

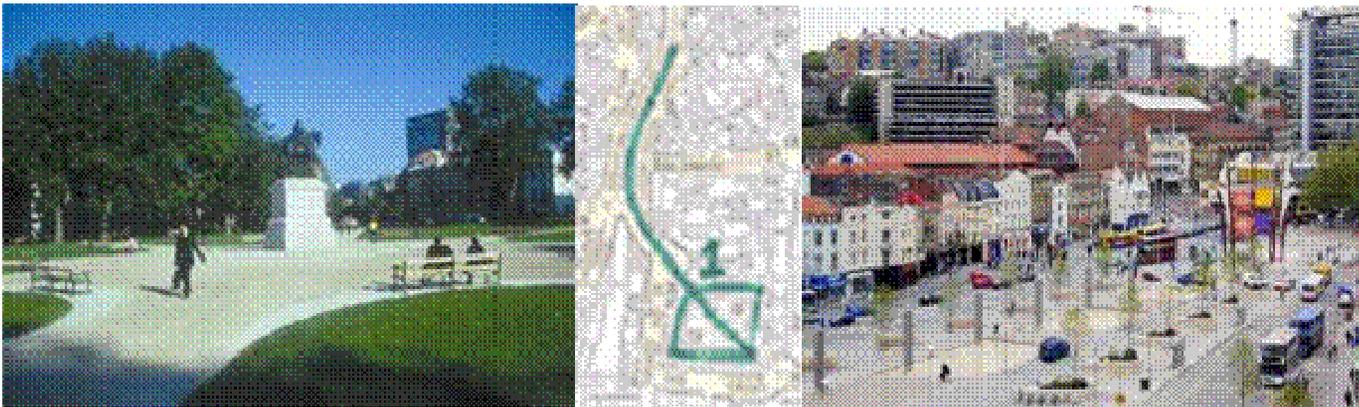


THE SOUNDSCAPE APPROACH

Pilot study in Bristol



- Queen Square to the Centre

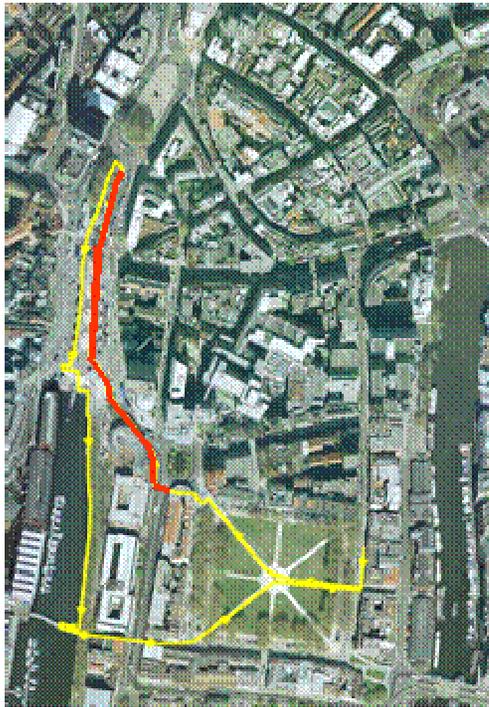


- Soundwalks carried out
 - 17-21 May 2006
 - The soundwalks started on Queen square, then veered towards The Centre, went along the waterfront before coming back to Queen Square.

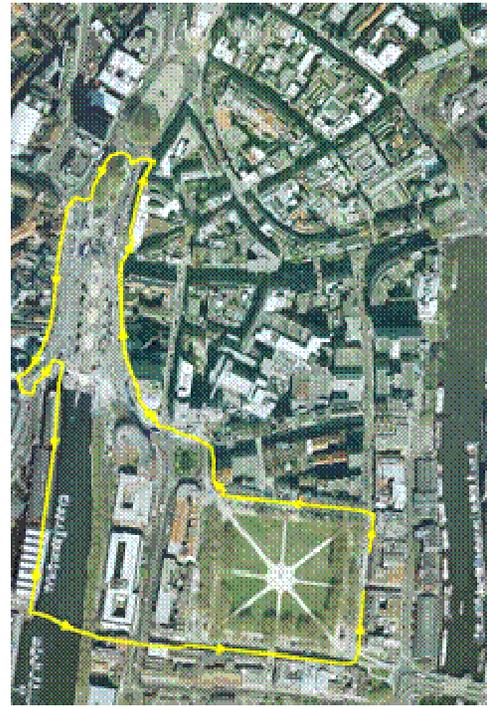


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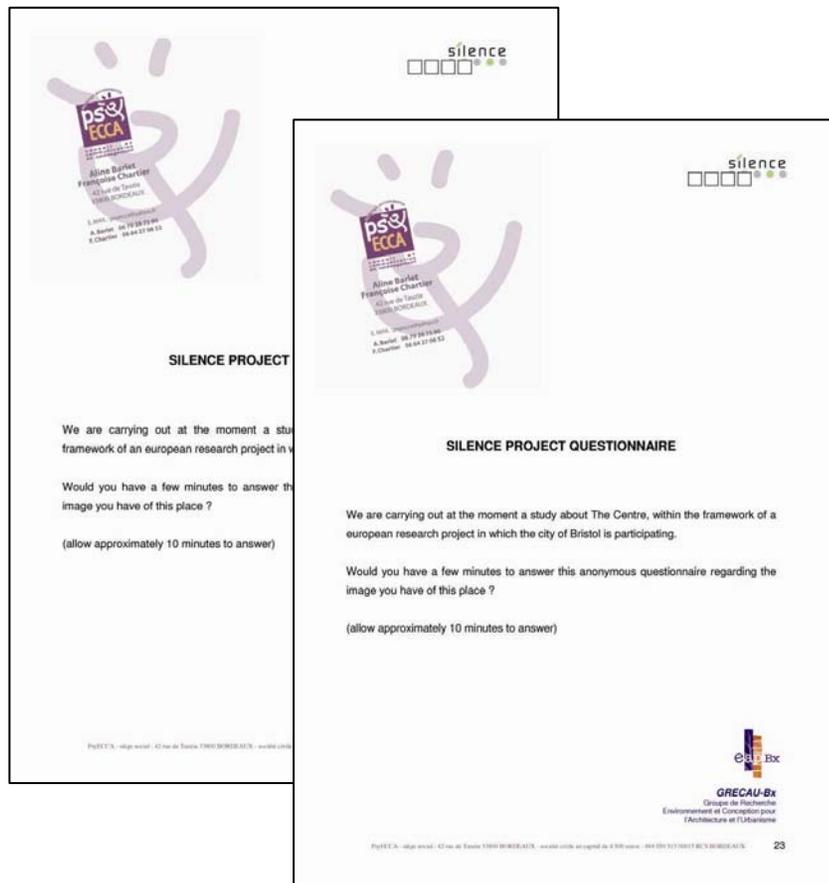
A



B



- Citizen surveys carried out (18-20 May 2006)



45 questionnaires (in English) were completed for each site (The Centre and Queen Square).

The full results are available on the *Listen to your city!* CD-Rom - Full report: Soundscape approach as a tool for urban design ([PDF - Part 2](#))





Presentation of the site

- Location of the site in the town -Queen Square:
 - the largest Georgian square in England;
 - very popular with pedestrians;
 - used for a number of public events.
 - primarily an office location, busy with pedestrians at the beginning and end of the working day and at lunch time



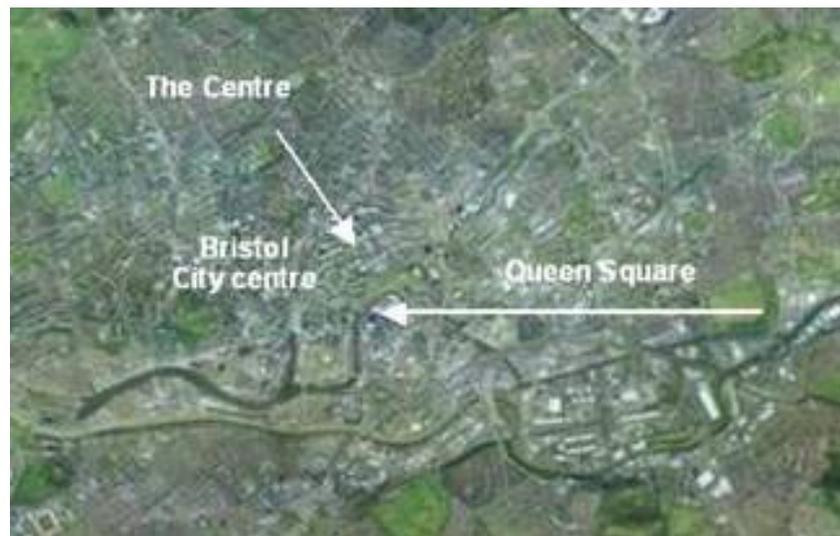


Presentation of the site

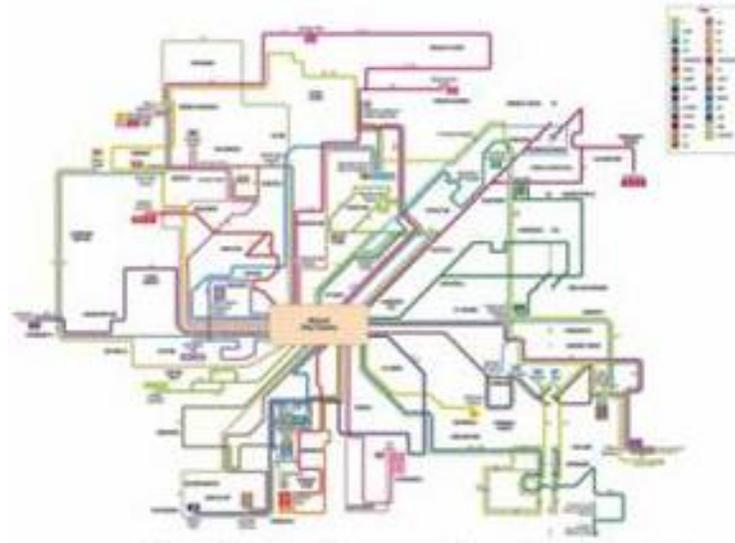
- Location of the site in the town – ‘The Centre’:
 - a public area near the water front of Bristol’s Floating Harbour;
 - remodelled from a 4-lane roundabout to be a more pedestrian-friendly area, with much more public space for pedestrians with the pools and flowerbeds;
 - shops on both sides, busy until gone midnight.



- Location of the site in the town
 - The two sites are in the town centre



- Access to the site
 - The Centre is served by all the buses.





Description of the site – Queen Square

- Volumetric analysis
 - urban square with a large central lawn;
 - peripheral traffic on cobbled streets;
 - wide sidewalks;
 - small private court yards in front of the buildings;
 - to have access to The Centre, Prince street, which is a wide avenue with a lot of traffic, has to be crossed.



Description of the site – Queen Square

- Buildings / Vegetation / Surface material / Urban furniture



- Volumetric analysis
 - The Centre has a very wide avenue, rather like a promenade, with two sidewalks lining a dual-carriage-way and a large central promenade with fountains.



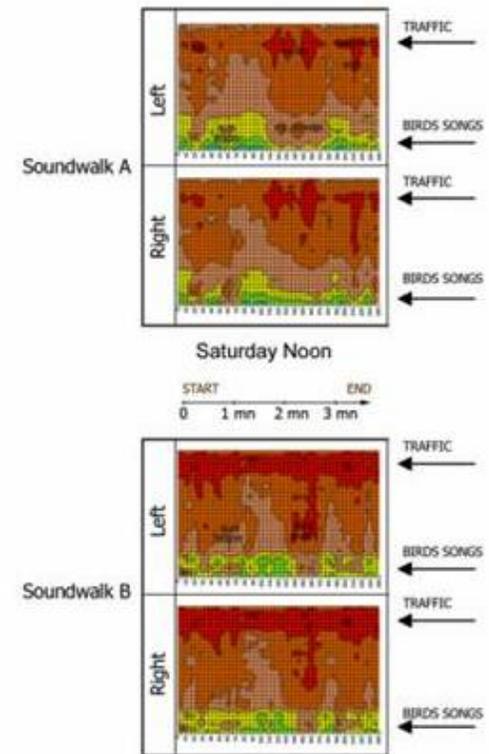
- Buildings / Vegetation / Surface material / Urban furniture



- Soundscape changing with the location in the site
- Some typical sounds can be highlighted:
 - Buses passing-by
 - Bus doors shutting
 - Bird song
 - Fountains



- What characterises the sound is the spectral sound energy distribution: waterfalls sound like white noise source, that is with an equal distribution of energy on the whole frequency range.
- The walker has the fountain on the left side which is clear on all the acoustic images because the sound level is higher on this side.





Subjective data analysis – Queen Square

- frequented by the inhabitants of Bristol (but only 20% of the interviewees live in the vicinity);
- the site is frequented throughout the day;
- mainly by young people who come to relax and stroll around, alone or accompanied by their partner or friends;
- site arrangement, social life and possible activities: evaluated in a positive way;
- Acoustic aspect: divided opinion – interviewees give a positive evaluation of the soundscape (qualitative dimension) but are not unanimous on the noise level (quantitative dimension);





Subjective data analysis – Queen Square

- the contrast in the evaluation of the qualitative and the quantitative dimensions can be explained by the perception of the multiple sound sources involved, whose nature and assessment differ;
- the traffic and street works sites are frequently heard sounds and are considered as unpleasant;
- natural sounds (birdsong) and human sounds (conversation and footsteps) are evaluated as being pleasant.





Objective data analysis – Queen Square

- typical soundscape of an urban park;
- only the cobbled pavement really induces noise on route B (path in front of house façades);
- one of the most important problems is the wind, particularly in the link area between Queen Square and the Centre.





Recommendations – Queen Square

1) Avoid Queen Square to become a large roundabout: change the way of using the streets (enabling traffic only on two streets and change the two other streets in blind alleys) and limit speed.

2) Implement vegetation and fountains on the link area (Prince Street Square) to change the perception of the soundscape.

⇒ **Recommendation 2 shows the real added value of the soundscape approach. Traditional noise maps would not have been sufficient to suggest such actions to be taken.**





Subjective data analysis – The Centre

- interviewees frequent The Centre regularly but the majority does not live in the district;
- used by a quarter of the sample as a crossing point, mainly during the home/work journey;
- Other activities: strolling around, relaxing and meeting other people;
- majority of the users go there alone, especially in the morning and at noon;
- environment of the Centre is evaluated in a contrasted way;





Subjective data analysis – The Centre

- site arrangements, atmosphere, possibilities to meet others: positive evaluation;
- some evaluate The Centre as a rather dangerous and not very convivial place.
- acoustic aspect: users evaluate its qualitative and quantitative dimension negatively;
- dominant sound sources identified by the interviewees are related to road circulation (traffic, public transport) and evaluated as unpleasant;
- the presence of water on the site is evaluated as the most pleasant source (but rarely mentioned as a representative source of the place).





Objective data analysis – The Centre

- traffic noise is predominant along route B and at the end of route A (after the fountains), whatever the day or time;
- along the fountains on route A the sound of water masks traffic noise (when they work!).





Recommendations – The Centre

1) Reduce truck and bus traffic in The Centre and promote the use of electric vehicles for city buses.

2) Try to use waterfalls at the end part of The Centre which is not on the harbour side.

⇒ **Recommendation 2 shows the real added value of the soundscape approach. Traditional noise maps would not have been sufficient to suggest such actions to be taken.**





More information

- CD-Rom *Listen to your city!*
 - Extracts from Bristol soundwalks
 - The soundscape approach – the method in brief
 - Full report: Soundscape approach as a tool for urban design
 - Full report: Recommendations for soundscape design
 - Web: www.silence-ip.org
 - Contact: ojung@polis-online.org

