



**Figure 1.2: Aerial view of West of Soho Square**

*(Source: UK Aerial photos)*

#### *Monitoring and evaluation*

- 1.34 Monitoring and evaluation of impacts are a key part of any proposed change and ensuring that innovations are effective and determining whether modifications are needed. Ideally, a common methodology and set of outcome, output and input indicators needs to be devised which can be used both for pre-assessment of costs and benefits and monitoring and evaluation of results. Who is responsible for monitoring and evaluation needs to be clearly delineated and, if possible, the community should be involved.

## Report structure

- 1.35 Chapter 2 sets out the context for the study, defining the describing the study area and setting out the key issues for conservation. Chapter 3 analyses the sustainability challenges for Soho and Chinatown, and Chapter 4 briefly outlines the regulatory and policy context.
- 1.36 Chapters 5, 6 and 7 set out potential ‘hardware’ and ‘software’ solutions to retrofitting sustainability in Soho and Chinatown. The aim is to set out basic principles and a framework for understanding how, where and why particular solutions might be applied, as well as who would be mainly responsible for initiating and applying them:
- Chapter 5 looks at energy issues (including energy supply, heating, cooling, lighting and ventilation, and internal fittings, equipments and appliances)
  - Chapter 6 covers other retrofitting issues (waste, water and drainage management, transportation, noise, pollution and biodiversity)
  - Chapter 7 covers integrated approaches (coordinating the roles of urban design, Conservation, planning, new development, managing the public realm, neighbourhood involvement, urban typologies, design guidelines, corporate responsibility, landlords initiatives, information management, and guidance, community advice and evaluation of building improvements)
- 1.37 In a pilot study such as this, the opportunity to undertake a detailed technical analysis is not open to us, although we point to the direction such studies might take in the future.
- 1.38 We cover the ‘hardware’ solutions broadly along the environmental sector lines used in the City of Westminster’s Unitary Development Plan and its Supplementary Planning Guidance on Sustainable Buildings.
- 1.39 Several solutions have relevance to several sectors, for example green roofs, which are covered under biodiversity but are also relevant to energy and water management. Solutions may have synergies within and across sectors. Sometimes, they also work against one another and choice needs to be made on the basis of life cycle cost effectiveness and users’ priorities and characteristics. A wide range of approaches to achieving the desired outcomes of retrofitting sustainability are classified in Appendix 8.
- 1.40 Under ‘software’ solutions we note how different stakeholders (owners, occupiers, community, professional and business organisations, the local authority) can individually and collectively inform, influence, initiate and implement the technical solutions (including their management, operation and maintenance).

### Evaluating solutions

- 1.41 It is possible to look at measures relative to one another in terms of their cost-performance and to make an initial and indicative assessment, as we have done in table 6.1. However, in order to make specific assessments for buildings in Soho, we would need first to establish the range of building types to be found in the area through a survey and energy audit to establish baseline conditions. Without this firm base, costs and practicalities of solutions will be largely guesswork.
- 1.42 The cost of installation of retrofitting measures will vary according to the detail and level of specification and building costs and the way they are combined with other refurbishment measures and works. Their cost in use will depend on management arrangements and particular user behaviour, in particular, as it affects the balance of heating and cooling requirements, together with the cost of energy and other resources in currently a highly volatile market.
- 1.43 Estimates by RICS published in October 2007 suggested that the payback periods to the landlord (rather than individual occupiers) for some retrofitting measures could be considerably longer than the expected lifetime of those items. The RICS building costs were relatively high for a high specification (necessary to achieve substantial savings in CO<sub>2</sub> emissions) and energy costs have increased substantially in the meantime. Nevertheless, with little financial incentive for landlords to undertake some retrofitting measures additional subsidies, other incentives or additional regulatory measures may be necessary to facilitate related reductions in CO<sub>2</sub> emissions.
- 1.44 There are a number of 'quick wins' that pay for themselves in a few years. There is no reason why these measures should not be undertaken although there are likely to be limited opportunities for some of them in Soho.
- 1.45 Apart from these non-disruptive 'quick wins', under current conditions and without outside pressures or rewards or a strong 'green consciousness' on the part of owners, most retrofitting measures to improve building sustainability are only likely to take place as part of the normal building refurbishment cycle, as required by the revised building regulations or with a strong lead and financial incentives from the Government.
- 1.46 There are a number of methodologies in existence that can be used to evaluate retrofitting measures in individual cases, in particular, those being offered and developed by the BRE.<sup>14</sup> Developers and owners may be required to draw on these to carry out an independent sustainability appraisal as part of an Environmental Performance Statement, required for approval by Westminster's Planning Authority on developments above a certain size.
- 1.47 Commercial property owners intending to sell or let, and others selling leases, will be required from now on to provide Energy Performance Certificates (EPC). There are questions about the methodologies used in the preparation of these (in particular with regard to historic buildings and residential properties) and their likely practical impact.<sup>15</sup> However, a qualified assessor will be employed to produce them, and they will give an initial indication of measures that can be taken to improve energy performance.
- 1.48 In the longer term, if and when EPCs have proved themselves in practice, it will be possible to carry out an analysis of data accumulated on the energy performance of existing buildings and to categorise these according to type. This could provide a basis for providing better-targeted planning and design standards or general advice to property owners than currently is available.

14. Formerly, the Building Research Establishment.

15. See interview with Jonathan Lane of Shaftesbury PLC, Appendix 3.

- 1.49 In the meantime, property owners will need to pay for advice from professionals using the established environmental assessment methods as applied to individual properties, with expert knowledge of how retrofitting measures might be negotiated and applied in historic conservation areas.
- 1.50 For smaller property owners, this may be expensive and they are more likely to rely on the advice of manufacturers, suppliers and contractors, or on the often less-than-adequate and unqualified, general advice that is currently available. This is likely to result in solutions that are ad hoc and sub-optimal. Energy cost pressures may lead to owners cutting corners that are unacceptable in conservation terms. Alternatively, sustainable refurbishment will simply not take place, as owners avoid potential conflicts with the planning authorities.

### **Limits of the study**

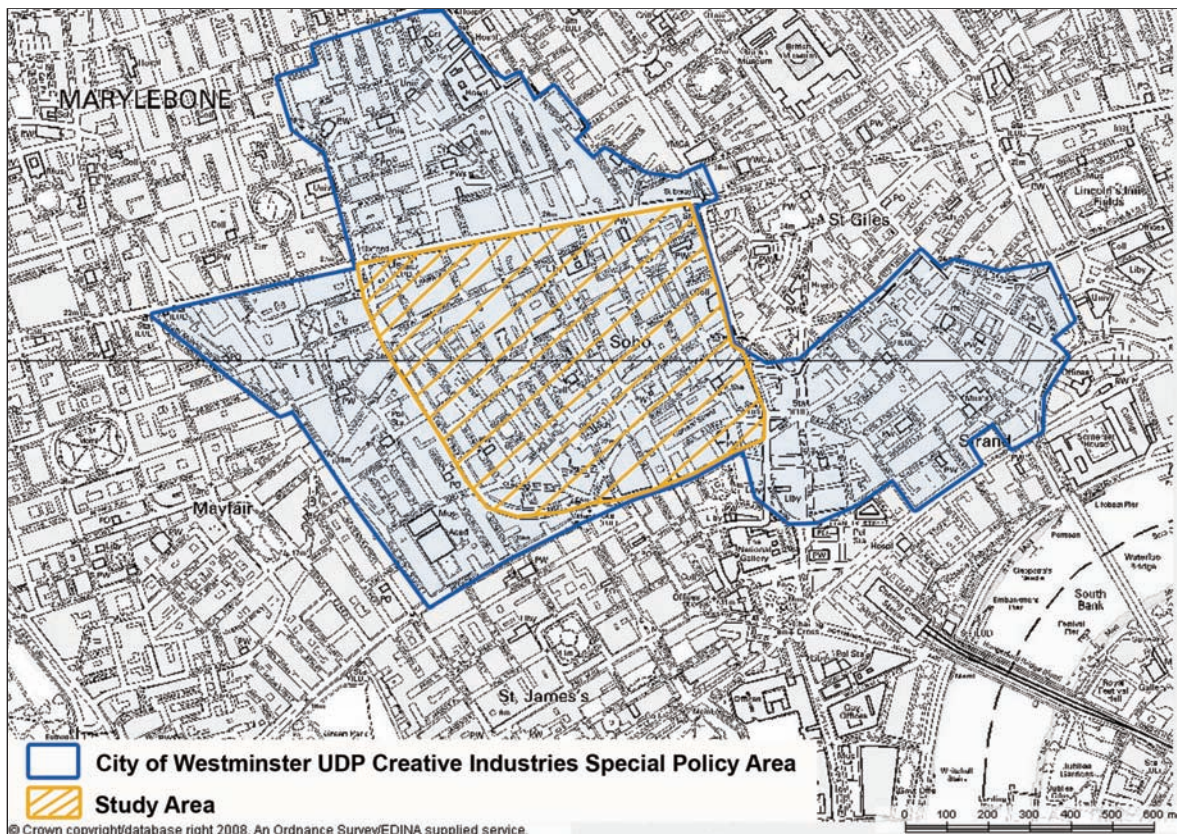
- 1.51 This study makes an initial set of recommendations for practical and cost effective solutions to the issues identified above. It recommends solutions that could be used alone or in combination by the target audience, over a range of time scales, for the purposes of retrofitting buildings and streets to improve their sustainability and that of the area. Key factors are that solutions can be applied easily, are compatible with policy and that their life-cycle environmental impacts are low. Where factors are too complex for this study or involve clear policy or practical choices these are set out to provide a basis for further research and discussion.
- 1.52 It is important to note that this is a pilot study to set out the scope for retrofitting in Soho. It is based primarily on a review of the literature supported by discussions with key actors involved in the Soho Conservation Area and Chinatown. The intention is to provide a guide to how property owners and other stakeholders in Soho, the West End and Westminster can take a decisive and leading step in assessing and initiating nation-wide retrofitting technologies. Additionally, it aims to demonstrate how the City Council can ensure that planning policy places no unwarranted obstacles in the way of this and how it can best encourage owners to apply best practice.
- 1.53 However, further technical research, beyond the scope of this first study, will be necessary to explore in depth the evidence drawn from the literature and to make firm recommendations for practical and cost effective solutions to the issues identified above.
- 1.54 The research further suggests ways in which different approaches could be piloted in the Soho area although, again, the design of pilot projects is beyond the limited scope of this study.

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### **Audience and dissemination**

- 1.55 This study aims to inform and raise the awareness of the wider community and of key decision makers in local government and business. A target audience of 'built environment managers' should be encouraged to take up the recommendations for appropriate ways of improving environmental sustainability in existing buildings, which are often in multiple ownership and management. This target audience includes:
- Property owners
  - Developers
  - Development Control, Urban Design & Conservation Planning officers
  - Planning Policy officers

- 1.56 These actors in turn provide a bridge to other key stakeholders, in particular, residents, local businesses, customers and visitors, other Council departments and public agencies, construction professionals and the construction industry. In this respect, the involvement of English Heritage in steering this study has been crucial and we hope that it may inform future best practice guidance for areas of this type.
- 1.57 While the focus of the study is Soho, clearly it is important that any findings can be shared with other similar areas. Within the City of Westminster, other mixed-use conservation areas with shared characteristics include Covent Garden, Fitzrovia and the New Bond Street area. This is broadly the area covered by Westminster City Council's Unitary Development Plan Creative Industries Special Policy Area (Figure 1.3). There are other similar areas in Westminster such as Old Marylebone and parts of Victoria. Beyond Westminster, Clerkenwell and Hoxton/Shoreditch have similar characteristics. Nowhere, however, has the concentration of commercial activity that is found in Soho. Recommendations from a study of this kind could be a step forward in addressing similar issues for other similar central, mixed-use historic areas.



**Figure 1.3: UDP Unitary Development Plan Creative Industries Special Policy Area**

(Source: Westminster City Council d)