Cottenham Village Design Group

Newsletter Issue 9 - May 2010

Building Futures - Talk at the AGM

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Mouchel's Previous Schools

Stephen Wyard, Senior Architect at Mouchel, started by providing an introduction to his company. Whilst the company as a whole is involved in many fields, the Cambridge office primarily deals with property, especially relating to education. Mouchel is one of two design partners selected by Cambridgeshire County Council for public buildings including schools.

About ten years ago Stephen worked in Uganda for five years. This inspired his thinking that school buildings should not be restrictive. To illustrate the idea "every space a learning space" he showed a photograph of a typical African scene with children being taught in the open under a tree.



One of Stephen's roles is to conduct Design Quality Indicator assessments. It is important to create the right environment with light and space in order to set the appropriate mood; a light roomy environment is more inspiring and motivational than one that is dark and cramped. Schools also need flexible agile spaces to be suitable for future needs.

He provided four examples of previous school projects with which he had been involved.

Hatton Park Primary School, Longstanton



This was a new 210-place school building to replace existing buildings. It was complicated by a requirement to retain the original buildings during construction. The design comprises a group of agriculturally inspired buildings around an internal courtyard. The main school hall is based on the design of a barn, with the rest of the buildings being low structures. An important feature is the "transparency" of the design, with views into opposite classrooms from the walkways and other rooms. It achieved a BREEAM Very Good rating.

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Annual General Meeting

The Cottenham Village Design Group's AGM was held on Tuesday 2nd March 2010.

This was preceded by a very enlightening talk about the plans to add a new sixth form facility to the Village College, planning permission for which was granted with minor modifications on 9th March. Some notes from the talk can be found to the right.

Committee 2010 - 2011

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The Harbour School, Wilburton



This is a residential school for children with social, emotional or behavioural problems. The existing Grade II listed Victorian building was designed by Augustus Welby Pugin, who was also partly responsible for the Palace of Westminster. The site also featured various buildings added from the 1960s onwards and several trees with preservation orders, so sensitive treatment was required. A new teaching facility and gymnasium were added. The access road had to be constructed to

emergency vehicle standards, but needed to be dug by hand in order to protect the tree roots.

Impington Village College



The original Grade I listed building was designed by Walter Gropius. A new flexible science and teaching block was added, providing twenty classrooms for a variety of uses. The design picked up on many of the themes of the existing building, such as transparency, stacked brickwork and simple geometrical shapes. It was featured on the cover of the SCALA Yearbook.

The Bellbird School, Sawston



This was an amalgamation of two existing schools; its name was suggested by two students based on a combination of the bell that used to be rung at John Falkner School to start the school day and the bird that featured in the John Paxton School emblem. The development was compact due to the protected village amenity area, and was influenced by the exemplar primary school design by Walters and Cohen Architects. An internal courtyard forms a tranquil oasis and provides natural light into the the school.

Education Vision

Peter Marshall, Deputy Head at Cottenham Village College, explained how the sixth form development had arisen. Apparently the school has some flexibility when compiling statistics as to how to classify some pupils; this was exploited by putting one student in the 2008 instead of 2007 year group thereby meeting the criteria for becoming a High Performing Specialist School for mathematics and computing. This resulted in an offer of funding worth approximately £5.5M for creating a sixth form of up to 350 places.

The existing college has about 150 to 160 pupils in each year group, so

it was felt that about 140 places would be comfortable for post-sixteen provision. However, this number would be insufficient to justify building the appropriate facilities, so the proposal was increased to 250 students.



Most pupils currently feed into Hills Road Sixth Form College, Long Road Sixth Form College or Cambridge Regional College so are already spoilt for choice. However, a gap in provision was identified in Cambridgeshire at the lower end of the education sector, although not special needs per se. A and AS-levels are already well catered for, so the sixth form will concentrate on vocational courses in construction and the built environment, hospitality and catering, sport, ICT, media, and health and beauty. This focus also addresses other needs of the local community, such as for adult learning.

The sixth form building will also consider the needs for conferencing, art display and staging.

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Development at CVC

Stephen continued by describing the two new buildings proposed for CVC. Their design has been constrained by the site being sandwiched between the green belt and the village amenity area.

The main sixth form building faces the all weather sports pitch and is based around a large shared common room for socialising, dining, informal study, performances and exhibitions. Other facilities on the ground floor include a fully fitted-out professional kitchen, two ICT labs, and hair and beauty areas. There is also accommodation for the hearing and language centre which is currently in a mobile building; this is being separately funded by the council. The first floor provides four general purpose classrooms and a suite of seminar rooms.

A major feature of the sixth form building is the large balcony on the first floor that overlooks the sports pitches. The building is intended to be distinctive and of its era, but pays respect to its surroundings. It incorporates many features to improve its sustainability in order to achieve a BREEAM Excellent rating, including a sedum roof, solar water heating, solar shading, a ground source heat pump and insulation beyond that required by the building regulations.

The second building - the technology building - is a barn-like structure featuring a courtyard area for construction activities.

Questions and Answers

- Q. Where is the car parking going to be located?
- A. Existing parking will be retained and twenty new spaces will be created, mainly by formalising existing spaces. The students are unlikely to be drivers at seventeen (due to ability, social or financial reasons) so parking is not expected to be an issue. The new spaces are intended primarily for new staff.
- Q. What are the plans for the swimming pool?
- A. Approximately £140K is required to bring the pool up to current standards. There are ongoing debates, but it is unlikely that this sum will be found for an open air pool.
- Q. What about students using mopeds and scooters?
- A. It is likely that some students will arrive by mopeds and scooters; there will also be some arriving by taxi, which will increase traffic through the village. Significant new cycle parking will be

- provided which is expected to be suitable for moped and scooter use too.
- Q. What are the red squares on the plan?
- A. The large area is green belt scrubland that will be temporarily used for the construction equipment. The thin strip is the existing drain that will be increased in capacity.
- Q. What are the things that resemble chimneys on the sixth form block?
- A. They are wind catchers to provide natural ventilation for the building.
- Q. In the private sector "green" features are often dropped from designs due to their cost; is that likely to happen here?
- A. They are required to achieve the BREEAM Excellent rating, which is a condition of the funding.
- Q. How will the arrival of different students be managed through the day?

- A. Staggered start and end times are already used. The sixth form is expected to have three full-time days a week without free time instead of the five days for other students. Different break and lunch times will also be arranged. However, joint education sessions will be arranged where appropriate that mix different year groups (including adult education).
- O. What is the timetable?
- A. Tendering ends on the 7th April. Construction will start in May and last nine or ten months, allowing a few months gap before students start September 2011.
- Q. How will construction work affect exams?
- A. This is a concern. Impact will be minimised by locating exams in rooms as far from the construction as possible.
- Q. Will the constructors be "pig ugly"?
- A. Yes, that is a requirement!



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Visit to Donarbon Waste Management Park

A group of CVDG committee members and members visited Donarbon on 19th March 2010. We were met by Karen Brenchley and given a comprehensive talk before going round the site in a minibus. Since our last visit a few years ago the mechanical biological treatment plant (MBT) has been built. It will take all of Cambridgeshire's black bin rubbish. The aim of the plant is to sort and process the black bin waste and reduce the amount that goes to landfill to ensure Cambridgeshire meets landfill directive targets. Currently the plant is undergoing commissioning and will be fully operational on 1st November. It is the first of its kind in Eastern England. Black bin waste is mechanically sorted for example into aggregates, ferrous and non ferrous metals, glass, paper and plastics as well as organic matter (including paper and cardboard). We could view the sorting hall from our meeting room. The plant was not operational during our visit. The machinery is made in Germany and Austria and a team of German technicians are working on the MBT plant in the commissioning phase. In the adjacent composting hall, kitchen and garden waste, dust paper and wood are turned for seven weeks and made into a compost-like material. Currently the compost-like material goes to landfill. However Donarbon envisage three potential uses for this material: (i) quarry restoration, (ii) compost for non-food crops such as bio fuels e.g. miscanthus and (iii) as a bio fuel once plastics removed.

After viewing the MBT we boarded the minibus and headed up onto the landfill. We could see a lot of seagull activity, an indicator of how much food waste still currently ends up in black bin rubbish. We drove on to see where green bin waste is recycled in in-vessel composters. The soil conditioner from this waste is available free to the public at Donarbon's Waterbeach site but most goes to farmers. We saw the windrows of higher quality compost made from garden waste from official tips and grounds maintenance waste. This shredded waste is mainly sold to farmers at f_{10} /tonne.

We passed a hydrogen plant and methane plant. The latter takes methane produced from within the landfill site and burns it to generate electricity. Most goes into the national grid. Methane is a potent greenhouse gas.

Where are the markets for some of the major recyclable commodities? The industry for recycled plastics is mainly in China. Plastics are shipped out to China on boats returning to the country after delivery of their goods to this country. Scrap steel is destined for CORUS, mostly for building projects in the UK. Aluminium has a wide range of uses in the UK, including making new cans. Likewise timber is for the UK market, mostly for chipboard manufacture.

Thanks to the innovative work at Donarbon in partnership with Cambridgeshire County Council, the county is the second in the country for its recycling rates. It will be worthwhile visiting the waste management park once the MBT plant is fully operational.

Jennie Blood-Smyth Member











