

# **shaping places**

final report

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## Introduction

*Shaping Places* was a programme developed by the Kent Architecture Centre 2003-2006, involving teachers working with artists and built environment professionals in 15 primary and secondary schools in southeast England.

The aim was to create a substantial body of knowledge about the scope of environmental design studies, to identify possible content and appropriate methods, and to make explicit the contributions from different subject disciplines and professions.

Eileen Adams was commissioned to monitor, review and evaluate the *Shaping Places* programme as part of a systematic approach to generate case study material. This process had been established by the Kent Architecture Centre in a previous A4E-funded project, *Sight Specific*, which resulted in *Breaking Boundaries* (2002), a book that influenced planning of the *Shaping Places* programme.

The key outcome of this programme is the *Shaping Places* publication. This explains what has been learned from the process of inter-professional collaboration in education through projects in 15 schools over a period of two years and emphasises those ideas and methods of learning and teaching that can transfer to other schools and be used by other educators. The publication, while aimed primarily at teachers, may also be useful in relation to learning about design and change in the built environment in other settings, e.g. Design Champions, and cross-professional CPD.

This report has a different purpose. Part 1 summarises key findings from the *Shaping Places* programme, and has been jointly prepared by Annette Hards and Eileen Adams. Part 2 has been prepared by Eileen Adams: it sets the findings in context and identifies issues that need to be considered in determining future policy and the way forward.

This report will be forwarded initially to the programme's three funding bodies, but subsequently, will be circulated more widely to those with an interest in built environment education.

We would welcome your feedback about this report, which can be emailed to [Annette.hards@kentarchitecture.co.uk](mailto:Annette.hards@kentarchitecture.co.uk) or posted to Annette Hards, Kent Architecture Centre, Historic Dockyard, Chatham, ME4 4TZ

## Contents

### 1.0 overview of the shaping places programme

- 1.1 starting point
- 1.2 aims
- 1.3 objectives
- 1.4 funding
- 1.5 management
- 1.6 timetable
- 1.7 advisory group
- 1.8 schools
- 1.9 monitoring projects
- 1.10 outcomes
- 1.11 summary of project outputs
- 1.12 benefits
- 1.13 problems
- 1.14 review of risk
- 1.15 the publication

### 2.0 policy issues arising from the shaping places programme

- 2.1.1 built environment education: national and regional context
- 2.1.2 built environment education: findings
- 2.1.3 built environment education: policy issues
- 2.2.1 learning and teaching (pedagogy): context
- 2.2.2 learning and teaching (pedagogy): findings
- 2.2.3 learning and teaching (pedagogy): policy issues
- 2.3.1 inter-professional collaboration: context
- 2.3.2 inter-professional collaboration: findings
- 2.3.3 inter-professional collaboration: policy issues
- 2.4.1 research and development: context
- 2.4.2 research and development: findings
- 2.4.3 research and development: policy issues
- 2.5 the way forward

## 1.0 overview of the shaping places programme

### 1.1 starting point

The *Shaping Places* programme was devised in response to a request from South East England Development Agency (SEEDA) in August 2003 that the Kent Architecture Centre (KAC) 'reintroduce a programme of work with schools involving architects, designers and artists working with teachers on projects linked to the curriculum to engage children in different aspects of urban design.'

The starting point for the programme was articulated in the original Proposal:

*The South East generally faces a real challenge in relation to the sheer scale of built environment development envisaged within the region. It is recognised that there will need to be significant investment in urban design skills in order to create successful and sustainable communities for the future. There is a need for an education programme that addresses the urban design skills shortage, developing the design abilities of individuals, whether as citizens, practitioners or professionals, and nurturing communities' capacity for active and positive participation in environmental change.*

### 1.2 aims

At the outset, the programme's long-term aim was described thus: *to engage young people in the urban design process in the hope that the next generation might be better prepared to play an active role in future in shaping the built environment, whether as citizens, designers or built environment practitioners.*

### 1.3 objectives

The objectives of the *Shaping Places* programme were to:

- Raise awareness and increase the interest and ability of young people to participate in the process of shaping the environment to create better places to in which to live, work and play.
- Develop new strategies for learning and teaching.
- Create guidelines for learning and teaching for use in schools and community settings.
- Create a forum through which teachers, artists and built environment practitioners could work together as educators, sharing their knowledge and skills.
- Develop the capacity of two architecture centres, The Kent Architecture Centre in Chatham and the Solent Architecture Centre for Architecture + Design in Southampton, to support the development of education programmes at two architecture centres and strengthen the regional network of organisations engaged in education and/or built environment activity.

- Develop the capacity of schools who had been involved in the programme to develop new projects without the help of outside professionals and to report back.
- Work with a wide range of organisations across the south-east region with interest in the built environment, strengthening links between them to encourage networking and mutual support; and to establish a forum for wide dissemination of the project through publication and an associated in-service and a continuing professional development programme in workshops, courses and conferences.

It was not anticipated that future projects would always involve interdisciplinary working, cross-phase or inter-professional collaboration. Rather, the hope was that other teachers and educators would be able to use the learning methods that would evolve and be made explicit through the programme.

#### **1.4 funding**

It was apparent from the outset that such a programme would not be wholly funded by SEEDA, and so additional financial support was sought and obtained from Arts Council England, South East (ACE,SE) and Commission for Architecture and the Built Environment (CABE). KAC has been a 'Regularly Funded Organisation' within the ACE,SE's portfolio since 2001, with a clear remit to engage in education activity linked to contemporary architecture and urban design, and CABE provides funding for programme activity in architecture centres in England through its Regional Funding Programme.

Following discussions with the three funding bodies about the original proposal, it was agreed that the programme should be developed in stages. The initial stage of work would involve a period of outline planning, to establish the aims, basic operational framework, outline roles and relationships and identify some key learning outcomes and would be followed by a pilot programme, involving paired primary and secondary schools in two locations, Ramsgate and Havant. The lessons learnt from the pilot programme would then be incorporated into the subsequent delivery of the programme in schools across the southeast region, in collaboration with the new Solent centre. Following completion of the work in schools an evaluation would be carried out, a guide for teachers prepared, and a series of seminars would be held across the region to give wider dissemination to the programme. The outline planning and pilot stages of the programme were funded by SEEDA, and the main programme was jointly funded by SEEDA, ACE,SE and CABE.

#### **1.5 management**

The programme was managed by Kent Architecture Centre, with support in the second year from the newly established Solent Centre for Architecture + Design. It was co-ordinated by Annette Hards with support from Ruth Gage and Jo Vogiatzaki, Kent Architecture Centre.

Support for participating schools included:

- Funding to cover fees and expenses for artists and built environment professionals.
- Provision of a conceptual framework to facilitate planning, monitoring and reporting of educational activities.
- Careful management to assist effective collaboration between artists, built environment practitioners and the school community.
- Continuing professional development programme of meetings and workshops, including supply cover.
- Materials and photography budget for each school.

## **1.6 timetable**

The overall programme, as originally conceived, can be summarised as follows:

Stage A (Sept- Nov 03) Building the partnership: making contact with key individuals within organisations identified as potential partners, and bringing them together in a series of meetings across the region.

Stage B (Nov 03- Mar 04) Outline Planning for overall programme: establishing aims, basic operational framework, outline roles and relationships, identify key learning outcomes

Stage C (Feb- Oct 04) Pilot Project: developing the detailed planning through inter-professional INSET programme, delivering the pilot project in 2 locations and then evaluating and disseminating information prior to starting the main programme.

Stage D (Sept 04- May 05) Detailed Project Planning for the main programme: including recruiting artists, architects and designers, working with schools and other partners to develop the detail of the projects

Stage E (May- July 05) Projects in Schools: work in schools carried out

Stage F (July- Oct 05) Review and Evaluation: all project material, experiences etc reviewed and evaluated for inclusion within publication, plus local dissemination carried out across the region

Stage G (Oct 05- Jan 06) Write publication, commission artwork, and organise printing and distribution

Stage H (Jan- March 06) Dissemination: plan and deliver a regional event to promote publication

## 1.7 advisory group

An advisory group met with the evaluator to discuss the planning and development of the work in schools, the form of the final publications and plans for its dissemination and development. The group included:

- Mark Drury and Paul Grover, Solent Centre for Architecture + Design
- Annette Hards, Kent Architecture Centre
- Pam Moore, Planning Aid South
- Miranda Pearce, South East England Development Agency (SEEDA)
- Ivor Rushforth, art education consultant
- Phil Turner, Planning Aid South

## 1.8 schools

The programme included a pilot phase in four schools in Ramsgate and Havant in 2004.

The main programme consisted of a further six projects which took place in 11 schools in Bracknell, High Wycombe, Ryde, St Leonards on Sea, Southampton and Strood in 2005.

These included a wide range of primary and secondary schools. There was a good geographical spread, with different types of urban and rural settings represented. This was both to test and to demonstrate the transferability of the programme. Locations were chosen which would respond to the strategic aims of the funding bodies.

Participating schools included:

- Bidbury Junior School, Havant
- Bitterne Manor Primary School, Southampton
- Bitterne Park School, Southampton
- Clarendon House Grammar School, Ramsgate
- Filsham Valley School, St Leonards-on-Sea
- Fox Hill Primary School, Bracknell
- Manor Farm Junior School, High Wycombe
- Mayfield CoE VC Middle School, Ryde
- Ryde High School, Ryde
- St Leonards CoE Primary School, St Leonards on Sea
- St Peter-in-Thanel CoE Junior School, Broadstairs
- Temple School, Strood
- Temple Mill Primary School, Strood
- The Brakenhale School, Bracknell
- Warblington School, Havant

SEEDA was interested in a good mix of locations, to include places both within and beyond the Growth Areas and the Coastal Priority Areas.

Schools worked with a wide range of organisations across the southeast region with an interest in the built environment. The Arts Council England was keen to see links made with the Creative Partnerships in Kent, Hastings/East Sussex and Southampton/Isle of Wight.

The results of the evaluation of the pilot projects influenced the development of the work in schools in the main programme. Projects from the 15 participating schools formed the case studies for the *Shaping Places* publication.

### **1.9 monitoring projects**

The Evaluation Framework for reporting worked very well in the pilot projects and was used again in the main programme, with slight modifications. Participants welcomed the clear structure, finding it helpful to clarify their thinking both at the planning stage as well as after the project.

Reports highlighting different aspects were received from teachers, artists and the built environment professionals. Excellent photographic documentation was generated, particularly where an artist had been attached to project.

The evaluator attended planning meetings, which provided valuable insights into participants' expectations and initial thinking. At the end of the first year, a video presentation and discussion of the project at Havant Council Offices provided valuable insights into the learning process, the environmental issues explored and pupils' views.

The evaluator held de-briefing meetings after each project, which provided valuable opportunity for participants to reflect further on their experience and voice opinions that had not been recorded in reports. In the first year, de-briefing sessions concentrated on roles, relationships and management issues. In the second year, the focus was more on the evaluation of study methods and teaching strategies, to help identify the scope and purposes of the final publication.

From the pilot phase in year one, Kent Architecture Centre introduced small changes in ways projects were supported and monitored. Measures were put in place to cover an extended period of sick leave. Both the coordinator and KAC are to be congratulated in having in place a management framework that ensured there was no loss of support or direction during this time.

Feedback from the first year was shared with participants as part of their induction to support planning and preparation for the second phase of development.

In each year, attempts were made to match the choice of outside professionals – artists, architects, landscape architects, photographers, and filmmakers – with the needs of the schools and their suitability for particular projects.

At the end of the first year, regional seminars afforded opportunities for participants to reflect on their experience and share it with others.

Following feedback from the pilot projects, the main programme was refined, so in the second year, there was an attempt to establish more equitable partnerships. The nature of inter-professional collaboration, roles and relationships were clarified during induction, when it was made clear that planning and project development should be through collaboration and that both teachers and the other professionals should have joint responsibility for shaping the attitudes and expectations at the outset.

In the second year, staff were advised to revise the introductory sessions with pupils, where the emphasis should not be so much on individuals' professional practice, but on ways of seeing the environment and thinking about the purposes of buildings and spaces and how they might be used.

In project planning, the advisability of using blocks of time was stressed, collapsing the normal timetable for a week, for instance.

### **1.10 outcomes**

The *Shaping Places* programme succeeded in achieving all its broad objectives.

The original proposal contained ambitious targets for built environment practitioners and artists to work with pupils in schools across the southeast region, and to work with teachers through in-service training sessions. The programme aimed to engage with a wide range of regional organisations in its delivery. This programme of activity with schools and teachers would produce a body of evidence, including case study material, which could then be evaluated and written up to be disseminated through some form of publication to be sent to every school in the region.

The underlying intention behind the programme was to identify strategies for engaging young people, for anticipating change and visioning, and to consider the pros and cons of a range of options, in the context of the development and/or regeneration of their local area, which could be transferable. In essence, the intention was to develop a robust process model.

The projects in schools raised pupils' awareness of and increased their interest in the built environment. They developed pupils' ability to participate in the process of shaping the environment by developing positive attitudes to dealing with change and by nurturing skills to enable them to visualise the possible impact of proposed changes.

Teachers adapted ways of working in art and design and geography to contribute to built environment education, environmental design and education for sustainability.

Artists and built environment practitioners shared their expertise and gained an understanding of how young people learn in schools.

Inter-professional collaboration helped to develop new strategies for learning and teaching through project work, using a range of media, including 2D, 3D, photographic media and words, making connections between visual literacy and verbal literacy. Spatial understanding was a key element. The use of project work and design activity featured importantly in how learning was organised.

The programme developed the capacity of two architecture centres and supported the development of their architecture education programmes: The Kent Architecture Centre in Chatham and the Solent Architecture Centre for Architecture + Design in Southampton. The programme brought the two architecture centres into a close working partnership, and helped to develop their work and strengthened links between them and organisations across the region.

By means of regional seminars organised by the Kent Architecture Centre, the programme created a forum through which teachers, artists and built environment practitioners could report on work in progress and come together as educators, sharing their knowledge and skills.

The programme involved a wide range of organisations across the southeast region with interest in built environment education, strengthening links between, promoting networking and mutual support and establishing a regional network.

The programme established a forum for wide dissemination of the project through the publication of *Shaping Places*. Planning for an associated INSET / CPD programme in the region is currently being developed in collaboration with local education authorities. Through publication of the book, *Shaping Places*, and the intention to make CD copies more widely available, the programme created guidelines for learning and teaching for use in schools and community settings not only in the South-East, but nationally.

### 1.11 summary of project outputs

The project outputs have been split between the pilot projects and the main programme.

The pilot projects took place in two schools in each of two locations, Ramsgate and Havant. A total of five artists and built environment practitioners worked with 11 teachers and 170 pupils to deliver projects in the schools. One of the findings from the evaluation of the pilot programme was that working with more than a single class group in a school created logistical difficulties that affected the quality of outcomes. In order to ensure that good quality case study material was generated it was decided to limit the main programme to a single class group in each participating school.

The main programme worked with a total of 11 schools in 6 locations, Bracknell, High Wycombe, Ryde, St Leonards-on-Sea, Southampton and Strood. A total of 37 artists and built environment practitioners worked with 26 teachers and 240 pupils to deliver the projects in schools.

Through the pilot programme a total of 186 people were assisted in their skills development, and through the main programme, the total was 303. These figures include both pupils and adults.

Within each project there were a number of opportunities for cross-professional CPD or 'in-service training' for teachers, artists and built environment practitioners. These took the form of the preparatory planning sessions, the actual delivery of the project with pupils plus interim reviews of project progress, formal evaluation meetings after the schools' projects were completed, and dissemination events. These varied across the projects in terms of the length of sessions, number of people involved in each, but the following table provides a summary of the scale of that activity. For the purposes of this table, a half-day session is the equivalent of min 3 hours, and participants include all teachers, artists, and built environment practitioners.

Project location	Preparatory sessions (half-day sessions x participants)	Project delivery (half-day sessions x participants)	Evaluation meetings (half-day sessions x participants)	Dissemination events (half-day sessions x participants)
Havant	13	47	8	51
Ramsgate	18	40	10	Cancelled at last minute due to adverse

				weather
Bracknell	10	24	6	32
High Wycombe	10	27	6	
Ryde	28	56	11	34
Southampton	28	36		
St.Leonards-on-Sea	21	56	7	40
Strood	13	35	7	33
total	141	321	55	190

## 1.12 benefits

The evaluation process identified a number of benefits that arose through participation in the *Shaping Places* programme.

The benefits for participating schools were:

- The cross-phase connections strengthened links between the secondary schools and their feeder primaries and showed how learning and teaching strategies could be adapted to suit the needs of different age groups.
- An enhanced curriculum and cross-curriculum connections.
- Greater social relevance to school topics.
- Raised levels of achievement.
- Creative approaches to learning and teaching.
- A wider range of community links and a raised public profile.

The benefits for pupils were:

- Enriched learning experience through opportunities to work with people from different professional communities.
- Opportunity for children in the transition phase between Key Stages 2 and 3 to engage in project work and make connections between different areas of study.
- Opportunities for experiential learning outside school.
- Experience of project work, involving a variety of learning styles and media.
- Experience of group work involving cooperation and collaboration.
- Experience of study that was relevant and important to their locality and their future lives as citizens.
- The development of a wide range of skills, including intellectual skills, both subject-based and generic, design, communication and social skills.

The benefits for professionals were:

- Working with colleagues from other disciplines and professions was an opportunity to experience a variety of approaches to environmental design education and provided a new perspective for many as to how they viewed their professional role.
- The programme provided support for teachers from art and design and geography departments to work with artists and built environment professionals for environmental design projects. Teachers were able to extend their professional boundaries, acquire new subject-knowledge and develop new ways of supporting learning activities.
- The experience of working with architects influenced teachers' thinking about the built environment and the challenge of dealing with change. The programme obliged teachers to consider how to accommodate these ideas into their teaching.
- Artists and built environment professionals saw how their professional knowledge could transfer to a setting outside their usual field of work and had relevance for general education.
- Artists and built environment professionals learnt about the constraints on learning imposed by precedent, established departmental relationships and hierarchies, the school timetable, the weight of administrative duties, health and safety considerations and pupils' expectations.
- Teachers, artists and built environment professionals had extensive support from the two architecture centres for inter-professional collaboration, not only through establishing partnerships between teachers, artists and built environment professionals to work on the projects in schools, but in providing a conceptual framework for the projects, educational expertise and managerial assistance.

### **1.13 problems**

Many schools were not geared up to accommodate the ways of working required by project-based learning related to environmental design and to inter-professional collaboration in education. The use of the environment as an educational resource, working outside the classroom, learning based on experiential, investigatory and experimental modes, stronger community links, the use of a wide range of resources and the need for flexibility and adaptability made demands on schools that challenged traditional timetables and established organisational patterns.

### **1.14 review of risk**

The main risks identified in the original funding submission to SEEDA for the main programme were as follows:

1. Not able to recruit schools to take part in project
2. Not able to recruit suitable artists and built environment practitioners to take part in project
3. Not able to attract project funding

KAC proposed to manage each of these risks as described below .

KAC would work with local education authorities, partner organisations such as Creative Partnerships, and the existing network of contacts to make links with schools. KAC would aim to provide a sufficiently attractive, and well thought through proposal for the schools, which would address their potential concerns with regard to timing, funding and support. In the event, KAC did reduce the number of schools that took part in the programme, but this did not compromise the quality of the work undertaken.

KAC would work closely with partner organisations such as Arts Council England, Creative Partnerships, RIBA, RTPI, LI and existing network of contacts to ensure information about the opportunities this project offers to artists and practitioners is widely available. KAC did not have any difficulties recruiting artists and built environment practitioners to work on the programme. The project was not dependant on a single source of funding, and KAC considered that each of the three funding bodies could see a good return for their level of investment. There were issues however, with regard to completing the programme within the timetable of the funding bodies' financial cycles, which is expanded on below.

CABE funding, through the CABE Regional Funding Programme 2004-6 was secured in January 2004 as part of bids from KAC and the new centres in the Solent and Milton Keynes areas. Further bids to SEEDA and ACE,SE were made in March 04 with a view to funding starting in July 04. As these bids were being finalised, the initiative to develop an architecture centre for the Milton Keynes sub-region was, for a number of reasons, not progressing in such a way as to be capable of supporting the Shaping Places programme.

The time required for the appraisal process associated with both the SEEDA and ACE,SE funding necessitated the submission of these bids in March, however, subsequent to their submission a review within KAC was undertaken, looking at the scale, spread and timetable for the programme. This concluded that there was a compelling case for scaling down the project to enable the whole cycle of delivery, evaluation and dissemination of the complete programme to be achieved by the end of March 2006, to fit with the funding cycles for the three funding bodies. It was considered that this scaling down could be achieved without compromising the overall aims and objectives of the project. The revised, reduced programme was carefully worked through to ensure that projects took place in a diverse range of locations across the region, to ensure transferability.

There were two additional risks that KAC hadn't identified-

- That a key member of staff would be on extended sick leave at a critical point in the project.

This risk was managed by bringing in temporary cover together with other KAC staff members providing back up for the programme, and did not have a significant impact on the programme delivery or budget.

- That the programme would not be wholly completed by the end of the financial year.

The original intention, within the revised and reduced programme was to launch and distribute the Shaping Places publication by 31 March 2006. At the Steering Group meeting in December 2005, it was considered a possibility that the writing and design and print process for the publication could overrun, but that best endeavours would be made to meet the deadline. By mid-January it became apparent that the quality of the

publication would be significantly compromised if KAC reduced the time available for the drafting, and editing process to meet a publication deadline of 31 March 06, and so the publication will now be launched in May.

### 1.15 the publication

An important aim was to make explicit the methods of study and the ways in which projects in schools developed, so that others not involved in the programme could benefit. The key outcome of the evaluation was the book, *Shaping Places*.

The book goes beyond the usual presentation of case studies and is in four parts: *process, projects, study methods* and *working together*.

- *Process* explains how involvement in design and designing can be a learning process for pupils, extending their experience of the built environment, deepening their understanding and helping them to think about the process of change.
- *Projects* describes ways in which schools in the programme developed studies related to environmental issues in their local area. Students in secondary schools and pupils in their primary feeder schools followed similar programmes of study, adapted for the different age groups. A key factor in all the projects was the need to consider possibilities for change.
- *Study Methods* explains methods and techniques used in the programme that can be adapted by any school. Many of the approaches will be familiar to geography and art and design teachers. The aim here is to clarify how these methods can be used in environmental design projects and the sequence of study that other schools can adopt to develop their own environmental design projects and provides a wealth of study activities that can be adapted to suit different age groups.
- *Working Together* focuses on relationships, particularly the value of group work. Approaches were developed through teachers from different disciplines and phases working with artists and built environmental professionals. The methods shown here can be adapted to a variety of settings.

The sections on *Projects* and *Working Together* include quotes from participants to illuminate their particular experiences and clarify what they had learned. The sections on *Process* and *Study Methods* identify frameworks and ways of working that can transfer to other schools. The section on *Working Together* raises issues related to inter-professional collaboration in education.

The range of projects and study methods is not exhaustive or comprehensive, but the book does identify a wide variety of models, approaches and techniques that can be adapted to different situations. In addition, the book:

- Provides evidence of inter-professional collaboration in education.
- Argues the case for environmental design projects to be included in the school curriculum.
- Exemplifies possible content of projects and explains methods involved in project-based learning.

- Can be used to develop a policy for environmental education, to ensure that pupils experience different kinds of environments and a variety of study methods in successive years.
- Can be used by different subject teachers in secondary schools (particularly art and design, geography and design technology) to develop multi-disciplinary or interdisciplinary projects.
- Can help artists and built environment professionals contribute to educational programmes.

The book is intended for teachers who wish to develop environmental design projects dealing with change. It will be of particular interest to teachers in art / design, geography, design technology and ICT in secondary schools and teachers in primary schools. The intention is to provide prompts and inspiration as well as a framework and strategies for study for both experienced teachers and for those contemplating environmental and design projects for the first time.

Publication is expected at the end of May. In the summer term 2006, a paper copy will be sent to every primary and secondary school in the Southeast region; CDs will be made available and it will be placed as a PDF on the Kent Architecture Centre, Architecture Centre Network and South East Excellence websites.

The publication of *Shaping Places* does not mark the end of a programme, but launches the beginning of a new phase of development, when other schools will be invited to develop their own projects.

## **2.0 policy issues arising from the shaping places programme**

In this section, policy issues are explored under the following headings:

**Built environment education.**

**Learning and teaching (pedagogy).**

**Inter-professional collaboration in education.**

**Research and development.**

In each case, the context is explored, findings from the shaping places programme are summarised, questions are posed to stimulate thinking about the issues involved and the report concludes with some advice on the way forward.

### 2.1.1 built environment education: context

Interest in environment and environmental issues has grown since the seventies, with each decade bringing into focus different concerns, such as heritage, sustainability, urban renewal and energy. What has remained constant is a concern with environmental quality.

The last few years have seen renewed interest in built environment education and a new regard for the value of the use of the environment as an educational resource.

The notion of participation, which emerged in the seventies, is now being revisited.

Two major themes link all of these: quality and control. Everyone wants a good quality of life and to feel they have some control over their lives. Similarly, everyone wants a good quality environment to live in and to have some control over what it looks like, how it feels, how it impacts on them. Environmental quality is essentially about relationships between people and place, what people choose to value in their surroundings and the meanings invested in them. Perception of quality will probably be influenced by people's direct experience, emotional engagement and personal associations. It will also be influenced by the limits of their environmental and social experience and by their education. Control is about shared responsibility for shaping and caring for the environment, decision-making about what it should be like, how it should be used and what impact the way we live has on the environment. To what extent does the individual take responsibility and have control? This is a key question that built environment education currently needs to address.

#### Perceptions

How do young people view the environment? The media is a major educational influence on how young people perceive the built environment. Film and television continue to present stereotypical views of the built environment. Films like *Blade Runner* and *Judge Dred* present a very dismal and frightening view of the future. In contrast, publicity for loft living, shopping malls and millennium museums with great coffee shops present lifestyles to which young people aspire. Television makeovers make them want to take a more active part in shaping their environment. This might mean that we need to review the stereotypes and images that young people hold of the built environment and urban design professionals. Urban living and design have a sexy and fun image for young people at the moment. Designers are 'in', especially interior designers, landscape designers and fashion designers. Architecture and architects are high profile and seen as 'cool'. Judging from advertisements, even builders are losing their tatty image to become objects of desire.

However, although young people are excited about environmental issues and urban culture, they think planning is boring and architecture elitist. Planners suffer from a poor image. Young people do not know what urban designers do. Planning is essentially about relationships between people and place. It is about shaping and managing the environment. It is about a sensible and appropriate use of resources. It is about dealing with change. It is about having a vision of the future. But this cannot become a reality unless it is a shared vision. How do young people see themselves in relation to the environment? Consumer or steward? Vandal or victim? Or active citizen?

Young people need to be encouraged to see themselves more as active players in the scene, where they are able to influence the appearance, feel and meaning of their

towns and cities. They need to be encouraged to recognise the value of design, not as creating artefacts, but as a range of processes, as a means of perception, a way of seeing the world, of creating cultural identity, of making meanings, of understanding who they are and creating our environment anew. The need is not necessarily for more science and technology education, but for better design education to understand how we might use science and technology to shape and manage the environment rather more responsibly and appropriately. There is a need for cultural education which questions how we choose to live, envisions better alternatives and addresses issues of how we can work together to achieve better environmental quality and a better quality of life for everyone. Young people are eager not only to respond to a changing world, but also to help shape that world. How might they be helped to deal with the experience of change positively, creatively and responsibly? How might they be involved in the design process to shape the way we live and the environment we live in? How might they influence the decision-making process to put their ideas into action?

### Participation and education for sustainability

Education for sustainability is a spectrum of interests that needs to accommodate architecture and planning, landscape and environmental design, as well as nature conservation, ecology and environmental science. The environment is increasingly made, shaped and controlled by human activity. However, in addition to our concern with ecology, economics and politics, we need also to recognise the importance of the visual and formal qualities of places, the messages they convey and meanings they generate. Without this perception, the environment comes to represent only utilitarian values and to neglect the aesthetic and the spiritual. At the heart of education for sustainability must be relationships between people and places.

Environmental design education is about the thinking and values that inform decisions about how we shape the environment, the part that young people might play in helping to shape the world around them and how they might learn to take greater responsibility for looking after it. It is education for participation – through helping young people visualise possibilities for environmental change and enabling them to see how ideas are put into effect. Participation in the design process and participation in decision-making are key issues in education for sustainability. This is concerned with how resources are used, and how people are able to be responsible for the way the environment is shaped and managed. They need to be aware of the social, political and economic frameworks that impact on this.

Urban renewal and landscape projects are key areas for community involvement. For young people, school grounds and neighbourhood projects offer opportunities for them to be involved in work that develops a sense of place, where they are invited to make judgements about aesthetic and design quality and where they may be able to contribute to change. Participation ranges from tokenism, through manipulation to various degrees of genuine participation (Hart 1997). There is a world of difference between token consultation exercises and real participation. Young people will not achieve more sophisticated levels of participation unless they have some experience to build on, unless they have developed and refined a range of skills and are supported by a variety of professionals in education, art and design and environment. Through participation in local projects dealing with environmental change, young people can enrich the planning process as well as prepare them to play a more active part in shaping and caring for their environment as adults.

New initiatives have emerged to address these issues and to develop built environment education nationally. The establishment of CABI's education programme

with its supporting publications has done much to raise the profile of built environment education in schools. A new book, only recently published, *Getting Out There: Art and Design*, encourages art and design teachers to make use of the local area as an educational resource. The introduction states:

*In February 2005 the government's education and skills select committee published its enquiry into education outside the classroom. The findings recognise a compelling argument for the educational value of the built environment. Learning in the local environment brings subjects to life. It also helps to increase self-confidence and maturity; provides new ways of learning; enhances pupil motivation; and encourages the development of social and lifelong learning skills. Furthermore, it invites pupils to approach the places and spaces they inhabit from different perspectives, encouraging long-term engagement and a realisation that as young people they have a valid contribution to make to the development of their local area. The teachers we interviewed requested support in identifying learning opportunities in the local areas and in managing the bureaucracy surrounding school trips. In response, we decided to set up the Getting out there programme, to provide advice on running school trips and lead to the development of a number of tailored teaching resources. This book is the second of these 'local safari' guides, designed to encourage an investigative approach to learning in the local area. The first guide, published in 2005 for geography and citizenship, helped young people explore topics such as community and regeneration. Over time we plan to develop guides for other Key Stages 3 & 4 subject areas.*

CABE has also supported the development of the Architecture Centre Network (ACN), which provides a professional network to promote, support and disseminate good educational practice.

In Scotland, the efforts of The Lighthouse and its web-based architecture education programme have addressed both local and national needs for support for built environment education needs in Scotland. CABE is considering a similar approach in its plans in England for Engaging Places. In Wales, the first education initiative of the Design Commission for Wales has been My Square Mile, a project in Swansea primary schools, which will provide material for a CD to be disseminated to all schools in the municipality.

Another influence has been renewed interest in young people's participation in environmental change. This is evident in initiatives such as Schoolworks and Joinedupdesignforschools, engaging young people in the design of the school environment. Learning through Landscapes' *Grounds for Improvement Secondary Action Research Programme (SARP)* was a 3-year NFER research project investigating students' involvement in school grounds improvement. The process of grounds development in the SARP schools was seen to support students' learning and skills development, build students' self-confidence, and contribute to wider changes in the school. Furthermore, the impact of the outdoor physical developments included improved facilities and new activities within the grounds, positive changes in students' attitudes and new resources for curriculum teaching and learning.

Anticipating changes in the nature and purposes of schools and school environments, CABE's *21<sup>st</sup> Century Schools, Learning Environments of the Future* questions the appropriateness of the traditional school environment and identifies different scenarios for learning environments, including: 'no school'; 'the school dispersed in the community'; 'the school extending into the community'; and 'the school as a self-contained community'. It considers the possibility of environments outside school and people other than teachers featuring importantly in pupils' learning experience.

*If we accept that schools are not the only places where learning takes place, and teachers not the only people who can support learning, then the emerging models of learning environment will need to embrace innovation. Creativity and a flexible approach to the management, form, and location of school settings. The need is to think of a school less as a building and more as a community of individuals sharing experiences and activities, as a result of this, schools may have to become more diffuse in their operation, providing for a wider range of educational experiences for a more varied group of learners over a longer time period.*

### **2.1.2 built environment education: findings from *Shaping Places***

The *Shaping Places* programme echoed many of the current trends identified above: study was locally based, it focused on change and it was influenced by the way environmental designers think about shaping the environment. It took learning out of the classroom and into the street to make use of the local environment as an educational resource. It engaged pupils in thinking about the impact of change and helped develop skills necessary to participate in the design process.

Local development issues provided a focus for study and stimulated young people to engage with the challenge of environmental change confidently and positively. Pupils particularly appreciated the use of the local area as a resource and the opportunity for active learning that was not entirely classroom-based and text-based. Teachers too welcomed the stimulus afforded by the built environment and design projects. Both pupils and teachers developed new understandings and insights in relation to the built environment and design, and understood more fully local issues concerned with environmental change.

Although built environment education is cross-curricular in nature, and supposedly is the province of a range of subject teachers in schools, it tends to fall to the geography teacher to take major responsibility for teaching about it. Art / design teachers tend to use the environment as an inspiration for artwork, rather than engage pupils in studies of environmental design. The *Shaping Places* programme introduced new ideas and fresh content into both the geography and art / design curriculum, emphasising environmental change.

It was difficult for participants to give enough time to planning and it took time for all teachers to learn how best to support project work. The burden of producing resources fell to the built environment professionals in the main, and they tended to take the lead in supporting the learning activities. Many of them felt that they were not sufficiently recompensed financially for the time involved.

The programme placed demands on schools and teachers' organisational skills and revealed tensions in trying to run disparate systems together, attempting to accommodate project work within strict timetables and tight organisational structures. Projects that were concentrated in a week-long time slot, where the normal timetable had been abandoned, were easier to manage and utilised time and other resources more effectively. It is not clear whether or not it caused any shift in schools' notions of how best to use resources of time and expertise to develop environmental projects.

It was not possible to anticipate the long-term effects on the schools involved, as there is no follow up study in place to monitor how the experience has impacted on the pupils, teachers or schools involved in relation to their perceptions, policies and practices.

### **2.1.3 built environment education: policy issues**

In recent years, CABE has taken a lead in England as an advocate in spearheading built environment education. However, there needs to be a higher public profile and stronger voice promoting built environment and environmental design in a positive and optimistic way. This is not only the responsibility of a single organisation. It is not only the responsibility of schools or teachers. It requires concerted and collaborative effort by national organisations, national and local government agencies and other players in the field regionally and locally to adopt a multi-agency approach to create a more visible presence and a positive image for both the built environment and for built environment education.

Our knowledge of the ways and means to involve young people in environmental design has grown considerably in the last few years. However, with the exception of CABE, there is no obvious focus for people to access the tools and strategies that can facilitate this. There needs to be a more determined effort by professionals, organisations and local authorities to collaborate.

There needs to be a more accessible national focus to support and disseminate good practice in ways that educators can take ownership and feel themselves part of the curriculum development process.

- **How to establish a positive view of the built environment and stronger advocacy for built environment education?**
- **How to identify the nature and scope of a built environment education curriculum that can be easily embraced by schools and teachers?**
- **How to develop new curriculum content that is focused on the notion of 'change' that is concerned with issues and processes rather than with factual content and the transmission of a body of knowledge?**
- **How to provide appropriate resources that are easily accessed?**
- **How to engage practitioners in the process of development?**

### **2.2.1 learning and teaching (pedagogy): context**

Where do design and the built environment feature in the school curriculum? Advocates for environmental education promote the approach that the environment is an ideal vehicle to teach many different subjects. However, this is not the best way to look at it. If this approach is adopted, there is the danger of fragmentation and lack of focus in a subject-based curriculum, particularly in relation to architecture and design, which require multi-disciplinary and inter-disciplinary study. Otherwise, young people will develop a piecemeal and distorted view of what these are about. Environmental design studies have little lasting impact unless they draw upon wider experience and knowledge gained through a range of subject disciplines. Few schools have adequate policies and management strategies to deal with this. The geography teacher usually spearheads built environment education, but inevitably, sees the subject through the lens of a particular discipline. What is needed is a new approach to how built environment education is conceived, presented and handled within schools. This will

require making connections between the environment and design, cultural and lifestyle issues and sustainability.

In the UK, design education has developed from technical education focused primarily on product design, locked into material technology and production processes. There needs to be a perceptual shift to create a broader view both of design and design education as cultural activities. Education should include a focus on learning processes and systems of thought, concerned with transformation, adaptation, connections and synergies, rather than be obsessed with products and located in consumerism. Design education requires approaches to learning and teaching which are based on generation of new knowledge and the development of skills and capabilities, rather than relying on transmission, absorption and regurgitation of information.

The need is not for more science and technology education, but for better design education to understand how we might use science and technology to shape and manage the environment rather more responsibly and appropriately. There is also a need for cultural education which questions how we choose to live and relate to the environment, which envisions better alternatives and addresses the issue of how we can work together to achieve better environmental quality and a better quality of life, not just for those people who have money to spend on consumables, but for everyone.

It is also time for change in the management of built environment education and design education in schools. It is an area of study that crosses curriculum boundaries, and should be treated more as a dimension of the curriculum. Although the management of education has been the obsession of policy makers and administrators for the last fifteen years, they have still not cracked this problem. Boys dominate design areas such as product design and engineering design, whereas girls dominate textiles and food technology. However, built environment education in schools is not gender-specific. It involves groupwork, so valuable in developing social, communication and inter-personal skills, increasingly important in today's service-based economy.

## National Curriculum

The current trend is to move away from the subject-based curriculum. Hints from the QCA suggest that present redrafting of the National Curriculum focuses on the learner and emphasises learning outcomes, and that the aim is to enable young people to become:

- *Successful learners who make progress and achieve*
- *Confident individuals who are able to live a safe, healthy and fulfilling life*
- *Responsible citizens who make a positive contribution to society.*

The emphasis is on processes, skills and competencies that develop the capability to learn. Three areas currently being considered in the revisions for the National Curriculum: creativity, competencies and critical skills:

### *Creativity*

*Imaginative activity fashioned so as to produce outcomes that are both original and of value.*

*The exploration of and experimentation with ideas, materials, tools and techniques.*

*The opportunity to take risks and to value and learn from mistakes.*

### *Competencies*

*Investigating, analysing, thinking, designing, making, reflecting and evaluating in relation to a range of media, techniques and processes including new and emerging technologies.*

### *Critical skills*

*Express reasoned judgements about qualities, values and meanings, in their own and others' work through analytical, reflective approaches that take account of diverse contexts.*

## Learning environments of the future

Looking further into the future, *21<sup>st</sup> Century Schools: Learning Environments of the Future* (CABE, 2004) explores changes in the purposes of schools and the nature of education. It views the learning environment not only in terms of design, but also in terms of the management of learning and teaching. If it is the case that *...We might find ourselves moving away from the idea of the creative individual to the concept of the creative society, more dependent upon interactivity and collaborative effort ...* then there implications for how we continue to view the subject-based timetable, individual effort validated by an examination system and working relationships derived from other eras.

## Teacher education

One of the biggest stumbling blocks in developing built environment education in schools has been the lack of provision in pre-service (encompassing post-graduate (PGCE) courses in secondary education in art and design, design and technology and geography as well as in primary education) and in-service training and professional development. In shaping courses, it is no good focusing only on the technical aspects of construction, or historical aspects of the development of architectural styles. An approach focused on design, that links people, place, lifestyle and economics would be much more useful.

Research by students on the *Education for Sustainability* MSc programme at London Southbank University has shown that piecemeal approaches to in-service do not have a lasting impact. Individuals may be enthused and motivated to develop work in schools, but require the support that only a whole-school approach can provide. There are precedents that can point the way. We need to encourage school-based action research to develop the field, in which both students and teachers can be involved. It is important to create a critical mass of educators involved in built environment education. There needs to be more effective means to value, support and disseminate innovative work so that it is embedded in the education system, both in professional education and in schools. Innovation and development are two separate phases. We are good at encouraging innovative practice. However, current systems are inadequate to support development.

### **2.2.2 learning and teaching (pedagogy): findings from *Shaping Places***

The *Shaping Places* programme was based on relationships between learning and design, particularly learning *about* design and learning *to* design. This was summarised as *learning through design*. This is the educational model. It brings together two areas: design awareness and design activity. These are linked by reflection and critical study, in relation to the work of other designers and the pupils' own work.

In learning through design, the emphasis is not so much on informational content, but on learning strategies, that will enable pupils to understand, think and do things. Study involves a range of intellectual, practical and social skills. It relies on visual and spatial modes of thinking. It requires pupils to make connections. Most importantly, it focuses on the notion of *change*.

Learning through design introduces students to learning experiences and working relationships different from other areas of the curriculum. One big difference is that the teacher does not know the answer before the students embark on the project. The whole point is to learn something new, to generate ideas and understandings, not to transmit, absorb and regurgitate what is already known.

Learning through design involves collaborative working and group effort. The work cuts across the boundaries of subject disciplines and addresses wider curriculum concerns, such as citizenship.

The programme emphasised processes of learning and demonstrated how to support learning activities. It obliged teachers to re-think approaches to study and demonstrated how cross-curricular studies could be managed through project work. The architects took the lead in all these. Although some of the projects were too ambitious, while others did not stretch the pupils, a clear framework for study emerged that can transfer to other settings. This involves:

- Investigation
- Critical study
- Generating ideas for change
- Design activity
- Presentation
- Reflection
- Evaluation

Projects satisfied requirements of the current National Curriculum for geography, art / design, design technology, citizenship and PSHE and contributed to the development of both visual and verbal literacy.

A key aim was to give pupils experience of the environmental and design issues that they might face as citizens and to help them develop the motivation and skills to participate in influencing how the environment might be shaped in the future. Pupils had opportunities for individual study, small group working and class activities.

The adults involved acted as guides and facilitators, modelling ways of analysing and appraising the environment, and developing proposals for change. The project work encouraged by the *Shaping Places* programme made studies relevant and meaningful for pupils. It anticipated the ways of thinking currently being considered in the revisions to the National Curriculum.

The challenge for teachers was to consider how to extend pupils' experience of the built environment and deepen their understanding. To do this, they needed to think not only of *content* in terms of the ideas that underpinned the work, but the *methods* that underpinned the *process* of learning. The projects in the *Shaping Places* programme showed convincingly that pupils of different ages could tackle similar projects. The approaches to study and the methods of study were similar. However, the complexity of ideas they dealt with and the depth of study changed.

Study methods that made use of a variety of media and which required a variety of learning modes were developed. They could easily be adapted for different age groups and different subjects. There was greater emphasis on group work than usual. All projects involved experience of design activity. Projects emphasised the importance of joined up learning, drawing on different disciplines, making connections between verbal and visual literacy.

Learning activities involved: experiential learning; skills-based learning; and project-based learning.

- Observation skills and skills of analysis were developed through fieldwork.
- Skills of synthesis and interpretation were developed through artwork.
- Skills of synthesis, appraisal and critique, were nurtured when pupils made value judgements about a building or a space to identify the need or opportunity for change.
- Verbal skills developed through a range of interactions and exchanges included the ability to negotiate with peers, to formulate and communicate ideas, to express and justify their opinions, to explain ideas, to present work formally, to respond to questions, and to engage in argument and debate.

- Social skills were developed with pupils working collaboratively in small groups and contributing to whole class sessions.
- Design capability was nurtured, emphasising visual and spatial modes of learning, combining intellectual, technical and practical skills.

Schools welcomed the opportunity to participate in the programme and accommodated the projects. However, the Shaping Places programme did not necessarily shift established practices in schools. Although in many instances, schools made special provision to cope with the demands of the projects, many of the built environment professionals found both the physical environment and the bureaucratic constraints did not necessarily provide the flexibility and adaptability that project work required.

### 2.2.3 learning and teaching (pedagogy): policy issues

A key finding from the *Shaping Places* programme was that built environment education does not only involve the introduction of new content or unfamiliar learning methods and teaching strategies. It also requires different strategies for the ways learning is organised and requires new approaches to the management of learning and teaching and the use of resources. This has implications for the pre-service training of teachers, for in-service and professional development. Teachers will need to take ownership of learning and teaching programmes as part of their professional responsibilities.

Greater leadership and a higher level of cooperation needs to be shown by government departments and agencies such as the Department for Education and Skills (DfES), the Qualifications and Curriculum Authority (QCA), the Teacher Development Agency (TDA) and the Commission for Architecture and the Built Environment (CABE) to address issues of curriculum content, the management of learning and teaching, the provision of resources and professional development related to built environment education, rather than relying on initiatives to be led in piecemeal fashion by individuals and organisations outside the school system.

- **How can current arrangements in teacher education (pre-service and in-service) address questions of pedagogy, concerned both with the practicalities of learning and teaching related to built environment education and the theoretical ideas that underpin them?**
- **How might pre-service and in-service training for teachers address the need for curriculum development and professional development in built environment education?**
- **What knowledge, skills and attitudes need to be developed in built environment education as part of teachers' pre-service training?**
- **How might practising teachers be encouraged to review their subject knowledge in relation to the built environment, and to recognise the value of their professional skills, so that they are able to support and direct learning?**
- **What will be the impact of extending the use of the built environment as an educational resource – and focusing on dealing with the experience of environmental change – on the school curriculum?**

- **How might current revisions in the National Curriculum convey the need to accommodate a variety of approaches to built environment education?**
- **How might subject teachers from a range of subject disciplines be encouraged and enabled to take responsibility for built environment education?**
- **How might schools be helped to understand that built environment education cannot be addressed only through discrete subjects, but requires multi-disciplinary and interdisciplinary study?**
- **How might schools be helped to develop new strategies for structuring learning and teaching that accommodates project-based learning, where the timetable can be used as a more flexible and adaptable management tool?**
- **What changes in the management of the curriculum in schools are necessary to support built environment education?**

### **2.3.1 inter-professional collaboration: context**

Collaboration is an increasing feature of artistic and design practice in built environment projects. It is increasingly becoming more common for artists, designers and built environment professionals to work with schools.

In the first documented project of architects working with teachers (*Front Door* 1974-76), the reason for the architects to work in school directly with pupils was for them to learn how young people learnt and how schools and teachers operated, so that their advice on built environment education would be more informed. Following on from this, the *Art and the Built Environment* Project (Schools Council 1976-82) demonstrated that single projects had little effect, but that working parties involving teachers, architects and planners could provide continued support over a period of years for individuals to embed new thinking in their professional practice. In the seventies and early eighties, lots of work on built environment education, led by architecture workshops and urban studies centres, developed from inter-professional collaboration involving teachers, architects and planners. However, during the nineties, the introduction of the National Curriculum in schools and greater centralist control meant that a lot of pioneering work in regional initiatives was lost.

Now, Education for Sustainability brings into sharper focus the close relationship between green issues and urban living, and creates opportunities for young people to explore with a fresh eye relationships between people and place, between the use and design of the built environment, and to consider the meanings and value it might have for them. A particularly important focus here is Citizenship to enable young people to play an active part in shaping and managing the environment in the future. Young people are likely to become involved in citizenship and issues relating to environmental design through:

- Local Agenda 21 groups and youth fora
- as subjects for research
- consultation for local and urban development plans
- involvement in urban regeneration projects
- design projects

school grounds developments.

They would not be able to do this without the support and guidance of environmental, design and education professionals. In the thirty years since the first project to engage architects in curriculum development, artists, architects and other built environment professionals have worked with teachers and schools in a variety of ways for a range of purposes: as critical friends; as collaborators; as amateurs; as paid helpers providing a service; and as artists and designers using the experience of working with pupils to feed their own creativity and for paid employment to diversify their own professional practice. There is also the danger that whereas artists and built environment professionals were first seen as catalysts for changing schools and teachers' practice, their engagement has evolved to become part of another service industry to support schools and do what teachers cannot do for themselves, rather than empower teachers to extend their professional boundaries.

Inter-professional collaboration can take place in the context of school-based programmes, residencies, or in architecture centres and design workshops. It may be through providing support for young people's fora or community design initiatives such as the preparation of village design statements or inner city renewal. Increasing use is now being made of websites and the Internet to enable young people not only to access information and ideas, but to help them make contact with both professionals and other young people engaged in environmental design projects.

Various Arts Council programmes have sought to increase audiences and encourage people to participate in and benefit from the arts. In 2004, funding for this in England was £20million. Many programmes have involved artists working in community settings as well as providing access to arts venues and activities. The approach has been reflected in another initiative funded by Arts Council England, such as the Creative Partnerships programme, focused specifically on inter-professional collaboration in education.

*Creative Partnerships provides school children across England with the opportunity to develop creativity in learning and to take part in cultural activities of the highest quality and that the idea behind Creative Partnerships is a simple one – to animate the national curriculum (the sciences as well as the arts!) and to enrich school life by making best use of the UK's creative wealth.* The first phase in 16 areas received £40 million and in 2003, it received a further £70 million investment from the Department for Culture, Media and Sport (DCMS) and the Department for Education and Skills (DfES), increasing the Creative Partnerships areas from 16 to 36.

Other initiatives, joined up design for schools (funded by the Sorrell Foundation) and Schoolworks have provided funding opportunities for artists and designers to work with teachers and pupils in schools. They have addressed the challenge of young people's participation in the design process and promoted inter-professional collaboration in education.

However, although each of these programmes has created opportunities for both professional development and curriculum enhancement, none offers a sustainable model for development. This is because of cost implications, because artists and designers are not trained as educators and because the work is project-based rather than related to pupils' or schools' long-term developmental needs. Although there are immediate satisfactions and achievements, there is no evidence of long-term changes embedded neither in teachers' practice nor in the school curriculum. Although some claim an action research dimension, they all rely heavily on support from external

facilitators, experts and researchers and rely on the existence of project funding to pay for them and to disseminate the results.

Teachers need help to see built environment education as part of their professional concerns. The problem of embedding it in schools' programmes does not lie with the National Curriculum or with examination boards. It is not merely a question of teachers' perceptions of this complex (or compound) subject. It is more a problem of how subject teachers perceive their professional role and where they define the boundaries of their specialist disciplines. It is a problem of how they are able to work with others to contribute to cross-curricular programmes of study. The emphasis should not be on creating educational resources for teachers to use. The need is to help teachers recognise the educational value of existing resources and develop the confidence, skills and management strategies to use them more effectively.

As well as considering the knowledge, aspirations and motivations pupils might have, we also need to consider teachers' knowledge of the built environment. How might the environment feature in their pre-service training? What provision is possible through continuing professional development? There are many opportunities for designers and organisations to work with teachers and schools to learn about education, but little evidence of teachers' placements in design or built environment organisations, or any parallel to the National Society of Education in Art and Design's Artist Teacher scheme. Sharing professional expertise needs to be a mutual exchange.

A key concern is that although there has been a lot of goodwill and many initiatives to promote built environment education in schools, there is a lack of any infrastructure that creates links in a dynamic, long-term and sustainable way, either in the curriculum, in the management of learning and teaching, in connections between teachers and the design professions and outside organisations, or between schools, further education and higher education. This is the most pressing need, to transform innovation into normal practice. Teachers, environmental and design professionals, schools, outside organisations and agencies need to develop long-term strategies for working together. A new initiative funded by CABE is to look at the models for development. The key is to identify a range of proven models that can be adapted to different circumstances and settings.

### **2.3.2 inter-professional collaboration: findings from *Shaping Places***

The Shaping Places programme was designed:

- To provide an enriched experience for young people engaged in environmental design projects by providing a working contact with artists and built environment professionals;
- To provide support for teachers from art and design and geography departments to work together with artists and built environment professionals on environmental design projects.
- To make explicit the ways in which projects developed as well as the methods of study so that other teachers can benefit from their experience.

However, the aim was not only to benefit the schools that participated in the programme, but also to disseminate the results of their efforts and provide encouragement and support for other schools to develop their own projects.

All professionals welcomed the excitement and stimulus of new working partners. The programme enabled teachers from different subject disciplines and different phase groups in schools to work together. Artists and built environment professionals saw how their specialist knowledge might transfer to a different context. All the professionals developed new perceptions of other professionals and gained fresh insights into their own work and professional role.

The contribution of artists, architects and landscape architects to the Shaping Places programme took a variety of forms:

- They made a significant contribution to conceptualising and planning projects in schools, suggesting possibilities for study and ways of handling topics.
- They provided resources such as maps and plans.
- They introduced topics for study through PowerPoint presentations, identifying new concepts and vocabulary and exploring unfamiliar ideas.
- They supported streetwork sessions, explaining how to use the study methods, analyse and appraise townscape quality and record information.
- They directed design activity, supporting pupils through different stages of appraisal, ideas generation, development of ideas and presentation of proposals. Their work with 3D and digital media was especially significant.
- They shared techniques used in professional design practice and demonstrated ways of handling computer-aided design.
- They engaged in critique of pupils' work, both during the design activities and at the final presentations.
- They helped document the projects.
- They contributed to shared reflection and evaluation.

Inter-professional collaboration was not without its problems. At first, collaboration was difficult for people who did not know each other beforehand, and at the beginning of projects in schools, there was sometimes a lack of clarity in planning and determining roles and relationships. Some teachers found the experience frustrating, but after the experience, they now have a clearer idea of how they would run a project by themselves. Many say that they will incorporate what they have learnt in new projects. Many of the artists and built environment professionals identified difficulties and frustrations of adjusting to the bureaucratic set-up and institutional environment of schools. Some projects reinforced outside professionals' negative perceptions of teachers and schools, particularly their roles in controlling behaviour and enforcing discipline. In other projects, teachers were perceived as heroic figures, and artists and built environment professionals gained new insights into education, schools, learning and teaching, developing a high regard for teachers and a new understanding of the difficulties and challenges they faced.

### **2.3.3 inter-professional collaboration: policy issues**

Young people's participation in environmental change can be promoted through existing structures with the help of cross-departmental and inter-agency initiatives. Different kinds of professionals need to develop new kinds of working relationships. Individuals who might support young people's involvement in environmental change are: local authority officers, architects, planners, councillors, teachers, artists, play workers and youth leaders. Education programmes to develop young people knowledge and skills for participation can be developed in schools, youth clubs, architecture centres, urban studies centres and through local authority initiatives. There needs to be better connections made between professional groups and greater clarity about what they need to achieve through inter-professional collaboration. We need to find ways of developing positive long-term relationships between education and built environment professionals to develop imaginative programmes to support young people's engagement in environmental design.

**The key question is – why invite artists and built environment professionals to work in schools with teachers and pupils?**

- **Is it to act as ambassadors for their professions?**
- **Is it to provide a novel form of professional development for artists and built environment professionals, for close encounters with a public they do not generally meet?**
- **Is it to provide additional educators to fill the gaps in teachers' professional training?**
- **Is it to extend and enhance what teachers can do for themselves?**
- **Is it to give another dimension to learning and teaching by creating new opportunities for learning outside the classroom and challenging the normal relationships within the classroom?**
- **Is it to help teachers develop skills and models of collaborative working to accommodate multi-disciplinary and inter-disciplinary studies?**

Partnerships between schools and built environment education organisations or centres of one kind or another have done much to develop innovatory practice. However, the continuation of inter-professional collaboration as a succession of short-term, one-off initiatives needs to be totally reconsidered. They do not go anyw here; there is no significant shift, unless they are seen in the larger context of action research, to bring about curriculum development and professional development to ensure systemic change in the field of built environment education.

- **In what ways can inter-professional collaboration be extended not only to initiate change, but also to provide longer-term support to embed change in teachers' practice and in the school curriculum?**

#### **2.4.1 research and development in built environment education: context**

During the last thirty years, there have been many innovatory projects and programmes in built environment education, initiated by individual teachers and schools, local authorities, professional organisations and national agencies. Some have focused on content, viewing the built environment from different perspectives – the design professions, the construction industry or citizenship. Some have emphasised the importance of involving architects and planners in schools to address the lack of expertise in this area. Some have stressed the need for clarity in methods of learning and teaching. Whatever is highlighted, some basic questions need to be addressed in developing built environment education in schools:

- What is to be taught? What is the scope of the subject?
- Who is going to teach it? Which subject teachers will be involved in secondary schools?
- How is the teaching to be managed to show progression and development over time?
- What resources can support it?
- How is the subject to be validated?

#### Teachers

The Secondary National Strategy for school improvement makes it clear that teaching and learning is at the heart of school improvement. It encourages schools to develop strategies to support school improvement through professional development, having regard for four principles: expectations, progression, engagement and transformation:

- *Expectations* –establishing high expectations for all pupils and setting challenging targets for them to achieve.
- *Progression* – strengthening the transition to Key Stage 2 to Key Stage 3 and ensuring progression in teaching and learning across Key Stage 3.
- *Engagement* – promoting approaches to teaching and learning that engage and motivate pupils and demand their active participation.

- *Transformation* – strengthening teaching and learning through a programme of professional development.

The Secondary National Strategy characterises teachers' professional knowledge as:

- Subject knowledge
- Teaching and learning models
- Teaching repertoire (skills and techniques)
- Conditions for learning.

In relation to built environment education, teachers' subject knowledge of architecture and the built environment is not adequate. This was the case 30 years ago and is still the case, because pre-service education has never addressed the problem. Not all teachers are familiar with the project-based approaches so valuable in environmental design. Not all teachers are skilled in supporting collaborative group work. Not all schools have sufficient flexibility and adaptability in the ways they manage learning to be able accommodate built environment education.

A key consideration of any work in schools is that of accountability, much of it based on goals, targets and outcomes. Schools are inspected, teachers constantly called to account and pupils frequently tested. The current vogue for accountability tends to interpret the notion of 'value' as 'value for money' or 'added value'. Educational value is often low on the list of priorities. However, there are some indications that evidence-based research is being developed in museums concerned with generic learning outcomes. Creative Partnerships claims to embrace action-research and CABE is now engaging in evidence-based research. All these focus on processes of learning, appropriate for education programmes.

Development includes: built environment curriculum; the professional development needed to train educators; and institutional development required embed it in the system. Development needs to be underpinned by sound research. The most appropriate model for research and development in built environment education is action research. Central to the notion of action research is the idea of change. The practitioner / researcher does not only seek to understand existing situations or practices, but actively seeks to change them. The practitioner / researcher does not merely record the impact of change, but is an agent of change. Action research, the study of change, is preferred to the study of texts, the study of cases of practice is preferred to the study of experimental samples and the focus of enquiry is on practical issues as distinct from theoretical issues. The conduct of the investigation is controlled by participants in a collaborative framework of dialogue validated by colleagues and co-professionals (Bell 1988).

Lomax identifies six principles that inform action research:

- Action research is about seeking improvement by intervention.
- Action research involves the researcher as the main focus of the research.
- Action research is participatory and involves others as co-researchers rather than informants.
- Action research is a rigorous form of enquiry that leads to the generation of from practice.

- Action research needs continuous validation by “educated” witnesses from the context it serves.
- Action research is a public form of enquiry. (Lomax, P. 1994)

How is the research tested out? How might learning and teaching strategies developed in one place transfer to other settings? Networks for dissemination and professional support are necessary. Good communication has been established between members of a national Architecture Centre Network. They share good practice and disseminate the results of each other’s work, as well as holding joint training days and supporting each other through mentoring. (This is one of the networks that are being used to disseminate the results of the Shaping Places programme). PLAYCE, an international organisation to bring together built environment educators to share their experience, was established in Finland in 2005. This provides a forum for discussion and debate and a means of dissemination wider afield.

#### **2.4.2 research and development: findings from *Shaping Places***

Placing the Shaping Places programme in the context of the Secondary National Strategy, it was primarily the architects who raised expectations of what built environment education projects might involve. Much of the subject knowledge was introduced by built environment and design professionals. Teachers brought into play their knowledge of how young people learn and how teachers can support their learning, using techniques primarily derived from art and design education. The architects more than the teachers supported learning through providing: information, explanation, demonstration, direction, instruction, advice, questioning and leading discussion. Very importantly, all of the adults involved brought to the experience of learning enthusiasm, commitment and inspirational leadership.

The models were based on experiential, investigative and project-based learning, described by The National Strategy as an *inductive* model, where pupils are required to gather, sort, classify information, suggest hypotheses and then test them. This was developed primarily through design activity.

Design projects, where the end result is not known, but the means to achieving learning outcomes are clear, provide many opportunities for the educator to present the model of the good learner, modelling how to learn and how to apply what has been learnt.

In the management and organisation of projects, it was the architects, more than the teachers, who identified key concepts (the big ideas) that pupils were expected to explore, related very closely to everyday life and the world outside school. They set the framework for the projects and negotiated methods of study for streetwork and studio development.

With teachers, they developed learning opportunities for pupils to construct knowledge and make meaning through information gathering, problem solving and skills of investigation, enquiry and experiment. Together, they set expectations about the nature and quality of the work. They provided stimulus and challenge, as well as strategies for learning and feedback on work in progress.

The *Shaping Places* programme could be viewed as school-based professional development for the teachers. However, no follow up study was planned to show the subsequent impact on pupils, on teachers' professional practice or on the artists and built environment professionals.

However, bringing teachers, artists and architects to work with teachers and their pupils in primary and secondary schools was only one of the aims. The key aim of the programme was to understand what was gained from this experience of inter-professional collaboration in education that could be of value elsewhere, and to make explicit the learning methods, so that others could benefit. Although the projects were related to the local context, the study methods were transferable to other settings.

The budget covered not only the operation of the projects in schools, but also the cost of the publication and its dissemination throughout the region. The plan is to distribute a copy of the book to every school in the region and to make the material available as a PDF on the Kent Architecture website. (If funds permit, CD copies will also be made available).

The material will form the basis for in-service workshops, courses and conferences, supported by the two architecture workshops working with schools and local authorities. The results of the programme will be disseminated through the national network of architecture centres and other opportunities at conferences, seminars and courses around the UK.

### **2.4.3 research and development: policy issues**

Questions arising from the Shaping Places programme:

- **How can we learn from built environment education programmes in schools?**
- **How can we re-invest what was learned and provide long-term support for development?**
- **How should this be done?**
- **What resources are necessary and which strategies are appropriate?**

In relation to development, three key areas emerge:

- 1. Inter-professional collaboration in education**  
**What is the place of inter-professional collaboration in education?**
- 2. Curriculum development**  
**How can good practice be disseminated to influence curriculum development in built environment education?**
- 3. Professional development**  
**What pre-service and in-service training is required for teachers' professional development to enable them to engage in built environment education?**

## **1. Inter-professional collaboration in education**

In what ways should new initiatives involving inter-professional collaboration build on, extend or refine the experience gained by teachers, artists and built environment professionals working together on the *Shaping Places* programme?

The programme was successful in supporting inter-professional collaboration in education. However, it is not necessarily advisable to constantly repeat the experience using the same model. Although the programme worked, everyone appreciated it and it resulted in worthwhile experiences for pupils, it was very expensive, it did not necessarily ensure long-term attitudinal change, nor did it ensure change in educational practice or changes in how learning and teaching are managed, either in the participating schools or any other schools, as no further support mechanisms were put in place.

- **Should the current model be replicated?**
- **Should the current model be modified to make better use of artists and built environment professionals as advisers and critical friends rather than teachers' assistants?**
- **Should the current model be abandoned and replaced by a different one?**

## **2. Curriculum development**

- **What kinds of curriculum development related to built environment education could be nurtured at different levels?**
- **In relation to local development, how might teachers in the participating schools share their experience of the programme with their colleagues?**
- **In relation to regional development, how might teachers in other schools and centres the southeast of England benefit from the programme?**
- **In relation to national development, how might other schools and centres in the UK learn from the programme?**
- **In terms of international development, how might built environment educators in other countries benefit from the programme?**

### 3. Professional development

There are plans for wide dissemination of the *Shaping Places* through the publication of a book and CD and web-based information, and the development of an associated pre-service and professional development programme.

- **How might this resource be used as a focus for pre-service and in-service programmes?**
- **What further support should be provided for the network of education and environment professionals established through the projects in schools and the various seminars across the region?**
- **What is the role of the two architecture centres? What other partners might they work with?**
- **In terms of local development, how will strategies from the programme be adopted in the participating schools and by the two architecture centres?**
- **How might a follow-up study be structured to find out how the programme impacted on the different participants?**

In terms of regional development, **what strategies for in-service training and continued professional development can be put in place through workshops, courses and conferences?**

A regional seminar in Bexhill is planned for May.

A course for teachers is planned in Woking in May.

Contact has been established with local education authority inspectors and discussions in progress to build in *Shaping Places* inputs in courses and conferences.

In terms of national development, **how might the results of the programme be disseminated so that other educators can learn from the experience? How should feedback be sought?**

Good communication has been established in a national network of architecture centres (ACN).

- **In addition, how might other professional networks such as the National Association of Art and Design Education (NSEAD), A4 (Inspectors and Advisers in Art and Design) and the Geographical Association be informed about the *Shaping Places* programme and help with disseminating the results?**

In terms of international development, **what opportunities are there for the wider dissemination of the material produced in conferences, workshops and courses?**

- Contacts have already been established with PLAYCE, an international network of educators in built environment education.

- Contact with the Aspen Conference in the USA, in June 2006, where techniques will be tested out on design educators.
- Contact with the University of British Columbia, where MA students will use *Shaping Places* as a required text during their summer programme, July 2006.
- Contact has been made with a number of universities in Australia and plans are being formulated for dissemination.

Long-term Issues related to long-term development include:

- The need for long-term core funding in contrast to short-term project funding;
- Investment in professional development and organisational change.
- Facilitating institutional change, requiring a focus on educational managers as well as educational practitioners.

## **2.5 the way forward**

There have been countless projects, programmes, studies and reports during the last 30 years that have identified the same problems:

- The need to manage built environment education more effectively in schools as a dimension of the curriculum.
- The need for improved teacher education, both in pre-service, in-service and continuing professional development.
- The need for more strategic initiatives based on inter-professional collaboration.
- The need for core funding to support long-term development through the efforts of centres and outside organisations.
- The need to see collaborations between schools and organisations, between teachers and built environment professionals working together to develop educational programmes available to all.
- The need to embed new developments. The most effective strategy here is to adopt an action-research model, where what is learned can be reinvested back into the system to develop the field.

There is a wealth of experience in the UK to draw upon. There needs to be a higher public profile and stronger voice for built environment education in schools, and clear strategies for development. This is not only the responsibility of schools or teachers. It requires concerted and collaborative effort by national organisations, government agencies and other players in the field of urban design and education.

Development in built environment education in schools requires:

- A more visible presence and a positive image for both the built environment and built environment education.

- A shared vision of education between different professional groups, government departments and regional agencies.
- Effective networking to bring together designers and educators.
- Effective communication between the different sectors.
- Effective inter-organisational collaboration.
- More active use of websites and networks.
- Improved research and development through action research, involving better dissemination of good practice,
- Improved pre-service training and professional development for educators (teachers and designers).
- A national focus to fund and coordinate these initiatives.

Now is the time to focus on strategic planning to create the infrastructure to support development. This is the challenge for all organisations concerned with development, education and building capacity.

(See next page for 10 strategies that could be put in train immediately).

## **10 strategies**

The following 10 strategies could be put in place immediately to embed what has been learned from *Shaping Places* in the system:

### **Inter-professional collaboration in education:**

- **Impact study to determine how the *Shaping Places* programme has influenced built environment education in the participating schools.**
- **Selected participants in the *Shaping Places* programme invited to create a do-it-yourself INSET pack for schools, led by the two architecture centres.**
- **The use of built environment professionals as tutors in workshops and courses.**

### **Curriculum development**

- **Feedback sought from teachers that have made use of the *Shaping Places* publication. Schools encouraged to document their work and submit it for an award, resulting in publication / dissemination of good practice.**
- **Active use made of architecture centre and local authority websites to disseminate good practice.**
- **On-line journal of good practice to promote local development and disseminate it more widely.**

### **Professional development**

- **Development of a regional network of built environment educators.**
- **Multi-professional workshops and courses to build confidence and competence in the use of the study methods.**
- **Award scheme for education champions to recognise the efforts of professionals in a variety of contexts (i.e. teachers, artists, architects, landscape architects, etc) to promote built environment education.**

### **Research and development**

- **Future development needs to be underpinned by ongoing research. The most appropriate model in this context is action research, where evaluation is seen as part of a long-term, on-going cycle of research and development. Data is gathered from schools, workshops and courses. It is analysed, interrogated and ideas shaped, tested out and disseminated through publications and materials suitable for in-service and continuing professional development to inform and improve practice. Practitioners monitor their efforts, and are encouraged to take a questioning, reflective and critical stance to their work. It is validated by experts in the field acting as critical friends.**