



"The building's material rhythm echoes its context with strong horizontal and verticals representing the topography and natural features of the Fens."

make Architects



Materials and Elevations Concept from make architects

By Jamie Rogers

The elevations to the learning communities have a strong horizontal aesthetic reflecting the horizon and the horizontal topography of the Fens. Brick has been chosen as a robust material which can be laid to emphasize the strong horizontals. Long strip windows maximize the panoramic views and natural day light. Colour is used to the glazed spandrels. Strong yellow, green and blues, reinforce the identity of each of the Learning Communities (King, Madiba and Pankhurst), echo the colours of the College logo and reflect the natural colours of the Fens.

The elevations to the communal and community areas are conceived to reflect the strong vertical lines found naturally in the Fens – lines of tall Poplar trees for example, which break up the horizon, delineating ancient boundaries or providing protection from the

prevailing winds. The existing, regular spaced, structural brickwork piers of the Corporation Road building are re-clad in brickwork to match elsewhere. This rhythm continues around the southern elevations facing the college green/plaza with brick panels of different widths interchanging across the Eden walls, providing a striking architectural backdrop. Colour is inserted into the brick and recessed brick panels with green, yellow and blue vertical slots. The intensity and rhythm of the coloured slots increase around the community reception, marking the entrance.

The building's material rhythm echoes its context with strong horizontals and verticals representing the topography and natural features of the Fens.

How It Was Built stopping it sinking

By Ryan Blunt

CFA (Continuous Flight Auger) piling is a construction method that involves drilling into the ground (up to 23 metres deep on the project) with a large hollow core auger. This removes the soil as the auger rotates slowly as its lowered into the ground under its own weight. As the auger is lifted out of the ground a high strength concrete is pumped in at very high pressure (typically 1500 psi) to fill the void formed from the rising auger.

Whilst the concrete is still liquid a 3.5 metre long bundle of reinforcing steel is inserted flush to the surface level. The uppermost part of the reinforcement steel has a debonding material attached to prevent the concrete from bonding to the steel making later stages in the process much easier. (See later)

The soil slurry removed is taken away by lorries to be processed because it is extremely fluid and useless as a construction or fill material.

After approximately two weeks when the concrete has hardened, diggers remove the limestone matt built up for a strong base for the piling rig which weighs almost 40 tonnes.

The pile is marked around its perimeter at the required cut-off level and cut around the whole perimeter roughly 50mm into the pile using a hand held petrol powered circular saw. A water spray is used on the blade to keep it cool.

The pile is then "cropped" using an excavator attachment called a "Mr. Cropper". This attachment forces multiple large chisel shaped steel wedges simultaneously cut into the mark made previously. The high pressure forces the top of the pile to pop off, thanks to the



debonding material installed early on. The pile cap is lifted off using the excavator and taken away by lorries to be crushed and recycled. The use of the debonding material to the reinforcement steel requires a high level of coordination between all the parties involved - the Structural Engineers, the Main Contractor (Kier Eastern), the ground workers, Site Engineers and the Piling Subcontractor.

If, for example the debonding material was put in too low this excess material low down would have to be removed by hand and would affect the structural integrity of the pile and likewise if the material was installed too high the cap would be much harder to remove. The advantage of using this method is that it saves a lot of time and money (approximately 6 times faster than using hand tools).

We offer a fleet of CFA rigs from 30 to 45 tonne. Pile diameters range from 300 to 900mm and up to 26m depth.

Central Piling (The Piling Contractors used on the project)

This is paramount when there are approximately 600 piles to do!

The main advantages of CFA piling are:

- Almost vibration free (good for sensitive areas eg. schools)
- Fast and economical
- Rigs are fully computerized
- And environmentally friendly

Piling is necessary due to the poor nature of the soils in the region. The school is situated upon what are known as the Terrington Beds. These were deposited about 2600 years ago by the sea and are predominately composed of fine silts and sands. This, combined with the relatively high water table in the area results in the soil having a very poor strength so significant foundation works are required to stop the school ending up like the leaning tower of Pisa!



A view over the Eden Space

Quiz corner win a prize!

For a chance to win one of the prizes send your answers to Mr. Gerwyn Williams in a sealed envelope by ____ (don't forget to include your name!)

- Q1. What is happening to the brickwork on Corporation Road Block?
- Q2. What are the colours used to the spandrels?
- Q3. Roughly how many piles are on the project?
- Q4. Roughly how much does the piling rig weigh?
- Q5. How deep is the deepest pile?

Prizes will be awarded to the first correct answers received. The winners will be notified ASAP to receive their prizes.

Temporary School

By Richard Coleman

During the construction work to the Thomas Clarkson Community College the building on Corporation Road is to be refurbished.

Whilst the refurbishment of the existing Corporation Road building is underway the students shall be moved into a temporary school that will be constructed at the Weasenham Lane entrance to the school.

The temporary school will be fully constructed ready for use after the February 2011 half term to minimise the disruption to the school.

The modular building is a modern environment in which the students can work and shall include food technology classrooms and information technology suites. Along with all the necessary facilities there will be no compromise on space.

These are similar to the temporary buildings that are being used in the construction work at the Neale Wade School in March where they are proving very successful.

The temporary school will fully support the modern teaching methods that are currently available to the students, including interactive whiteboards and the latest I.T equipment.

The Corporation Road building refurbishment and the construction of the new school building shall be completed and ready for use after Christmas 2011.

'These temporary buildings are provided by the world leaders in modular building'

Kier Eastern

'This next year will reveal an exiting new time for the Thomas Clarkson Community College and in turn, the students'

Kier Eastern



A View from Above Aerial Photographs

COURTESY OF R. CULY – KIER EASTERN



A Vision of the Future - Thomas Clarkson Community College

