



Providing Shade in School Grounds Guidance

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1.0 Introduction

This guidance has been produced by Essex County Council Built Environment Branch and Gill Wynn Williams Associates. Its purpose is to inspire and inform a more creative approach to the provision of shade in school grounds. We hope it will be read by school staff who are asked to provide shade for children, whether they are of nursery, primary or secondary age.

Our aim is not to provide detailed technical information or replace the role of the consultant but to:

- Provide a guide to getting started and writing a brief
- Explain what makes good shade
- Evaluate a range of options for both built and natural shade structures

Young skin is more delicate and vulnerable to damage than adult skin and we spend far more time outdoors in our early years. As climate change makes heatwaves a more likely occurrence, shade provision in school grounds is becoming more and more important to the well-being of our children.

2.0 Getting Started

A shade structure may take many forms - fabric canopies, timber shelters and trees are just some of the options which are considered later in this guide - and before choosing a structure for your grounds, your first step should be to write a brief.

2.1 Writing a Brief

The design brief should include information on the existing layout, features and uses of your school grounds as well as more detailed information on the location, size and style of the proposed shade structure. A useful exercise is to walk the site and make notes on aerial photos or plans of the site (see 2.4 Know Your Site opposite).

It is important to ensure that shade is provided in the right place and at the right times. Think about:

- Where are the existing areas of shade and how does this change throughout the day?
- How will the shaded area be used?
- Who will use the shaded area?
- How many individuals will use the shade?
- How big will the shaded area need to be to accommodate them?

It is also important to ensure that structures work with existing buildings both visually and functionally. This is particularly important where it has been decided that shade should be provided close to buildings. Think about:

- What is the style of the existing buildings and other site features?
- Will the structure prevent maintenance access - to clean windows, replace gutters or paint walls?
- Will the structure affect daylight within the buildings?

The design brief can be used as a checklist to ensure that all requirements are being met. It is common for the brief to change during the decision making process as new alternatives are explored.

2.2 Talking to Those Involved

The design brief should be prepared after talking to other staff and pupils. Involving children particularly can bring fresh ideas to the table and allowing them to participate encourages a sense of pride in and ownership of the final structure.

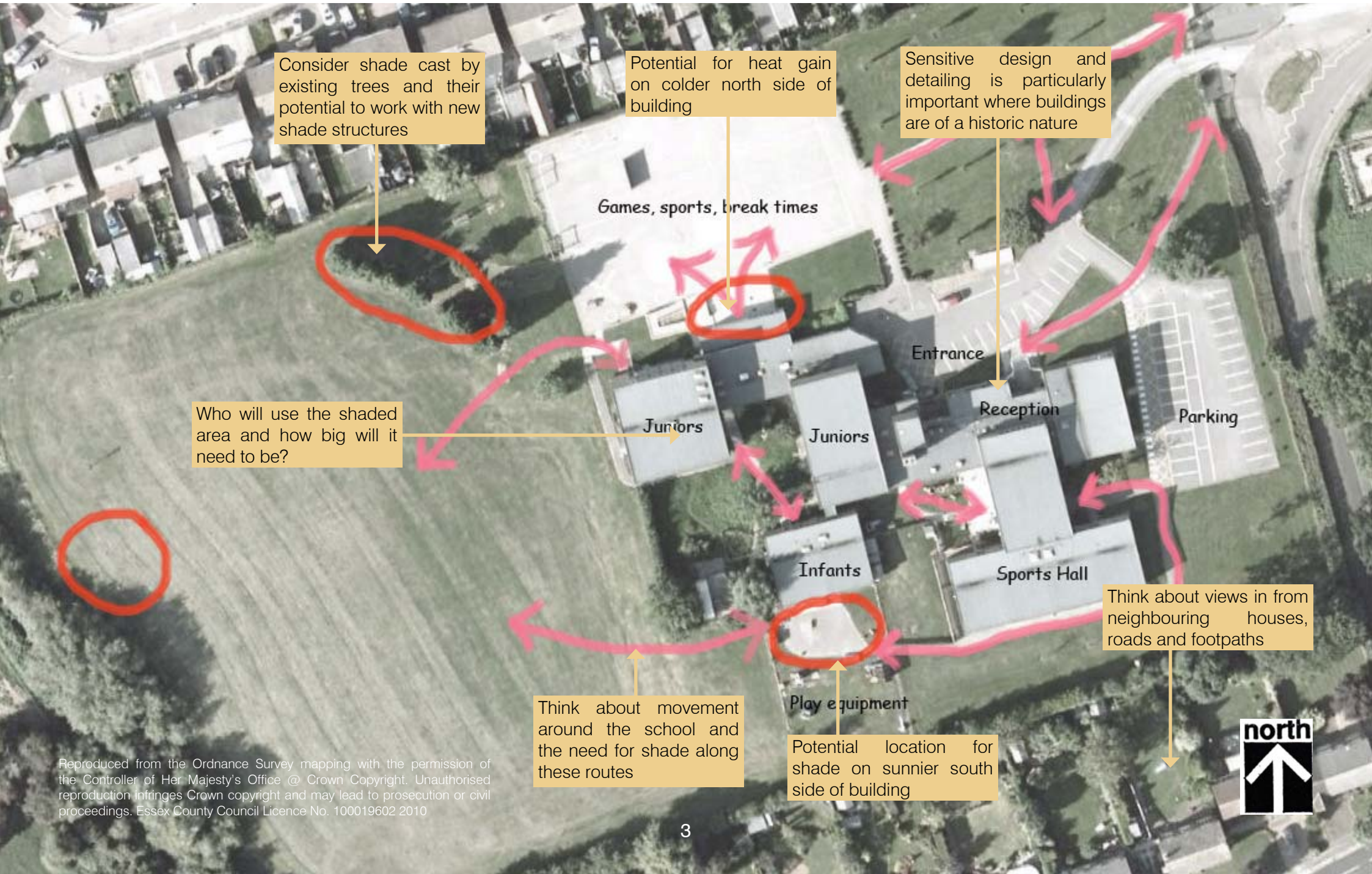


Drawing by pupil from Frobisher Primary School, Jaywick for consultation

2.3 Planning Permission

Finally, when you have chosen a design, be sure to consult with your Local Planning Authority to check whether you will need planning consent.

2.4 Know Your Site



Consider shade cast by existing trees and their potential to work with new shade structures

Potential for heat gain on colder north side of building

Sensitive design and detailing is particularly important where buildings are of a historic nature

Games, sports, break times

Entrance

Reception

Parking

Who will use the shaded area and how big will it need to be?

Juniors

Juniors

Infants

Sports Hall

Think about views in from neighbouring houses, roads and footpaths

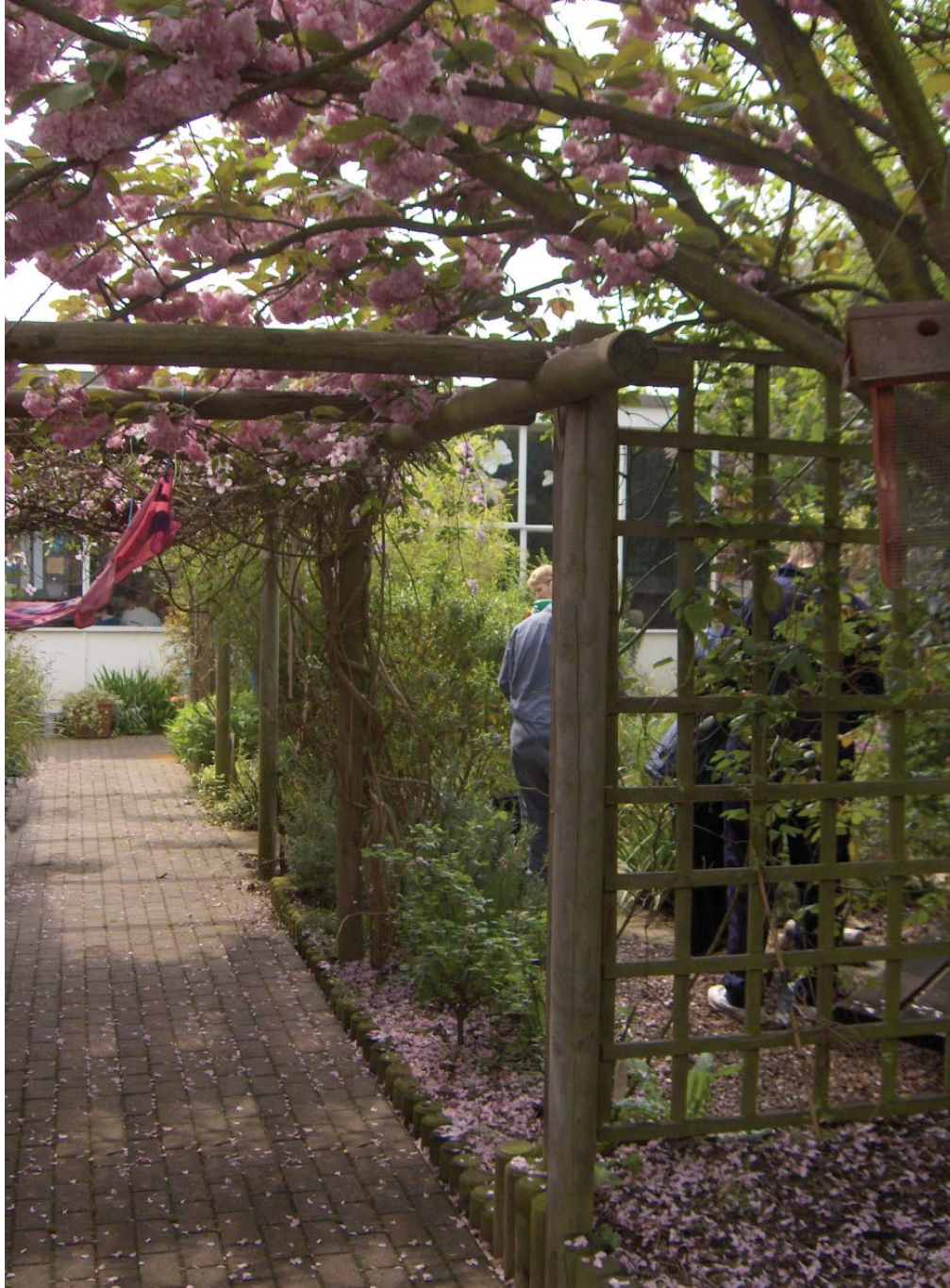
Think about movement around the school and the need for shade along these routes

Play equipment

Potential location for shade on sunnier south side of building



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3.0 Design Principles

Shade structures will vary in location, size, style and form but we have identified six broad principles which should be addressed to provide a good shade structure.

3.1 Work with existing buildings, structures and planting

3.2 Be Creative

3.3 Combine hard materials and planting

3.4 Be sustainable

3.5 Provide good shade

3.6 Provide for a variety of uses

The following pages illustrate the design themes above using images of different types of shade structure. Each has been designed to respond to a specific context and they should be viewed as inspiration for a more creative design process rather than replicated. The final form, size and style of shade structure should respond to the context and uses of your own grounds.

3.1 Work with existing buildings, structures and planting

Canopies placed close to buildings can be an opportunity for vandals to get onto the school roof

Canopy should not interfere with maintenance of existing drainage gutters

The materials and design of the canopy compliment the building

Raised planters help to define outdoor space, provide seasonal interest and visually anchor the structure

Structure provides shaded and sheltered walkway and teaching space between classrooms

3.2 Be Creative

Canopy colours are sympathetic to building colours

Planting beds add colour, scent, seasonal and wildlife interest to the shaded area

Careful design creates an interesting and stimulating place for outdoor play and study

Timber fence and decking contribute to overall character of shaded area

Bespoke seat designed by artists with pupils

3.3 Combine hard materials and planting



Drainage of canopy through poles

Planting makes the place more welcoming and softens the appearance of the canopy and wall

Planting provides habitat for wildlife and opportunities for outdoor learning

Shrubs and flowers add structure, seasonal interest and help to create a sense of place

Low wall helps define and enclose space and provides informal seating

Careful placement of shrubs and trees can help to keep the area cool in summer and provide shelter in winter

3.4 Be sustainable

Grow climbing plants such as clematis and honeysuckle on trellis

Placing the structure next to existing mature trees can provide different degrees of dappled shade

Trellis and climbers can provide extra protection from reflected UV radiation and shelter from wind

Shaded area looks out onto a central space in which activities can take place. Pergola becomes a quieter place from which to watch

Recycled or reclaimed materials from local suppliers for surfaces and structures

Use of solid and robust materials from sustainable sources increases the life span of the structure

3.5 Provide good shade

Tree provides attractive dappled shade to the entrance, giving children extra protection from UV radiation



Play equipment underneath the canopy gives the shaded area a clear function and reason for children to use it



Canopy extends beyond the edges of the area play area



UV radiation can be reflected from adjacent surfaces. Grass generally reflects far less radiation than a paved surface



3.6 Provide for a variety of uses



Semi-waterproof fabric shade-sail

Consider how large trees will grow and spread when planting

Story telling seat provides a focus for activity in the space

White boards allow children to make the place their own

Sand pit can be moved in and out of the sun

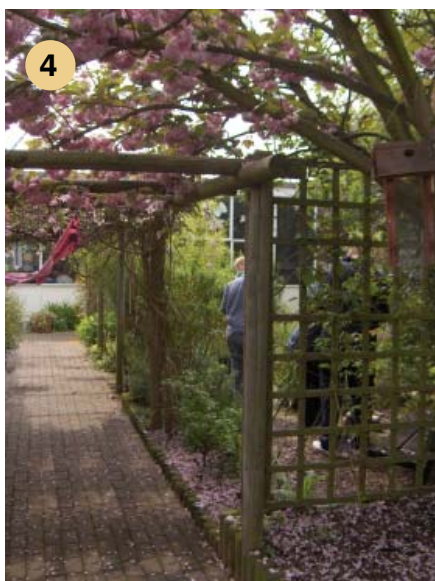
Shaded area can be used for outdoor learning, performance, play and exhibition of work

4.0 Making a Choice

	Type	Advantages	Disadvantages	Cost	Longevity	Sustainability
1	Timber Shelter	<ul style="list-style-type: none"> • Provide total shade • Water Proof • Bespoke designs can be commissioned 	<ul style="list-style-type: none"> • Off the peg can be the wrong scale for primary school children • Some designs lack imagination 	£ - £££	L - LLL Depends on design	Variable
2	Permanent Fabric Structure	<ul style="list-style-type: none"> • Visually eye catching • Large range of styles and colours available • Bespoke designs can be commissioned • Can cover large area without need for a heavy structure • Can be semi-waterproof or waterproof • Can be relatively cheap to repair/replace 	<ul style="list-style-type: none"> • Modern appearance not to everyone's taste but can provide a contrast to older buildings • May discolour • More vulnerable to vandalism than built structures 	£££	LL - LLL Depends on design and maintenance	Variable
3	De-mountable fabric shade sail	<ul style="list-style-type: none"> • Simple sails can be visually appealing to children • Easily taken down in the winter • Cover wide areas easily 	<ul style="list-style-type: none"> • Sails may discolour (especially when close to trees) • More vulnerable to vandalism than built structures 	£	LL	Variable



	Type	Advantages	Disadvantages	Cost	Longevity	Sustainability
4	Timber pergola (Sustainable timber)	<ul style="list-style-type: none"> • Good at making spaces as well as providing shade • Opportunities to combine with seating and planting • Added interest of climbers, flowering plants, food plants etc 	<ul style="list-style-type: none"> • Timber quality must be checked for splinters, cracks and durability 	££	LLL	Good
5	Tree planting	<ul style="list-style-type: none"> • Provide seasonal interest, fruit, flowers and ecological benefits • Provide cool dappled shade • Create opportunities for play • Create a sense of place 	<ul style="list-style-type: none"> • Choice of tree constrained by proximity of buildings, ultimate size and soil conditions • Maintenance required in earlier years 	£	LLL	V Good
6	Willow structures	<ul style="list-style-type: none"> • Excellent enclosure of space • High level of shade when established 	<ul style="list-style-type: none"> • Can cause problems if planted very close to buildings • Require regular maintenance 	£	LL	Good



	Type	Advantages	Disadvantages	Cost	Longevity	Sustainability
7	Architectural canopies	<ul style="list-style-type: none"> • High level of shade and shelter • Can be designed to complement existing buildings on site 	<ul style="list-style-type: none"> • Standard products may not fit with the character of the building 	£££	LLL	Variable
8	Bespoke works of art	<ul style="list-style-type: none"> • Good sense of place and stimulating environment • Opportunity for involving children in design and construction with the artist 	<ul style="list-style-type: none"> • May have long lead in for supply 	£££	L - LLL Depends on design	Variable
9	Dens and temporary covers	<ul style="list-style-type: none"> • Good involvement for pupils • Can change the space and canopy easily 	<ul style="list-style-type: none"> • Ephemeral structures can look untidy to some • Limited life span 	£	L - LLL Depends on design	Variable



5.0 Help with Shade Structures

These are some of the organisations that may be able to provide help and support for shade structure projects.

The Landscape Institute

www.l-i.org.uk

Lists all registered landscape architects

Royal Institute of British Architects

www.architecture.com

Lists all registered architects

RICS (Royal Institution of Chartered Surveyors)

www.rics.org.uk

Lists all registered chartered surveyors

The Department for Children, Schools and Families

www.teachernet.gov.uk

Publications include 'School Grounds – A Guide to Good Practice' and 'Schools for the Future, Designing School Grounds' both available from The Stationery Office (www.tso.co.uk)

Learning through Landscapes (LTL)

www.ltl.org.uk

LTL operates a members advice service which can put schools in touch with school grounds professionals in their area.

Secured by Design

www.securedbydesign.com

Service from the police giving design advice on security matters

Arts Council for England

www.arts.org.uk

The arts council has regional offices which can help with finding a

local artist for a bespoke project

Axis Arts

www.axisartists.org.uk

An arts organisation listing artists on a database

Cancer Research UK

www.sunsmart.org.uk

Provides information about schools and sun protection

The Planning Portal

www.planningportal.gov.uk

Many planning authorities now accept applications online via the planning portal

Acknowledgements

Page 2 Illustration by pupil from Frobisher Primary School, Jaywick, Essex

Page 8 Image reproduced from Sun Smart: Shade for Everyone, 2004, The Cancer Council, Australia

Page 10 **Fig. 3** Image reproduced from Archiexpo website, 2009, <http://www.archiexpo.com>

Page 11 **Fig. 5** Image reproduced from Woodside West School website, 2009, <http://www.woodsidewestschool.com>

Page 12 **Fig. 8** Image reproduced from Hall and Bednarczyk architects website, 2010, Chepstow, <http://www.hallbednarczyk.com>

Fig. 9 Image reproduced from Freeplay Network website, 2009, <http://www.freeplaynetwork.org.uk>

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