

HAMPSHIRE COUNTY COUNCIL

Committee/ Panel:	Buildings, Land and Procurement Panel
Date of Decision:	12 October 2010
Decision Title:	Carbon and Energy Reduction Works to Weyford Infant and Junior Schools, Bordon
Decision Reference:	1983
Report From:	Director of Property, Business and Regulatory Services

Contact names: Steve Clow and Bob Wallbridge

Tel: 01962 847858/
01962 847894

Email: steve.clow@hants.gov.uk/
bob.wallbridge@hants.gov.uk

1. Executive Summary

1.1. This report seeks approval to:

- The design proposals for energy efficient improvement works to be undertaken at Weyford Infant and Junior Schools, Bordon, at a total estimated cost of £997,000 (including fees of £107,000)
- The authorisation of the Director of Property, Business and Regulatory Services to agree the detail of the remaining works in the Bordon eco-town demonstration project and work up proposals for a second phase of works in consultation with local schools, East Hampshire District Council and other interested parties.

2. Contextual Information

The Bordon eco-town Project

- 2.1. The County Council has been working with East Hampshire District Council, Central Government and schools in Bordon to assemble and fund a demonstration project detailing how improvements to the energy efficiency of publicly owned buildings may be achieved.
- 2.2. A programme of proposed improvement works to Weyford Infant and Junior Schools, Bordon Infant and Junior Schools, Woodlea Primary School and Bordon Library was submitted to the Department for Communities and Local Government (DCLG) for grant aid under its eco-town programme.
- 2.3. The buildings were selected for their mix of construction types and condition. The bid to the DCLG also highlighted the benefit of common ownership and the use of County Council framework procurement arrangements.
- 2.4. With a contribution of £350,000 from the County Council's Landlord maintenance programme, grant funding of £1,275,000 was secured from

the DCLG. The then Department for Children, Schools and Families offered a further £1,300,000 in funding for the project, but this was subsequently withdrawn as part of the incoming government's in year spending cuts.

- 2.5. An application for funding of energy efficient works to the remaining public buildings in Bordon has recently been submitted to the DCLG. It is intended that the concept, progress and outcomes will be shared across all the schools in the Whitehall/ Bordon area, others in Hampshire and the Departments for Education and Communities and Local Government.

Weyford Schools

- 2.6. Weyford Infant and Junior Schools are located in the East Hampshire town of Bordon. At Weyford Infant School there are 171 pupils (3 - 7 years) on roll. There are currently 204 pupils (7 - 11 years) on roll at Weyford Junior School.

3. Scope of Work

- 3.1. It is proposed to focus an allocation of the funding on Weyford Infant and Junior Schools first, as they were identified as having the greatest need and potential for improvement. In addition, the range and extent of the works will be of particular value as part of the demonstration project. It is proposed to carry out refurbishment works, including the replacement of lighting and heating systems, which will significantly improve the energy efficiency of both schools.
- 3.2. The works are being procured through the IESE Tier 2 framework process. It is anticipated that the works will commence on site during October 2010 and complete during March 2011.
- 3.3. For the duration of the construction period the Contractor will have clearly separated access to the school site. The schools will remain in use for the duration of the proposed works. The works will be phased and temporary classrooms will be provided to allow for decanting and to minimise disruption over the construction period. The Contractor's working areas will be segregated at all times from pupils and staff and the deliveries and movement of plant will be restricted during the school day to ensure the safety of those involved.
- 3.4. Although funding for the project has already been approved, this report outlines the available budget from within which the project must be designed and delivered.
- 3.5. Any significant issues from either the Risk or Combined Impact Assessment will need to have specific attention in the design or implementation of this project.

4. Finance

4.1. Capital Expenditure:

The Capital Expenditure has already been approved; the following tables outline the breakdown of its distribution across the project:

Capital Expenditure	Current Estimate	Capital Programme
	£'000	£'000
Buildings	890	350
Fees	107	42
Total	997*	392

* The means by which the difference between the Current Estimate and the Capital Programme allocation is to be met are shown in the table below:

4.2. Sources of Funding:

Financial Provision for Total Scheme	Buildings	Fees	Total Cost
	£'000	£'000	£'000
1. From Own Resources			
a) P&R Capital Repairs Programme (as above)	350	42	392
2. From Other Resources			
a) Department for Communities and Local Government	540	65	605
Total	890	107	997

4.3. School Balances:

The school has the following level of balances:

Published revenue balance as at 1 April 2010 – Weyford Infant £18,606

Published revenue balance as at 1 April 2010 – Weyford Junior £ 64,077

Devolved capital as at 1 April 2010 – Weyford Infant School £89,687

Devolved capital as at 1 April 2010 – Weyford Junior School £73,458

4.4. Revenue Issues:

a) *Energy Savings*

The improvement work to the building envelope is estimated to reduce the heat loss from the buildings by 70Kw. The combined carbon emissions from the existing boilers at Weyford Infant and Junior Schools based on the previous 3 years data is on average 140,000 kg of carbon dioxide per annum. The wood chip, Biomass boiler will produce 3,300 kg of carbon

dioxide per annum, a reduction in carbon dioxide emissions of 96%. The installation of efficient lighting and automated controls will realise further reductions in current energy use of 60%, which is dependant on occupancy use.

- b) It should be noted that the cost of the wood pellet fuel is approximately the same as for the oil. There is currently one oil fired and one gas fired boiler serving the Infant and Junior Schools respectively. The total cost of the fuel will rise but this will be mostly offset by improved thermal performance and lighting energy reductions also included elsewhere in the project.

5. Risk & Impact Issues

- 5.1. Please see Appendix B for a summary of the risk and impact issues considered in relation to the design of this project.

6. Details of site and existing Infrastructure

- 6.1. Weyford Infant School is a Victorian school with later additions of traditional construction and is accessed from Mill Chase Road. Weyford Junior School is on an immediately adjacent site and is of SCOLA system-built construction and is accessed separately from Washford Lane.
- 6.2. It is anticipated that the existing mains services will be of sufficient capacity to serve the proposals.

7. Scope of the Project

- 7.1. The proposed works will significantly reduce the energy consumption and carbon emissions of the Weyford schools through improved insulation, double glazing and the replacement of inefficient lighting and heating systems. The existing oil and gas fired boilers will be replaced with a single Biomass boiler (fuelled by wood pellet), which is a zero carbon technology. The boiler will be a demonstration project and will serve both the Infant and Junior School.
- 7.2. The installation of a wood fired boiler to provide heating and hot water to both schools will be the first installation of it's type in a Hampshire County Council owned school. The biomass boiler is using the latest sustainable technology and follows the successful installation by the County Council of this type of sustainable energy source in the visitor building at Queen Elizabeth Country Park. Recycled off-cuts of wood are processed and compressed to form a pellet fuel that is fed automatically into a heating boiler. On-site storage provides sufficient capacity to fuel the boiler for four to six weeks. Post completion, the system will be monitored to identify and record the benefits of this immerging technology. Due to the carbon dioxide absorbed from the atmosphere during the life of trees this technology is considered a zero carbon solution, contributing significantly to the reduction of the schools carbon footprint.
- 7.3. The proposed fuel is wood pellet rather than wood chip because it has a higher energy content fro a comparable volume. The pellets can then be accommodated within the existing oil tank room on site. In terns of supply of wood pellets; approaches have been made to three potential providers.

We can, therefore, be confident that there is sufficient quantities and that competition is available to ensure value for money.

- 7.4. The project demonstrates how improvements can be made to existing buildings that will significantly improve energy efficiency and reduce carbon emissions providing a possible template for future refurbishment. Through the installation of educational metering, students, staff and the local community will have an increased awareness of the issues surrounding energy use and the burning of fossil fuel and the impact this has on climate change and future energy security.
- 7.5. The refurbishment works will include the following:
 - Improvements to the building fabric to reduce energy demand, carbon emissions and improve its thermal performance. This will consist of replacement windows, roofs and facades with increased insulation values and improved windows and external door access
 - Replacement of the existing inefficient oil and gas heating systems, with a sustainable zero-carbon technology wood pellet Biomass boiler
 - Replacement of lighting and the installation of lighting controls to minimise wasted energy performances, when spaces are not in use or when natural day light is sufficient
 - Metering and visual display to increase awareness of each building's energy use and the improvements made.

8. The Proposed Building

- 8.1. There is no extension or new build being proposed within the scope of this project. The proposals will comprise of the refurbishment works only.

9. External Works

- 9.1. There are no significant external building works or landscape proposals associated with this scheme.
- 9.2. The vehicular access and delivery of pellet fuel for the proposed biomass boiler will be via the existing Infant School car park area, which will improve site safety as it will negate the existing need for vehicular access to the fuel store via the nursery external play area.

10. Planning

- 10.1. Planning consents are not required for these proposals.

11. Building Management

- 11.1. The existing building management arrangements will remain in place.

12. Professional Resources

Architectural)
Landscape)
Mechanical and Electrical)
Drainage)

Structural Engineering)
Quantity Surveying)

13. Consultations

13.1. The following have been consulted during the development of this project and their feedback can be seen in overview in Appendix C:

Local County Councillor
School/Governors
Children's Services
Fire Officer
Access Officer
Planning Department
Eco – Town Group

14. Recommendations

14.1. **That the Executive Member for Policy and Resources be advised to:**

1. Approve the design proposals for energy efficiency improvement works at Weyford Infant and Junior Schools, Bordon, at a total estimated cost of £997,000 (including fees of £107,000).
2. Authorise the Director of Property, Business and Regulatory Services to agree the detail of the remaining works in the demonstration project and work up proposals for a second phase in consultation with local schools, East Hampshire District Council and other interested parties.

CORPORATE OR LEGAL INFORMATION:

Links to the Corporate Strategy

Hampshire safer and more secure for all:	No
Corporate Business plan link number (if appropriate):	
Maximising well-being:	Yes
Corporate Business plan link number (if appropriate):	
Enhancing our quality of place:	Yes
Corporate Business plan link number (if appropriate):	

Other Significant Links

Links to previous Member decisions:		
<u>Title</u>	<u>Reference</u>	<u>Date</u>
Direct links to specific legislation or Government Directives		
<u>Title</u>	<u>Date</u>	

Section 100 D - Local Government Act 1972 - background documents

The following documents discuss facts or matters on which this report, or an important part of it, is based and have been relied upon to a material extent in the preparation of this report. (NB: the list excludes published works and any documents which disclose exempt or confidential information as defined in the Act.)

<u>Document</u>	<u>Location</u>
None	

RISK & COMBINED IMPACT ASSESSMENT:

Race and Equality Impact Assessment

Race and equality impact assessment has been considered in the development of this report and no adverse impact has been identified/

Crime Prevention Issues

The County Council has a legal obligation under Section 17 of the Crime and Disorder Act 1998 to consider the impact of all the decisions it makes on the prevention of crime. The proposals in this report have no impact on the prevention of crime.

Fire Risk Assessment

In consultation with the Hampshire Fire and Rescue Service, a fire risk assessment concludes that this a low fire risk category building. Therefore a sprinkler system will not be installed.

Health and Safety

A designer's risk assessment and a design health and safety plan, in accordance with the Construction Design and Management Regulations 2007, have been undertaken for the proposed scheme.

Climate Change

This is covered in the main report.

FEEDBACK FROM CONSULTEES:**OTHER EXECUTIVE MEMBERS:**

Executive Member & Portfolio	Reason for Consultation	Date Consulted	Response:
Councillor Perry	Executive Lead Member for Children's Services	28.09.10	Councillor Perry has seen the report but had no comments to make.

OTHER FORMAL CONSULTEES:

Organisation	Reason for Consultation	Date Consulted	Response:
Councillor Carew	Local Member for Whitehall, Bordon and Lindford	17.09.10	Councillor Carew responded positively to the proposals contained in the report. He enquired about the opportunities to undertake further energy efficiency work on other schools in the Whitehall/ Bordon Eco-town area. It was explained that the works to the Weyford schools form phase one of the programme and will use a significant proportion of the funding, as they are the most in need of improvement. With the restrictions of the funding available it is intended to undertake works at other schools and the local Library. Because of the withdrawal of complementary DCSF funding, the scale of the works will be significantly reduced, but there will be opportunities to fit meters

Integral Appendix C

			to support behavioural change energy efficiency works across all the buildings.
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