

# Public Health Outcomes Framework

## 1.14 noise indicators

Environmental Protection UK 2015 Annual Conference

Dr Ben Fenech  
Dr Rik Van de Kerckhove

### Context

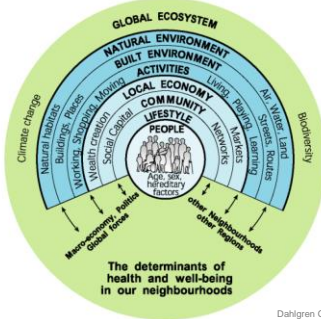
"The Public Health Outcomes Framework Healthy lives, healthy people: Improving outcomes and supporting transparency sets out a vision for public health, desired outcomes and the indicators that **will help us understand how well public health is being improved and protected.**

The framework concentrates on **two high-level outcomes** to be achieved across the public health system, and groups further indicators into four 'domains' that cover the full spectrum of public health. The outcomes reflect a focus **not only on how long people live, but on how well they live at all stages of life.**"

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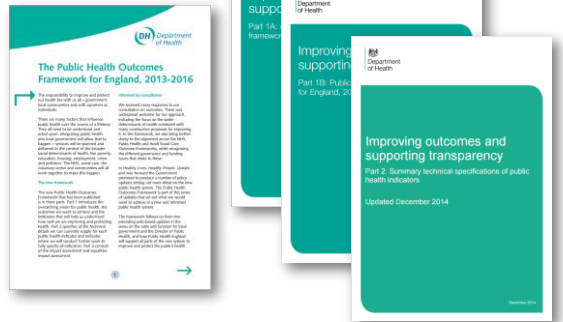
<http://www.phoutcomes.info/>

### Wider determinants of health



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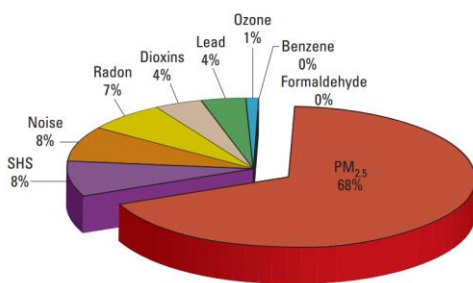
### Context



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<https://www.gov.uk/government/publications/healthy-lives-healthy-people-improving-outcomes-and-supporting-transparency>

### Noise and public health



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### Noise and public health

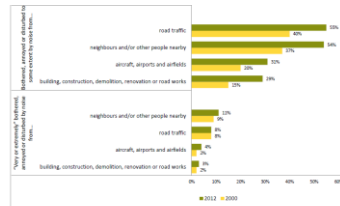


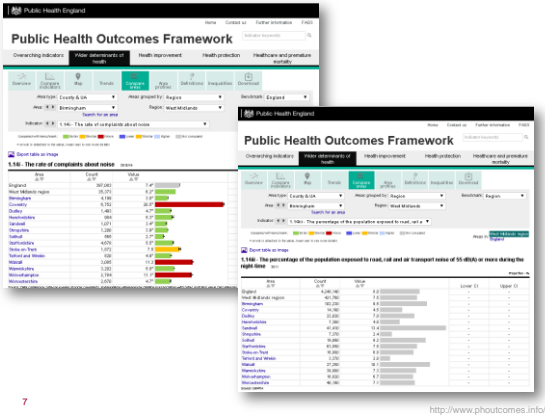
Figure 1. Key Findings: Ranking on Specific Sources and Categories Between 2000 and 2012 adapted from Defra (2014)

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**£7-10bn**  
The annual social cost of road traffic noise in England

**£6bn**  
The annual social cost of neighbour noise in England

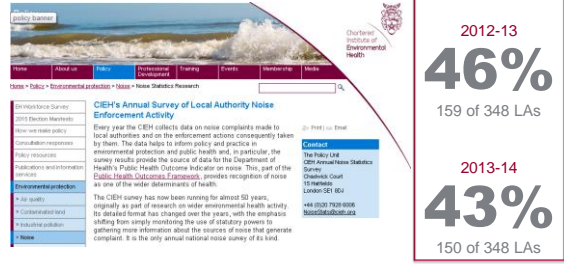
PHE estimates



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<http://www.phoutcomes.info/>

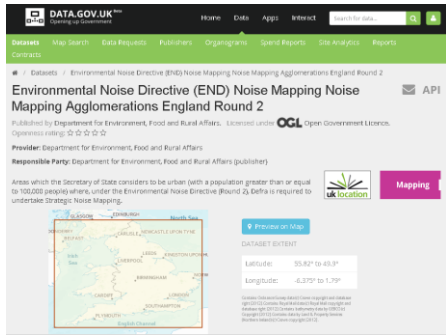
Data sources – 1.14i



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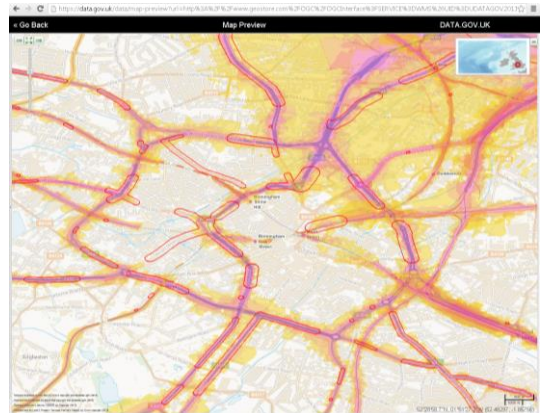
<http://www.ceh.org/policy/noise-statistics-research.html>

Data sources – 1.14ii, iii



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<https://data.gov.uk/dataset/environmental-noise-directive-end-noise-mapping-noise-mapping-agglomerations-england-round-2>



PHOF Indicator Criteria Essential

- **Clarity** - clear what it measures, outcomes or activities
- **Rationale** - why, addresses a specific policy issue or draws attention to a particular outcome
- **Relevance** - relevant to the policy and action available to improve
- **Attributable** - Measures progress attributable to the interventions/activities
- **Interpretation** - is meaningful to the intended audience(s)
- **Validity** - has an unambiguous definition, is methodologically and technically sound from a reliable data source which is available at an appropriate level (eg LA/ CCG) to make it meaningful and sustainable

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<https://consultations.dh.gov.uk/ph-outcomes-framework/phof-refresh-2015>

PHOF Indicator Criteria Essential

- **Construction** - the methods used support the stated purpose of the indicator and there is transparency about how they have been tested and justified
- **Risks** - any limitations, risks or perverse incentives identified and stated with any mitigating actions
- **Availability** - collected at sufficient level of geographical or organisational split
- **Affordability & VFM** – benefits without disproportionate costs and where new burdens created these will be estimated and sustainable funding identified

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<https://consultations.dh.gov.uk/ph-outcomes-framework/phof-refresh-2015>

Indicator Criteria Clarity

1.14i - Rate of complaints per year per LA about noise per thousand population

1.14ii - The percentage of the population exposed to road, rail and air transport noise of 65 dB(A) or more, LAeq,16h per local authority (16h is the period 0700 – 2300) according to the results of the strategic noise mapping carried out as required by the Environmental Noise (England) Regulations 2006, as amended.

13 http://www.phoutcomes.info/

Indicator Criteria Rationale

- NPSE: "promote good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development" [1].
- WHO: "Governments should include noise as an important issue when assessing public health matters" [2]
- Day / Night Capture the relevant exposure for three main health outcomes observed in the general population: chronic annoyance, chronic sleep disturbance and cardiovascular health [3]
- 65dB day / 55dB night noise insulation regulations / WHO Night noise guidelines [4]

14 [1] Defra, Noise Policy Statement for England, 2010 [2] WHO, Guidelines for community noise, 1999 [3] WHO Regional Office for Europe, Burden of Disease from Environmental noise, 2011 [4] WHO Regional Office for Europe, Night Noise Guidelines for Europe, 2009

Indicator Criteria Relevance | Attributable

- A population subset that is at a higher risk of experiencing adverse health effects directly attributable to noise
- Population subset most likely to benefit from noise management interventions (e.g. noise abatement orders, noise awareness campaigns, road traffic speed management, significant reductions in traffic flows, installation of low noise road surfaces and noise barriers, rail grinding, ...)
- The indicators are able to capture changes in population affected / exposed

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Indicator Criteria Interpretation | Validity

- No specialist noise expertise required to interpret indicators
- Complaints as a proxy to health outcome
- Noise exposure data generated using modelling techniques that meet the requirements of the EU Directive 2002/49/EC on Environmental Noise.
- Population data is based on Census data
- Reliability/robustness: no accepted way of fully quantifying the uncertainty associated with modelled noise. Uncertainties associated with noise modelling are expected to be similar across different local authorities.

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Indicator Criteria Interpretation | Validity

Guidance on completing the CIEH Annual Survey of Local Authority Noise Enforcement Activity

The following notes explain some of the thinking behind the survey questions; it should help you to answer the questions if you know what you are looking for and why. It is important to anticipate every possible query, however, so if you need to know more, do not hesitate to email us at [noise@cieh.org.uk](mailto:noise@cieh.org.uk) and we will reply as quickly as we can.

**ASSESSING AND DEALING WITH NOISE COMPLAINTS (boxes 4-7)**

Local authorities traditionally collect numbers of complaints received about noise each year. Through a proportion of these will not be justified, and they will include some multiple complaints about the same noise incidents, these figures nevertheless provide some evidence of demands on local services. From the collection year beginning 1 April 2011, we have reduced the number of 'Number of Complaints' box asking for either noise complaints, justified and unjustified, the new form 43 to just 05 in column 9'A. What these 05 complaints shown in table on page 4 below.

**Tip 9** If possible, we would like figures for complaints made to the authority as a whole, not just to environmental health departments, so please include those made to other departments too (but avoiding double counting).

**Numbers of complaints resolved (row 33) cells 05 43**

We ask for the number of complaints resolved since we understand many authorities use them (as a proportion of complaints received) as an important performance indicator.

The resolution of a complaint can be defined as either of either as local authority action is possible (usually where there is no evidence to support it) or where the policy and procedure adopted by the local authority for dealing with noise has been followed through to completion resulting positively in one of the following:

- The complainant withdraws their complaint and no instance of statutory nuisance or offensive trade/noise offence has been identified;
- Informal action (e.g. mediation or meeting letter) has been taken successfully; or
- Formal action has been taken and the offending noise abated; or
- The matter has been referred to an agency outside of the local authority (e.g. where the

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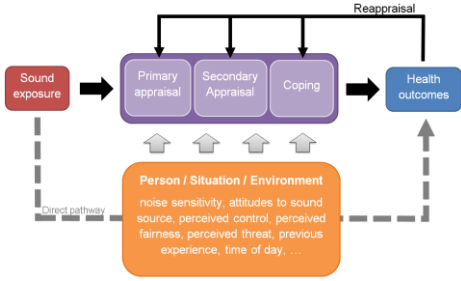
http://www.cieh.org/policy/noise-statistics-research.html

Indicator Criteria Construction | Risks

- Extrapolation of noise complaint dataset
- END mapping methodology documents due to be published by end of 2015
- Risks
  - complaints addressed to authorities other than LAs – e.g. police, EA, highways agencies, Network Rail, airports, train operators, ...
  - complaints as a proxy to health outcomes
  - adverse health effects at exposure levels lower than 65dB / 55dB
  - noise exposure from industry, construction, ...
  - non-acoustic modifying factors

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### A sound – health pathway representation



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### Indicator Criteria Availability | Affordability

- Complaint statistics available via LA's statutory duties to investigate + CIEH & LA's s voluntary reporting efforts
- Noise exposure data generated for the purposes of the Environmental Noise (England) Regulations 2006 (as amended)
- It covers 65 urban areas with a population in excess of 100,000 persons and a population density equal to or greater than 500 people per km2, together with geographical areas outside these urban areas in the vicinity of major roads, railways and airports.
- Costs for the purposes of the PHOF are minimal in relation to the overall cost.

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### 2015 Consultation

**Department of Health**

Consultation Hub Find Consultations We Asked, You Said, We Did

#### Refreshing the Public Health Outcomes Framework (2015)

**Overview**

The Public Health Outcomes Framework (PHOF) sets out a high-level overview of public health outcomes, at national and local level, supported by a broad set of indicators. The indicators cover the full spectrum of what is understood as public health and what can be measured at the moment.

The PHOF is used as a tool for local transparency and accountability, providing a means for benchmarking progress within each local authority and across authorities, and driving 'sector led' improvement where a local authority improves by learning from the experiences of others. Alongside the NHS Outcomes Framework and Adult Social Care Outcomes Framework, the PHOF reflects the Department of Health's focus on improving outcomes for people and communities, setting expectations for what the system as a whole wants to achieve.

When the PHOF was first published in 2012 there was a commitment not to make any changes for three years to allow it to become established during the transfer of public health responsibilities from the NHS to local authorities. Those three years are up and we need to make sure the PHOF is still as relevant and useful as possible. To do this the Department of Health and Public Health England are consulting on the PHOF indicator set, with a view to updating from April 2016.

**Contact**  
Public Health Policy and Strategy Unit  
020 7216 4850  
[PHOF.Refresh1213@dh.gov.uk](mailto:PHOF.Refresh1213@dh.gov.uk)

**Key Dates**  
**Start:** Closed  
Starts on 3 Sep 2015 to 2 Oct 2015

**Other Information**  
**Audience:**  
Youth groups,  
Community groups,  
Charities,  
GPs,  
Managers,  
Commissioners,  
Directors of Public Health.

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<https://consultations.dh.gov.uk/ph-outcomes-framework/phof-refresh-2015>

### 2015 consultation

- "Consequently the scope of the consultation includes*
- *consideration of: significant gaps in policy priorities, and proposals for a small number of indicators or sub-indicators;*
  - *indicators that no longer reflect a public health priority, duplicate an existing assurance mechanism, or are not sufficiently robust;*
  - *the extent to which the PHOF, the NHS Outcomes Framework and the Adult Social Care Outcomes Framework could be better aligned."*
- "DH will consider the responses to the consultation over the autumn and intend to publish our response by the end of the year. This will set out the changes to the Public Health Outcomes Framework from April 2016."*

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<https://consultations.dh.gov.uk/ph-outcomes-framework/phof-refresh-2015>

### Discussion

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