


Noise, Sound & Acoustics

Overview and
Current Policy Challenges

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Overview Film



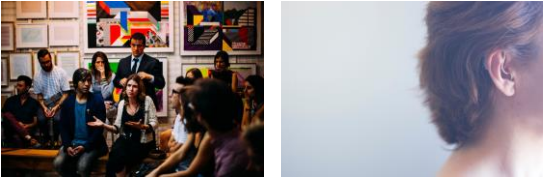
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Acoustics Affects Us Everyday




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First seen through Acoustics



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Acoustics in this Room

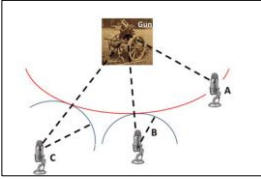


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Acoustics in World War I



In this diagram, the sound of the gun reaches point A first, followed by B and C. Using geometry, sound rangers could use the differences in how fast that sound reaches each point to determine the location of the gun.

ADAPTED BY B. BROOKSHIRE FROM "THE WORLD OF SOUND", SIR WILLIAM BRAGG, DOVER, 1968. WITH IMAGES FROM WWW.GOPHOTO.COM/PHOTOS AND EVAN AMOS, WIKIMEDIA COMMONS

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Acoustics in World War II

Aircraft detection before radar, 1917-1940



Flyinglegends.com

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Management of Noise

Noise is unwanted Sound

or

Sound that causes a perceived or unperceived adverse effect

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Different from Air Pollution

- What is your view of the concentration of Nitrogen Dioxide in this room?
- What is your view about the acoustics?
- Can you hear me clearly?



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Many of the Effects are Subjective

One person's music is another person's noise.



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Experiment

What is the **loudest** sound or noise you have experienced

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Experiment

What is the **most annoying** noise you have experienced


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Not just the Level of Noise that affects us

- But also
 - Its character
 - Frequency content
 - Continuous or intermittent
 - Its duration
 - Time of day it occurs
 - Day of the week it occurs
 - What we are doing when it occurs

Noise is Challenging to Manage Effectively

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Noise / Sound Management is a Devolved Issue




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Noise / Sound Management is a Devolved Issue

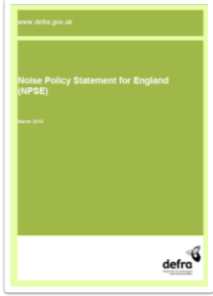


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Noise Policy Statement for England

- 2 pages of policy
- 4 pages of explanatory notes



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Noise Policy Statement for England

Noise Policy Vision

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

Noise Policy Aims

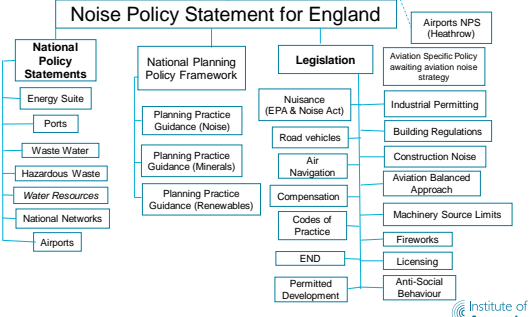
Through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development:

- 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.

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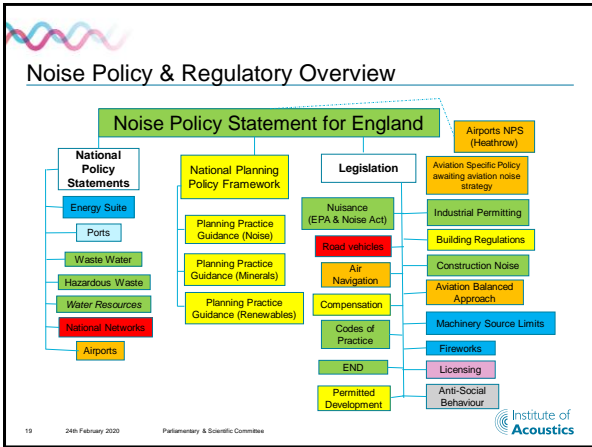
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Noise Policy & Regulatory Overview



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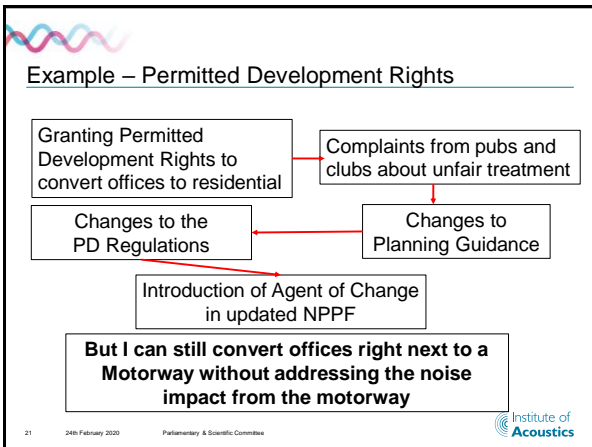
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Policy Challenge

- Noise Management responsibility spread over at least 8 departments or parts of departments
- Yet only **TWO** trained acousticians in Whitehall
- For most officials - Noise only a small part of their portfolio
- This can lead to
 - Uneven Implementation of Noise Policy
 - Incomplete Management of Noise
 - Unintended Consequences

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Example – On-shore Windfarms

- Much concern about noise
- Extant Government Guidance arguably out of date (1997)
- Technically complex
- IOA assisted
- Far from Straightforward




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Example – National Physical Laboratory



- Airborne Sound Department was closed
- Can no longer calibrate sound levels meters in the UK

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Example – Health & Safety Executive

Noise & Vibration technical resources cut by 50%


In 2015/16 Occupational Deafness was the highest Occupational disease by Employer Liability Insurance Claim

In 2018 – Hand Arm Vibration Syndrome accounted for 49% of ill health RIDDOR reports

Noise & Vibration specialist inspector resources cut by around 45%





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And coming up

- Replacing Gas Boilers
- With Air Source Heat Pumps

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Proposed Office of Environmental Protection

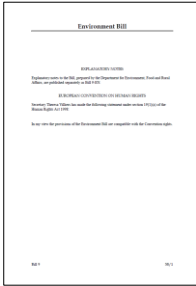
22 Principal objective of the OEP and exercise of its functions

(1) The principal objective of the OEP in exercising its functions is to contribute to—

- (a) environmental protection; and
- (b) the improvement of the natural environment.

(3) The priority areas are—

- (a) air quality;
- (b) water;
- (c) biodiversity;
- (d) resource efficiency and waste reduction.



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And what about these



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Possible way forward

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graph TD; A[Government Departments with responsibility for some areas of Noise Management] --> B[All Party Parliamentary Group on Sound and Noise Management]; B --> C[There are members of the Institute of Acoustics who work in all these areas];
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Government Departments with responsibility for some areas of Noise Management

All Party Parliamentary Group on Sound and Noise Management

There are members of the Institute of Acoustics who work in all these areas

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Thank You

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