St Andrews School
Design Statement

Justification for the Scheme

By way of explanation, the Hot School Meal Plan is an NCC initiative to introduce into the Schools of Northamptonshire the opportunity to provide a hot school meal to all students/pupils in the county. There is an ambitious programme of works to target approx. 226 Schools over a 3 year programme that began in 2010. We are currently concentrating on Year 2 Schools in 2011, of which there are approx. 104 Schools being considered.

The internal Kitchen provision for this School consists of fully refurbishing an existing single skin/timber clad ‘barn’ on the School premises which is currently used as an external store. The building is single storey and has a pitched roof with original King post truss design. It is proposed to fully refurbish the building and upgrade the thermal U-values of the construction elements (floors, walls, roof) to meet current Building Regulations. New catering equipment and appliances will be provided for the Kitchen and the design will ensure that the ventilation system meets current legislation guidance.

Design

Firstly it is proposed to upgrade the thermal U-value of the building envelope by removing the timber cladding and building a traditional brick and block cavity wall that is insulated. The brickwork will be sourced to match the existing type, colour and bond of the main School building. The existing clay roof tiles to the pitched roof will be temporarily removed and set aside to install new roofing felt and tanilised sw battens before the roof tiles are re-fixed. Cast iron and PVC RW goods will remain as existing. The rear gutter to the junction of roof and existing parapet wall is to be re-lined and dressed suitably with code 4 lead flashing.

A new Upvc double glazed casement window is to be provided to the main wall elevation facing the car park. The rear gable wall to be constructed is to be provided with a new single lead aluminium powder coated door in a colour to match other existing external doors on the site.

The proposed supply ventilation AHU plant location will be positioned within the new ceiling void created above the Kitchen. This will need to be vented to the outside which means a roof cowl will be seen on the pitched roof line. A wall extract fan is also to be provided all as shown on drawing 101650-05/M/1200 T2. Due to the topography of the site and surrounding areas it may be possible for residential property past the School site boundary to see these from a distance. The nearest residential site boundary is approx 5m away.

The kitchen ventilation systems have been designed to comply with current Health and Safety legislation and Building Regulations Approved Document Part F requirements.

Current legislation requires the safe removal of fumes and other gases/vapours that may pose a health issue to the operatives or be harmful to the building and its contents with regards to moisture etc.

The size of the ventilation equipment is dependent on the equipment being used within the kitchen and is closely controlled.
Associated plant also has to comply with noise limitation for the operatives (Noise at Work Act) and the efficiencies of the plant have to comply with Approved Document Part L of the Building Regulations legislation to ensure that fan energy is optimised to reduce lifetime running costs.

**Relevant Planning Policies**

The proposals for the external AHU plant feeding the new Kitchen ventilation comply with Local Planning Policy guidance and in particular with **Policy 13 of the Core Spatial Strategy Plan** for North Northamptonshire in the following ways:

- The roof cowl is situated at high level to deter vandalism and avoid noise and smells coming into contact with people.
- The internal unit is specified as one of the most energy efficient and quieter models on the market. The data for the noise generation can be seen within section 10 of the Ventilation and Extract Statement document supplied. This is aimed to comply with **PPG24** to minimise the adverse impact of noise.
- Material finishes of the roof cowl and wall extract fan grille are galvanised steel or can be powder coated at the request of the Local Planning Authority.
- The AHU plant has been designed and specified to meet current Regulations and improve the kitchen working environment for staff.

**Smells**

With regards to odours, we would assume that the catering loads producing odours leaving the kitchen should be minimal.

We advise that the new plant designed will be effective at removing the building up of fumes and odours and these will inevitably create a smell. The distance and prevailing wind will carry these to any adjacent location.
## Sound Data

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Ventilation & Extraction Statement

Refurbishment Kitchen

St Andrews Primary School, Grafton Street, Kettering
Northamptonshire NN16 9DF
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## ISSUE & REVISION RECORD

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Section 1 – Information on Premises

Number of meals per day: 112

Methods of preparation & cooking: Only reheating of pre-prepared food

Types of meal served: Reheating pre-prepared food

Proposed hours of operation: 1000 – 1400hrs

Section 2 – Plans & drawings

See attached for plans and elevations of proposed kitchen services.

Section 3 – Pre Filters

Not applicable to this site

Section 4 – Electrostatic Precipitators

Not applicable to this site

Section 5 – Carbon Filters

Not applicable to this site

Section 6 - Odour Counteractant or Neutralising System

Due to the kitchen being a Regeneration type, the meals will be delivered pre-prepared and reheated only on the premises. Therefore no food odours will be created because of food cooking.

Section 7 – Cooker hood

A cooker hood is not applicable in this application

Section 8 – System Operation

Extract rate: 0.133m$^3$/s
Supply: 0.106m$^3$/s

Section 9 - Flue Design

The kitchen exhaust is via a wall mounted extract fan.
Section 10 – Noise

Extract Fan

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Supply fan

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<td>230V</td>
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Section 11 – Maintenance

Filters for the AHU will be cleaned/replaced in accordance with the manufacturers’ recommendations.

Section 12 – Additional Information

The make up air for the kitchen will be supplied via a ceiling void AHU. This will be directly supplied to the kitchen via a 4-way blow grille.