Mapping Value in the Built Urban Environment

A Report to the Commission for Architecture and the Built Environment (CABE)

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Executive Summary

The Value Mapping project was commissioned by CABE in late 2005 and was managed by the Young Foundation, drawing on a team with experience of research and practice. The project was commissioned in order to better capture less tangible things that people value from places – specifically new buildings. This would look at aspects of the built urban environment for which markets (and therefore hard monetary values) do not exist. The aim would be to ensure these values receive greater prominence in future decisions on proposed developments. This would bring decision-making that inspired more confidence and ensure that public values would receive greater prominence in relation to the more easily calculable private ones.

It should be stressed that, at no stage, was 'good design' equated, by CABE or the project team with 'what the public want'. The aim was instead to look for valuation exercises that establish dialogue with the public – professionals would make the lay participants aware of technical issues and the public would make professionals aware of their needs.

Through a literature review and series of seminars the project team addressed the brief in a series of stages.

- Stage 1 defined the built urban environment and the concept of value. The built environment was seen as consisting of several key aspects: use; connectivity with the wider urban area and its needs; size of development; lay-out; physical content (such as street furniture) and human activity. Value was defined as becoming meaningful when people are willing to make a sacrifice (usually monetary) to get something.
- Stage 2 sought to map all the stakeholders who might have an interest in a proposed development. It noted how numerous stakeholder perspectives

needed to be factored in although the key players in most developments are likely to be: the developer and their team; the general public; other adjacent property owners; the local authority and, sometimes, national government.

- Stage 3 looked at the various methods currently in use to understand value. These included stated and revealed preference methods used by environmental economists and Multi-Criteria Analysis approaches used by built environment professionals. All were found to have problems but, crucially, all offered an angle on the issue of value.
- Stage 4 addressed how methods might be used to generate options for stakeholders to discuss – the particular need being to identify the scope for win-win solutions (aspects of a development that all parties wanted) as well as opportunities for tradeoffs (give and take).
- Stage 5 set out a suggested framework for taking the work forward – that is ensuring decisions that have greater legitimacy in the eyes of the public.

Summary of the Main Valuation/Decision Methods

Method	Strengths	Weaknesses
Hedonics	• captures monetary contribution that environmental elements make to a development's private value.	• ignores buildings for which there is no market.
Design Quality Indicators (DQI)I	• easy to use. • allows for the involvement of numerous stakeholders – the public can feel	• not enough attention to public space issues. • weak at assisting resource allocation.

	engaged.	
VALID	• all the advantages of DQI • gets people to narrow down what they want from a development (more than DQI does). • participants consider costs and compromises they might make.	• not enough on public space • weak at assisting resource allocation.
Contingent Choice	• simple to grasp • useable in investment decisions.	• hypothetical • the poor are seen as having less value • its measurement not dialogue
Choice Modelling	• captures value of different elements • useable in investment decisions.	• hypothetical • miss out the poor • its measurement not dialogue

The project succeeded in providing a conceptual framework for thinking about the options for conducting various types of valuations of the built urban environment and in delivering visual value maps that make valuation and value negotiation more comprehensible and, potentially, transparent. The project broke new ground in unifying two quite different approaches – namely, the multi-criteria analysis approach used in tools such as DQI and VALID with monetary methods used by environmental economists. Not only were the literatures brought together but,

through a series of seminars, various different individuals were brought together and the concept of Value Mapping was promoted and made more concrete.

The clear need in the next (post-project) phase is for CABE to oversee the application of the framework to an actual development – for example, a mixed-use town centre development, a transport interchange or a suburban residential development. However, before this step there needs to be dialogue about the report with property developers, other experts in the field of economic valuation and urban design valuation and, ideally, with software developers.

The report also suggests other possible developments that would drive work forward in the future, including a team within CABE focused on valuation work and building up a database of examples; a unit within a university, probably in an economics department; a network of practitioners and academics working in the field to accelerate mutual learning.

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Introduction

Aims and Objectives

This report is the primary output of a project funded by the Commission for Architecture and the Built Environment. It ran from December 2005 to March 2006.The project was commissioned in order to better capture less tangible things that people value from places – specifically new buildings. This would look at aspects of the built urban environment for which markets (and therefore hard monetary values) do not exist. The aim would be to ensure these values receive greater prominence in future decisions on proposed developments. This would lead to decision-making that inspired more confidence and should help to ensure that public values would receive greater prominence in relation to the more easily calculable private ones.

However, it should be stressed that, at no stage, was 'good design' equated, by CABE or the project team with 'what the public want'. The aim was instead to look for valuation exercises that establish dialogue with the public – professionals would make the lay participants aware of technical issues and the public would make professionals aware of their needs.

In terms of operationalising the above aims, three key tasks were required of the project team. Specifically, they were asked to:

- outline methods that either are used or could be used for valuing the built urban environment before and/or after development.
- find or develop methods for ensuring an appropriate balance between developments that achieve the aims of the (public or private sector) developer and the wishes of the general public.
- develop visual tools (Value Maps) that outline methods that those seeking to evaluate proposed developments might employ.

The exercise aimed to generate several main value maps. Firstly, there needed to be a visual that outlined the overall development and valuation process – the stages of development, the issues being valued, the scale at which valuation can occur, the types of choices available and the types of information offered. A second set of visuals needed to illustrate the choices in more detail and which make it clear how there might be trade-offs that can be made.

Project Team

The project team was a partnership of staff from the Young Foundation and the Bartlett School of Planning at University College London. The project was overseen by Dr. Geoff Mulgan, Director of the Young Foundation and the day-to-day management, seminar presentations and report writing was led by Dr. Gareth Potts, also of the Young Foundation. UCL (Professor Matthew Carmona, Louie Sieh and Claudio de Magalhaes) provided input at the literature review stages. Valuable input also came from Chris Sharpe, a co-founder of Sharpe and Pelipenko, London-based design and design software firm; James Audsley a Young Foundation staff member and from Dr Susana Mourato of Imperial College London.

Seminars

Two seminars were held with leading academics and practitioners to test out ideas and to get feedback and input from the considerable collected intelligence present. A further presentation was given to a seminar on the Business Case for Good Design organized jointly by CABE and Transport for London.

Context

Britain, like most countries, continues to see exciting additions to the built environment (buildings, infrastructure and spaces) that delight, appall and amaze people who encounter them. Examples include the new Selfridges in Birmingham (the 'blue bubble wrap' building), the Lowry in Salford, Gateshead's Sage Centre and Angel of the North, the Oracle retail and leisure complex built around the River Kennett in central Reading and the Millenium Bridge in London. Portsmouth's Tricorn Centre, now demolished, often used to top lists of loathed buildings. That city can also now boast the impressive new 170m tall Spinnaker Tower. Improvements to the environment haven't all been new build – in Birmingham, for example, recent decades have seen New Street reclaimed from buses in favour of pedestrians and Victoria Square converted from a roundabout to a fine civic space.

Interest has grown in the idea that well designed buildings and spaces might deliver wider social and economic benefits. The Office of Government Commerce's procurement pack Achieving Excellence in Construction contains a whole section devoted to the delivery of design quality, and the Treasury's Green Book recognises that non-monetary benefits need to be included among value-for-money assessment criteria for public building proposals. In March 2005, the National Audit Office endorsed the positive impact of buildings on service delivery in its report Improving Public Services through better construction. Concerns with economic benefits of design have been particularly prominent at a regional level.

The Industrial Revolution spawned many attractive town centres and those charged with reviving these many of these same areas economies are hoping that good design can now attract today's footloose entrepreneurs and skilled staff. Several Regional Development Agencies (RDAs), notably Yorkshire Forward,

One North East and the North West RDA are funding work into design and regional competitiveness.

Opportunities for high standard design in public buildings should be growing. The UK has seen very low levels of public capital investment in recent decades by comparison with other countries, during a period when *per capita* income has caught up with and in some cases overtaken others (the rate of investment has risen rapidly but remains well below OECD norms (Mulgan 2005). The result is an evident imbalance between private affluence and public poverty (and in some cases squalor), that is likely to persist for some time (*ibid*).

The architecture and built environment community are eager to see design receiving higher prominence – in public and private sectors alike. The Urban Task Force, led by the architect Lord Rogers of Riverside, recently reconvened and included increased attention to the design of buildings and public spaces amongst its calls. Specifically, it argued for placing design champions at strategic board level in public regeneration and development bodies and reinforcing this in the way Government funds and tasks the activity of such bodies. The Task Force also recommended a strengthening of design advice to ministers, mayors, local authority leaders and cabinets (UTF 2005). Such calls build upon the increased emphasis on design in the planning regime (notably through PPG 3). In London the GLA has an Architecture and Urbanism Unit and the Mayor is championing a project to create a 100 new public spaces.

Evidence is now starting to emerge of how buildings with well designed interiors can have a corresponding effect on workforce productivity; patient recovery rates, pupil performance etc. (see Eclipse 2005). Methods also exist for isolating the ways in which a development with a good frontage can see higher sales for

developers. Such external spaces invariably have benefits to the public that cannot easily be charged for – what economists term positive externalities.

However none of these methods go far enough in assessing:

- whether developers' schemes will yield as much benefit as they could for wider stakeholders (neighbouring property owners and the general public)
- how these other stakeholders might negotiate with the developer to ensure a development that delivered more benefits for them (stakeholders).

A value mapping methodology that is robust, replicable and comprehensive can provide tools for ensuring that

- developments receiving planning permission are valued (or not hated) by the public.
- the public sector have mechanisms for allocating resources to jointly fund developments with the private sector.

Report Structure

The report structure is outlined in table 1. Having outlined the rationale for the exercise, the first section of the report proper seeks to better define the terms built environment and value. The report has attempted to offer a very broad definition of stakeholders and to outline which groups are perhaps under-represented in deliberations around proposed developments. The next section looks at all the methods that were reviewed and then focuses down on those deemed to offer the greatest purchase on the questions in hand. Once the methods have been decided the remaining task is to look at how valuation occurs at present. The case is made for opening up the consultation/valuation process to more people, to making it as much about an educative dialogue as about measurement of value and to seeing earlier stages of the development process opened up to a wider body of

stakeholders. Finally, there is the question of ‘where next’ – here the report outlines a conceptual framework for tackling developments but, inevitably, the method needs to be applied and refined.

Table 1: Outline of the Report

Question	Section
Why	Introduction
What	Defining ‘Built Urban Environment’ and ‘Value’
Who	Stakeholders and their Needs
How	Methods for Assessing Values: An Overview
	Methods for Assessing the Value To Developers
	Methods for Assessing the Value To The Public
	Negotiation and Decision
When	Valuation and the Development Process
What Now	Taking Value Mapping Forward

What Is Meant By 'Built Urban Environment' and 'Value'

The Built Urban Environment

As Table 2 indicates, there are numerous aspects of the built urban environment. It can be defined as place, buildings, public space (loosely, the space between buildings) and landscaped elements of the natural environment within towns and cities. The valuation task ahead is considerably more challenging than simply identifying key aspects of the built urban environment. The value people will place upon this environment will depend not so much on any one element but upon the relationship of these elements to each other – the whole realm of urban design.

Table 2: Elements of the Built Urban Environment

Building Elements	**Landscape**	**Infrastructure**	**Uses and Spaces**
Artwork	Advertising	Bridges	Colleges
Balconies/projections	Bollards	Bus stops/shelters	Community uses
Building lighting	Boundary walls/fences/railings	Canals	Factories
Canopies	Festive decorations	CCTV polls and cameras	Gardens
Colonnades	Fountains/water features	Gutters/drainage	Homes
Corners	Lawns and verges	Harbours	Hospitals
Decoration	Paving	Home Zones	Industrial uses
Entrances/exists	Planters/hanging baskets	Parking bays/meters/car parks	Kiosks
Flags and banners	Planting beds and areas	Public toilets	Law Courts
Floodlighting	Public art	Railways	Leisure uses(active/passive)
Monuments/landmarks	Road surfaces	Roads and cycle lanes	Offices
Shop fronts	Shelters/band stands	Servicing bays/turning heads	Parks
Signage	Signage	Street lighting	Performance Venues
Skyline/roofscape	Squares	Telecommunications equipment	Play grounds
Structure	Steps	Telegraph polls	Plazas
Walls		Telematics	Police Stations
Windows			Prisons
			Restaurants and Eateries

	Street Furniture Traffic calming Trees	Telephone/post boxes Traffic lights/road signage Tram/bus lanes Underground services Utilities boxes Waste and recycling bins	Retail Parks Schools Shopping Malls Shops Sports facilities Sports Stadia Tourism Transport Terminals Universities

(Source: adapted from Living Places, Caring for Quality, (ODPM, 2004)).

Value

Economics textbooks highlight the importance of scarcity to value. People have certain goods, and services they want to consume although the value they place on these will diminish the more frequently they experience them – beyond a certain point the experience will actually become a negative one. Prices will thus be low if goods and services are in abundance and can sometimes be high simply because the opposite is the case (i.e. some luxury goods). Consumers need to strike a balance between enjoyment and over-indulgence – the market price will tend to represent this trade-off point. Producers need to tailor their supply in line with market needs – although they will forever make efforts (through advertising) to make people want more of some existing goods or services or to offer consumers something that is new and exciting.

The economists' definition of value as representing a consumer's willingness to pay for something (based on their estimation of the net benefits in relation to the cost) is applicable to all goods and services whether traded in the market or not. Thus, people are typically willing to pay for something like access to sunset even though no direct market exists for sunset – indeed, it should be possible to discern this value by comparing the prices of west-facing houses with other similar

houses. The ‘willingness to pay’ definition is actually a value in use – as opposed to a real or estimated market price for something (value in exchange).

Just as what people value will vary in accordance with their needs and the availability of the good/service so too will the things people value change over their lifetimes and between generations. Although people often share common perceptions of beauty, value is nonetheless a social construct and, as such, does not reside in any good or service indefinitely. In other words, nothing is valuable forever. Investment decisions by companies (and, for that matter, governments) have then to find a balance between something known to be valuable today and the considerable uncertainty about what future demand will be.

Just as there no such thing as indefinite value so too there is no such thing as intrinsic value. Members of the arts and economics communities have debated this latter issue – the former believing it exists, the latter believing it doesn’t. The economists accept that there may be a case for educating the general public about things they are unaware of (such as the historical importance of a particular work of art) but that everything can be valued – even human life. It is indeed true that human life can be valued – certain Government Departments do just this.

There has been a considerable interest amongst many key figures in Westminster, Whitehall and the think-tank world in the notion of ‘public value’ a term coined by Harvard University’s Mark Moore (Moore 1997). The key aspect of public value is that it is the public who determine what is valuable – rather than professional economists advising government. According to Moore and other writings on this (e.g. Kelly, Mulgan, Muers, 2002) public agencies have to constantly engage with the public to get a better understanding of citizens preferences and priorities. For something to be of value, citizens - either individually or collectively, must be willing to give something up in return for it. Such sacrifices may be through the

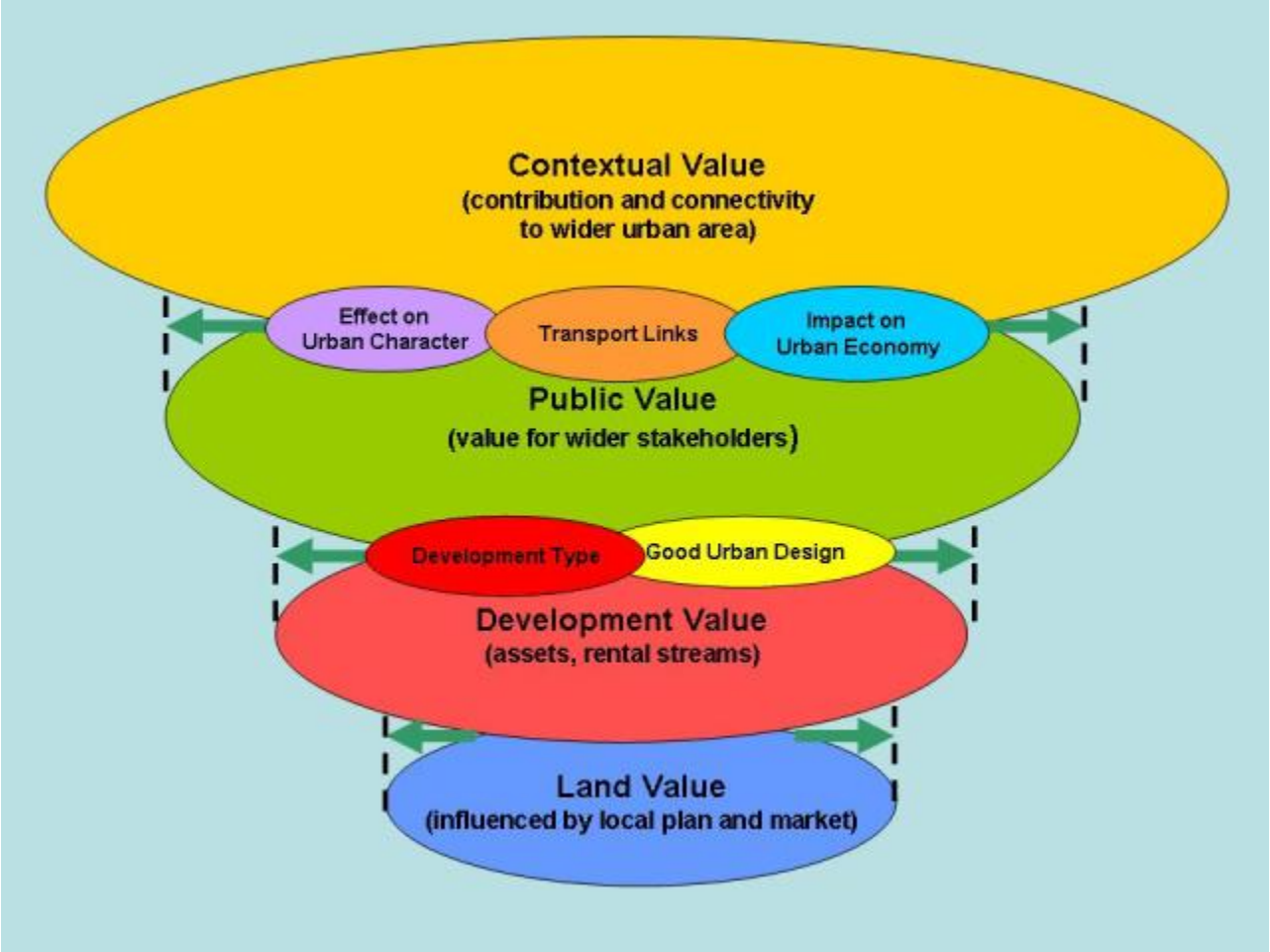
conventional channel of taxation but can also involve giving time – for example, serving as a part-time special police officer.

The idea of being willing to paying for something in order for it to be valuable is crucial. Everything people value is something they do, or are willing to, pay for – whether in monetary terms or through some other sacrifice (such as time). People consider the benefits they get alongside the disbenefits incurred and then they consider whether the net benefits warrant the time/money cost outlay required.

Which Aspects of the Built Environment Can Be Valued?

Figure 1 indicates how the ideal development will be one where, for each type of value (over and above the land value), there will be a gain in terms of value. In terms of valuing the physical elements there are established techniques for measuring land values and building values. It is the broader area of urban design where the public value and contextual value are added – considered ahead.

Figure 1: Ways to Maximise Value from a Proposed Development

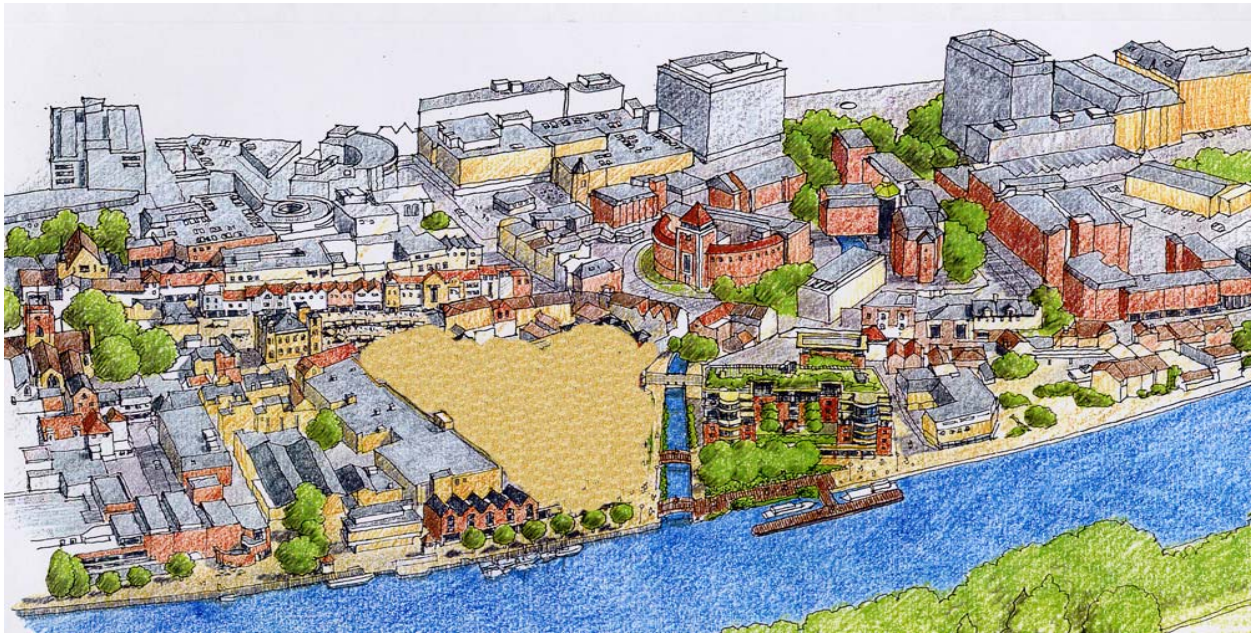


The most defining characteristic of a development is its use or, as is often the case, mix of uses. Also, important is tenure mix. For example, one of the most frequent issues in urban areas is a requirement from the planning authority that developments contribute to affordable housing. There is the more general question of how places work and whether they are likely to prove sustainable. Key issues for consideration are whether places are well connected, via various transport means, to other places; are they (if its an older area) in keeping with local character; are they safe; are they places where young children can play and places where older children can hang out away from the prying eyes of adults; is there adequate for rubbish collection vehicles to manoeuvre; are these away from the

main public areas; is there adequate parking; adequate greenery; is there a full range of neighbourhood facilities – notably shops and a primary school. In short, is it well designed.

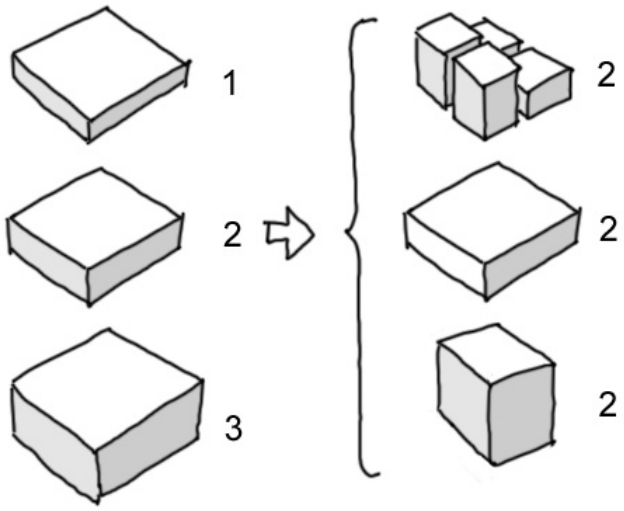
More generally, the public will have needs that are not currently being met and the local plan may well outline these. It may be that the site in question offers the opportunity to give the public what they want. As figure 2 below indicates, the development area (the blank area adjoining the waterfront) is located near a much older town centre. Even a cursory glance at the area sketched reveals the apparent absence of any play space for young children. This is just one example of how anyone looking to develop the existing site could be expected to make concessions to the public – or partner with a public body in funding play areas.

Figure 2: Context - Riverside Site in Kingston, South West London



The initial calculations will be about the nature of the development (i.e. use(s)) and about the quantity and spatial configuration of development. This latter term refers to the area of space open to the public and the lay-out of open space and buildings. These two aspects are depicted in figure 3. As can be seen, there are three options in terms of volume and, if (as depicted) the second one is chosen, there are three further options for arranging this volume. In reality of course there are a potentially infinite range of options – any valuation exercise needs to acknowledge this and decide on an appropriate balance between costs and choice. If computer software was available to produce and cost different shapes this would help.

Figure 3: Quantity and Spatial Configuration of Development



The next key issues are ‘physical content’ and ‘human activity content’. The former includes the whole range of building frontages, street furniture, materials etc. It can also include trees and landscaping. Human activity is also important – as the celebrated New York sociologist-planner William H. Whyte once aptly put it, “what attracts people most, it would appear, is other people” (Whyte 1980). This point is important in that public valuations of developments will be based on how they believe the places will be used – not simply on the size and shape of proposed developments. For spaces intended as a place to seek solace, people will need to be helped to visualize these spaces with just a few people reading or talking quietly, for retail areas, they will want to see people laden with shopping, for streets they will want to see pedestrian movement and for night-clubs they will want to see revelry.

Given the considerable debate around the extent to which public space is being privatised (Minton 2006), attention also needs to be drawn to who is and isn’t in being served by a development – wearers of certain clothing, security guards, certain age groups, colours, cyclists, buskers, leaflet distributors etc. Where visual materials are used to depict the proposed development (see ahead) exclusion should be clearly marked. As a further check, there needs to be clear representation at the negotiating table for these groups.

This is not quite the end of the story in terms of options. Consideration also has to be given to ‘Time’ - time of day, time of week, and time of year. Ideally, there need to be enough uses in or around a development to ensure that they are well used (and therefore yielding value) around the day (subject to residential requirements for quiet) and around the year.

There are many other factors that actually determine whether developments that do get built then go on to become good spaces. These include numerous services:

- maintenance
- policing
- cleansing
- wider planning and transport policy
- place marketing

So, as part of any deal-making, there needs to be attention given to the subsequent management of space and the monitoring of those who committed to doing this – whether they be in the public or private sectors.

Stakeholders and their Needs

Who Has A Stake?

As figure 4 below shows there are numerous different types of individual that might have an interest in a development. These groups may overlap – for example, a local resident might also be a member of a community group. Each individual consulted is likely to have a different reason for valuing or not valuing a proposed development – for example, a cyclist might want bike racks, a pedestrian may want benches and an architect will be concerned with the materials used in a proposed building. A blind person might be very much concerned with hearing lots of activity and a deaf person eager to see as many visual stimuli as possible. The Figure was designed with a view to outlining a broad range of stakeholders thereby building on other stakeholder definitions that been more focused on building developers and users (table 3).

Figure 4: Possible External Stakeholders in a Proposed Development

Table 3: Key Stakeholders in the Development of the Built Environment

Category	**Stakeholder**
Finance	Financiers, banks, PFI consortia, developers, government
Design and construction	Architects, engineers, sub-/contractors, Quantity Surveyor, an Urban Designer, an Environmental / Planning Consultant, a Highways/Transportation Engineer; a Civil engineer; a PR Consultant and a Socio-economic advisor sub-contractors and suppliers.
Occupant organisation	Chief Executive, Project Directors, Communications and Marketing Managers, General Workforce, HR, Facilities Manager, Security staff, Cleaners.
Public Realm	Local Authority; Local Community; Regional and National Community (see below).
Visitors to Building	Hospital patients, hotel guests, retail customers, students, pupils, the general public.

(Adapted from Eclipse 2005).

The Potential Value of (Funding) High Quality Design to Developers

Private developers are interested in making profits from the built environment. Non-profit organisations will be interested in developments that are fit for purpose rather than worrying about profit. Nonetheless, whilst local authorities may wish to consider the effect of developments on the wider wellbeing of the local public (part of the remit of local authorities in the UK) the realities of budget heads may well mean that the non-profit sector, like the private, have a tightly defined view of what they want from a development. It will take a good 'business' case to see them fund or co-fund developments with positive value for a wider public. This case is now considered more fully.

Developers are unlikely to spend on public frontages and open spaces if they can't see profits from this. Open space may be public in some senses – for example, bye-laws may operate and people may be allowed to protest if they get permission. Yet in many other senses spaces may be quasi-public – parking is for patrons only and skateboarding and board games are forbidden. It makes more economic sense to invest in internals spaces so that workers, shoppers and residents (i.e. those who are paying) can benefit. Many publicly constructed buildings are not necessarily very public – hospital and school grounds are closed to all but those members of the public who are treated/educated there. With prisons the grounds are not only very closed to the public but there is also a strong case for the buildings being out of sight of the public.

However there are reasons why developers might be interested in ensuring they make a positive impact on their local surrounds. These can be individual – for example, workers may want to leave because the public space is so poor. Collectively, developers (and existing owners) may recognise that they can overcome the problem of making investments that don't always benefit them directly. This same principal can apply to privately-owned residential or office

developments – i.e. the value of an individual painting their own door or trimming their hedge and the collective value (greater than the sum of the parts) of everyone painting their doors. The key factors in making this happen is a brokerage mechanism – with private developers in town centres and business areas this occurs to some extent through Business Improvement Districts (BIDS).

Table 4: Benefits for Developers (Co-)Funding Good Public Spaces

	Type of Benefit for Public and/or Private Developers
Individual Developer	• Worker rest - Summer lunch breaks mingling with the public • Worker pride in their company's building/surrounds • Developer/Owner's public relations – seen as good neighbour • Play areas for kids can mean more family shopping days out • Secure planning permission
Collective Investment	• Neighbouring properties will impact one another • With collective investment all gain in an upward spiral

The Potential Value of Good Public Space to the Public

In discussing 'public value' Kelly et al. (2002) note that the things which citizens value, and demand from governments most are services, outcomes and trust. It is not difficult to make potential connections between public value and the built environment.

- *Services*: If the public have been involved in the development of public buildings or spaces and have access to those spaces, it should augur well for increased receptiveness to the public *services* subsequently offered from those same premises.

- *Outcomes*: links can include the effects of good design of schools and hospitals buildings on positive welfare outcomes such as pupil attainment and recovery rates. There is also a considerable evidence base on designing out crime.
- *Trust*: refers here to the relationship between state and citizens – something that should improve if the two sides regularly discuss the shape of the urban environment. Trust can also be an outcome in itself.

More generally, the public can derive numerous benefits from the built environment – whether publicly funded or not. However, in contrast to the benefits to developers, the benefits to the public are much harder to calculate since, by definition, there is no market in public space – use of public space is free at the point of use. As with developers these benefits can be both felt by individuals and distributed amongst individuals – a whole that is more than the sum of the parts. The extent to which a public site generates collective benefits will be a function of how often people meet there – for example, neighbours meeting in a cul-de-sac or local shopping parade versus tourists on a once-in-a-lifetime visit to Trafalgar Square.

Table 5: Individual and Collective Benefits for the Public from Good Public Spaces

	Type of Benefit for the Public
Individual	• wellbeing from spaces to unwind in
	• wellbeing from urban greenery
	• wellbeing from buildings that stimulate
	• wellbeing from places where people can watch the World go by
	• wellbeing from places/spaces that encourage walking

	(links)
	• wellbeing from being safe – and feeling safe
	• civic pride from great developments
Collective	• social capital (mutual trust, sense of obligation, sense of community, shared norms and values) is greater with certain development types that foster frequent meetings. • community cohesion – places where ethnically and culturally diverse groups can co-exist peacefully. • social inclusion – places where often-excluded groups can be welcomed by the mainstream.

Other Property Interests

An evaluation of the built environment can't simply focus solely on the value that will accrue to the prospective developer – those with existing property stakes in the area are also important. The danger with focusing unduly on those who own property adjacent to a proposed development is that a 'not in my back yard' NIMBYism stifles development that might be good for a wider constituency. Focusing on local property owners might also see local renters (both private and social housing) overlooked. Clearly, in any final summing up of values these considerations need to be added into the equation. Table 6 attempts to sketch out how other property interests might stand to be affected (positively) by a proposed development.

Table 6: Types of Benefit for Other Property Interests from Good Public Spaces

Type of Benefit for Other property Interests
• private commercial property values may increase
• private residential property values may increase
• private commercial rents may increase
• private residential rents may increase
• assets owned by community groups may increase
• assets owned by local authorities may increase

'Social Valuation'

So far the focus has been on the values that may accrue to developers and individuals from the built environment. However, there will inevitably be knock-on effects – for example, if an individual's wellbeing benefits from regularly spending time at a local public place this will have knock-on effects for the taxpayer due to the reduced likelihood of needing to treat that individual for physical or mental ill-health. Similarly, a place for teenagers to 'hang out' may well reduce the incidences of anti-social behaviour with their attendant costs for victims' welfare and the costs incurred by the police and criminal justice system.

This issue of wider knock-on societal effects must also hold for the actions of the developer – for example, they will have to pay a price for the materials and land they use but what is the wider effect on the value that society has for the environment? It may be that the public doesn't value these aspects highly – so it seems worthwhile to inform people of these factors when making their valuations but also to keep a tab on the various impacts (which may or may not have monetary values attached to them). Hopefully, the public would become more

aware of these as the body of knowledge on how developments actually fared built up – in time, they might alter their preferences/values in light of this evidence.

Table 7: Types of Issues to be Considered in 'Social Valuation'

Type of Issue for Social Valuation
• cost of physical wellbeing to society
• cost of mental wellbeing to society
• cost of crime to society
• cost of environmental impact to society

Local Authority

The local authority, or indeed the state if a proposed development is of major national importance, will have certain perspectives that it wants to see reflected in valuations and deliberations on the built environment. These included issues such as whether a development will yield more or less money in terms of Council Taxes and, to some extent, through Uniform Business Rates. Although issues such as job creation and various local economic multiplier effects are not really within the remit of this account it is nonetheless the case that some proposed schemes will generate much more jobs and income for an area than others. Finally, the local authority also has to consider the various associated pressures that a proposed development will put on the area and its environs. This can include pressure on local primary schools associated with residential developments, pressure on local shops caused by supermarkets or pressure on the transport system. Such pressures can perhaps be taxed via the Section 106 (planning gain) system whereby the developer would agree to some sort of funding to lessen these effects – e.g. funding a school classroom. Again, not all of these impacts need have a monetary

valuation but would be something that was nonetheless considered in the option appraisals and negotiations.

Table 8: Local Authority Valuations

Issues for Local Authority Valuation
• Tax revenue
• Job Creation
• Income Generation
• Pressures on local services (schools, parks etc.)

Valuation and the Development Process

The Development Process

Before considering methods by which the built urban environment can be valued there is a need to be clear about the process through which this environment emerges at present and the key stakeholders that are, or might be involved. The obvious first key stakeholder is the *Client.* Unless a building is speculatively built by a private developer, there will be a client. This might be a business, a local public authority, a local regeneration company or, conceivably, a partnership of these. The client will appoint a *Consultant Team* of design and construction experts to advise them on their land and make recommendations about what is feasible in technical and political (planning) terms. Consultation events with the public can vary from the cosmetic to active workshop-type events that, if organized and facilitated well, can be extremely productive in identifying and designing out problems and securing consensus. If the Client then decides to proceed with a planning application, the Consultant Team will prepare this in yet more consultation with the local authority (mainly planning and highways, but sometimes other departments), and other stakeholders (urban regeneration

companies, regional development agencies, local landowners, bus operators, local businesses, residents). The process, at present, is outlined more fully in Table 9.

The post-development monitoring is perhaps seen as something of a Cinderella area – why do it after the development has occurred. There are several reasons. Firstly, if developers know this is going to occur they are likely to take their obligations and promises very seriously. It is also useful as part of the process of educating the general public about the built environment to show them that people often change their minds on developments (particularly somewhat avant-garde ones). The Angel of the North was, for example, initially unpopular in the North East whereas now the opposite is true.

Table 9: Key Stages in the Typical Development Process

Stage	Key Tasks
Feasibility	• Outline brief by developer • Local planning policy – land use designations, conservation areas etc.? • Back-of-the-envelope financial appraisal – very broad assumptions. • Preliminary site investigations • Desk study - historic maps (previous uses) and broad site constraints • Site visit and photographic survey of visible site features. • First design sketches and strategies.
Design	• Detailed development and refinement of developer's brief • Detailed development of design – plans, sections, elevations, model

	• Floor areas and numbers of residential units quantified • More detailed financial assessment – fewer assumptions, more detail • Some discussion / consultation with local planning authority and others • Full site investigation – engineering constraints and ecological assessment • Discussions / negotiations with neighbouring landowners • Preparation of design codes and some other detailed design information • Production of detailed specialist reports in transport, environment etc
Planning	• Planning application produced and submitted (drawings, A3 reports) • Meetings with planning authority – discussions with stakeholders • Some detailed design may continue in anticipation of planning approval • Public Exhibition • Public / stakeholder consultation process. • Negotiation of planning conditions and section 106 agreements. • Planning approval / decision to proceed with construction.
After completion	• Development of later phases • Ongoing sales and lettings • Ongoing operation of infrastructure e.g. buses, hospitals • Some roads built by developer adopted by local authority

Opening up the Development Process

As Table 9 reveals, there are four key stages in the development process. The crucial aspect to note is the late stage at which the views of the general public are sought – namely when the volume and lay-out decisions have been taken. As was discussed earlier, it is difficult to really consult (a valuation of sorts) the public unless there are some options on the table – and there will not be any such options without a developer first undertaking some preliminary feasibility studies. It's also true that the public would already have had the opportunity to comment on the local plan and that they elect Councillors to negotiate on their behalf when it comes to planning and other matters. The local plan will determine land-use and the heights of buildings – so there are already limits placed on the potential quantities and lay-outs. Council Planning Officers, architects and other professionals all have a professional duty to take the public into consideration in a development – as does the local Member of Parliament and the local media.

The local plan will offer protection against an inappropriate use and a building completely at odds with the local environment. But it doesn't allow the public an early decision on a key building. The pride that a community could derive from such involvement could be considerable – a pride that might lead to a greater interest in the stewardship of the developments in question.

Lay Knowledge and Interest

Public involvement is helped by well-designed methods for engagement, definition of options and dialogue. It also depends on information and some education. If people are to comment on a development's safety or environmental impact they need to be appraised of ways to do this. If they are to be asked on a scheme's architectural daring they need to be informed (without giving them a lecture on architectural history) why this is so.

People may know what they like when they see it but if asked for their views on how to change their environment the answers tend to be very mundane – people may know their area and its needs but their environmental vision often extends little beyond curbing dog fouling and mending broken paving. They need to explore possibilities with a committed, approachable design team that is there to genuinely take their views on board.

There may well be areas where education is futile. Not everyone will be interested in storage and collection space, parking standards, turning circles, kerb radius at pedestrian crossings, utility service infrastructure etc. Similarly, if the public are consulted on urban design questions, are their views likely to be shared by leading architects and urban designers? An analogy here might be the fact that television soaps appear to be valued more highly by the public than the works of Shakespeare. Building by opinion poll may herald the death-knell of inspiring built environments. Part of the answer may lie in showing people innovative developments from elsewhere in the World whilst also keeping local context and budget in mind. It would also show people that they can get it wrong occasionally – there are numerous examples (such as the Angel of the North) where proposed developments have met with public criticism only to subsequently be very popular when built.

Any valuation derived from public consultation is unlikely to give appropriate weight to more obscure, technical points, despite their importance. By far the commonest misunderstanding of the project is that it aimed to achieve the ‘best design’. Inevitably when the professions involve the laity in decision-making decisions will be different to those professionals would have made. This is not to say that design principles are jettisoned or, conversely, that whatever meets the least public resistance will dominate. Concerns of safety and economic sustainability will inevitably have to hold sway – that is, they will shape public

decisions. The ideal is for democratically accountable design experts to arbitrate between public wishes and those of a developer. Inevitably the more views and opinions that are fed in the better the eventual decision will be – assuming all are happy with the method employed from the outset.

Finally, it is worth stressing that developers and others with a professional interest in the built environment may also lack a thorough understanding of the ways in which a development's immediate external environment can impact, for better or worse, upon its market value. Even some major developers admit to using rules-of-thumb – for example, that a £20m development should have £3m spent on the surrounds. So these individuals too can benefit from good value mapping.

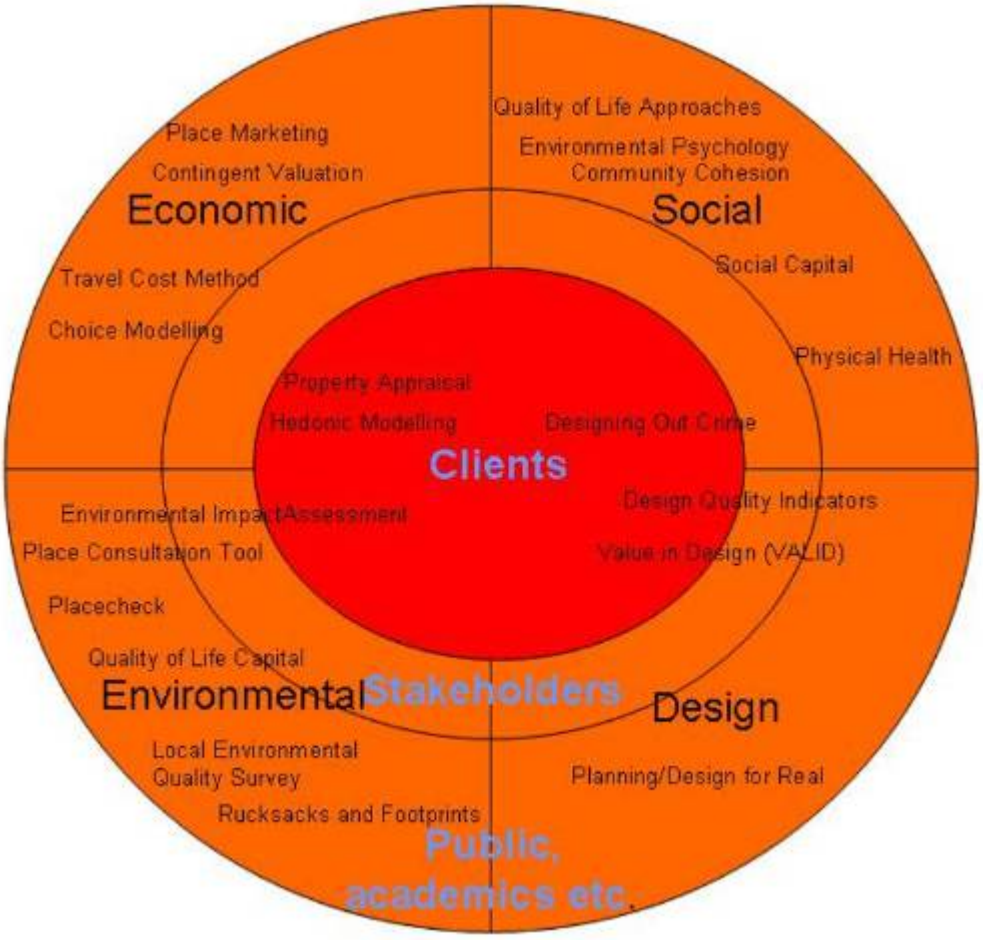
Methods for Assessing Value – An Overview

The Literature Review

The literature review, available as a separate document, covered a handful of broad approaches to assessing environmental value. These were: Design; Environmental Economics; Impacts and Indicators; Organisational Performance; and Property Market. A handful of different approaches emerged from the initial review that were seen as helpful to the exercise in hand but not, ultimately, as core methods that could be used. This 'complementary' literature is now summarised.

Figure 5 is useful in showing the different techniques that are available for assessing value or, at the least, thinking about aspects of a development that people might value. The figure is useful in that it also shows just how accessible tools are to the lay public. There doesn't appear to be a major problem in terms of a lack of methods – for local small scale evaluations of a proposed environmental change tools such as Placecheck doubtless are appropriate in that they require few resources, little/no prior education and because few variables are under study.

Figure 5: Principal Approaches for Considering Value in the Built Environment



Quality of Spaces

Several approaches consider the quality of existing places – most notable amongst them being Placecheck (by Urban Design Group), Local Environmental Quality Survey (by ENCAMS – Environmental Campaigns) and Landscape Area Characterisation (by English Heritage). The latter is used specifically to assess and categorise historic aspects of areas and landscapes – its relevance to proposed urban developments is likely to lie in informing all stakeholders of the site's significance. All of the methods offer something in terms of ways for thinking

about the built environment - if a community (or group of interested people) establishes what an area needs before a development is proposed this will put those same people in a good position to then judge what they are likely to value in any proposed development. The Area Characterisation's historical focus is particularly interesting in that it offers to help in uncovering the (often) hidden history of a place – a history that, once people become aware of it, may alter their valuations of the site.

Like almost all methods reviewed the approaches vary in cost depending upon the extent and rigour with which they are pursued. The tool that probably best addresses (non-monetary) value is the DQI for Public Space (currently being piloted[1] by CABE) which gauges the views of members of the public and of professionals running a space on nine issues (that the individuals have weighted beforehand). The nine are a mix of issues about design and about the use and compared against the group management of the space. They are: access; activities on offer; how it serves different needs; maintenance; performance; materials used; shelter and seasonality; role of the space in the community; how the space makes individuals feel. A score is then given by participants for each area of public space – so that, after the scores have been weighted, individual values can be compared with the groups. Only the DQI for Public Space method offers any real framework for stakeholder dialogue – and even this is somewhat unstructured (certainly when compared to the methods discussed subsequently).

One other tool worth mentioning is Planning for Real – developed by the Neighbourhood Initiatives Foundation. This is an easy to use tool that uses a three dimensional model of a neighbourhood as a way of helping people to put forward

[1] In 2006 CABE Space will merge the 'DQI for public space', 'GreenStat' (a customer survey for park users) and the 'Green Flag Awards' method of appraising green parks and open spaces.

and prioritise ideas on how their area can be improved. The basis for making the model, such as models of houses to assemble, and problem and ideas cards, as well as instructions for facilitators, are all contained in the Planning for Real kit. The tool is visual and fun to use and people of all abilities can get involved. The tool needs initial facilitation (recruiting residents to make their neighbourhood model using the kit provided). It allows communities to identify problems and agree solutions in a collaborative way. Participants are asked to prioritise the most practicable course using a Now-Soon-Later chart. As a consultation tool for the less educated and poor, the approach has much mileage but as a mechanism for valuation and decision-making on monetary issues, it is inappropriate.

Quality of Life

The Quality of Life Capital developed by a consortium of Government environment bodies is the most strategic of the various variant quality of life approaches – albeit one whose rural pre-occupations are fairly visible. It is all about identifying and maintaining benefits for an area – it is much less concerned with damage to an aspect of the environment than it is to the loss of benefits that were provided by that aspect. The approach stipulates that any change that reduces or damages the benefit is offset by some other change that increases or improves the same benefit to at least the same degree – a useful concept that might inform Section 106 agreements[2]. In some cases the recommendation will be that the development doesn't proceed at all. The method is very much a broad-brush style rather than a fixed check-list. It is also very much about protection rather than any creative process for use in shaping a future development.

[2] Compensation by developers to local authorities for pressures on the local environment.

Arts Impacts

Traditionally the arts sector has relied primarily on aesthetic rationales and arguments emphasising their intrinsic and 'civilising' values. David Throsby (2000) defines cultural value as consisting of: aesthetic value; spiritual value; social value (sense of identity and space); historical value, symbolic value and authenticity value (its genuineness). Similarly, Kelly and Kelly (2000) stress the need to value and support art which is difficult and new and for which there is no market. Delgado (2001 in Reeves 2002) notes too that issues such as cultural preservation and cultural diversity must also be factored into discussions about what is valuable. This has clear implications for the built environment – we should, so the argument goes, support the avant-garde because it may become popular and, if it doesn't, it will anyway still add to the stock of cultural diversity.

Environmental economists, including David Pearce, in work on preserving heritage buildings have recently taken issue with those who would see cultural values as somehow exempt from the formal valuation applied to other goods. The economists in question (see EFTEC 2005) concede that, a building that almost no-one values may have great value to a few experts who are aware of its cutting-edge technology or its historical significance. EFTEC argue that without the ability to compare costs and benefits the quality of decisions will forever be in question. In reality we do put implicit or explicit prices on all assets – even human life. They offer some hope for the aesthete - suggesting there may be a need to educate the wider public about the case for reconsidering their initial values (which creates the further problem of how much should be spent on such education).

What about the value of the life changing effects an arts project may have? Landry et al. (1993) described these as effects that have a "continuing influence upon, and directly touch, peoples' lives". These effects may not be apparent at the point of consumption (the admission price might be repaid many times over). So a valuation based on market value or willingness to pay might be misleading. Of course, measuring the effect of a building on a person is fraught with difficulty. The effects on one individual could be far more significant than any number of visitor pounds – it may be that seeing an impressive piece of architecture has swayed many talented people into the field of architecture and urban design. Alternatively, it may instead be that attraction to these professions is caused by bad design.

The arts impacts literature also discusses how an areas' image and, as a result of this, its economic fortunes can be changed if it can boast some great artistic works. Although we are avoiding discussion of economic impacts here, this particular issue is relevant in that urban environments can often be converted to images such as posters and postcards. These images can also then be used in tourism and advertising (see Kelly and Kelly 2000). So there is an additional source of value that conventional environmental economics doesn't appear to mention.

Environmental and Ecological Impacts

There are two main ecological approaches that focus upon impacts over a wider geographic reach - Ecological Footprints and Ecological Rucksacks. With the Footprints approach we can find the biologically productive area that is required to maintain the flows of much of what we consume and compare what we use with the area on the planet that is biologically productive. Urbanised economies are of course more likely, by definition, to need to import resources to meet their needs. It is perhaps unsurprising then that various towns and cities have developed detailed accounts for their ecological impacts and demands. Cities and

developments that can discourage car use without hampering movement are clearly a key factor in footprint reduction - in industrial countries, fossil fuel use accounts for about half of the footprint. The *Ecological Rucksack* is a similar tool that shows that anything we use has invisible environmental impacts in production and subsequent disposal – albeit one that extends well beyond the local place and, even, the local city and country. The Rucksack approach uses the idea of a consumed product's true weight – the weight of biosphere that is disturbed to make a good or service. Showing the true environmental impact of what we consume. Neither approach is applied at the level of buildings. With footprints the impact is by person (not by weight) so it is not entirely clear how the consumption of materials used for a building would be related to people.

The last approach is Environmental Impact Assessment (EIA). EIA provides evidence and analysis of environmental impacts of activities from conception to decision making. An EIA must include a detailed risk assessment and provide alternative solutions or options. It may cover any engineering or industrial project, legislative proposal, policy programme or operational procedure with environmental implications. It is more about being reactive rather than any creative process for deciding what the valuable features of a new building might be. Neither EIA nor the other two approaches is specifically concerned with measuring the costs of the impacts – which are different again, of course, from the value of these costs (society's willingness to pay to rectify the damage or to accept compensation for its occurrence).

Methods for Assessing the Value for Developers

Property Valuation

Development appraisals will vary in complexity depending on the type of development and the attitude of the developer. The aim is to produce valuations that tell private developers what their proposed scheme will yield in terms of profits and to tell public sector developers what their asset is worth. Most developers accept that there are significant margins of error in appraisals, and will work to limit the risk they undertake. In the UK there are five recognised valuation models – see table 10.

Table 10: Methods of Market-Based Property Valuation

Method	Description	Use
Comparable method	estimates the value of a property by comparing it to the prices of similar properties sold in similar locations within a recent period of time. The basic assumption is therefore that a property is worth what it will sell for.	for most types of property where there is good evidence of previous sales.
Accounts / Profits Method	rent decided upon is based upon the earnings potential of the building in the hands of the existing or, if for sale, a likely future type of owner. This is then used in the investments method (see below).	to determine an appropriate rent where evidence of rents is slight because the properties in question tend not to be held as investments – e.g. cinemas and theatres.
Investment/ Income Method	the present worth of a property is estimated on the grounds of projected	for most commercial and residential property

	future net income (in rent, for example) and re-sale value. Assumes money is of more value to its holder today than in the future. Uses the discounted cash flow (DCF) model to determine the present value of an investment. Internal rate of return (IRR) is that discount rate for a series of cash flows that will allow the project to break even. the alternative method is an implicit model, that determines value by reference to previous similar sales – generally referred to as the All Risk Yield model.	that is producing or has the potential to produce future cash flows through being let. Developers of investment properties are more likely to start off with a yield in mind. This will be less than the profit on a speculative development, as the risk is lower.
Development/ Residual Method	assesses the value of developable land – which may or may not have property on it.	where sites are ripe for development.
Contractor's Cost Method	cost of constructing replacement.	for properties not bought and sold on the market – for example, churches.

(see Pagourtzi et al. 2003 for a full review; see also the RICS Red Book)

At the Feasibility Stage appraisal is likely to be little more than adding up estimated sales costs (including profits required) and subtracting them from the estimated value of the site. As the scheme is worked up further and more costs known (for example utility and section 106 costs) are known there will then be analysis of cash flows – including discounted cash flow analysis. There are more

advanced methods that can be employed. These still take into account income flows, but which tend to try and take into account the changes to this flow over time, or to model more accurately various variables (such as geographic variations). These include:

- Artificial Neural Networks
- Spatial Analysis Method
- Fuzzy Logic
- Autoregressive Integrated Moving Averages
- Hedonic Price Models (now considered)

Valuing the External Impacts of Developments

The Hedonic Pricing Method aims to determine the relationship between the attributes of a good and its price. It has as its basic proposition the notion that any good has a range of characteristics, each with its own implicit or 'shadow' price. The final price of that good is the sum of the shadow prices of all its attributes, and thus reflects the consumer's valuation of the marginal differences between attributes. Applied to property (notably private housing and offices), it involves analysis of data (usually for the previous twelve months) relevant databases to disentangle the various attributes of a building or a development from the other factors making up their market price. Using regression analysis it is possible to estimate the relationship between the level of any one housing characteristic and the price of the property. It would then be possible to use the information from the hedonic price function to see how the quantity of a particular characteristic influenced the overall price commanded by a property. If the data is available, a big 'if', the exercise should be relatively cheap and easy to undertake. It has been used to examine the impact on market prices of the location of buildings in relation to factors such as:

- amenities

- architectural features
- external design characteristics
- health facilities
- internal design characteristics
- landscape features
- public transport
- school quality

The use of such techniques lie in knowing what will and won't add value to a similar development in the same property market at roughly the same time – that is, it allows developers to confidently prioritise one aspect of a development over another. The caveats about similarity and sameness are important – value transfer can only occur where there are considerable similarities between developments (and assuming that a new development doesn't steal customers away from an existing one). The method is telling the developer what the property buyer is willing to pay for from a development. Of key interest here are external design, landscape, and architecture. If the general public want developers to offer more than this then they must somehow find ways of paying them to do so. The hedonics method can also be employed by neighbouring property owners to assess how their property values are likely to be affected.

Despite the usefulness of the method to ascertaining developer value there are several concerns:

- change is at the margin - so there is no sense of willingness to pay beyond the margins (i.e. times of unusually high/low prices or supply). This makes it difficult to predict the effects of increasing/decreasing a particular aspect of property.

- the method uses regression and differentiation techniques and geographical information systems (GISs) – so it is not a method that anyone (for example, a community group) can apply.
- the method relies on there being a well-functioning, data-rich property market - in the UK; this has seen the method limited to housing.
- if transaction costs (searching, buying and moving) in property markets are sufficiently high, they may negate the benefits of moving.
- the method requires all other variables that could explain price differences to be isolated and quantified – evidence suggests this is difficult.
- as it concentrates on property prices, it ignores those with non-use values for a particular piece of the built environment and it ignores visitors.
- as it focuses on what buyers want it overlooks that fact that much of what they value may be distributed very unevenly in geographical and class terms (i.e. wealthy people buying proximity to rivers, parks etc.).
- developments in the public sector are not bought and sold in the way houses and offices are – there is, for example, no market for universities, hospitals or tube stations. So developers of buildings for the public sector cannot really know how much their building will gain in terms of its value.
- there is no obvious place for aesthetic considerations.
- looking at what people buy and responding to this may lead to a circular situation whereby buyers buy what is on offer rather than what they would like. This ties in with the point made earlier about whether valuation is a measurement exercise or a dialogue between key stakeholders.

Multi-Criteria Analysis

The Design Quality Indicators (DQI) and the Value in Design (VALID) are both examples of the most common technique used to compare unvalued costs and benefits – namely, weighting and scoring (sometimes called multi-criteria analysis (MCA)).

With DQI there are three main headings for valuing a design (usually a building). These are:

- Functionality (usefulness) – access, space and uses. These are concerned with the arrangement, quality and inter-relationship of spaces and how the facility is designed to be useful to all.
- Build quality (building fabric) – performance, engineering systems and construction. These relate to the engineering performance of a facility, which includes structural stability and the integration of health and safety aspects throughout the project lifecycle. They also relate to the robustness of the systems, finishes and fittings.
- Impact (sense of place) – urban & social integration; internal environment, form & materials; character and innovation. These refer to the facility's ability to create a sense of place and to have a positive effect on the local community and environment. They also cover the wider influence the design may have on the disciplines of building and architecture.

The Stages of DQI

1] Weighting: For the ten sub-headings referred to above initial weightings of 1-3 are set, by each stakeholder, for lots of different indicators within the ten headings – see figure 6 below which looks at the access sub-heading (part of functionality). The ultimate aim is for a design that has achieves excellence in all three main spheres.

Figure 6: Example of DQI Initial Weighting

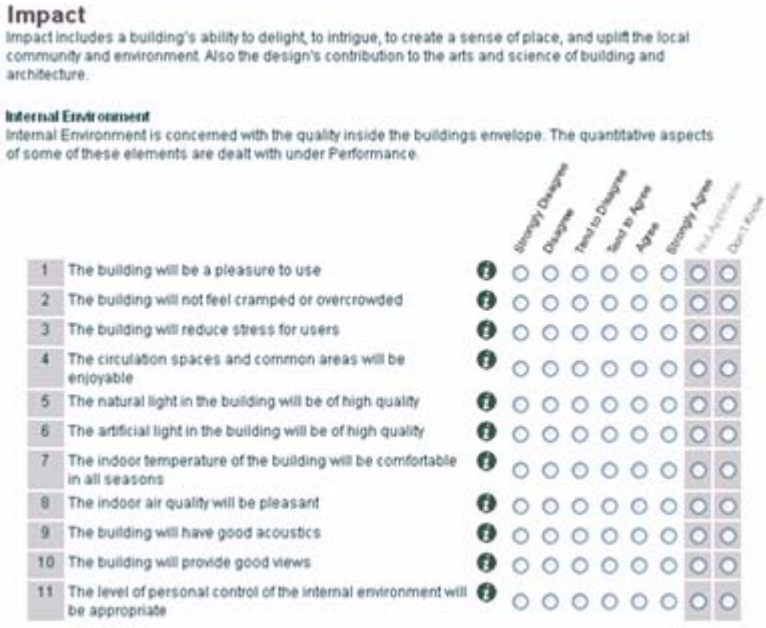
Access

		NA	F	AV	E
1	There should be good access to public transport	○	⊙	○	○
2	There should be sufficient car parking	⊙	○	○	○
3	The building should provide good access for all	○	⊙	○	○
4	The building should cater for cyclists	○	⊙	○	○
5	The layout and landscape around the building should provide good access for people	○	⊙	○	○
6	There should be safe and secure access for goods	○	⊙	○	○
7	The building layout should be easily understood	○	○	⊙	○
8	It should be easy to find your way around the building	○	○	⊙	○
9	The signage should be clear	○	⊙	○	○
10	The building should cater for the need of people with impaired sight	○	⊙	○	○
11	The building should cater for the needs of those people with impaired hearing	○	⊙	○	○
12	The building should be accessible to wheelchair users	○	⊙	○	○

Space

2] Ranking: a design is then rated using a Likert scale (agree strongly through to disagree strongly). This is outlined in figure 7 – that looks at the impact sphere and the internal environment sub-heading.

Figure 7: Example of DQI Ranking



Impact

Impact includes a building's ability to delight, to intrigue, to create a sense of place, and uplift the local community and environment. Also the design's contribution to the arts and science of building and architecture.

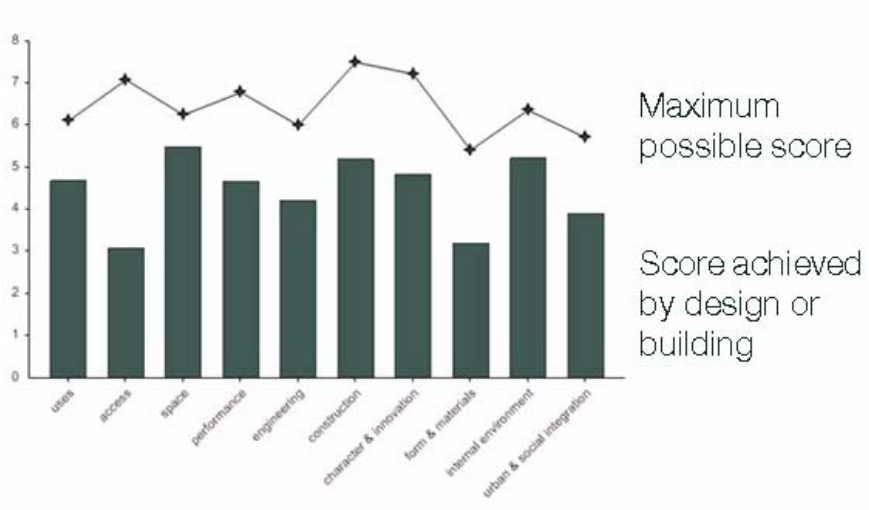
Internal Environment

Internal Environment is concerned with the quality inside the buildings envelope. The quantitative aspects of some of these elements are dealt with under Performance.

		Strongly Disagree	Disagree	Tend to Disagree	Tend to Agree	Agree	Strongly Agree	Not Applicable	Don't Know
1	The building will be a pleasure to use	○	○	○	○	○	○	○	○
2	The building will not feel cramped or overcrowded	○	○	○	○	○	○	○	○
3	The building will reduce stress for users	○	○	○	○	○	○	○	○
4	The circulation spaces and common areas will be enjoyable	○	○	○	○	○	○	○	○
5	The natural light in the building will be of high quality	○	○	○	○	○	○	○	○
6	The artificial light in the building will be of high quality	○	○	○	○	○	○	○	○
7	The indoor temperature of the building will be comfortable in all seasons	○	○	○	○	○	○	○	○
8	The indoor air quality will be pleasant	○	○	○	○	○	○	○	○
9	The building will have good acoustics	○	○	○	○	○	○	○	○
10	The building will provide good views	○	○	○	○	○	○	○	○
11	The level of personal control of the internal environment will be appropriate	○	○	○	○	○	○	○	○

3] Calculation an Overall DQI: The Likert marks are then weighted using the initial weighting to give an overall DQI – for each individual and collectively. Individuals can see (using diagrams such as the one below – figure 8) where they are getting or not getting what they want and the Co-ordinator can see how the Group overall are ranking different design issues.

Figure 8: Calculating the Overall DQI



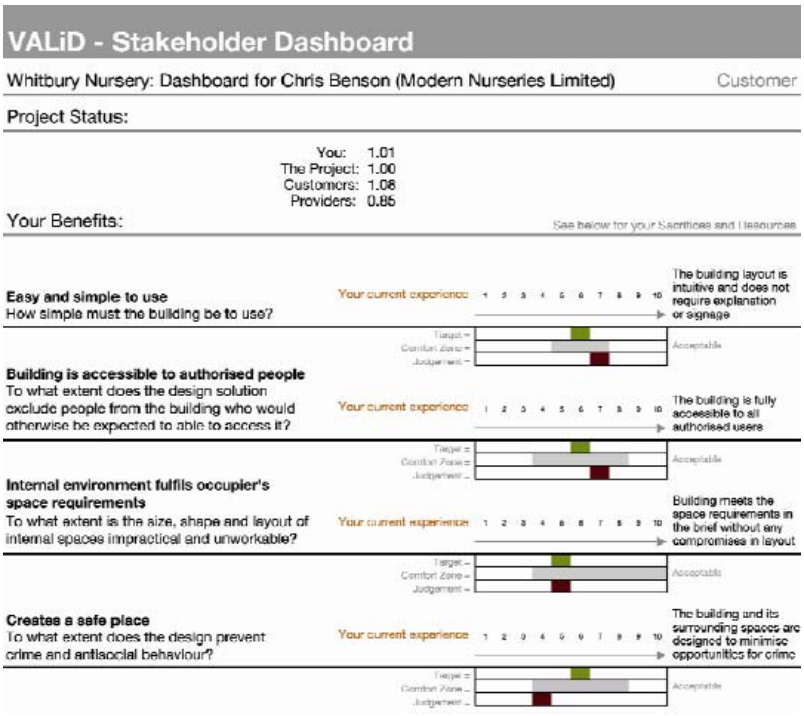
DQI is essentially an exercise that can take place during the course of a day – some of the discussion may centre on data generated in advance (such as heating data) and some will simply be reflections on building characteristics (such as extent to which it 'raises your spirits'). The focus is certainly upon the building quality – rather than the specific interest here, namely the factors that make for successful places and spaces. The method can be employed throughout the design process although, strictly speaking, any comparison between buildings or over time will need the same stakeholders to be involved. One factor that would appear to be somewhat flawed is that the initial weighting is constrained to three/four choices – 1-3 and not applicable. The problem is that stakeholders are allowed to

give everything the top rank – rather than being expected to rank heading and sub-headings.

The VALiD method also involves weighting and ranking although it seems to be a more sophisticated model. It has a first stage of trying to tease out the organisational values of the likely participants in order to gauge their expectations and to anticipate their preferred ways of working in the project team. This activity is not however connected with design in general and certainly not with the specifics of the impacts a development makes on urban places and spaces. It seems somewhat too nebulous – headings of different value types considered include hedonism, stimulating, others-orientated, security.

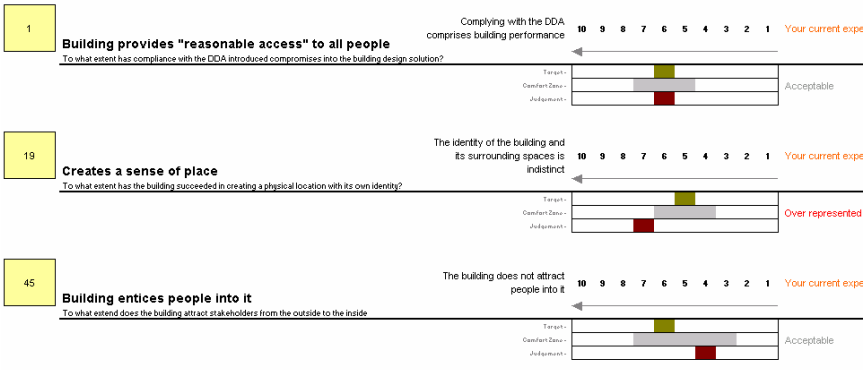
In Stage 2 stakeholders are asked to select their own preferences from two generic lists: benefits they seek, sacrifices they are prepared to make (from the same list) and resources that will be expended in the process. They are not supposed to select more than ten from any list – thereby ensuring that they focus and that the exercise doesn't take too much time. This is called setting a stakeholder dashboard. For example, in the diagram below the individual has picked four benefits – simplicity, accessibility, space requirements and safety. As can be seen, stakeholders pick a target, a comfort zone and a judgement on the current situation in terms of the scheme under discussion. This makes it possible to see where people are getting more of what they want – which they can then possibly trade in for things where their targets (and comfort zones) are not being met.

Figure 9: Setting Benefits in a Stakeholder Dashboard



The sacrifice scale consists of things that the stakeholder is prepared to compromise on in order to derive benefits.

Figure 10: Setting Sacrifices in a Stakeholder Dashboard

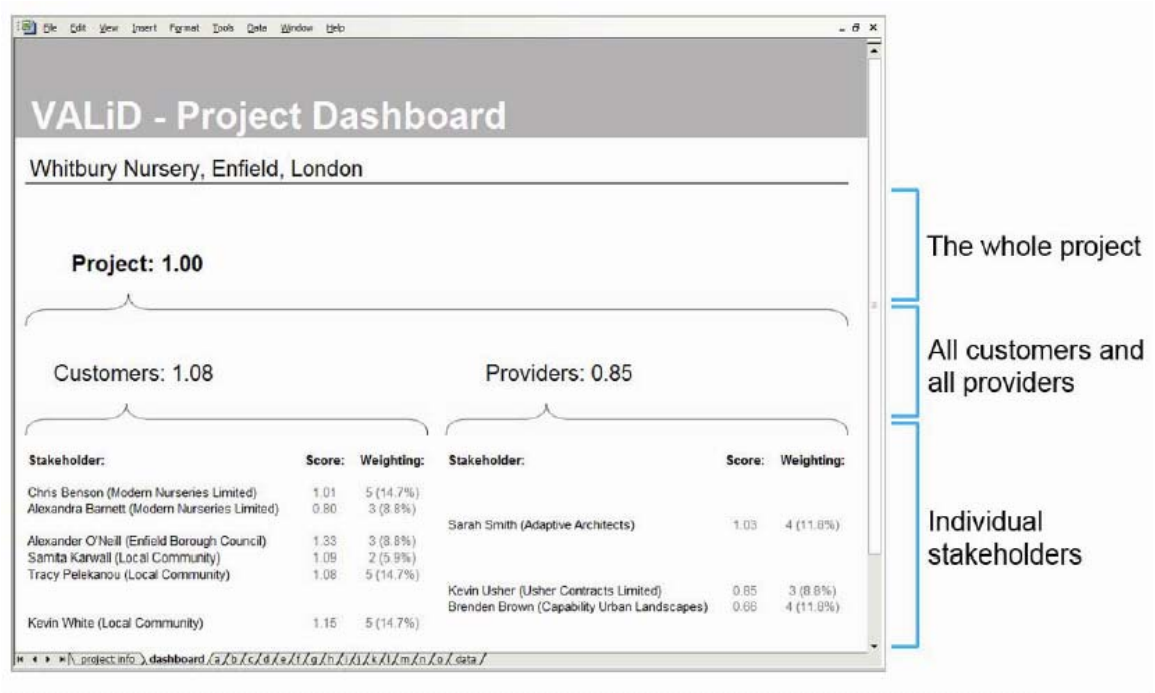


The final aspect of resources is a further way in which the stakeholder is forced to reflect on what they are looking for. Resources include risk (delays in securing planning approval), costs (such as security and waste disposal) and time delays (such as community consultation).

VALiD considers value delivery performance as the fulfilment of stakeholders' expectations. By comparing each stake holder's current judgement of the project solution's current fulfilment of their benefits, sacrifices and resource with the targets they set for those benefits, sacrifices and resources, a measure of expectation fulfilment (i.e. "value delivery") is arithmetically determined as the ratio of judgements to targets. This calculation is performed within each stakeholder's individual dashboard. Taking any stakeholder importance weightings into account, VALiD then aggregates these "value ratios" to provide pictures of value delivery performance in further numerical dashboards that summarise project performance in delivering value to all customer stakeholders, all provider stakeholders, and to the project as a whole. Data entered into the pro-forma excel spreadsheet is periodically used to (instantly) calculate a 'value ratio' for each stakeholder and for the project as a whole. Analysis is likely to be done by the project facilitator.

As the figure below also shows, there are also various methods for weighting according to the stakeholders' importance – thereby helping lessen, if not removing, the worry that stakeholders are all treated equally when, in fact, their ability to resource their differing claims may vary wildly (i.e. between a poor representative from a community group and someone from a large construction company).

Figure 11: The Overall VALiD Dashboard



What Methods Exist – and What are Needed?

Various methods exist for developers to gauge likely rental streams over a prolonged period. There is also the Hedonic approach that helps to isolate the value that the property market places upon different elements of the external environment. However, the information offered here is very much about how the market performs. Thus, it is not about the nature or amount that buyers might like if they had more choice. Nor is it about what designs developers would offer if they could be more certain of benefiting. Such certainty could come through some sort of collective investment pact with neighbouring property owners and/or other developers. Multi-Criteria Analysis, although it doesn't offer any sort of monetary valuation, does allow the opportunities for the sorts of dialogue that would appear to be needed for these new market possibilities to emerge.

Methods for Assessing the Value for the Public

Stated Preference Techniques

Stated preference approaches deal with hypothetical environmental futures and, as such, are something those interested in valuing proposed changes to the built environment must consider. The techniques also, crucially, discuss valuations in money terms – asking whether the value people claim to have for some environmental change (or preservation of the status quo – such as preservation of an old building) exceeds the costs of that change. The poor are seen as having no value for things – those unable to afford some environmental good are treated as having zero value for it. From an economic viewpoint this is perfectly valid. The two approaches that are of most direct relevance (Contingent Valuation and Choice Modelling) gauge peoples' views about what they would be willing to pay for something – whether they actually use it or not.

Stated Preference methods are the main way of estimating non-use. This can include:

- *altruistic use* – knowing someone else might like it
- *option use* – having the opportunity to do something if you want
- *bequest use* – leaving something for the future
- *existence use* – satisfaction that things exist even if you don't enjoy them personally

Because users have difficulty saying how much of their value is attributable to use and non-use values, non-use value is only measured by talking to non-users.

There is a dilemma that affects both contingent and choice modelling approaches – namely, that when people say what they would value there is no way of knowing how other people will actually use it. Admittedly, contingent and choice methods might make it possible to discern that people value some places more if they have few visitors (a small space near a church, say) and value others because of the

‘urban buzz’ factor. But, once a building is built it’s impossible to know whether everyone will then visit and be disappointed because too many people are there – or because the reverse is the case. Hopefully, the transfer of data from existing visit studies (see ahead) can help here.

The two methods differ in that one asks directly about willingness to pay for a proposed change to an environmental good (usually a specific site) or service whereas the other attempts to tease out this willingness by exploring peoples’ preferences for various different environmental variables (including cost).

Contingent Valuation

This is the most widely accepted method in environmental economics for dealing with total economic value – both use and non-use. The most common form is discrete/dichotomous choice which asks: would you pay the following to get a certain change – yes or no. There are various checks in place to stop people exaggerating their willingness or ability to pay. Questions are asked of a randomly selected sample (usually 350-500) of the relevant population and are conducted by mail, phone or in person. Participants are randomly assigned different values (payment amounts) and asked if they would be willing to pay this amount to secure a proposed change. The amounts are usually small – as the costs of a development are likely to be spread over many people (rate/taxpayers) and many years. Ideally, the values should hover around the actual costs likely to be involved for different changes to the status quo.

Respondents are typically asked to comment on three choice options. One of these will be the status quo (do nothing) situation. In the case of a proposed urban development the do-nothing situation would most probably be replaced by the development that would go ahead anyway – and then a couple of options that the public might wish to pay more for but which the developer might feel would not

lead to direct returns to them on their investments. It is important that respondents think that there is a payment vehicle by which the questions they are being asked might genuinely happen – for example, they might be asked ‘would you be willing to pay amount x on your Council Tax to secure the following change’. Examples of the sort of visual material a respondent might face are given below. It relates to an imminent re-design of Finsbury Park tube and bus station – essentially the first figure is the planned development and the two subsequent minor options offer the respondents a cctv system and, secondly, a cctv system and a bike racks. The material is attractive and clear – if presentations are too elaborate there is evidence that respondents start valuing the presentation as well as the development.

Figure 12 a, b and c: Proposed Development at Finsbury Park – No Payment Required

would you pay an extra 10p a year on your Council Tax to support this?

would you pay an extra 11p a year on your Council Tax to support this?

Once the data has been collected researchers estimate[3] the average value for an individual or household and then extrapolate this to the relevant wider population. The results can be disaggregated into several variables, like income and age. Median willingness to pay is more robust to outliers and of more interest to policy makers worried about political support yet, for the purposes of cost benefit analysis, it is mean/average WTP which is most appropriate.

One key drawback is that, in everyday life, people are rarely asked to perform such difficult cognitive tasks. Instead they have the opportunity to engage in repeated transactions over time, they have opportunities to explore in some detail the markets for substitutes and complements and have the opportunity to acquire substantial information.

Choice Modelling

With choice modelling a survey respondent is given a number of situations on a set of cards that differ according to a few key attributes. In some cases, visual aids such as videos or photos may be used to help respondents understand the scenario they are being asked to value. Respondents are then asked to select their preferred set. The inclusion of price as one of the attributes allows for the derivation (using logit modelling techniques) of implicit prices for each of the other attributes. This approach is particularly suitable for the valuation of environmental goods, since these goods are almost invariably multidimensional in character. An example is given below of one such choice experiment. There are often just three sets on offer (one being the ‘do neither of the other two’ option) - if a respondent is faced with too many choice cards/images it may simply be too much of confusing task. It is then a bit like hedonics in that it splits up value into contributing factors.

[3] Analysis includes regression (for open-ended data) and Logit models (for yes-no responses).

Choice can also help in refining which aspects of the built environment people do and don't care about. Whilst choice modelling makes it possible to isolate values for individual aspects of an environment it can also show things that people simply don't really have preferences for – this may be revealed statistically through various repeat exercises that establish what is and isn't important or simply by people saying they don't care when doing the exercise. In this case things like the type of materials proposed for a building might well be left to the experts. The Choice approach is also useful because it can discern between whether it is the buildings or the activities that take place around them that people like (for example, the bookstalls, street performers and outdoor cafes on London's South Bank) rather than the building and design aspects. If these activities turn out to be highly valued it has useful implications for designers and building/space managers. It should even be possible to assess how our knowledge of what goes on inside a building affects our valuations of it - for example how peoples' views on gambling affect their enjoyment of a casino's design.

Figure 13: (Environmental) Example of Choice Modelling

	Forest A	Forest B
Type of trail	Multi-use trails + dedicated way marked, long distance (+ 20 miles) cross country bike trails. 	Multi-use trails + dedicated technical single track mountain bike trails. 
Optional trail obstacles	No optional trail obstacles. 	A range of optional trail obstacles provided including jumps, drop-offs, and north shore. 
Bike wash facilities	Bike washing facilities available. 	No bike wash facilities. 
Changing and shower facilities	Changing / shower facilities available. 	No changing / shower facilities. 
General facilities	Facilities included car parking, toilets, BBQ / picnic area, café and forest shop. 	Facilities include car parking and toilets only. 
Information	Only basic information on the forest, trails, and wildlife provided. 	Detailed and up-to-date information on the forest, trails, and wildlife provided at forest centre, in leaflets, along trails and on website 
Surrounding	Forest not managed to increase opportunities to view wildlife, points of interest and view points. 	Forest enhanced to increase opportunities to view wildlife, features of interest and view points. 
Distance	Forest located **300 miles** from your home.	Forest located **150 miles** from your home.

	Forest A	Forest B
My preferred forest is:		

	Forest A	Forest B	Stay at home
I would allocate my next 5 trips (to be taken within the next year) to:			

Travel Cost Method (Revealed Preference)

The basic premise of the Travel Cost Method is that the time and travel cost expenses that people incur to visit a site represent their valuation of that site. Because travel and time costs increase with distance it becomes possible to construct a marginal willingness to pay curve for a particular site. The Random Utility Method (RUM) is the most sophisticated and common TCM approach. It is particularly suited to dealing with specific quality changes of sites and where numerous substitute sites exist. With RUM individuals are asked about all possible sites they have selected in the past year, their quality characteristics and the travel costs to each site. Data is typically collected for the 12 months prior to the time of collection – which can be collection over this period or collection that asks people about their 'visiting' behaviour over this period. Data is usually collected from visitors at the site. The researcher can then estimate, using a logit model, when trips will be made, which sites are selected and how changes in site quality affect value. Being able to discern what makes sites desirable makes it possible to improve them for the better. As with choice modelling it enables researchers to pull apart overall valuations into component parts. Unlike the choice method it has the advantage of being based upon actual (albeit stated) behaviour. Its one problem is that it will only work if data have been transferred from another very similar development.

TCM does seem to be a snap-shot – some places that people visit may be declining in popularity whereas the reverse will true of other sites. This is a problem as the cost of environmental change is likely to a calculable one-off whereas the dis-/benefits from the change may well extend into the future. The method fails to capture non-use (substantial where a site is unique) and also fails to count by-passers – they are seen as being in the area (and possibly benefiting from the space) but not there because of the space.

What Methods Exist – and What Are Needed?

The methods reviewed in this section have shown that, if a developer (or collective of developers) feels unable to commit to creating a public frontage beyond that which will yield a commensurate benefit, there are still techniques that might be applied that could see the development of space that is public (or directly abuts public space) 'topped up' with public money (the money people claim to be willing to pay). There is then a way to attribute value to the sorts of public spaces that and building frontages that developers want and that the public wants. With a development that consists of, say, a whole housing estate.

What doesn't exist is any way of attributing value to the poor using existing economic valuation techniques. This is not something that occurs in other spheres of life – people on the most meagre income are entitled to vote and to undertake jury service. In other words, there are areas where the public are free, irrespective of income, to make valuations that are important to society. The children and the elderly are likely to be very prominent amongst those seen as having no value. Perhaps then a method can be derived that gives the poor (and other groups) an environmental allowance of some description – to be used in contingent valuation surveys. It is not the aim here to come up with such a mechanism – merely to raise the issue.

Reference was made in the stated preference work to surveying the 'relevant population' without any discussion of what this might mean. Who should be surveyed when a development is being proposed? Reference was also made earlier (figure 3) to the numerous stakeholders that might have an interest in a development. So far the focus has been on the developer (and, possibly, neighbouring organisations and other developers investing in adjacent sites) and the general public. The key task here is to identify who should be surveyed amongst the general public? Perhaps the answer then is for any proposed

development to have an agreed geographical sphere of influence and for a random sample survey to then be conducted over this sphere but with some form of distance decay applied to results. This idea of distance decay is particularly useful for development in regeneration areas since these may simply not have a neighbouring population. This survey could also include tourists.

Negotiation and Decision

Negotiating Positions

Figure 14 shows the process through which any proposed development can be considered. It serves as a conceptual framework for thinking about the valuation process from start to finish. The monetary techniques are left until the latter stages because it is only then that there will be concrete options to put to the public – the aim being to ask about their willingness to pay. This could be done earlier in the development process but people cannot be expected to state willingness to pay unless there is a strong chance a development will actually proceed.

Figure 14: Conceptual Framework for Valuing the Built Urban Environment

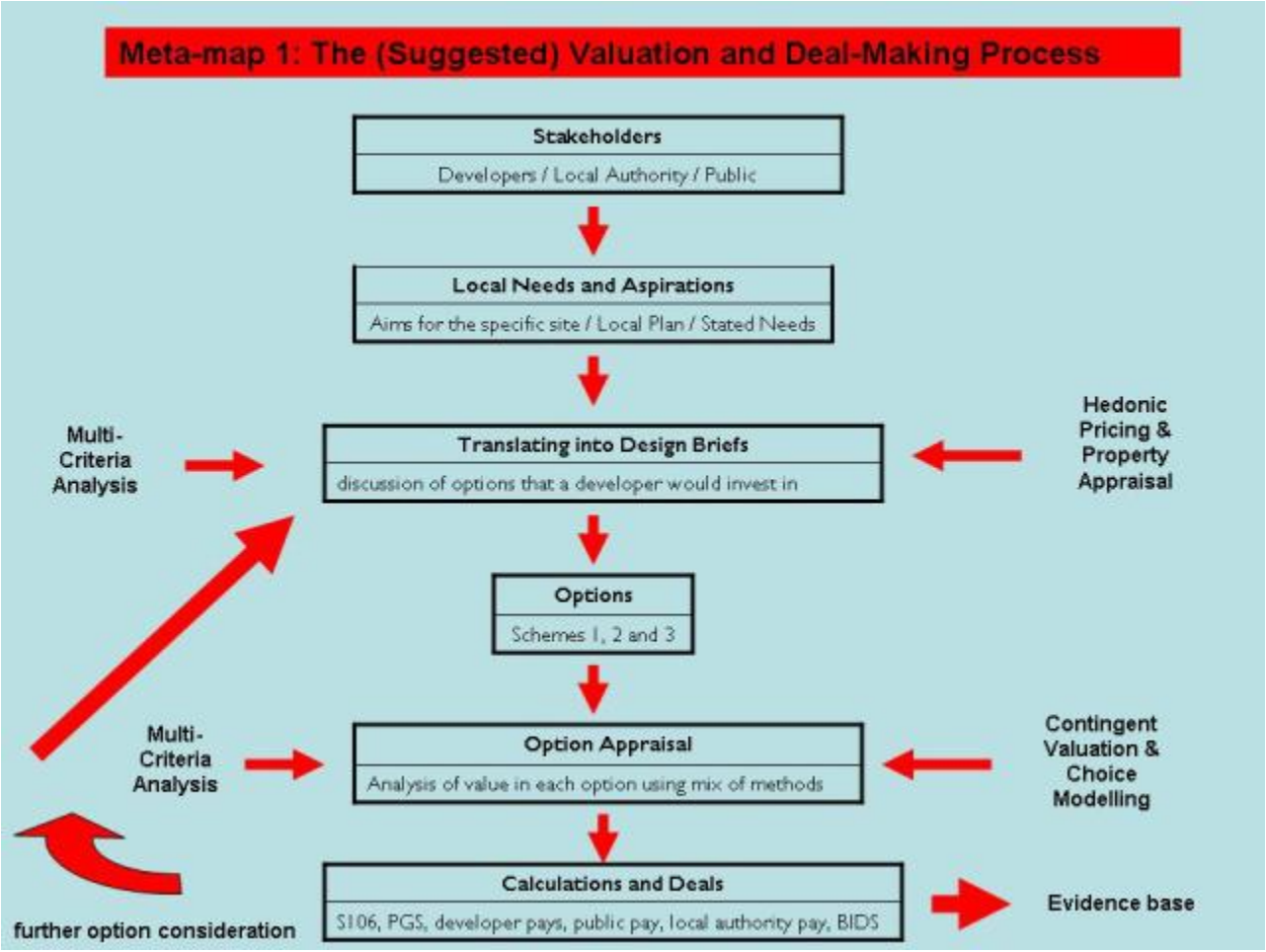


Table 11 is an attempt to start mapping out the potential win-wins – those that all parties put a positive value on. It can also identify conflicts – where one party sees something as negative and another as positive.

With a multi-criteria analysis approach there will be differences in how people score an option overall and also in terms of which aspects are particularly contentious. With the VALID approach there can be trading between different stakeholders in terms of what they will concede. However, in terms of making decisions between two factors that rank equally there isn't, in the absence of a

monetary value, a way of saying with certainty which factor should take precedence and by how much. With monetary techniques it will be possible to calculate which aspect about a development is valued more.

One issue not mentioned so far is how to compensate those who are opposed to a development and yet have no property (and so have nothing whose value can decline). One technique that can be employed here is willingness to accept compensation (WtA). Since it is not constrained by income, this is something that the poor, like the rich, can state when asked.

Table 11: Framework for Negotiation Between Developer and Stakeholders for an Option

Option 1	**Costs**	**Developer Ability to Pay**	**Stakeholder Value** (including willingness to pay or be compensated)	**Calculations (total value minus costs)**	**Deals (identify win-wins &conflicts)**
Land Value				This column can assess whether there is a net value from the proposed development and will make it possible to identify who does and does not value each different element.	This column is where win-win spending is decided and where finance is sought for aspects that are under-valued. This money may come from a land tax, Section 106, public spend or, where people are willing to pay more than the costs.
Property Value					
Scale					
Interior Quality					
Use(s)					
Exterior environment					
Public Value					
Parking					
Servicing					
Crime Reduction					
Space for exercise					
Contextual Value					
Transport links					
Effect on urban character					
Effect on urban economy					
Etc.					

Conclusions – Taking Value Mapping Forward

Reflections on the Project

The research work has synthesised a great deal of knowledge and experience that is, or could be, brought to bear upon valuing the built urban environment. The seminars that were held revealed that no-one actually felt they had the answer to valuing different options and making deals on the different elements that make up these options. The project has moved forward in offering ways for doing this and, in the process, created a community of interest in the issue of value mapping.

Value maps have been designed that give an overview of the key issues at stake. The initial map identified four main layers of value and then pointed to different aspects of these layers. Of particular importance was the notion of needed to increase the overlaps between what is valuable for the development and value for the potential site users and the wider urban area. The second map outlined out the overall process and the points at which different methods could be employed. The third map offered a way for starting to tackle the values (rankings or, preferably, willingness to pay) that developers and the public have for different options on the table.

The project also revealed that the public is rarely involved in the design process at an early stage. Until this can occur decisions will not have full legitimacy. This involvement needs to be one of dialogue – (two-way) education and discussion rather than ticking boxes. By opening up the development process we can hopefully make it more transparent.

Another measure would be to consider ways of ensuring that the public have genuine opportunities to value the urban environment. They can only really do this if they genuinely believe that their choices will require them to make some form of sacrifice. For wealthier individuals and groups this might be mechanisms to assess

public willingness to pay on different development options. For the cash poor there might instead be mechanisms that allowed them a say on environmental decisions in return for them offering to give time to some good cause (this time then could be converted by the planning authority into monetary terms). In discussing the process and offering ways for the poor to value options, the project will hopefully help in making the process more democratic and egalitarian.

All of the methods have weaknesses. The MCA approaches will need to be re-designed to incorporate a much more sophisticated version of values – both tangible and intangible. These values will go beyond the normal building focus of MCA to a wider concern with good places.

The Way Forward

The obvious next step for the value maps sketched out here is to test their robustness and relevance in real contexts. The steps for a value mapping pilot are outlined in Appendix 1. This also discusses management issues and the practicalities of finding appropriate sites and willing participants.

The issue of language is important here. In addition to the value mapping term itself, it would be useful if other terms came to be commonplace in the lexicon of designers, architects and developers. An example might be ‘public value added’ (or in the worst cases ‘public value destroyed’).

In addition to the practical action the case is strong for other developments that would drive work forward in the future, including:

- a team within CABE focused on valuation work and building up a database of examples, from around the World. The database would look at the application of valuation and decision-making tools to proposed and existing urban developments.

- a unit within a university, preferably a new type of centre that brings economists and designers together. This would look to start applying the environmental economics techniques to the built environment. It would also look to design an MCA tool that was much more suitable for looking at what makes good places rather than just good buildings. Ideally, there would also be individuals whose skill sets bridge design and economics.
- a network of practitioners and academics working in the field to accelerate mutual learning.

The clear need is for practical action rather than research – resources should focus very much upon the former. However, there are issues where research is needed:

- knowledge on design quality and its relationship with economic value.
- knowledge on design quality and its relationship with public value.
- knowledge on how mainstream valuation can better reflect place design.
- knowledge on how to extrapolate current values into the future.

One thing that has been clear from project discussions and seminars is that participants, including non-designers, have favourite places and spaces and like talking about them. People may lack design expertise but know what they like. Discussion on design can be very sociable in that all can have an opinion. So the Value Mapping project should have as a good reserve of good will to draw upon. The key issue is that those championing the agenda take the time necessary to produce quality methods – valuation methods and the developments they lead to are likely to outlast those involved in commissioning and conducting this project.

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Project Management

Geoff Mulgan - The project has been overseen by Dr Geoff Mulgan CBE, Young Foundation Director. Geoff became director of the Young Foundation in September 2004. Between 1997 and 2004 he had various roles in government including director of the Government's Strategy Unit and head of policy in the Prime Minister's office. Before that he was the founder and director of the think-tank Demos, described by the Economist as the UK's most influential think-tank; chief adviser to Gordon Brown MP; a consultant and lecturer in telecommunications; and an investment executive. He began his career in local government in London. He has been a reporter for BBC TV and radio and a columnist for national newspapers including the Guardian and Independent. Geoff is a World Economic Forum Global Leader of Tomorrow, and was ranked in 2004 as one of the UK's 100 leading public intellectuals. He has lectured in over 30 countries. He is a visiting professor at LSE and UCL, and a senior fellow at the Australia New Zealand School of Government. His most recent book is *Connexity* (Harvard Business Press and Jonathon Cape, 1998). Previous books include: Saturday Night or Sunday Morning (Comedia, 1987); Communication and Control: Networks and the New Economies of Communication (Blackwells, 1991); Politics in an Anti-political Age (Polity, 1994); Life After Politics (Harper Collins, 1997). He has two books forthcoming in 2006: Good and Bad Power; and The Art of Public Strategy.

Gareth Potts - the report-writing, seminar presentations and day-to-day project co-ordination was led by Dr. Gareth Potts, a Young Foundation Research Associate. In addition to his PhD (economic geography) he holds a Masters degree in Civic Design and a first degree in Social Policy and Administration. After his PhD (on universities' roles in regional economic development) he worked on the ESRC-funded Cities Programme where his work included a book chapter on the links

between economic competitiveness and the social fabric (social capital, social cohesion and social inclusion). After this he worked at the New Economics Foundation where his work included co-authoring two reports for the Inner City 100 project (researching and promoting the UK's most dynamic inner city entrepreneurs) and two reports for central Government on enterprise in deprived areas. Between that post and his present job he worked for Marsh Farm Community Development Trust, Luton covering various capacity building and strategic tasks. He is author of a review article for the journal *Economics and Philosophy* on the work of Professor John O'Neill, Director of Lancaster University's Institute for Environment, Philosophy and Public Policy. He has also reviewed the book 'Environmental Ethics and the Global Economy' for the *Journal of Applied Philosophy*. He has contributed numerous articles to the regeneration press ranging from professional football clubs' community schemes to the idea of establishing a national Citizens Research Network whereby residents in disadvantaged areas can be supported to conduct research on these areas locally and, through the Network, nationally. He currently serves on the Research Advisory Board of the Urban Forum.

The Project Team

The Bartlett School of Planning, UCL

The Bartlett team has been led by Professor Matthew Carmona, who has successfully undertaken a range of research projects for CABE. Matthew Heads up the Bartlett School of Planning and has published extensively around issues of urban design, public space and its management, design policy and control, design value, and the measurement of design quality. Currently, Matthew serves on the 'Urban Design Skills Working Group', and is a member of the Royal Town Planning Institute's General Assembly. He is on the editorial board of 'Urban Design Quarterly', is European Associate Editor for the 'Journal of Urban

Design', and is series editor for the 'Design in the Built Environment' book series from Ashgate. In 2002 Matthew worked with Norman Foster & Associates to win the West Kowloon Cultural District International Master-planning competition. He has undertaken a wide range of research projects from funders that include: DETR, CABE, RTPI, ESRC, ODPM, the Housing Corporation, and the Audit Commission.

Claudio de Magalhaes is a senior lecturer in planning and urban regeneration, with a background in architecture and town planning. Prior to moving to the UK in the early 1990s, he worked for 12 years a senior planner in local and regional government in Brazil, acquiring considerable experience in urban governance and in the management of urban investment programmes for urban and regional development. As an academic, his interests are in urban planning and the governance of the built environment, property development processes and urban regeneration policy. He has conducted research for ESRC, RICS, CABE, local authorities and UK Government Departments and published on property markets and globalisation, capacity building for urban governance, and the relationship between urban governance, the built environment and property markets. His more recent research focuses on the relationship between urban governance and increasingly globalised property markets, design and the management of public spaces.

Louie Sieh is an Architect and Senior Research Fellow at the Bartlett School of Planning. She trained as an architect at Cambridge University and the Architectural Association in London. She has practised as a built environment consultant, primarily as a master-planner and urban designer. Louie joined the Bartlett in 2002 where she worked in the area of performance management in the public sector through which she contributed to the ODPM Working Group for a national planning quality indicator. Her research interests span strategic

management in the public sector, the creation of value in urban public space, and the relationship between built environment production, consumption and its governance. She is currently completing a PhD entitled *"Public Space Governance – Questions of Value in the Urban Public Realm"*. Louie is on the editorial board of "Transactions", a journal of the Centre for Education in the Built Environment (CEBE).

Imperial College, University of London

Guidance around the environmental economics field was commissioned from Dr Susana Mourato, a Lecturer in Environmental Economics at Imperial College London's Department of Environmental Science and Technology. Susana is an economist (MSc Economics, New University of Lisbon; PhD Economics, University College London), specialising in environmental economics and an expert in the application of non-market valuation techniques to the measurement of environmental, social and cultural change. Her recent research has focused on testing and developing choice modelling techniques: her work in this area has been published in various international journals. She has worked on more than 40 research projects and consultancies for research councils, governments, industry, charities and international organisations.

Sharpe and Pelipenko

At both stages of the project we have involved a practising designer involved. In this particular individuals' case, he also has the capacity to develop new software tools using these methods. The person who has agreed to work with us, Chris Sharpe (BArch, DipArch, Mackintosh School of Architecture, Glasgow), is founding partner of Sharpe and Pelipenko, an urban design software company that recently created the street design program 'Streetscape' and continues to develop urban design and planning tools. He has worked as an urban designer at Alan Baxter and Associates and Bernard Engle Architects and Planners in London. He

has had experience of residential-led and retail-led mixed-use master-planning, movement engineering, conservation, characterization and community planning exercises.

Young Foundation

James Audsley provided valuable intellectual and practical input to the CABE project between late 2005 and March 2006 when he worked as a Research Assistant at the Young Foundation. He has a BA in Geography from Oxford University and worked as an intern on the Transforming Neighbourhoods project over the summer of 2005. His interests focus on regeneration, city design and community issues. He is currently developing his research dissertation on the redevelopment of the World Trade Centre for publication. Previously he has interned with Transport for London's Policy and Strategy team, as an MP's assistant and in George Wimpey's Land and Development team (City Region). His main work at the Young Foundation consisted of working on the development of the Neighbourhood team's 'neighbourhood wiki' and conducting research across the spectrum of the project's work.

Appendix 1: Suggested Value Mapping Pilot

Stage 1 – Getting the Site and Participants

- **Use Type:** The method would be applied to a planned development that is at the very early stages. Sites might fall into categories such as: residential development – housing or flats; transport interchange; city centre mixed-use development; offices / factories; stadia. Resources permitting, each of the developments would be valued – thereby making it possible to see if some types/scales of development proved harder to value than others. For example, a proposed building overlooking a large public open space might be considerably easier to value than a sizeable neighbourhood housing development that had numerous different foci (cul-de-sacs, playing areas, housing styles etc.).

- **Stakeholders**: the next stage is to identify the developer and their consultant team of professionals. Also important will be neighbouring property owners – somehow these individuals seem worthy of being given additional weighting to the wider general public. The ‘general public’ will need to be randomly selected. The selection method for participation in all the main types of approaches advocated here ensures that the population chosen will vary in incomes – so no one group should dominate (at least not until willingness to pay methods are employed - and adjustments can be made even when those measures are adopted). he geographical coverage of the selection will be determined by the intended scale of the development – a community building will need to see the general public meaning those within, say, a mile radius whereas an international arts venue will need, at the least, a national level definition of the public. The more local a development is the less the cost is likely to be and the less the money spent on consultation is likely to be.

- **Persuading Participants – Private Sector**: The key with a private developer in particular is to talk profit – the methods discussed here offer the possibility of funding the types of high-yielding developments that the developer couldn't afford on their own. Also, the more that public objections are identified and addressed early in the development process, the less likely developers are to be stuck in lengthy and costly planning enquiries. However, a developer could just decide to hope that other developers will be the first guinea-pigs. The more sophisticated their understanding of what makes places that last the greater will be the chance of them identifying long-term profits.

- **Persuading Participants – Public Sector**: An alternative here is to persuade a public sector developer to adopt the approaches outlined here – if, say, a local authority is interested in good design it should also consider engaging in a value mapping exercise for its own proposed developments. One approach might be to identify where a local authority is keen to release land for development. For logistical reasons (i.e. meetings with key stakeholders) the local authority should ideally be located in or near to the organisation conducting the valuation exercise. Given that several types of development are likely to be involved it would be most practical to involve several authorities – one per development. There are several high profile opportunities for piloting – obvious ones being developments in the Thames Gateway and the Northern Way. That the methods were being applied in such settings would further raise their profile. If a 'live' development is still not forthcoming there could be a 'retrospective' exercise – i.e. using projects that have already happened.

- **Persuading Participants – the Public**: Retrospective exercises might be hard to enthuse people about. In terms of getting the public to engage in a value mapping pilot they could be reminded that it is them who will have to live, for better or worse, with the eventual development. Ideally, there would be ways of making them pay for the development when it was built too – unlikely though for a pilot exercise.

Stage 2 – Ascertaining Needs

- **Ascertaining Needs**: This will be a mix of the developer deciding what they want from a development and the public being asked (by an independent body with design expertise – ideally a local planning authority since it is democratic) what they want. The public will be engaged in two-way discussion and the developer will generate the chosen volume and lay-out that they think will give them the maximum profit (within the bounds of the uses and scales permitted in the local plan). This is often a somewhat 'back of the envelope' affair – an attempt to work out what might be achieved in terms of flats, offices floor-space etc. (i.e. how much profit might be made).

- The techniques used here would be the MCA approach (a revised version of VALID probably – one more attuned to buildings' wider environs). It would outline all the key design and place aspects referred to earlier and would also encourage discussion of what the area needed according to peoples' statements when asked and what local authorities consider needs to be. This MCA tool would inevitably need experimentation to get it right.

Stage 3 – Option Generation

- **Options**: The independent body will then seek to generate a few options. These options can serve as the basis for discussion between the developer and public participants in the valuation exercise. Bringing in a design expert to assist the public at this early stage would be a radical break with past planning practice – making mainstream development consultation more analogous to community planning processes. There is always the danger of a developer claiming that they can't afford to depart from their preferred development without it becoming uneconomic. To offset the likelihood of this happening the developer would, ideally, be asked to 'open their books' to an independent auditor (e.g. the local planning authority). So the development options will all be ones that the developer could afford. Here methods are somewhat irrelevant – the option generation is down to the design team interpreting the brief set for them in the previous stage.

Stage 4 – Option Appraisals

- **Appraisal Methods**: MCA and stated preference approaches could both be used here. At present there is no adequate MCA tool in existence that will assist a good value mapping exercise. Similarly, there has been very limited application of stated preference techniques to the built urban environment. Ideally, both types of approach would be attempted – this might be on the same options or on different developments altogether. This would at least start to show what was possible – highlighting potential pitfalls that have perhaps not been seen by those using existing MCA and economic techniques. The MCA approaches are clearly more comfortable to the architecture and built environment professions where detailed familiarity with statistics and micro-economics are not pre-requisites of entry to the field. The methods are also more accessible. However, it is the stated preference methods that offer most hope of making actual calculations

about where the public and developers are actually willing to put their money.

- **Scale**: The scale at which the methods can be used has been ignored so far simply because it has been so ignored in the literature. There is no real MCA or stated preference approach that has addressed the issue of geographical scale. In theory the methods should be operable at any scale – only the conduct of value mapping exercises will really start and cast light on this.

- **Cost**: this too has been underplayed as it too has been little discussed in the literature. MCA approaches are usually cheap in that they involve key stakeholders gathered around a table – for a day or two. Stated preference approaches can vary greatly – from a few weeks work to many months. The sensible course is to tailor the methods according to the overall cost of the proposed development – with a slice of the land value perhaps being used to foot the bill.

Stage 5 – Calculations and Negotiations

- **Calculations**: the different options should be relatively easy to cost up. It is then a matter of ascertaining which options (and which elements within these options) are valued by the various stakeholders. This makes it possible to see which developments will be affordable in terms of overall costs minus willingness to pay. Within this overall picture will be numerous other variations between aspects of the development and between different stakeholder groups. This makes it possible to identify: conflicts (where one values something positively and another wants compensation for it) and aspects that perhaps have too much or too little funding committed. There could actually be a built in mechanism for ensuring that too much might be

committed to a particular development (or aspect of development) – namely, by making some willingness to pay options exceed the actual costs of the option.

- **Negotiations**: this is where any excess willingness to pay for an option might be redistributed to options/aspects that some want but which are not collectively affordable at present. Where there were conflicts between developers and the public there might be concessions and swaps made – a development that is more likely to limit crime in return for one that less green space. Other funds might also be made available to ensure a better social outcome - for example, section 106 funds or planning gain supplement (essentially a tax on the land value). Particularly important amongst the 'public' are local property owners – who stand to lose/gain by a neighbouring development. These might be expected to invest more in their property's frontage and the external environment – as, in a development area; property should be set to rise.

Stage 6: Implementation and Monitoring Agreements

- **Monitoring**: there will need to be agreement on the monitoring of what has been agreed – to ensure that the developer does what they had promised and to see if the public are genuinely satisfied with what they have got.

- **Evidence Base**: A completed account of the whole process would need to be fed into a data bank to inform those contemplating similar developments in future. This would make it possible to build up an overview of what people do and don't value – thereby making option generation an increasingly sophisticated process. Inevitably there needs to be a sufficient body of knowledge before it is fed into initial designs – the danger of not

doing this is of prejudicing designs (thereby skewing the evidence base towards the earliest monitoring and data collected).

Timescale

There is the inevitable question of how long the whole process will take. Ideally, the value mapping pilot might be on a development scheme where it was envisaged that the period between initial site survey and planning permission was short.

An alternative approach raised in some project meetings is to try and condense the whole exercise into a day or two – known as a *charette* in the design profession. This could be further facilitated by focusing on an area where a lot of preliminary evidence had been gathered about the town/city and the needs of the immediate locality. This would certainly prove popular with many – in that it would all be resolved in an intense burst.

It should be stressed however that concern with the time in which the exercise is done should not detract from the main aim of getting a value mapping approach that is realistic in terms of being able to support design. As urban design seldom takes place in such intense burst, there seems little point in attempting methods that achieve this.

Managing the Pilot

The pilot value mapping exercise should, ideally, bring together a team familiar with both economic and MCA methods. To encourage such team formations there need to be more opportunities for the different parties to meet and discuss these issues. It would be a good idea to bring together a handful of environmental economists and MCA experts to review the report.