

# Soundscape, Quiet Areas & Health – a national and local challenge

*Brighton Soundscape Workshop, April 2011*



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- ▶ Introduction
- ▶ 1. Quiet Areas, Soundscape and Health
- ▶ 2. National and Local Challenge
- ▶ 3. Current Approach to Quiet Area Policy in UK
- ▶ 4. Noise Policy, Soundscape and Quiet Areas – is there a way forward together?
- ▶ The challenges ahead
- ▶ Workshop: Practical examples of local initiatives

Part 1

*Quiet Areas, Soundscape and Health*



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# The demand for quiet areas – what the public thinks

## The importance of quiet areas to UK residents (from ICM poll, 2009)

	London	UK wide
% of people that think existing areas of quiet need protecting	62%	91%
% of people who regularly visit quiet areas	40%	31%
% of people who visit a local park to find quiet	73%	40%

# The demand for quiet areas – what the public thinks

The importance of quiet areas to Amsterdam citizens  
Dutch Ministry of Housing, Spatial Planning and Environment  
(Van den Berg, 2008))

	London	UK wide	Amsterdam
% of people that think existing areas of quiet should be better protected	62%	91%	50%
% of people who regularly visit quiet places (i.e. at least once a week)	40%	31%	50%
% of people who visit a local quiet place to relax/recover, walk or cycle etc	73%	40%	75%

# From “cost of noise” to “value of quiet areas”

- ▶ Predominant focus of existing information concerns the impacts of high noise levels on:
  - **Amenity** e.g. adverse impact on quality of life, well-being, property prices etc
  - **Health** e.g. hearing impairment, mental health, cardiovascular effects, sleep disturbance, cognitive development etc
  - **Productivity** e.g. cognitive effects in children, concentration, creativity, reduced work productivity through tiredness etc
  - **Ecosystems** e.g. effects on animal health (including meat quality), breeding patterns, communication, foraging etc
- ▶ Concern that concentrating efforts towards managing noise hot-spots may result in a “spreading” of noise into areas and times where levels are currently low
- ▶ Almost all existing valuation work looks at costs & dis-benefits of high noise levels, not benefits of low noise levels or benefits of quiet or benefits of good quality acoustic environment / good quality soundscape
- ▶ Identification and valuation of these benefits may provide evidence to support the protection and enhancement of the acoustic environment

# The value of quiet areas – Defra research

- ▶ Defra-funded Research Project “*The Economic Value of Quiet Areas*” [URS/Scott-Wilson (March/April 2011)]
- ▶ **Objectives**
  - To identify, quantify and monetise (as far as possible) the benefits that people derive from quiet areas
  - To develop a ‘framework’ or ‘tool’ that can be systematically and consistently applied by policymakers to assess the benefits that people derive from quiet areas or conversely, the costs of loss of access to these areas.
- ▶ **Key Tasks**
  - Conduct a literature review to identify the benefits that quiet areas deliver
  - Produce a report which proposes an approach for quantifying the benefits of quiet areas
  - Produce a case study using the methodology and identify sensitivities, uncertainties and potential future research



# The benefits of a good acoustic environment / quiet areas

- ▶ Effects on Amenity
  - Reduced annoyance, Relaxation/Recreation, Spiritual
- ▶ Health benefits
  - Mental, Beneficial impacts on well-being, Psychological, Physiological, Psychological restoration
- ▶ Productivity
  - Peaceful sleep, Creativity, Problem Solving, Cognitive Development
- ▶ Ecosystems & Environmental
  - Biodiversity – habitats, foraging, communication





# The benefits of a good acoustic environment

## - health and amenity benefits

- ▶ Access to quiet indoor and outdoor areas reduces annoyance, increases undisturbed daytime relaxation, improves sleep, reduces stress related psychosocial symptoms and contributes to physiological and psychological wellbeing (Gidlof-Gunnarsson & Öhrström, 2007)
- ▶ Access to tranquil nature areas is stress reducing and has positive effects on physical and mental health – green exercise (New Economics Foundation, 2005)
- ▶ Urban open green spaces can be an oasis of calm and tranquility and the more often a person visits the less often they will report stress related illnesses (Grahn & Stigsdotter, 2003)
- ▶ Access to good quality green space provides health benefits ranging from reduced anxiety to increased physical activity, resulting in a lower risk for strokes, heart disease, diabetes, obesity and certain types of cancer (CABE, 2010)

# The benefits of a good acoustic environment

## - health and amenity benefits

- ▶ Access to a quiet façade of a dwelling reduces noise annoyance by 10-20% (Berglund, Kihlman, Kropp & Öhrström, 2004)
- ▶ Access to a high-quality ‘quiet’ courtyard is associated with less noise annoyance (Gidolf-Gunnarsson & Öhrström, 2010)
- ▶ Percentage of time with noise disturbance (and duration of quiet period) is generally more important than actual noise level (van den Berg & van den Berg, 2006)
- ▶ Availability of restorative environments associated with lower annoyance in children exposed to aircraft noise (Gunnarsson, Berglund, Haines, van Kamp, Lopex Barrio, Nilsson & Stansfeld, 2003)
- ▶ Quiet time intervention in acute care hospital ward provides therapeutic benefits and improves organisational functioning (Gardner et al, 2010)

# The benefits of a good acoustic environment

## - spiritual benefits

- ▶ Quiet/silent retreats offered by many beliefs
- ▶ Churchyards, temples, burial grounds, etc. used for contemplation and meditation
- ▶ The Quiet Garden Movement and Trust
  - Provides a network of quiet gardens for prayer, stillness, reflection and appreciation of nature
  - 300 Quiet Gardens worldwide
  - Including inner city locations



# The benefits of a good acoustic environment

## - wider contribution to the quality of urban open space

- ▶ Many direct and implied references to quietness in open space literature e.g. :
  - “Quiet and enjoyable” among factors for high scoring streets from pedestrian perspective (CABE, 2005)
  - People visit parks to “relax and think” (25%) or for “peace and quiet” (21%) (GreenSpace, 2007)
  - Green spaces offer “relaxation, recreation, refreshment and relief” which are in short supply in cities (CABE, 2009)



## Part 2

# *National and Local Challenge*



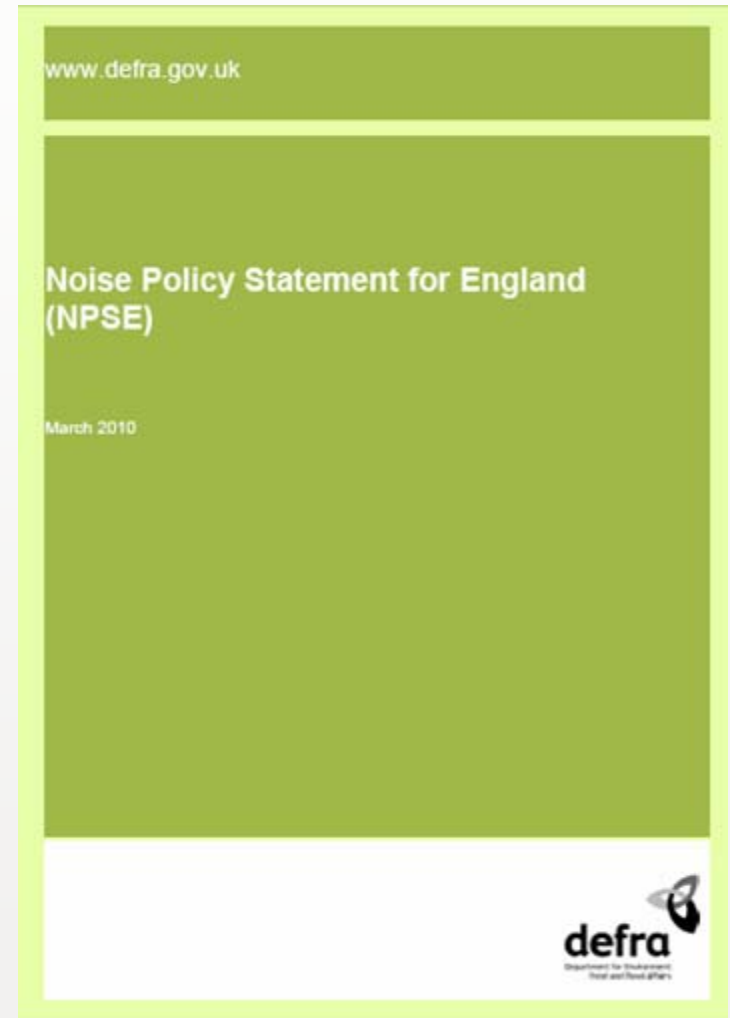
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- ▶ AIM: “To avoid, prevent or reduce on a prioritised basis the harmful effects, including annoyance, due to exposure to environmental noise”
- ▶ In order to deliver this aim, one of the actions to be implemented using Noise Action Plans is: “preserving environmental noise quality where it is good”
- ▶ Noise Action Plans for agglomerations should include “any measures to preserve quiet areas”
- ▶ Note that the overarching aim is about preventing harm from high levels of noise whilst one of the underlying actions is to preserve good acoustic environments yet Noise Action Plans are only required to try to protect quiet areas.
- ▶ The END provides an unclear policy basis for the promotion of soundscape quality and protection of quiet areas.

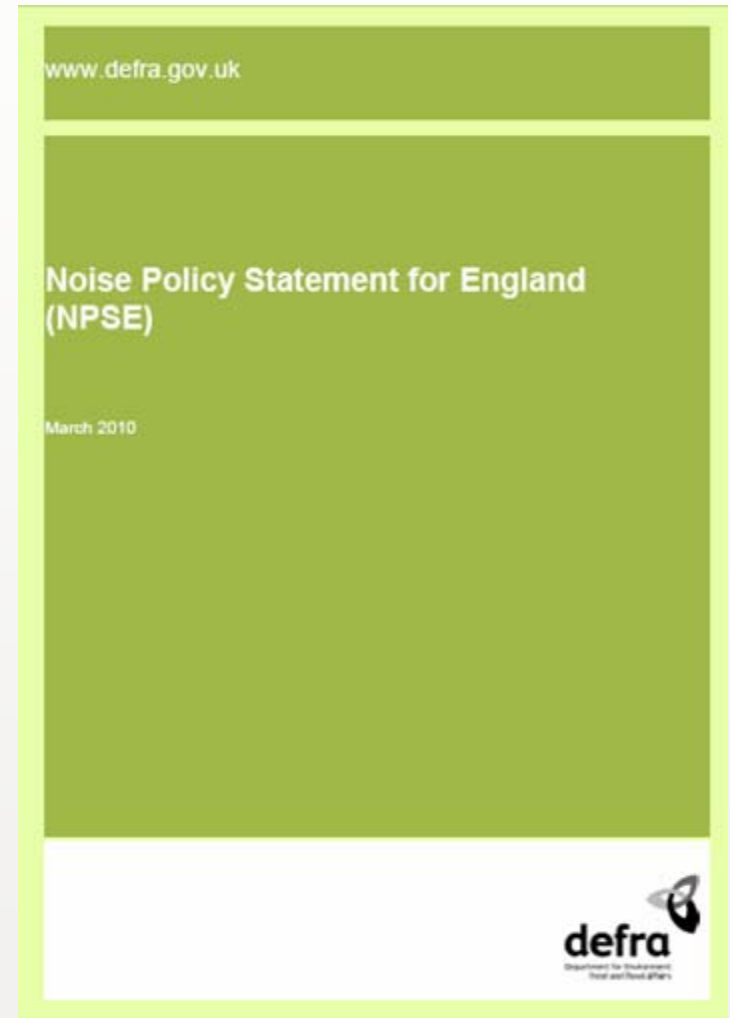
# NPSE – Noise Policy Statement for England

- ▶ This lack of clarity as to the underlying purpose of noise policy has been addressed, at least in England, by the publication of the Noise Policy Statement for England (March 2010)
- ▶ “Official policy statements from Whitehall tend to be bland and full of sincere-sounding generalities, but just now and then something important, perhaps even revolutionary can be glimpsed in their pages. So it is with the latest paper from Defra, the Noise Policy Statement for England.”
- ▶ (The Independent, 17 March 2010)



# NPSE – long term vision for noise policy

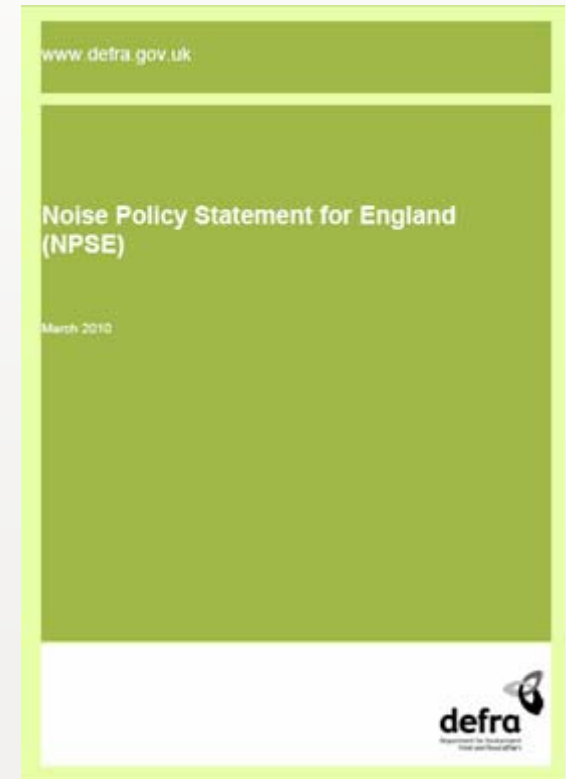
- ▶ NPSE sets out the long term vision of Government Noise Policy in England which is to:
- ▶ “Promote good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development”





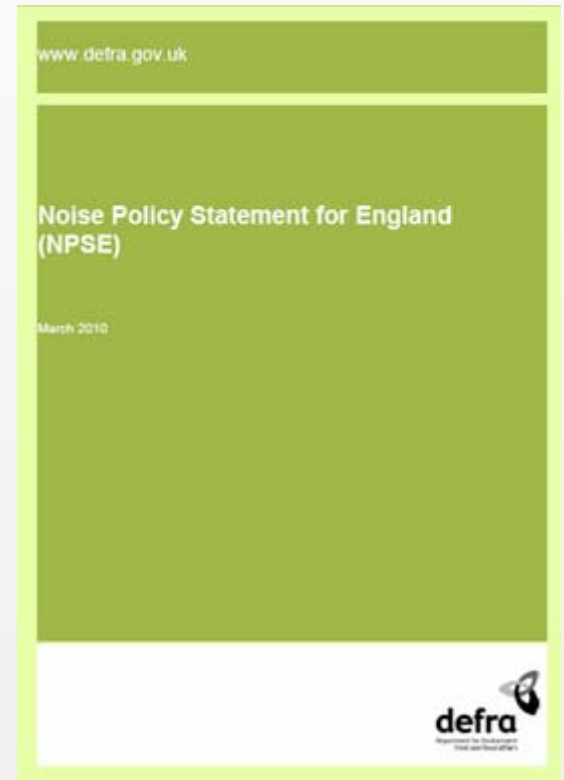
# NPSE – three aims for noise policy

- ▶ NPSE sets out three aims for Government Noise Policy:
- ▶ “Avoid significant adverse impacts on health and quality of life from environmental, neighbour and neighbourhood noise”
- ▶ “Mitigate and minimise adverse impacts on health and quality of life from environmental, neighbour and neighbourhood noise”
- ▶ “Where possible contribute to the improvement of health and quality of life through the effective management and control of environmental, neighbour and neighbourhood noise
- ▶ These three aims are to be addressed “within the context of Government policy on sustainable development”



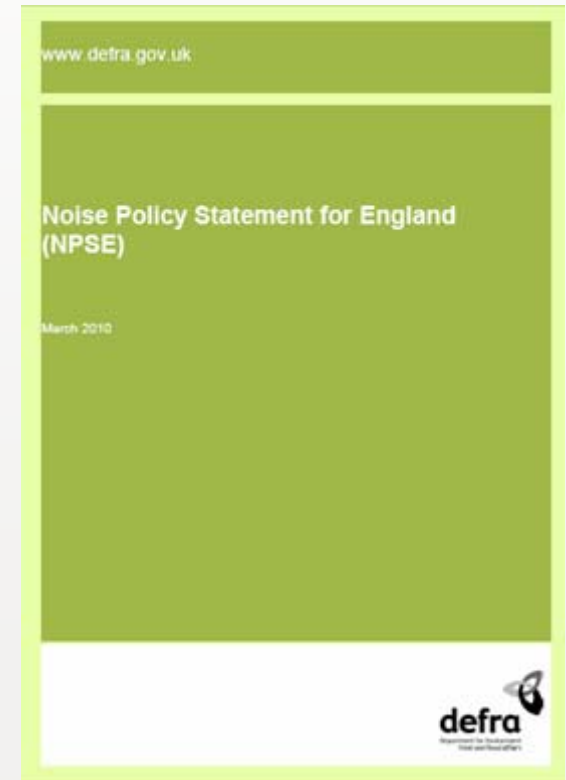
# NPSE – who should implement the NPSE?

- ▶ All tiers of Government, public authorities and other bodies should have regard to NPSE - at national and local level, whenever any policy is being developed or decision is being made that could directly or indirectly affect the noise environment”
- ▶ i.e. EVERYONE!



# NPSE – third aim provides local opportunities

- ▶ Third aim of NPSE:
- ▶ “Where possible contribute to the improvement of health and quality of life through the effective management and control of environmental, neighbour and neighbourhood noise”
- ▶ This aim seeks, where possible, positively to improve health and quality of life through the pro-active management of noise while also taking into account the guiding principles of sustainable development, recognising that there will be opportunities for such measures to be taken and that they will deliver potential benefits to society. The protection of quiet places and quiet times as well as the enhancement of the acoustic environment will assist with delivering this aim.”



## Part 3

# *Current approach to Quiet Area policy in England*



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# What do the Regulations currently require in England?

## Environmental Noise (England) Regulations 2006 (as amended)

### Regulation 13 – Identification of quiet areas

#### (1) The Secretary of State must identify -

- ▶ (a) quiet areas in first round agglomerations: and
- ▶ (b) quiet areas in agglomerations,

in such published form as the Secretary of State considers appropriate

#### ▶ (2) The Secretary of State must:

- ▶ (a) keep the identification of quiet areas in first round agglomerations under review ; and
- ▶ (b) make revisions where the Secretary of State considers it appropriate

# What do the Regulations require...continued

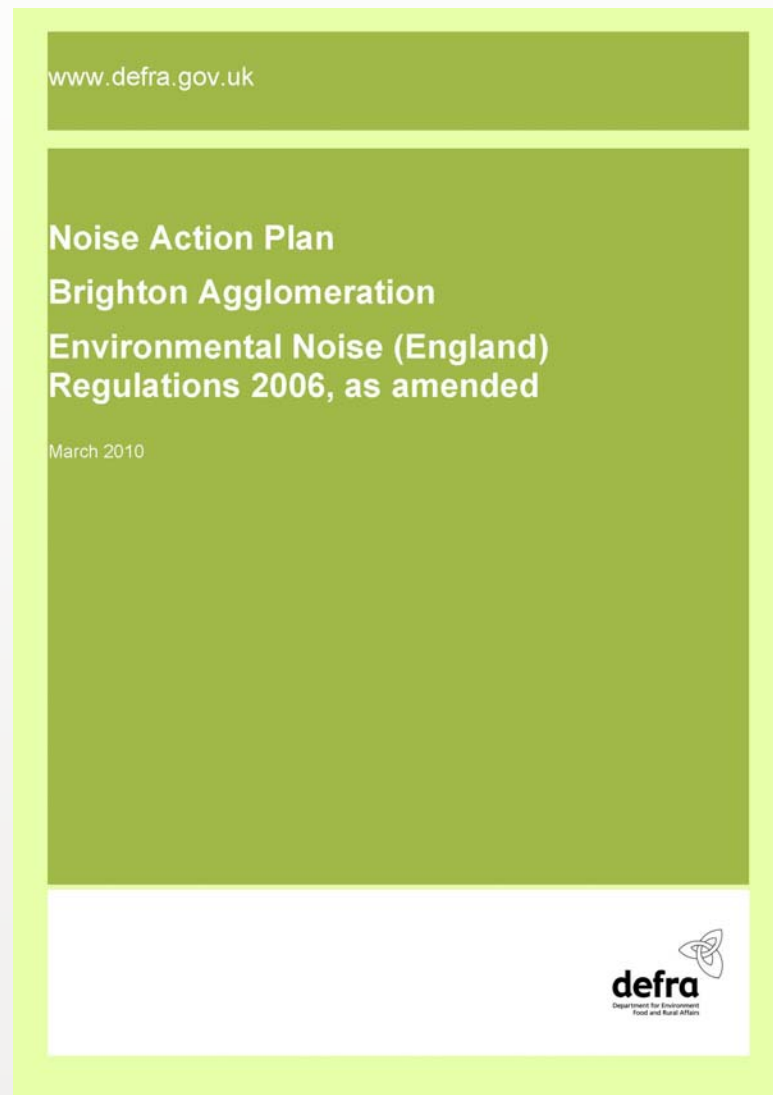
## Regulation 15 - Action Plans General Requirements

- (1) Any action plan drawn up or revised under this part must:
- (c) **Aim to protect quiet areas** in first round agglomerations and agglomerations **against an increase in noise**



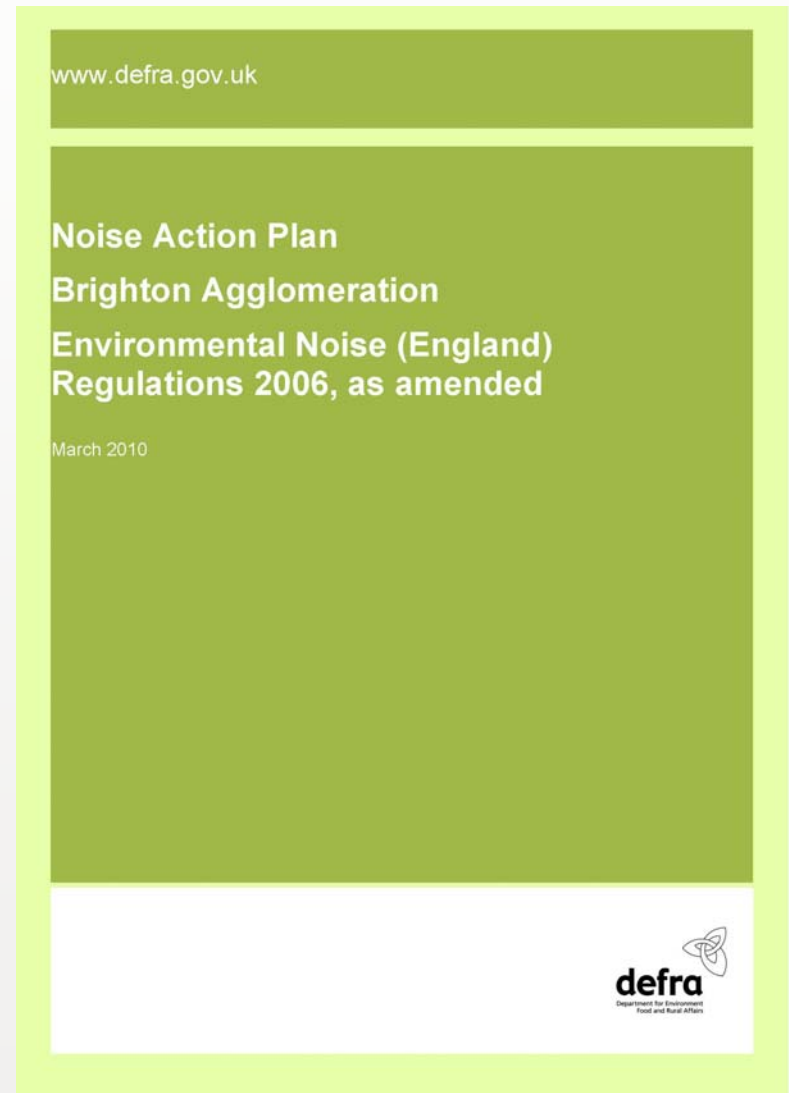
# Noise Action Plans

- ▶ Noise Action Plans were adopted by the Secretary of State, Hilary Benn on the 15<sup>th</sup> March 2010
- ▶ In England there are currently 25 Noise Action Plans covering:
  - Major Roads (outside agglomerations)
  - Major Railways (outside agglomerations)
  - 23 Agglomerations Noise Action Plans, including Brighton Agglomeration.
- ▶ Plus Airport Noise Action Plans will also be produced by Major Airports and airports such as Shoreham (Brighton City) where the relevant noise contour affects the agglomeration.



# Quiet Areas Process (Agglomeration Noise Action Plans)

- ▶ **Part E (Brighton Agglomeration) Noise Action Plan**
- ▶ Competent Authority (Secretary of State) will liaise with LAs within the agglomeration
- ▶ Take account of available local information on open spaces and results of strategic noise mapping
- ▶ Determine whether any open space should be formally identified as a Quiet Area
- ▶ LAs then expected to adopt policies to manage the noise environment so as to protect the quietness and avoid increases in noise from transport and industrial sources





# Quiet Area identification - criteria

- ▶ Secretary of State will only identify as Quiet Areas those open spaces which provide **significant and important benefits** because they are **quiet**
- ▶ It is expected that such open spaces will **already be regarded as special** and that
- ▶ they may already be managed to sustain their quietness.



## Recommended short term procedure:

- ▶ Noise Filter: 55 dB  $L_{day}$
- ▶ Minimum area filter: 9 hectares
- ▶ Minimum area of quiet: e.g. 4.5 hectares to be  $< 55$  dB  $L_{day}$

## Recommended long term procedure:

- ✓ Ascertain views of users and other stakeholders
- ✓ Noise level considered “worthy of preservation”
- ✓ Possible noise level and min area filter
- ✓ Involvement of “relevant authorities”

## Part 4

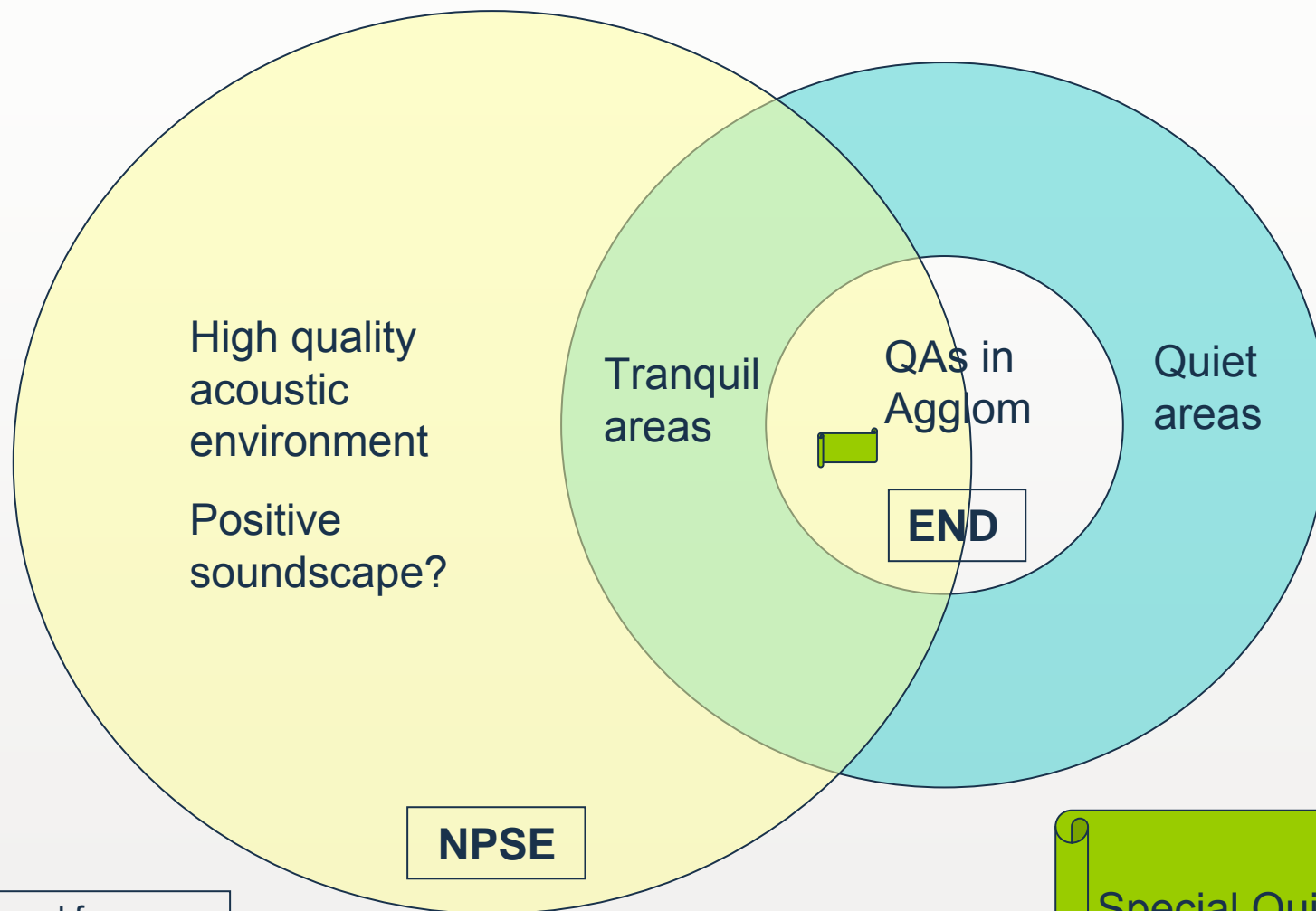
# *Noise Policy, Soundscape & Quiet Areas - is there a way forward together?*



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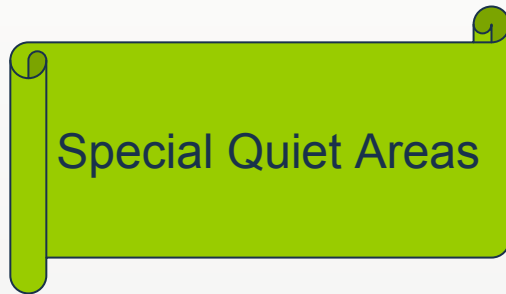
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# Possible relationship between Soundscape, Quiet Areas, END and NPSE



Developed from a discussion with Hilary Notley, Defra

Special Quiet Areas



## Formal identification of Quiet Areas

Aim to protect quiet areas in the agglomeration...from an increase in noise due to transport and industrial sources

Such spaces will probably already be regarded as “special” and must provide “significant and important benefits because they are quiet”

May already be “managed to sustain their quietness”

Management of quiet areas should be integrated with open space planning and wider policies for securing sustainable development

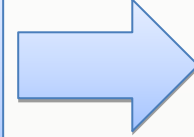
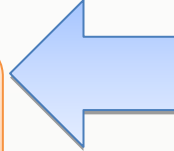
# Big Society approach to the implementation of the Noise Policy Statement for England: Quiet Areas/Tranquility

Natural Environment White Paper/  
Public Health White Paper

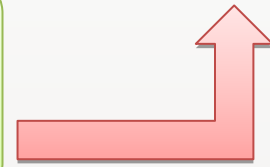
EPUK Led Partnership (LA; NAS; Univ; Defra etc)



Big Society/  
Localism/  
Well Being



Big Society Champions



Noise Policy Statement for England (NPSE)  
- implementation



Quality of Acoustic Environment/  
Soundscape/  
Tranquility



To deliver the wider well being, public health and sust. dev agenda



Quiet Areas in agglomerations

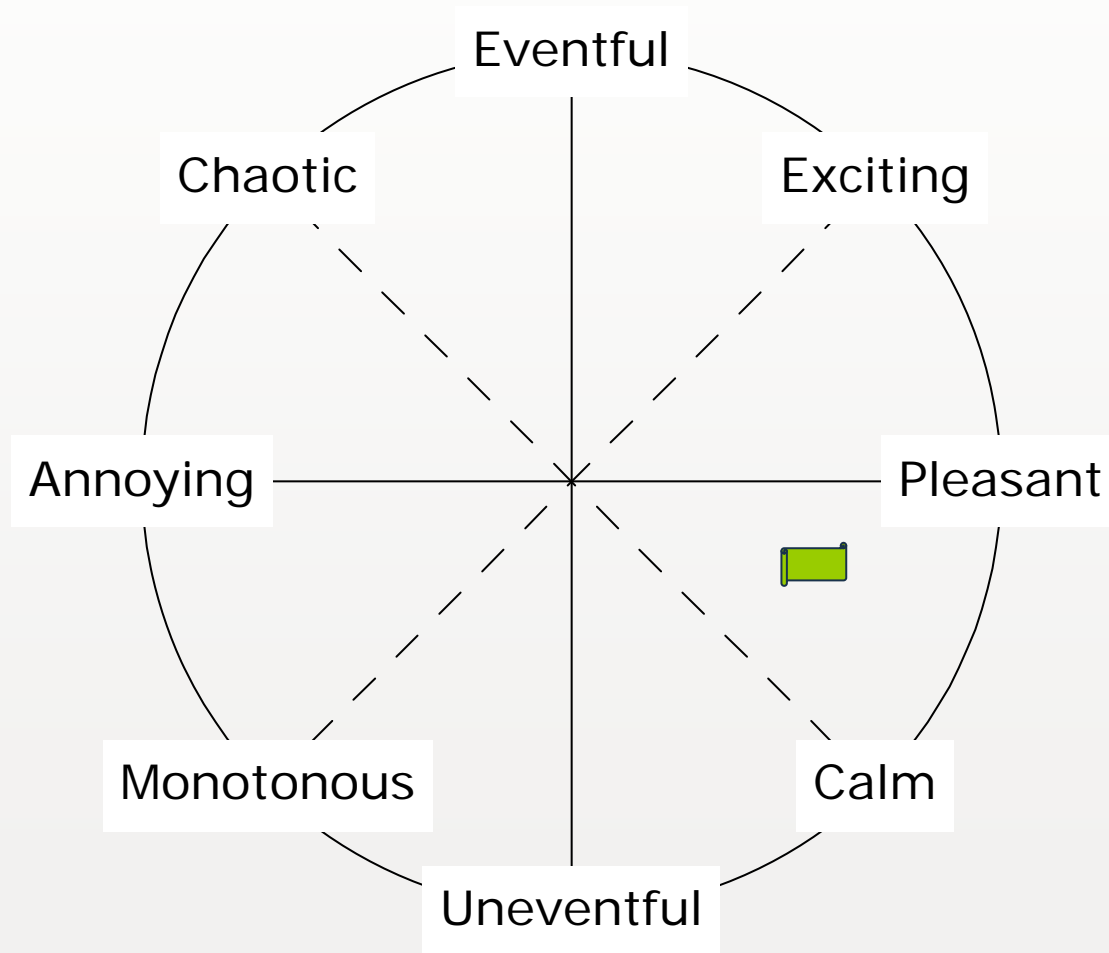


To deliver requirements of END

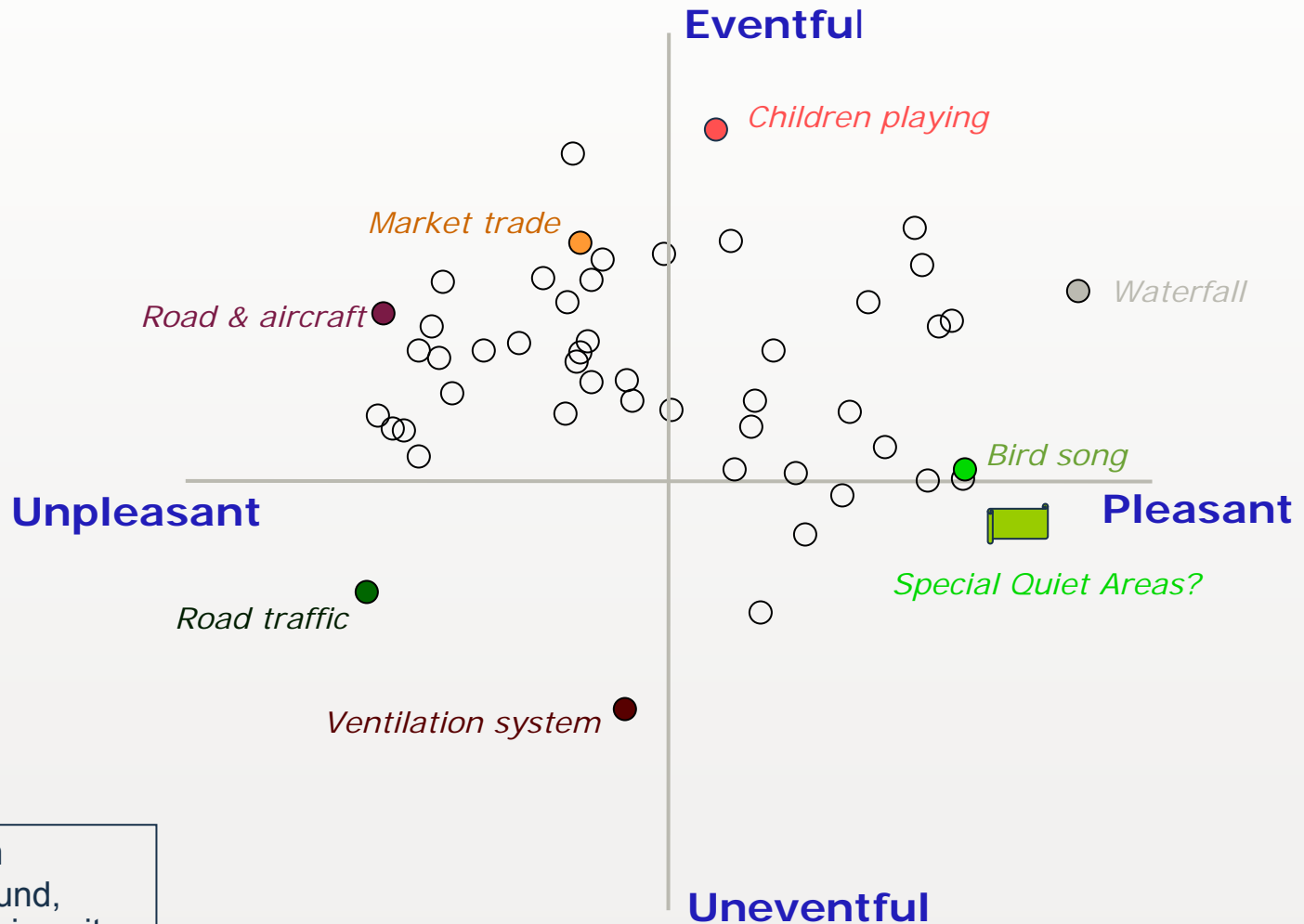
Funding: Government Funding for Big Society Initiatives?

Developed from a discussion with Tim Dice, Defra

# Can soundscape approach help to find special quiet areas?



# Perceptual Dimensions of Soundscapes



Adapted from  
Birgitta Berglund,  
Stockholm University



- ▶ **“The great challenge is not to decrease the adverse health effects (in noisy areas), but to create good & health-promoting soundscapes!”**
- ▶ Birgitta Berglund, *ENNAH Conference, London, 17 February 2011*
- ▶ *Department of Psychology, Stockholm University*
- ▶ *Institute of Environmental Medicine, Karolinska Institute*
- ▶ **“ The immediate challenge is to harness our knowledge and understanding of places with good quality acoustic environments (soundscapes) and to motivate local people and relevant authorities to respect and protect such special places. We could begin with the identification and protection of any special Quiet Areas in our biggest cities as required by the END!”**

*Thank you for listening!*

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Workshop

*Practical examples of local initiatives*



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## Bristol City Council

- SILENCE project – EU funded project to assess methods of reducing transport noise in urban areas
- Their work has included:
  - Dedicated interactive “Citizenscape” website
  - Interactive maps allowing residents to nominate quiet areas
  - Noise themed blogs drafted by Council Officers and discussion threads where members of the public are invited to contribute
  - Webcasts to facilitate discussions
  - Defra Quiet Area Pilot Study

## Westminster City Council

- Their work has included:
  - Development of a Westminster Noise Strategy
  - Associated and underpinning research included:
    - Noise Attitudes Survey
    - Noise Measurement Survey
    - Aircraft Noise Study
    - Open Spaces Study – considered tranquillity

## City of London Corporation

- Their work has included:
  - Study considering options for the development of the concept of Quiet Zones
  - Attitudes Survey in open spaces
  - Noise Measurement Survey (primarily in open spaces)
  - Quietening Open Spaces Study
  - Development of a City Sound Walk
  - Bespoke site specific open space case studies considering acoustic (and other) issues

# Examples of practical implementation

## Brighton & Hove City Council

- Their work has included:
  - Hosting Soundscape Workshop, April 2011
  - + ..... ?





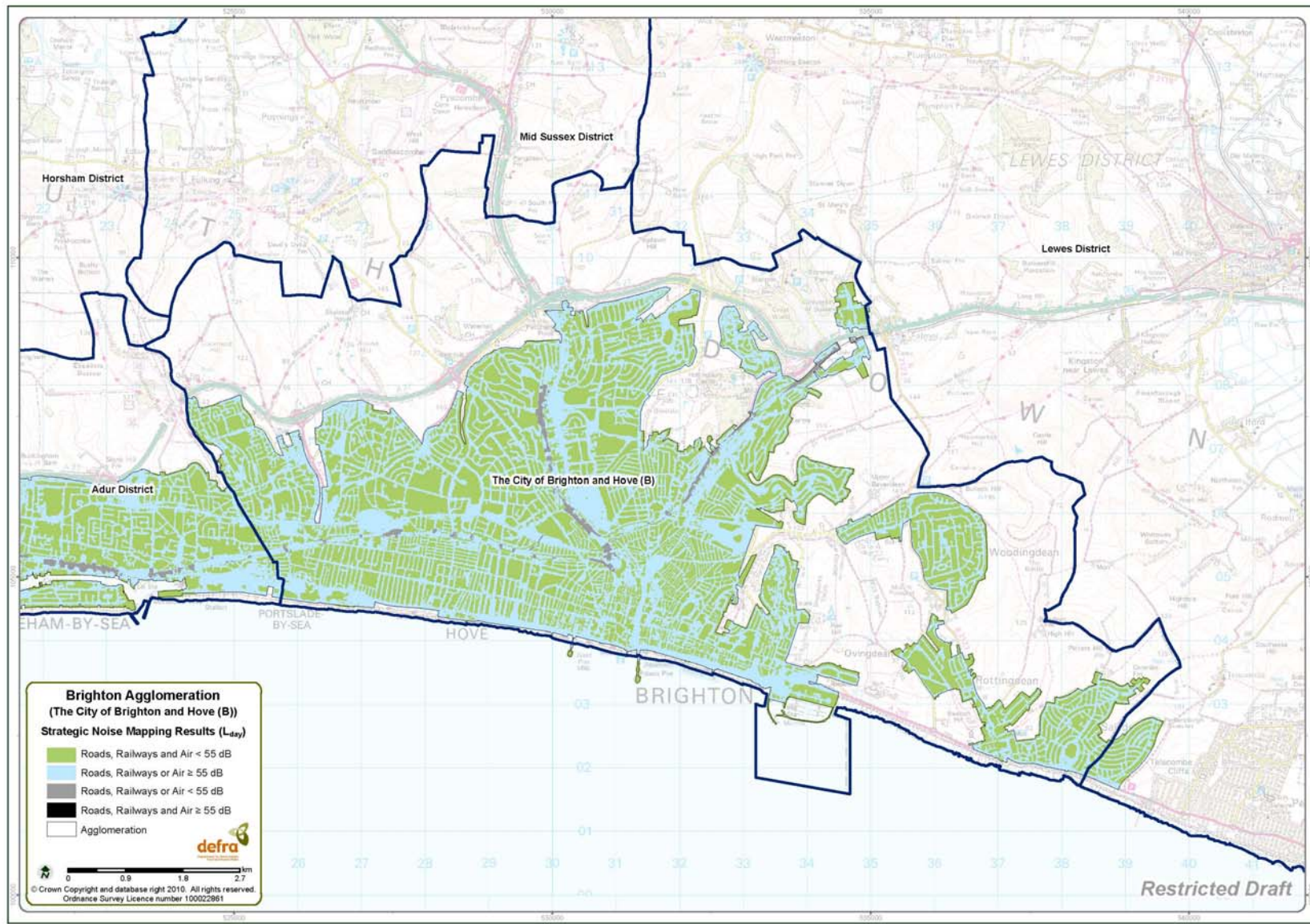
# Brighton agglomeration – First Priority Locations





# Brighton agglomeration

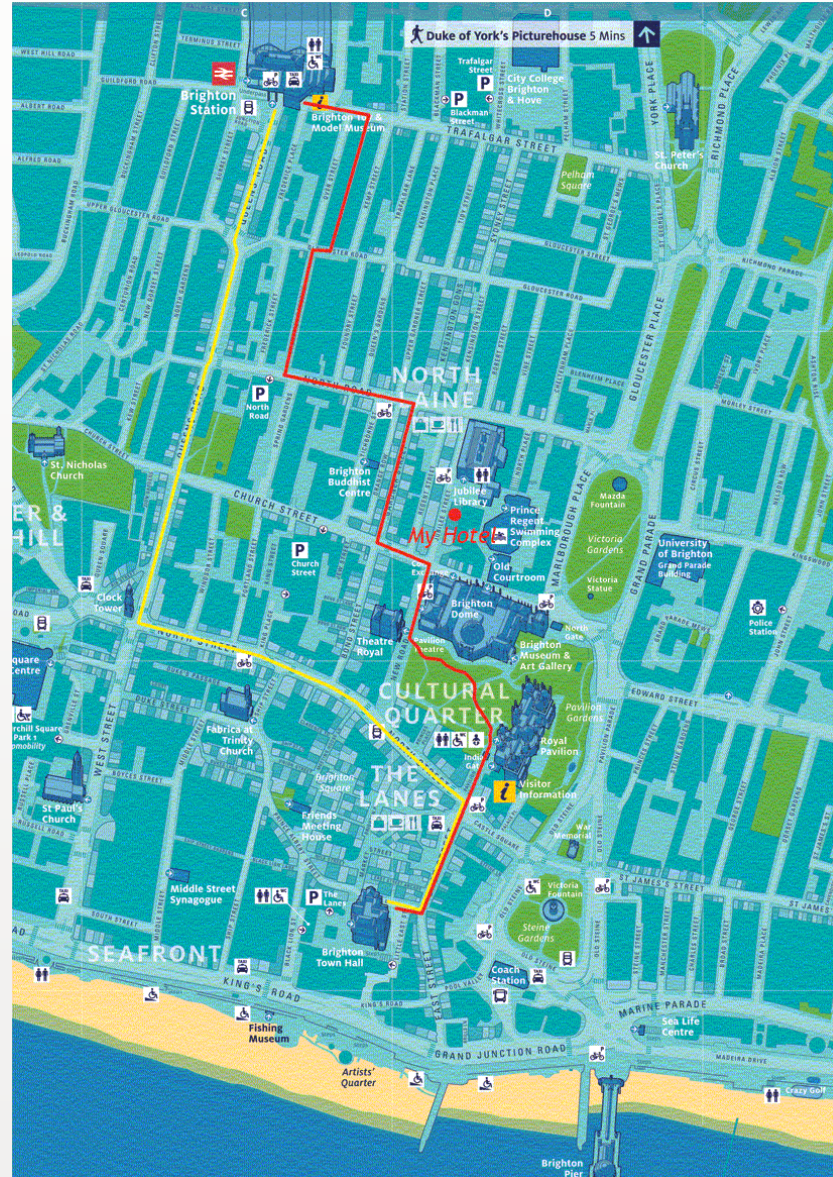
– areas that may be quiet according to the noise maps





# Brighton agglomeration

## – walk from station to Town Hall



# Royal Pavillion Gardens, Brighton



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# Royal Pavillion Gardens, Brighton (from yelp.co.uk)

- ▶ “I think that this is a very nice area of the city. As the road behind the gardens has been pedestrianised and there are natural high building barriers around the area, **you get insulated from the hustle and bustle of the traffic in the city.** Yeah, you will not be immune to the legion of tourists in the summer ...”
- ▶ “I love this park. No matter what time of day you trek through here, you can almost guarantee you're going to be witness to something rather interesting, whether it be people throwing flaming sticks around their heads, someone busking on the guitar, or .... Even when such frivolous activity isn't on-going, you're still **bound to enjoy the delightful beauty and peaceful atmosphere this park has to offer.**”
- ▶ **“The website for the Royal Pavillion Gardens claims it is "an oasis of calm" in the middle of a bustling city** which has recently been restored to its Regency glory (the garden that is, not the city unfortunately). It always seems teeming with people. Whenever I do pass through I am surrounded by groups of tourists roaming in packs, a conglomerate of mothers and pushchairs and.... But that is not a complaint by any means. It is indeed a beautiful setting in the middle of a very busy area.





# Six questions to discuss, approx 10 mins each

- ▶ 1. Please think about the situation in your own country. How could soundscape approaches better contribute to the current EU action on environmental noise and ‘quiet areas’?
- ▶ 2. Now think about the situation in your own local authority or the area where you live. In what ways could soundscape approaches better contribute to the management of parks and open spaces?
- ▶ 3. How could soundscape approaches better relate to the wider policy agenda of improving public health and well-being and achieving sustainable development?
- ▶ 4. What further research is needed in order to encourage greater uptake of soundscape approaches at the local, national and international level?
- ▶ 5. How can local people and local authorities be encouraged to get more involved in implementing soundscape approaches?
- ▶ 6. Are there any other soundscape related topics that you wish had been covered at this conference?



*Thank you for listening!*

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