

# Design Review Report

Penyffordd CP School,  
Flintshire

**DCFW Ref: N149**

Meeting of 24<sup>th</sup> November 2017



## Review Status

Meeting date  
Issue date  
Scheme location  
Scheme description  
Scheme reference number  
Planning status

## PUBLIC

24<sup>th</sup> November 2017  
7<sup>th</sup> December 2017  
Flintshire  
Primary School  
N149  
Application submitted

## Declarations of Interest

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Panel members, observers and other relevant parties are required to declare ***in advance*** any interests they may have in relation to the Design Review Agenda items. Any such declarations are recorded here and in DCFW's central records.

Panel Chair, Andrew Linfoot works for CH2M, which employs Ryder landscape architects on a project for the Environment Agency in the north of England. All present were content to proceed with the review following the declaration.

## Consultations to Date

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Formal pre-application consultation with the Local Planning Authority, along with statutory public consultation took place during summer 2017. The scheme was reviewed by DCFW on 13<sup>th</sup> July 2017, and this report should be read alongside the report from the previous review.

## The Proposals

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The site is occupied by the existing infant school and its playing field in the Southern part of Penyffordd, about nine miles from Chester. The proposed development consists of a 1.5 form entry primary school to be built on the available part of the existing infant school site whilst the school continues to operate – the available area suggests a two-storey school. The playing field to the East is proposed to be retained. The proposal responds to BB99 (Building Bulletin 99). The hall, studio and games pitch are intended for dual-use with the community.

## Main Points

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The Commission welcomes the opportunity to review this important scheme again. However, given that the scheme has already been submitted for planning, is due to go to Committee in January and the estimated construction start is in March 2018, it is relatively late in the design process for the review to be of most value to the process.

The Commission has some serious concerns about the quality of spaces, form and materials the current proposed building would provide. The following points should be considered to inform further design work to make sure the school that is delivered is the best it can be.

### **Design process from strategy to detail**

The site strategy is logical and the chosen location for the new building is well justified. Similarly, it is positive that facilities above and beyond the minimum required by the Building Bulletin have been included.

However, there is a lack of clarity, logic and care in the floor plans and organisation of spaces. The Design Commission is disappointed that concerns raised in relation to the plans in the previous review have not been addressed.

The internal circulation is unnecessarily compromised by the arrangement of spaces which results in dog-legged corridors. This will mean the building is harder to navigate. Rooms are not arranged so that best use is made of daylight, views and natural ventilation.

The Commission would like to see the design team critically appraise the layouts, demonstrate a deep understanding of the consequences of the decisions made and seek to improve the arrangement of spaces to deliver the best possible school environment on this site. The brief, site conditions, desires of the staff, pupils and community and long-term running requirements and costs for a new school project are complex, and we would expect to see a rigorous, iterative design process undertaken to resolve the variety of issues and test and refine solutions. There is no evidence that this has taken place.

Although the design process means that ideas, layouts, materials, services design and details are continually evolving, a planning consent would 'fix' certain parts of the design. It is important that the form, layout, structure, environmental design strategy, services and energy strategies, fenestration, rainwater strategy and materials palette are fully resolved before this point. If planning approval is achieved prematurely, there are increased risks of costly 'design fixes' or undeliverable aspirations. Discussions during the review revealed that many important strategies remain unresolved. There are also steps in the funding business case process which will require certain design 'fixes'.

Once construction starts **any** changes or refinements are likely to be costly and could cause delay. All parts of the proposals, from strategic to detail should be fully resolved by this time.

### **Clarity of concept and narrative**

The initial concept diagram is clear and appears to work with the constraints of the site. However, as at the previous review, the clarity of the 'street' with two blocks concept is almost completely lost through the way the rooms and circulation are arranged. It could be that the original concept is not an appropriate container for the facilities and qualities of spaces demanded by the brief. It would be beneficial for several strategic concepts, which respond to site constraints and opportunities, to be quickly tested with the brief. This would help to make sure that the best solution is found.

There is a lack of any analysis of the context. Context analysis should help inform and justify an appropriate design response to the brief. However, the form and materials should be appropriate to a primary school and a building of this scale and nature, rather than a direct imitation of local residential buildings.

A clear, strong design narrative, based on sound analysis of the context, brief and other studies, would help to guide strategic design decisions and solve detail problems. It would also help to justify the scheme in the Design and Access Statement. The Commission refers the team to Welsh Government guidance:

<http://gov.wales/docs/desh/publications/171009design-and-access-statements-guidance-en.pdf>

### **Environmental design and spatial experience**

Young children will be spending a large amount of their time in this building. Therefore, it is essential that it provides the best quality of environment and levels of comfort in which they can learn, grow and develop. Furthermore, the school should be an inspirational place in which children can explore, interact and play. It is extremely concerning that there are no drawings or models to explain what the school will be like for children to experience, and that this was barely mentioned in the written documentation or verbal presentation.

There are numerous studies which show that daylight and air quality play an important role in children's concentration and learning achievements. Despite the claims made by the design/developer team, it is evident that the proposal presented at the review will fail to achieve good daylighting and ventilation in many of the learning spaces. In addition, little thought has been given to how learning spaces might be arranged and fitted out to make best use of the natural light. It is likely that electric lighting will be on during most of the day at all times of year. It is not clear that a services strategy has been fully considered or designed to be well-integrated and maximise efficiency. The floor plans and crude section drawing highlight problems with dark spaces, overheating and glare from un-shaded south-facing glazing, and ineffective natural ventilation.

The environmental design failings mentioned above are apparent when basic 'rules of thumb' are considered. Further environmental testing is required, and this should inform strategic design changes. It is not enough to simply test the original plans and mitigate against problems. This approach would not result in an efficient high-quality school environment which is comfortable, inspiring and conducive to learning.

Environmental design will also have a significant impact on long-term running costs for energy and maintenance of any equipment. A different layout and arrangement of spaces would reduce overall energy demand and the reliance on technology.

We are aware that publicly funded schools in the 21<sup>st</sup> Century Schools programme are not yet meeting intended environmental standards, thereby improving efficiency and contributing to carbon reduction and enhanced value from the use of energy saving measures and technologies. The early consideration of environmental design and building performance is essential in achieving efficient high quality learning environment and to achieving such standards.

This project presents an opportunity to demonstrate the environmental processes, energy use and construction of the building as a learning resource for children.

### **Delivering design quality – time, cost management, construction and materials**

Benchmarking visits are a very useful way for the clients/users and design team to refine the design brief. It is positive that some visits to other schools have been undertaken

and lessons learned incorporated in the brief. It would be of further benefit if the team visited exemplary design and construction projects such as those delivered by Hampshire County Council and schools designed by Architype, including St Luke's and Wilkinson in Wolverhampton, Burry Port Primary School, and Cwm Ifor. Case studies can be found on the DCFW website (<https://dcfw.org/?category=case-studies>) and in Welsh Government's *Practice Guidance: Planning for sustainable buildings* (<http://gov.wales/docs/desh/publications/150311practice-guidance-planning-for-sustainable-buildings-en.pdf>).

The current proposal has many complex junctions at corners and between different materials. This complexity is likely to increase construction costs. Simplification of the form might allow funds to add value elsewhere.

The choice of materials and the detail design (including eaves, rainwater goods, doors, windows, rooflights and boundary treatments) will be crucial to achieving a quality building. The Commission is disappointed that timber-effect composite cladding materials are proposed. These could reduce long-term quality and their environmental impact should be considered in the light of other materials which may be more sustainable.

It is sensible to plan for future extension of the school now, and to include it in the planning application. Given this opportunity, the proposed extension should be designed as a continuation of the concept and so that it in no way compromises the first phase of the school in terms of circulation, environmental design, comfort, form and external spaces.

As curricula and teaching methods are likely to change over time, robustness and flexibility will be valuable. The structural strategy, construction method and services strategy are all key to achieving flexibility. These have not yet been adequately considered or resolved. It would be sensible to design-in flexibility now to minimize risks of costly and disruptive building work or lack of 'fit-for-purpose' later.

Management of time and budget are also crucial to achieving a quality building in the long term. The estimated programme for planning, detail design and construction are challenging, which increases risks for cost and quality. It is disappointing that there appears to be lack of clarity over the budget for build costs. Pre-fabrication offers benefits in efficiency, quality control and speed of on-site construction if the system is designed in from the start. Although SIPs construction was mentioned by the design team, there is no evidence in the material provided to us that this has been efficiently integrated.

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***A Welsh language copy of this report is available upon request.***

## Attendees

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Agent/Client/Developer:	Andrew Garner, Wynne Construction Mark Rothero, Chair of Governors & Resi Association Damien Hughes, Flintshire CC Liz Crompton, Deputy Head, Ysgol Penyffordd Jayne Mulvey, Head, Ysgol Penyffordd Claire Griffiths, Deputy Head, Ysgol Penyffordd
Architect/Planning Consultant:	Peter Fisk, Lovelock Mitchell Architects
Local Planning Authority:	Glyn Jones, Flintshire CC
Design Review Panel:	
Chair	Andrew Linfoot
Lead Panellist	Toby Adam Steve Smith Maria Asenjo Jen Heal, Design Advisor, DCFW Amanda Spence, Design Advisor, DCFW Carole-Anne Davies, CE, DCFW
Observers	Peter Paddock, Abbotts Lane Residents Association Wendy Maden & Sue Jones, DCFW