 July 2018.
- 12.12 In 2018 the World Health Organisation published revised Environmental Noise Guidelines for the European Region. The

²⁴ <https://www.gov.uk/government/publications/national-planning-policy-framework--2>.

Government is considering the implications of the guidelines for future noise policy and guidance.

- 12.13 Defra will continue to develop, agree and disseminate good practice approaches and methodologies through the Interdepartmental Group on Costs and Benefits noise subject group (IGCB (N)) to support the policy appraisal of noise. Further information is available from <https://www.gov.uk/noise-pollution-economic-analysis>
- 12.14 Defra has worked closely with the Department of Health and Public Health England and will in due course update the Public Health Outcomes Framework indicators with the results from Round 3 mapping.
- 12.15 Defra will keep under review the definition of Important Areas used in this Action Plan.

Part F: Consultation

13. Consultation

Informal consultation

- 13.1 During the development of this Action Plan, Defra held informal discussions with various bodies including:
- Rail Safety and Standards Board (RSSB);
 - Office for Road and Rail (ORR);
 - Relevant Government Departments
 - Relevant Stakeholders
- 14.1 The formal public consultation for this Action Plan was open for 6 weeks and closed on the 15th November
- 14.2 A total of 30 responses were received from local authorities, transport authorities, private individuals, and other interested parties. The various responses were reviewed and amendments have been made to this Action Plan where appropriate. A document has been published summarising the responses to this consultation. It can be found on the GOV.UK website.

Appendix: Glossary of acoustic and technical terms

Term	Definition
dB(A)	A measure of sound pressure level (“A” weighted) in decibels as indicated by a sound level meter which complies with British Standard BS EN 61672-1:2013 – Electroacoustics – Sound Level Meters – Part 1 Specifications.
$L_{Aeq,T}$	The A-weighted equivalent continuous sound pressure level which is a notional continuous level that, at a given position and over the defined time period, T, contains the same sound energy as the actual fluctuating sound that occurred at the given position over the same time period, T
L_{day}	The L_{Aeq} over the period 0700 – 1900, local time (for strategic noise mapping this is an annual average)
Levening	The L_{Aeq} over the period 1900 – 2300, local time (for strategic noise mapping this is an annual average)
L_{night}	The L_{Aeq} over the period 2300 – 0700, local time (for strategic noise mapping this is an annual average)
$L_{Aeq,16h}$	The L_{Aeq} over the period 0700 – 2300, local time (for strategic noise mapping this is an annual average)
L_{den}	The L_{Aeq} over the period 0000 – 2400, but with the evening values (1900 – 2300) weighted by the addition of 5 dB(A), and the night values (2300 – 0700) weighted by the addition of 10 dB(A).
$L_{Aeq,18h}$	The L_{Aeq} over the period 0600 – 2400, local time (for strategic noise mapping this is an annual average)
$L_{Aeq,6h}$	The L_{Aeq} over the period 2400 – 0600, local time (for strategic noise mapping this is an annual average)