scala news

Autumn 2011

Construction & architecture news for the public sector

Design solutions edition

in this issue: Wellstead Primary School, Hedge End; Westfield Folkhouse, Mansfield; Inmans Primary School, Hedon; **Design solutions:** What is the real value of integrated design and how to get it, Life and death of school building programmes, Research into design award winning architectural practice, Enhanced summertime performance of school buildings; Civic Building of the Year Award 2011.

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Editorial comments

A celebration of design solutions

The annual Civic Building of the Year Award takes place on 11 November in Leeds to recognise the achievements of all those involved in these outstanding works of architecture.

The aim of SCALA is to assist in achieving the highest possible standards in the development, design, construction and management of the public sector estate. The Award is a high profile example of promoting design supported by the 'Design solutions' theme of this edition.

Each of the three feature projects has differing challenges but a unique and successful solution. Wellstead Primary School was highly commended in the 2010 CBoY Award and is a sustainable solution in a green lung surrounded by development and to the high standard expected from a Hampshire CC project. Westfield Folkhouse comprises a purpose built extension to an existing Georgian property which was renovated as part of the works. The sympathetic restoration and attractive modern interiors provide an ideal setting for its young people users. Inmans Primary School replaces the flood damaged old school and is notable for the system build solution and standard classroom design as well as attractive and individual design solutions throughout the building.

Andy Beard has provided an extensive article on the 'Life and death of school building programmes' from the creative solutions and design ingenuity of the post-war era to the well resourced but restrictive procurement practices of the 'noughties' and the current James Review. The roller coaster ride of politics, design and procurement described is not for the faint hearted or those with delicate design sensibilities.

The NPS article highlights the value of integrated design and how to achieve it making the point that responsibility for this should be established at an early stage, with a clear design lead and areas of responsibility and a supportive procurement process and post-occupation evaluation.

Michael Serginson updates us on his research in to Design Award Winning Architectural Practices, following on from his initial presentation at SCALA 2010, which analyses architectural practices and academic research based on RIBA awards for school design. Successful practices have a high proportion of architects on staff; methods of communication and review, both within the design team and between the design team and the client and user representatives; and the control of design iteration through a formal client "sign-off" of the designs at key stages of the project. Good basic processes which, together with the integrated design recommendations above, should be noted by those responsible for commissioning and procuring projects.

The enhanced summertime performance of school buildings is evaluated by Phil Harris in his SCEME article in which the success of a BEMS managed low rate natural ventilation system achieves one of the lowest energy consumptions in a recent PfS study.

I hope these articles have highlighted the value of design and well thought out solutions. If so, why not attend the Annual President's Dinner on 11 November in Leeds when the Civic Building of the Year Award 2011 will take place with visits to buildings of interest beforehand. Details are to be found in Latest News and at www.publicarchitecture.co.uk.

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Contents

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Cover picture: Wellstead Primary School, Hedge End.

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Annual SCALA President's Dinner 2011
at Leeds Marriott Hotel on Friday 11th November 2011

The annual SCALA President's Dinner this year will be held in the 4 star Leeds Marriott hotel situated in a pleasant landscaped area in the city centre only 5 minutes walk from the main railway station at Leeds.

For those delegates arriving in the afternoon, a visit is being planned to some local buildings in the Leeds area worthy of interest which will enable delegates to gain valuable CPD knowledge on "Design at its best" in and around the city. Afterwards delegates will be brought back to the hotel for about 5pm where tea, coffee and biscuits will be available.

The SCALA AGM will be held at 5:30pm in one of the meeting rooms within the hotel. The main event of the day will be the President's Dinner which will once again be a full three course dinner complete with wine. Tea, coffee and mints will be served at the end of the dinner. There will also be an opportunity to win superb prizes from a raffle with donations going to the RNLI.

SCALA has supported this worthwhile organisation for many years and the RNLI has received generous donations from the invited guests and delegates during that time.

The highlight of the Dinner will be once again the Civic Building of the Year Awards and this year the panel have had an extraordinary number of excellent entries from which to choose the eventual winner. Donald Murdoch will act as MC for the evening with his usual charm and wit making sure everyone enjoys the evening in a relaxed atmosphere and in pleasant company.

Make sure you do not miss this event as it promises to be an excellent means of networking with colleagues, viewing some excellent buildings, either on the afternoon tour or as part of the CBOY Awards, and an enjoyable meal in relaxed company along with supporters of the CBOY, and our sponsors, NPS.

Put the date in your diary NOW.

FRIDAY 11th November 2011 at the Leeds Marriott Hotel, Leeds.

For more information and to book go to www.publicarchitecture.co.uk

Scalanews distribution list

Readers will know that Scalanews is the most effective means of reaching senior management and all those involved in construction and architecture in the public sector.

Published 5x pa copies go to members of SCALA, SCEME and the ACA as well as to a named person in every local authority in the UK and NI, and 'movers and shakers' in the industry. In addition to addressing current issues every edition has a unique theme reflecting an area of interest to readers.

The distribution list for this edition has been rationalised to ensure an even greater focus on those involved in the industry and the public sector and now includes members of COPROP, the Association of Chief Corporate Property Officers in Local Government, involved in the development and implementation of policy affecting community assets.

Greetings to them and as with all our readers I welcome comment and suggestions on improving and facilitating the sharing of knowledge and expertise to the benefit of all in the sector. If you do not or no longer receive a copy and wish to do so please e-mail me with your contact details.

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Wellstead Primary School 7

Wellstead Primary School is a new one form entry primary school serving the Dowd's Farm housing development in Hedge End, Hampshire. The site, at the tip of a green lung that cuts the traditional developer housing in two, was originally an established farm owned by the Salvation Army.

The brief from Hampshire County Council's Children's Services Department as the Local Education Authority was to provide a sustainably designed one form entry, 210 place all through primary school to serve the catchment of the residential development. The accommodation was to include 7 classrooms, music/drama space, main hall, food-technology space, CDT space, SEN rooms, administration accommodation, sanitary accommodation including a hygiene room and necessary staff accommodation.

Designed in two principal steeply pitched roofed linear forms, the main teaching block in one and the hall/music drama in the other, each forms two sides to a courtyard with the administration and additional curriculum facilities being housed in cedar clad flat roofed flanks. The courtyard space is completed by the library to the west that creates a shop front to the wider community that provides a transparent space linking the children, parents and the community with the heart of the school. A simple glazed link to the east can be opened up to extend this central space and link it to the formal hard play area.

The structural frame of the building is hot-rolled steel with secondary cold-rolled infill panels that are clad in a mixture of good quality buff facing bricks and untreated cedar to the external walls and natural slat to the pitch roofs. This strategy enables the flexible use of the building in the future for other uses as the

Courtyard space with simple glazed link

Liam Presley

Architectural Team
Hampshire County Council - Architects

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SCALA
CIVIC BUILDING OF THE YEAR AWARD
2010

Highly Commended in the Civic Building of the Year Award 2010 sponsored by NPS Group Ltd.

8 **Wellstead** Primary School

"The building has been designed to maximise day-lighting, natural ventilation and incorporates the latest building management systems."

Site plan

internal partitions are non-load bearing. A high pitched roof with a low eaves has been used to create internal airy spaces that increase the sense of space and also enable the key teaching spaces to have an external covered area. The building has been designed to maximise day-lighting, natural ventilation and incorporates the latest building management systems.

The primary energy source for the heating comprises 5 ground source heat pumps supplemented by solar panels to provide the school's hot water. All services have smart meters and the lighting is daylight linked with movement sensors.

Vibrant furniture colours contrasting with a neutral palette

The interior design concept embraces the holistic approach to the building and its setting. The meadow carpet in the children's library is a memory of the original farm on the site and the organic nature of the furniture is playful yet sophisticated in its translation.

A simple neutral colour palette provides the perfect backdrop for children's work, whilst the vibrancy and use of colour in the furniture and upholstery provides a counterpoint to the neutral background. The use of furniture, colour and materials creates a fun, sociable and exciting learning environment designed for the well being of both staff and children alike.

The project started on site in May 2007 with building completion and the landscape being handed over for the start of the academic year 2008-2009 in September 2008. The contract value was £4,376,000.00.

Credits

Architect:
Liam Presley

Interior Designer:
Claire Hart

Contract Administrator:
Mike Peet

QS Liaison:
Jeremy Borton

Clerk of Works:
David Hart
HCC Property Services
Hampshire County Council

Quantity Surveyor:
Steve Caulton, Faithful and Gould

Structural Engineer:
Paul Batty, Price and Myers

Landscape Architect:
James Newborn, Hyland Edgar Driver

M&E Engineers:
Jim Alesbury/Steve Rogers, RHB Partnership

Main Contractor:
Tony Hardy/Ian Budgen, BAM Construction

Job: Wellstead Primary School

Type of Tender: Tendered through Framework. Contract type: JCT LA With Quantities 1998 Edition With Contractor's Designed Portion Base Date: 3Q07 TMS: P5555 GIFA = 1416 m² New Primary School

Element			Preliminaries shown separately	
	Total cost	Cost per m²	Element as % of total cost	Element unit rate
1 Substructure	£485,039.00	£343.00	11.12	N/A
2A Frame	£227,693.00	£161.00	5.22	N/A
2B Upper floors	£0.00	£0.00	0.00	N/A
2C Roof	£322,463.00	£228.00	7.39	N/A
2D Stairs	£0.00	£0.00	0.00	N/A
2E External walls	£86,158.00	£61.00	1.97	N/A
2F Windows and external doors	£222,743.00	£157.00	5.11	N/A
2G Internal walls and partitions	£63,968.00	£45.00	1.47	N/A
2H Internal doors	£135,472.00	£96.00	3.11	N/A
2 Superstructure	£1,058,497.00	£748.00	24.26	
3A Wall finishes	£63,635.00	£45.00	1.46	N/A
3B Floor finishes	£99,349.00	£70.00	2.28	N/A
3C Ceiling finishes	£145,548.00	£103.00	3.34	N/A
3 Internal finishes	£308,532.00	£218.00	7.07	
4 Fittings	£148,776.00	£105.00	3.41	N/A
5A Sanitary appliances - in mechanical	£0.00	£0.00	0.00	N/A
5C Disposal installations	£0.00	£0.00	0.00	N/A
5D-G Mechanical installation	£430,380.00	£304.00	9.87	N/A
5H-L Electrical installation	£284,223.00	£201.00	6.52	N/A
5J Lift installation	£0.00	£0.00	0.00	N/A
5N BWiC with services	£42,556.00	£30.00	0.98	N/A
5O Profit and attendance	£0.00	£0.00	0.00	N/A
5 Services	£757,159.00	£535.00	17.36	
Building sub-total	£2,758,003.00	£1,948.00	63.22	
6A Site works	£470,129.00	£332.00	10.78	N/A
6B Drainage	£125,944.00	£89.00	2.89	N/A
6C External services	£14,921.00	£11.00	0.34	N/A
6D Minor building works/alterations	£0.00	£0.00	0.00	N/A
6 External works	£610,993.00	£431.00	14.01	
7 Preliminaries	£838,586.00	£592.00	19.22	
8 Contingencies	£155,000.00	£109.00	3.55	
Contract sum	**£4,362,582.00**	**£3,081.00**	**100.00**	
Gross cost				**£3,081.00/m²**
Nett cost (including abnormals)				**£1,948.00/m²**

"The meadow carpet in the children's library is a memory of the original farm on the site and the organic nature of the furniture is playful yet sophisticated in its translation."

Go to the Awards Base to see all the winning schemes.

Integrated Design - What is the real value of integrated design and how to get it?

Sui Te-Wu

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The architectural profession has been traditionally charged by the client with the responsibility of leading the design team to deliver a quality design, on time and on cost.

The leadership role provided by the architect includes meeting the client's expectations of an integrated design throughout all stages of the project development by co-ordinating design decisions and production of information amongst the multi-disciplinary design team.

The integrated design will meet the client's requirements in the brief on the scope, the functionality, the distribution of resources and the manner how the design and construction is planned, procured and delivered. From the client perspective, the responsibility and expectation are very clear.

With this approach, the appointed architect is empowered to lead and to control the direction of design, the pace and sequence of decision making, the need to explore options for value and cost savings and to communicate effectively with the whole design team. The relationship between the architect and the client is direct, robust and well-defined.

For a number of reasons, this approach is less commonly selected as the model for public funded projects in recent years. The reasons may be due to the specific type of the investment, the size and complexity of the project, the accountability of the client, the funder's particular requirement or how the project is procured. These are all valid reasons for taking a different approach to achieve the design outcomes and project goals. Each approach for the design delivery will generate its own team relationship; commonly it separates the project lead, usually by professional members of project management or design management, from the architectural design function. The architect provides the design service and leaves the rest to the project lead person to provide and to communicate the outcomes to the client at each appropriate stage.

How is design integration to be achieved if the architect is not empowered to lead the design

Hethel Engineering Centre, Norfolk, by NPS is an example of a holistic and collaborative approach to architectural design

process, but only by influencing others? Who sets the direction of design and communicates it to the client at the right time? Who makes choices and who manages the sequence of design decisions for the benefit of value and cost? When should changes be made and to whose responsibility? **Who is responsible for the integrated design?**

There are many completed projects where design procurement models have been successful and individuals contributing to the unique circumstances have been praised. We have also witnessed, or read in published articles, as well as through discussions and debates with others, about problematic public funded projects where design suffers resulting from procurement and design delivery problems, with mistakes or missed opportunities even by the reputable architectural practices. The use of a post-occupancy review on building performance for a reasonable period after occupation would assist in determining future procurement methods and help inform the industry.

Each project would have its own specific definitions of responsibilities to address these questions. To avoid any confusion the responsibilities of managing the integrated design must always be defined at the outset of the project reducing the likelihood of additional costs being incurred. This is particularly important when there is increased pressure on design professionals to deliver value at a time of decreasing resources.

Organisations with multi-disciplinary professional services are well placed to take a lead for the public funded project clients to ensure that integrated design can be achieved using a variety of procurement models contributing to successful outcomes.

"To avoid any confusion the responsibilities of managing the integrated design must always be defined at the outset."

Editor's comment: See Andrew Beard's article on 'The life and death of school building programmes' and Michael Serginson's research into award winning architectural practices in this edition as a follow up to the value of integrated design.

Scaladiary

October

7 SCALA S&SE & London regions and SCEME joint meeting (contact Bernard Wyld **T:** 01273 623291)

11 ACA PPC/TPC Annual Conference, London (contact Shona Broughton **T:** 020 8325 1402)

November

11 President's Dinner and Civic Building of the Year Award 2011 at the Marriott Hotel, Leeds (see the ad in Latest News, page 5)

December

8 NW Region meeting at Lancs CC (contact Chris Coxhead **T:** 01772 533270)

9 Policy Committee and SCALA Forum & Council in London

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The old and the new - best of both worlds for £6.5 million Nottinghamshire youth centre project

A £6.5 million restoration and redevelopment of a Grade II listed building has created a world class young people's centre in the heart of Mansfield, Nottinghamshire.

Westfield Folkhouse, which was built in 1830, has been used as a youth centre for most of the 20th century and is currently managed by Nottinghamshire County Council. Prior to the redevelopment, the youth centre was housed in a 1960s extension with the old building mainly used as office accommodation for the Council's Youth Service staff. The old building was in a deteriorating state and the extension was small and dated.

The Council was awarded a £5 million Myplace grant in 2008 with £1.5 million from its own funds for an ambitious project to restore the old building and create a state-of-the-art extension that complements the listed structure.

Construction works started in November 2009 and the doors opened to young people this June. The Council project managed the works and employed Lewis and Hickey (Nottingham office) as lead architects and GF Tomlinson as the principle contractor.

Sympathetic restoration

The project team worked closely with the local conservation officer and English Heritage to ensure the old building was restored in a sympathetic way using appropriate techniques and materials.

Much of the stonework was degrading due the use of modern cement mortar so the building was re-pointed with a lime mortar. The stonework in selected areas was lightly cleaned using the Doff system to remove surface dirt and biological growth and areas that were too damaged were replaced with local stone. Cast iron guttering and drainpipes were installed where plastic replacements were previously used.

Repairs and, where necessary, replacement of sash windows were carried out using Ventrolla,

The new extension next to the original building

Stuart Risk

Project Manager
Nottinghamshire CC

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Project team left to right: Giri Kanagasabai, Structural Engineer; Alison Stuart, Landscape Architect; Simon Hurt, Electrical Engineer; Stuart Risk, Project Manager; Jarrod Tandy, Mechanical Engineer.

Photos: Martine Hamilton White

14 **The old and the new -** best of both worlds for £6.5 million Nottinghamshire youth centre project

"The old building continues to be used as office and meeting space and is now a base for a local youth homeless charity."

Modern materials used in the cafe

Vibrant colours in the communal area

a company specialising in this work. Internally, reed plaster ceilings which were collapsing have been repaired and damaged cornicing was restored in-situ using traditional techniques.

The entrance hall's flagstones, which were under modern flooring, were revealed and relayed in areas where they had sunk and layers of paint on the internal stone staircase were removed using the Doff system. Interior walls were re-plastered using lime plaster replicating their original finish and breathable Keim Ecosil paint was used on interior walls.

The old building continues to be used as office and meeting space and is now a base for a local youth homeless charity.

Complementing the old with the new

The project includes a 1,000m^2 extension over two floors which houses rooms for multi-media gaming zones, music and dance, DJ booths, activities areas, café zones and offices. The design aims to complement the old building by using a similar colour palette whilst having a distinct identity by utilising modern materials such as glass, and aluminium and steelwork.

The addition is set back from the original building's frontage, meaning visitors get the full impact of the historic architecture on the driveway approach to the building. The extension's frontage used ashlar faced stone which blends with the colour of the old stonework whilst giving the extension a more modern smooth finish. Self-cleaning glass was introduced to areas helping reduce maintenance whilst taking advantage of natural light where installed, including roof lights and bespoke glass pods to add design interest.

Attractive internal space for young people

The Council worked closely with young people to ensure the building met their needs and was an attractive environment for them to use. Vibrant colours were used throughout the extension's internal space to give it a modern and stimulating feel. Curved feature acoustic rafts which allow audio to be played throughout the building have been fitted and are

Credits

Project Management:
Nottinghamshire County Council

Lead Architects:
Lewis and Hickey (Nottingham office)

Principle Contractor:
GF Tomlinson

Structural Steelwork:
Cavill Fabrications

Electrical Installations:
Lukes & Godwin

Mechanical Installations:
MJ Robinson

Groundworks - Labour, Plant and Materials:
Phil Watson Civil Engineering Ltd

16 **The old and the new -** best of both worlds for £6.5 million Nottinghamshire youth centre project

"The Council worked closely with young people to ensure the building met their needs."

colour coded to define spaces and act as a design feature. Toilets were designed to be large and colourful with graffiti panels on the doors in response to young people's feedback that these areas tend to also serve as meeting areas.

Outside space - continuing the theme

The outside space needed to blend in with the old building whilst offering a wide variety of activities for young people so the land to its rear was divided into two areas.

The 'urban' area includes graffiti walls, basketball court, an outdoor gym and allotments. It is situated behind a newly created wall made of locally sourced grit stone of a similar colour to the old building to preserve its character.

A calming, traditional area in the form of a sensory garden and landscaping was located next to the nearby conservation area overlooking the side of the listed building.

The sensory garden and landscaping

Articles on community buildings can be found on the Knowledge Base.

Enhanced summertime performance of school buildings

Phil Harris, SCEME President and Chief Engineer at Worcestershire County Council, explains how a design solution which integrates heating, ventilation, controls and thermal mass helps deliver exemplary low-energy buildings which stay cool in summer.

Phil Harris

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For some years, Worcestershire County Council's Property Services division has been evaluating the performance of school buildings in order to determine the optimum combination of ventilation system, heat emitters and control strategies to deliver the lowest energy-in-use together with good indoor air quality. The trend has been towards natural ventilation, controlled by BEMS, using indoor CO_2 concentration as the controlled variable in winter, and room temperature over-ride in summer. We have also found that rapid response heat emitters, such as panel radiators and fan convectors, deliver more accurate control of space temperature without the overshoot and consequent energy wastage associated with slow-response emitters like underfloor heating.

The ventilation principle involves extracting warm, buoyant air from the spaces via large vertical ducts exploiting the stack effect, in a typical natural ventilation system, with fresh air being introduced via openings in the façade, passing over the radiator which is encased to ensure effective warming and mixing. Control is by airtight modulating fresh air dampers mounted within the façade, together with shut-off dampers in the vertical extract duct.

View of The Chase Technology College Science Block

Ventilation demand is sensed by a BEMS system CO_2 sensor in the room space, which monitors the concentration of CO_2; the BEMS system then sends control signals to the modulating fresh air damper to maintain the room CO_2 concentration at the desired set point of between 1,000 and 1,500 parts per million.

This system therefore restricts ventilation rates to the minimum required to maintain ideal air quality, and overcomes one of the drawbacks of natural ventilation, which is the inability to recover energy from the warmed extract air. Outside occupied times, internal CO_2 concentration drops rapidly, and the dampers close tight, thus retaining heat in the room during cold weather. Automatic control of dampers, rather than windows, for ventilation means that a summer night cooling strategy can be implemented securely and very effectively during warmer weather.

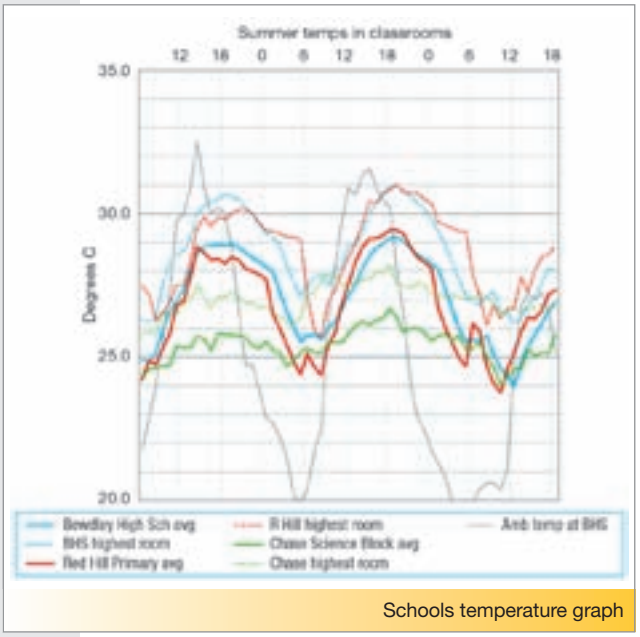
The strategy described above has been adopted for a number of new-build schools in Worcestershire, designed in-house, by external consultants and even by design-build contractors. However the most recent and arguably the most successful culmination of this long-term design approach is the new Science Block at The Chase Technology College, nestling in the shadow of the Malvern Hills.

The views contained in this article are not necessarily those of Worcestershire CC.

"The use of a 'raft' suspended ceiling allows air circulation to reach the concrete soffits, thus maximising thermal heat exchange between structure and room space."

The sedum roof with 'eyelid' openings

Designed by Worcestershire County Council's in-house Property Services design team and constructed in 2009 at a cost of £4 million, the 2,400m^2 Science Block contains 14 laboratories on three levels and is a stand-alone extension to this 1,600-pupil high school originally constructed in the 1953. The building is naturally ventilated throughout by a network of internal extract ducts leading vertically from each laboratory to roof level, where they terminate in specially-designed 'eyelid' openings built as an integral part of the sedum roof structure. The building differs from previous designs in that the structure is heavy weight, having blockwork internal walls and ceilings; the use of a 'raft' suspended ceiling allows air circulation to reach the concrete soffits, thus maximising thermal heat exchange between structure and room space. Heating is by gas-fired condensing boilers.



Schools temperature graph

During the period of very hot weather in June-July 2007 we were able to monitor, via the BEMS systems, the room temperatures in three separate schools. The outside air temperature peaked at over 32°C on three consecutive days; the highest average classroom temperature in two naturally-ventilated lightweight schools peaked at just over 29°C, with diurnal swings of around five degrees, as shown by the red and blue lines on the graph. However, the Science Block, as the solid green line illustrates, remained at below 27°C throughout the same period, with diurnal swing of around two degrees. The night cooling strategy and exposed thermal mass was therefore clearly delivering significant cooling effect which kept the average classroom temperature a full five degrees below peak outdoor air temperature with no mechanical cooling.

In 2010, Partnerships for Schools undertook post-occupancy evaluations of 24 recently-completed new school buildings and extensions. The Chase Science Block was highly commended for its indoor air quality, and achieved first place among the schools evaluated for its low heating energy consumption, which over two years' operation averaged 44.5kWh/m^2/annum against a DEC 'typical' benchmark of 172kWh/m^2/annum, putting it close to the top 10% of secondary school buildings in the UK. The Chase school itself has a DEC rating of D-77 and one of the lowest energy consumptions seen among the schools evaluated in the PfS study.

See other SCEME articles in the services and sustainability sections of the Knowledge Base.

The life and death of school building programmes

The way England invests in its school buildings is changing yet again. Before looking at the latest changes, and at the risk of sounding like a grumpy old man, I think it is worth looking back at the immediate post-war period when school building was at a peak.

Schools were designed either in the departments of the county or city architects or by private practices who had built up solid experience of schools design. The Architects and Building Branch of the Government's Department of Education carried out research into schools design and published extensive guidance on best practice. Procurement was initially by competitive tendering on a school-by-school basis, although larger cross authority consortia were later developed.

Hertfordshire primary school group, 1952

Many excellent schools were designed in this period and some have adapted well to new pedagogies and curricula half a century later; others are now at the end of their useful life, but sometimes only as a consequence on inadequate maintenance at some stage. The later decades of the 20th century saw investment in school building decline to very low levels, and many local authorities skimped on maintenance, rather than have to reduce the numbers of teaching staff. Many local authority architects departments were disbanded or outsourced, and much of the country's expertise in school design was lost.

Then, with a change of government just before the turn of the century, the government's priority became 'education, education, education'. By then many schools were in extremely poor condition and

Yewlands School, Sheffield - Sir Basil Spence 1957

unsuitable for current pedagogies. In order to keep investment off the balance sheet of public spending, the Department for Education and Skills decided to embrace the concept of public/private partnerships, using the previous government's 1982 invention, the Private Finance Initiative (PFI). This transferred responsibility (and risk) for design, building, finance and maintenance to a private contractor. Apart from public expenditure avoidance, one of the greatest attractions of PFI to the government was that it guaranteed proper maintenance of the new buildings for the next 25 to 30 years, thus avoiding the local authority neglect that had beset previous school investment.

Many of the first PFI schools suffered from very low design standards, as evidenced by the CABE audit in 2006 of 52 recently built secondary schools. Part of the problem was undoubtedly the lack of the necessary schools design skills and experience at that time. But analysis of the PFI projects has shown that the problem was often the procurement process itself. The complexity of tendering and negotiating contracts led to design being a very minor element in the whole competition process, and as a result many contractors paid little attention to their choice of design teams. Contractors tended to be highly risk averse and preferred to build rather conventional and unimaginative schools. Another drawback was the high cost of running a PFI selection process for just a handful, or in some cases just one, school, and thus it

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"The complexity of BSF contracts meant they were even more expensive and time-consuming to procure even than PFI."

PFI school design at its worst…

…and much better at Peacehaven School, architecture plb

became a very high overhead on the construction cost. Further, in many cases the design of the replacement schools was based on the existing approach to education, rather than considering how it could support the task of raising achievement through different approaches to teaching and learning.

Another Government initiative at this time was the Academies programme. Enthusiastically supported by Prime Minister Blair, its intention was to replace failing schools with publicly funded independent schools, partly supported by benevolent sponsors.

The Academy of St Francis of Assisi in Liverpool stimulated a new enthusiasm for education in its pupils, as well as achieving new standards of sustainable building design (Architects - Percy Thomas Partnership, now part of Capita).

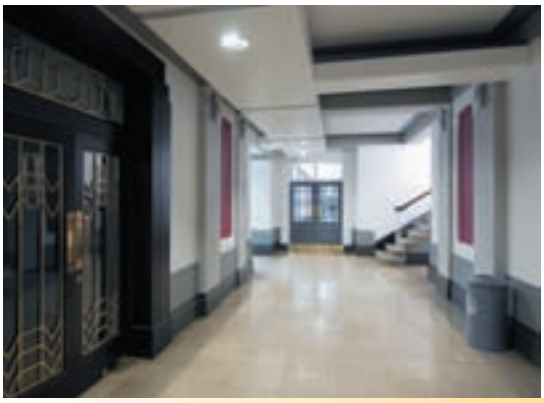
The Academy of St Francis of Assisi in Liverpool

Because the sponsors had a big say in the choice of designers, many of the projects were handed to 'signature' architects, such as Lords Rogers and Foster. Traditional procurement processes were used for the projects, but the results have been mixed. Some excellent new buildings have been created that have helped to generate a step change in the attitudes of students, staff and parents to education. But other Academies have ended up with some very expensive and quirky designs, several of which have already required substantial alterations. For example, Foster's Bexley Academy, which initially cost £31 million, almost immediately required £600k of alterations to divide up unusable open plan teaching spaces.

In 2003, in an attempt to overcome the limitations of PFI, the government introduced a completely new approach to procurement in a massive programme called Building Schools for the Future (BSF). It was always described as an education, rather than building, programme and was hugely ambitious. It aimed to replace or refurbish every secondary school in the country over the following 15 years. By setting up long-term partnerships in each local authority it aimed to spread procurement costs across more schools, and PFI would only be used for complete re-builds, with traditional contracts being used on more complex refurbishment projects. The intention was that longer contracts would produce construction economies and enable continuous improvements in quality. A new quango, Partnerships for Schools, was established to run the programme on behalf of the government, on the basis that a dedicated organisation could ensure that it would be delivered as efficiently as possible without the distractions of government.

However, the reality has been that the complexity of BSF contracts meant they were even more expensive and time-consuming to procure even than PFI

"It took the CABE Schools Design Review process, with a mandatory minimum design quality threshold, to ensure that all contractors took design seriously."



Sheffield BSF: refurbishment of Grade II listed High Storrs school and new extensions to Bents Green SEN school. Architects - BDP

(approximately £2.5 million/school). Once again, design quality got sidelined in many of the early projects, and it took the CABE Schools Design Review process, with a mandatory minimum design quality threshold, to ensure that all contractors took design seriously. BSF developed a poor reputation with local authorities, schools, contractors and designers because of its cost and bureaucracy, and yet once the 'local education partnerships' had been established some of them have delivered large numbers of projects quite rapidly and to reasonably high standards. Yet because contractors have remained firmly in the driving seat, it is clear that any design successes have been hard won by determined architects, design teams and clients.

In terms of construction innovation, the majority of the new schools are disappointing. Most are steel framed buildings with lightweight cladding and suspended ceilings throughout. In particular, the sustainability standards have rarely exceeded the contractual minimum requirements. In many of the new school buildings the thermal mass is low and classrooms rely on single-aspect opening windows for ventilation and internal blinds to control direct sun. As a consequence the internal environmental quality of these classrooms is frequently poor, particularly in hot weather.

While BSF was grabbing all the headlines, another schools investment programme was under way: the Primary Capital Programme (PCP). Unlike the secondary programme, the government gave the funding for PCP direct to local authorities for them to invest as they felt best. New primary schools have been the real success story of the last decade, with some really excellent designs, many of which are highly innovative and very sustainable; they will be well loved buildings in their communities for many decades to come.

The arrival of the coalition government in May 2010 heralded dramatic changes to investment in schools. After just two months, Michael Gove, Secretary of State for Education, decided to scrap the rest of the BSF programme as well as the CABE Schools Design Review process. Only projects already in contract were allowed to continue, and the future method of funding investment in schools went into the melting pot, awaiting a major review by Sebastian James, the Group Operations Director of Dixons Retail plc. The RIBA offered evidence to this review, with a number of very sensible and practical ideas for the reform of the existing arrangements, aimed at increasing

Classroom at St Lukes Primary, Wolverhampton. Architects - Architype

competition and innovation. They recommended that there should be far greater client preparation, including bringing in an expert client design adviser to work with the schools and local authority, and suggested using an integrated design team to produce a concept design before involving contractors. They suggested 'de-bundling' the projects and running some design competitions. They supported 'standardisation' as opposed to 'standard schools'.

The James Review steering group have now reported and they concluded that the capital allocation process was complex, time consuming, expensive and opaque. Then in July the Government announced its new capital funding proposals, which closely follow the recommendations of the James Review. There are few that would disagree with the analysis, but it is hard to see how many of the proposals are an appropriate response. The RIBA's ideas for reform are nowhere to be seen.

The new arrangements have a single goal: sufficient fit-for purpose places to meet the needs of every child. Undoubtedly a version of motherhood and apple pie to which everyone can sign up. The means of achieving this is based on a massive centralisation of the analysis of need, the distribution of funds and the provision of new buildings. This is far more controversial and although much of the detail is yet to be revealed what has been announced so far is deeply worrying. A single client for all schools, in the form of Gove's Department for Education (DfE), is to be created. The James recommendation that all major projects should be procured and managed centrally through a small number of national contracts has also been accepted. Thus, over the next five years, the equivalent of 100 new secondary schools (compared with 600 schools in the cancelled element of BSF) are to be procured through PFI.

Local authorities, dioceses and academies can all apply by mid October for any type of school, but only where they require more than 30% rebuild and are not Listed Buildings. Selection will be based primarily on condition information supplied by the bidders, although the need for additional places and suitability of existing buildings will also be taken into account.

Following selection of the most deserving projects, the DfE will apparently tender and negotiate group PFI projects covering a number of schools in different authorities, and standardised designs will be imposed, although with a limited amount of local choice. The selection process and setting up of PFI contracts will be a significant challenge for a government department that had previously delegated these roles to local authorities.

Campsmount Technology College, Doncaster: a DfE pilot project carried out in association with the James Review team

Other James Review recommendations are that the DfE should carry out a national school condition survey and should maximise value for money in maintenance and small projects through a 'simple and clear national contract'. Gove has already agreed to the first of these but is still silent on the second.

So the wheel has turned full circle again. In the post-war period the Government strongly supported investment in school building and, by working with local authorities and their design teams, developed an expertise in the field that was highly regarded both nationally and internationally. Then in the 80s and 90s, when funding for investment in the nation school estate was withdrawn, most of these skills were lost. Similarly, funding for maintenance declined and many schools fell into serious disrepair.

The new school investment programme that started in the late 90s was initially hindered by a lack of relevant skills and experience but, after a decade, the quality of new school buildings had risen substantially and now there are many architects, engineers and contractors who have developed real expertise in this field,

"Local authorities, dioceses and academies can all apply by mid October for any type of school, but only where they require more than 30% rebuild and are not Listed Buildings."

"Whatever happened to the coalition's promise of more 'localism'?"

including a real understanding of educational issues and a passion for excellent school buildings. Maintenance has largely been devolved down to schools and, with their governors and caretakers, they have developed great ingenuity in getting the greatest benefit from the limited resources available.

Now all this is to be abandoned on the altar of 'governments know best', 'biggest is best' and 'the private sector is more efficient'. These ideas may work in the retail sector, but schools are vital community resources that need to be tailored to local needs - and to take advantage of local opportunities. How will the concept of extended schools fit into this new model? Much local knowledge and many specialist skills will doubtless be lost. Whatever happened to the coalition's promise of more 'localism'? No attempt has been made to draw on the many successful aspects of the Academies and Primary programmes, and a return to the much-criticised PFI is intended. How long will it be before those in power realise how much bathwater has been thrown out with the baby?

Andrew is an architect/planner and the director of a consultancy company providing specialist design advice on schools, housing and regeneration. He is part of the 'Places and Spaces' consortium that offers consultancy in architecture, landscape architecture, planning and urban design.

He has been a Design Council CABE enabler for 8 years, providing design advice to Local Authorities on ten schools PFI and BSF projects, and is also a member of their Design Review panel. He is the author of several CABE publications on schools design and was a founder editor of 'Century21Schools' magazine.

He is a member of Yorkshire Design Review Panel and the South West Enabling Panel. With Justine Leach, he has organised and delivered over 50 urban design skills training workshops for local authorities involved in Housing Market Renewal and the DEFRA Rural Masterplanning Programme. He is an accredited Building for Life assessor.

Andrew was formerly Head of Planning and Premises Service for Sheffield Local Education Authority, and prior to that was City Architect for Sheffield and head of a large multi-disciplinary, award-winning design practice. He has been involved in architectural education for many years, was President of SCALA, Chair of the RIBA Validation Committee and is a trustee of the RIBA Education Fund. He regularly acts as external examiner at schools of architecture and is a Governor for Firs Hill Primary School in Sheffield.

Look at Education articles in the Knowledge Base for a wealth of information on school building.

Inmans Primary School, Hedon, East Riding of Yorkshire

In June, 2007 the East Riding of Yorkshire experienced its worst flooding in over 50 years. More than 6,000 homes were devastated and many community and school buildings suffered damage including Inmans Primary School in the small market town of Hedon.

The school occupied low lying land allowing the surrounding housing to escape the worst of the flood damage. This meant that any proposal to mitigate the flooding to the school would be of great concern to its surrounding neighbours.

In 2008 as part of a Central Government initiative, funding was obtained in the form of a DfE grant to rebuild the 420 place 60's school on the existing playing fields which will be replaced following the demolition of the original school.

Main entrance to the school

ERYC are lead members of the YORbuild construction framework allowing the early appointment of the local construction firm, Houltons. The construction team joined with the head and the school body to establish the main objectives for the scheme which were:

- The building to be flood resisting without any adverse effect on its neighbours.
- External spaces to be part of the school.
- Increase in the profile of the early years accommodation.
- Involvement of the pupils in the building works as part of their education.
- The earliest possible completion of the works.

Typical flood resilient design features include raised floor levels, sustainable drainage, water flow around hard areas, sacrificial soft zones,etc. Foundations were piled and the ground slab was formed from pre-cast pile caps and ground beams.

In order to reduce construction time a SIPS system has been used for all structural members and consequently the building has been designed using a high degree of standard layouts. It also includes a series of bespoke spaces in strategic locations. This is reflected in a plan form in a manner which meets the challenge of repetition head on and produces an aesthetic which brings together MMC and design without resulting in a 'flat-pack' building approach.

Installing the SIPS system on the ground beams

It includes ground source heating, PV cells and a sedum roof.

The main teaching accommodation is laid out in a fractured T-shape with a generous common central area which contains the main IT and resource functions with spaces defined by moveable furniture. All the classrooms have direct access to a series of bespoke outside learning or play areas. The base of the 'T' leads to the hall and dining spaces together with the administration areas and the school reception desk which guards the entrance through a dramatic timber door in the timber façade to the road and parking area.

Paul Bird

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Laying the sedum roof

The selected panel system defined the classroom module used throughout the building. Common groups of classrooms can be arranged adjacent to each other in a non-orthogonal manner creating a much freer and more adaptable combined space.

By employing the economy of repeat design in this way the design team could be more expressive in bespoke areas such as entrance lobbies, hall and dining spaces.

Typical classroom with an attractive range of finishes

The SIPS manufacturers were happy to rise to the challenge of the one-off and through this joint approach the Design Group have begun to develop an aesthetic approach to the challenge of Modern Methods of Construction which is far away from the image of a 'flat pack school'.

To avoid standardisation a palette of external finishes is used with brick gables and timber cladding to the entrance façade, acting as visual anchors and high notes to the rendered elevations. Internally there is a consistency of quality and variety in all three dimensions. The classroom ceilings are a successful example.

The ERYC see this scheme as a modest but key contribution to the school building debate.
The essential message is that between the extremes of 'iconic' BSF to 'one-size fits all', there exists the opportunity to address school building in an intelligent manner which brings together what we already know with what we can still learn.

The floor area is 2,400m^2, construction cost is £4.9 million and the project achieved PC after 78 weeks on site.

View of school and landscaping to southern boundary

Design Team

Project Manager:
Pnina Drye (ERYC)

Principal Architect:
Paul Bird R.I.B.A (ERYC)

Senior Technician:
Nick Railer (ERYC)

Technician:
Lawrence Brown (ERYC)

Mechanical Engineer:
Matthew Lawson (ERYC)

Electrical Engineer:
Bryan Marshall/Mark Harton (ERYC)

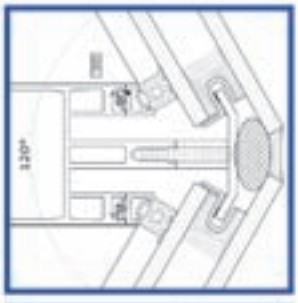
Structural Engineer:
John Bowers UKBS

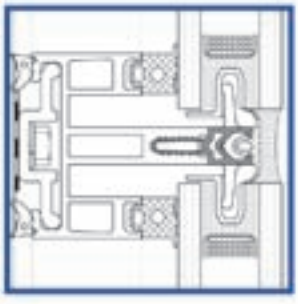
Clerk of Works:
Alfred Walker (ERYC)

Quantity Surveyor:
T. Brocklehurst (ERYC)

Landscape Design:
R. Condilac-UKBS

"Typical flood resilient design features include raised floor levels, sustainable drainage, water flow around hard areas, sacrificial soft zones,etc."





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Hedon Inmans Replacement Primary School

Tender Analysis Breakdown

	Element			
	Gross Foor Area m²		**Total Cost**	**Cost/m²**
Total		**2,461**		
1.00	**Substructure**		**494,293.21**	200.85
2A	Frame		602,318.71	244.75
2B	Upper floors		0.00	0.00
2C	Roof		242,285.31	98.45
2D	Stairs		0.00	0.00
2E	External walls		212,392.00	86.30
2F	Windows and external doors		160,695.95	65.30
2G	Internal walls and partitions		157,971.88	64.19
2H	Internal doors		106,750.99	43.38
2.00	**Superstructure**		**1,482,414.84**	602.36
3A	Wall finishes		17,329.19	7.04
3B	Floor finishes		94,023.36	38.21
3C	Ceiling finishes		121,861.93	49.52
3.00	**Internal finishes**		**233,214.48**	94.76
4.00	**Fittings**		**114,168.71**	46.39
5A	Sanitary appliances		30,879.37	12.55
5B	Services equipment		0.00	0.00
5C	Disposal installations		142,539.70	57.92
5D	Water installations		0.00	0.00
5E	Heat Source		82,462.95	33.51
5F	Space heating and air treatment		0.00	0.00
5G	Ventilating systems		0.00	0.00
5H	Electrical installations		325,027.92	132.07
5I	Gas installations		0.00	0.00
5J	Lift installations		0.00	0.00
5K	Protective installations		4,152.85	1.69
5L	Communications installations		1,200.00	0.49
5M	Special installations		554,728.16	225.41
5N	Builders work in connection		21,518.79	8.74
5O	Builders profit and attendance		651.00	0.26
5.00	**Services**		**1,163,160.74**	472.64
	Building sub-total		**3,487,251.98**	1,417.01
6A	Site works		429,860.18	174.67
6B	Drainage		182,289.37	74.07
6C	External services		60,021.34	24.39
6D	Minor building works		125,322.95	50.92
6.00	**External works**		**797,493.84**	324.05
7	**Preliminaries**		**678,878.34**	275.85
	Total (less Contingencies)		4,963,624.16	2,016.91
8	Contingencies		0.00	0.00
	Contract sum		**4,963,624.16**	2,016.91

"The Design Group have begun to develop an aesthetic approach to the challenge of Modern Methods of Construction which is far away from the image of a 'flat pack school'."

Research into design award winning architectural practice: initial findings

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Those involved in the joint research:
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Background

Following the presentation of the UK Local Authority Architectural Service Provision Survey 2010 to the SCALA Conference (Serginson *et al.*, 2010), the SCALA Forum in Edinburgh provided an opportunity to update SCALA members on the Knowledge Transfer Partnership (KTP) Project being undertaken by the School of the Built Environment and Gateshead Council Property and Design. The objective of the two year project is to produce a framework for the architectural design process based on the analysis of architectural practices and academic research. The initial findings of research into practice management and its influence on the architectural design process of school buildings were presented.

Research

In order to identify "best practice", architectural practices that have received Royal Institute of British Architects (RIBA) Awards for school design were approached for interview: the RIBA Awards were selected as their assessment criteria include both design quality and fitness for purpose (RIBA, 2009). Between 2005 and 2011 thirty-three school buildings have received the award, with seven practices having won for more than one school. To date, five RIBA award winning practices have been visited and six non-award winning practices with experience of school projects were surveyed as a control group.

Between April and May 2011 each practice was visited and a 2 hour interview conducted. The interview questions were derived from a literature review of the main aspects of the architectural design process. The responses to the interviews can be divided in to two categories: "good design practice", including management issues such as design team characteristics; briefing approach; and communication techniques; and "good employment practice", which includes practice approach; trust in staff; working hours; and staff benefits. The initial findings presented at the SCALA Forum focused on "good design practice".

Results

Practice responses were divided in to aspects of the architectural design process, with each aspect further sub-divided into specific topics within these areas. Each topic was represented in a spider diagram to identify similarities and differences between award and non-award winning practices. Initial results identify several commonalities in award winning practices. This includes; an architecturally-led **project framework**, that is, the overall approach adopted for projects by a practice, and practice directors involved heavily in various stages of the project and programming (Fig. 1). The **briefing** to the design team, typically involves visiting buildings with the client and user representatives and the use of physical models and participatory tools and techniques in order to develop and elaborate specific requirements.

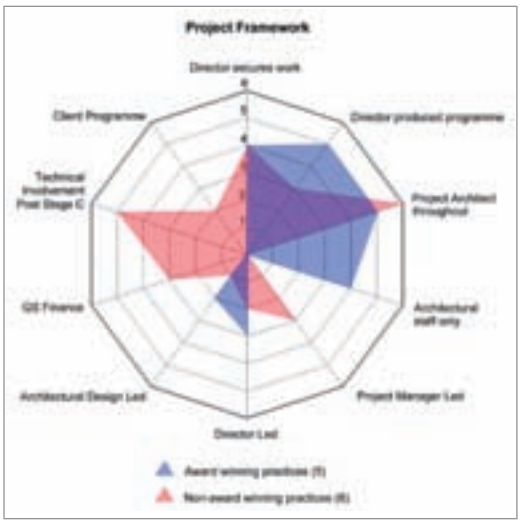

Figure 1 Project Framework - differences between the award and non-award winning architectural practices

Award winning practice **design teams** typically consist almost entirely of architectural staff (RIBA/ARB registered). A comparison between the average staff profile in award winning and non-award winning practices shows in the former 97% are architectural staff and only 3% are technical staff, with the latter averaging 64% architectural and 46% technical staff (Fig. 2). This theme is also evident in a comparison of the staff profile of the surveyed local authority practices (Fig. 3).

Award winning practices use traditional skills such as hand drawn sketches, diagrams and sketch models to communicate design options to client and user representatives. Some practices plan sessions at key stages of project where the designs are formally 'signed off' by the client representative in an attempt to control late changes (Fig. 4). Topics identified in **internal communication** included systematic project design reviews with an open invitation to the rest of the practice to share their experiences and opinions. Other aspects such as **recording time**, **managing expectations** and **feedback** were also measured, showing organised and client communication based practice.

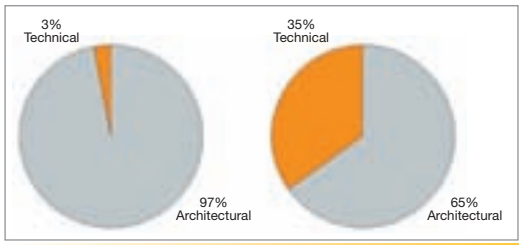

Figure 2 Average staff profile of surveyed award winning (left) and non-award winning architectural practices (right)

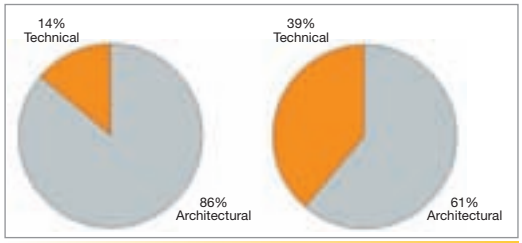

Figure 3 Average staff profile of surveyed award winning (left) and non-award winning local authority architectural services (right)

Summary

In summary, topics common to practices winning RIBA Awards for their schools' designs are evident, those identified include a high proportion of architects on staff; methods of communication and review, both within the design team and between the design team and the client and user representatives; and the control of design iteration through a formal client "sign-off" of the designs at key stages of the project.

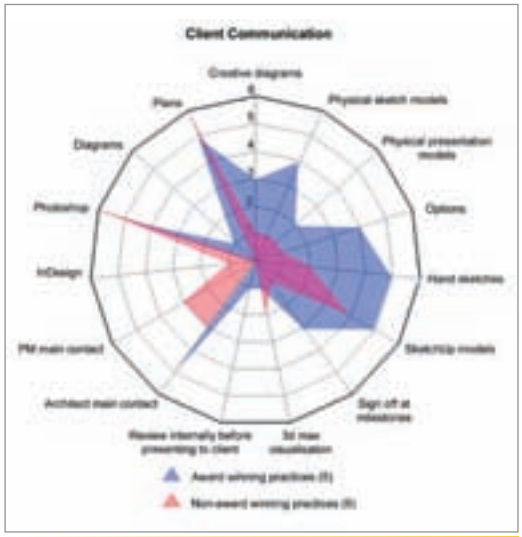

Figure 4 Client Communication - differences between award and non-award winning architectural practices

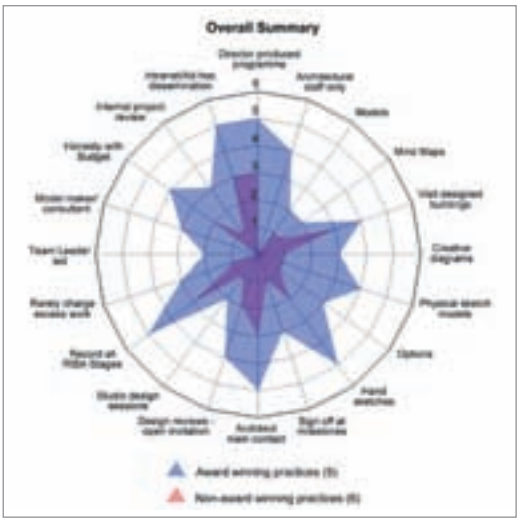

Figure 5 Illustrates the twenty topics where there is the greatest difference between the design processes of the award and non-award winning practices

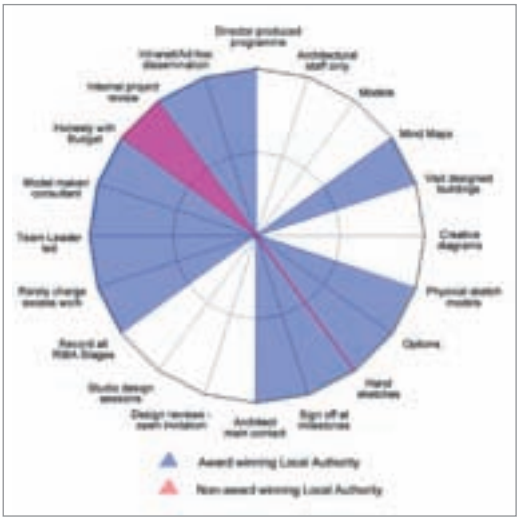

Figure 6 Illustrates the twenty topics where there is the greatest difference between the design processes of the award and non-award winning local authority architectural service

Future actions

The next stage of the research is to analyse the data concerning employment practice. It is expected that this will uncover further common attributes in award winning practices. A brief, follow-up questionnaire, capturing the key points of the analysis, will be circulated to the practices interviewed in order to provide a quantitative representation of data for comparison. The findings will be used to develop a framework for the architectural design process used by Gateshead Council Property and Design in the design of future projects.

"Between April and May 2011 each practice was visited and a 2 hour interview conducted."

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- Interviewed architectural practices.

References

RIBA (2009) RIBA Awards 2009. Briefing Notes for Heads of Regions, Shortlisting Panels and Award Juries. London: RIBA

Serginson, M., Giddings, R., Messer, S. & Ladinski, V. (2010) 'UK Local Authority Architectural Services Provision Survey 2010' **Scala**news, Christmas Edition, pp. 32-34.

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