

LAING O'ROURKE

GREENACRE SEN SCHOOL  
BARNSELY

DESIGN & ACCESS STATEMENT  
ENERGY CENTRE

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## Document History

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| <b>Introduction</b>      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                          | <p>This is a full planning application for a single storey flat roofed Energy Centre within the site of Greenacre SEN School, Keresforth Hill Road, Barnsley, South Yorkshire S70 6RG. The proposal will provide accommodation for a biomass boiler and 1 roof mounted turbine. The proposal forms part of a larger overall development scheme for the redevelopment of the school, in accordance with the national Building Schools for the Future (BSF) programme and Barnsley Remaking Learning.</p>                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Design Resolution</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                          | <p><b>Use</b></p> <p>The proposal is for a single storey energy centre, which is to accommodate a 220kW biomass boiler and a 1.5kW roof-mounted wind turbine.</p> <p>The purpose of the biomass boiler is to secure a source of renewable energy which will provide all of the annual heating requirements for the SEN.</p> <p>The roof-mounted turbine will contribute towards meeting a proportion (10%) of the total annual energy requirement of the Phase 2 schools (Springwell and Greenacre SENs and Shafton ALC).</p> <p>The proposal will provide the required energy needs of the SEN, whilst also allowing for the reduction of carbon emissions at the site by securing a renewable energy supply. This will make a positive contribution towards the delivery of a BREEAM 'very good' rating at the SEN, as outlined by the supporting Sustainability Statement.</p> |
|                          | <p><b>Amount</b></p> <p>The proposal is for a small 158m<sup>2</sup> single storey Energy Centre building with an additional 90m<sup>2</sup> fenced enclosure. This will provide the main plant area for the biomass boiler. Energy distribution will be underground to the main school. The proposals will have little impact on the overall density of the site and its surroundings, by virtue of the small quantity of development and the scale of the proposal.</p>                                                                                                                                                                                                                                                                                                                                                                                                         |
|                          | <p><b>Layout</b></p> <p>The Energy Centre has been positioned at the rear of the site close to the main school building to enable the most efficient energy distribution routes to the school. The centre is situated close to the internal distribution road to allow vehicular access to the centre for day to day maintenance and repair of the plant. Its position on the site and proximity to adjoining properties will ensure that it is a minimum of 10m away from any boundary. The development has been situated to cause minimal impact on the immediate vicinity.</p>                                                                                                                                                                                                                                                                                                 |
|                          | <p><b>Scale</b></p> <p>The Energy Centre is single storey with a flat roof with a maximum height of 4.5m. In addition it is proposed to provide a 1.5kw wind turbine situated on the roof of the building which will be approx. 3m in height. The scale of the proposed development is in keeping with its surroundings.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                          | <p><b>Landscape Design</b></p> <p>The proposals are to be accommodated within the landscaping details approved under then wider SEN construction programme.</p> <p>The energy centre will be set in a landscaped area with shrub and tree planting to the rear and side elevations. To the front of the building a hard landscaped area will be provided for access to enable maintenance and repair of plant and equipment.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

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|                      | <p><b>Appearance</b></p> <p>The proposed development will follow closely the design of the proposed school building using similar materials, of precast concrete panelled walls under a flat roof with polyester powder coated aluminium doors and louvres to match the main school. The materials chosen are traditional and as such will weather sympathetically over a number of years to blend with its adjoining neighbours. The roof mounted turbine will be functional in appearance, but by virtue of its size and the location of the Energy Centre, will not cause any adverse visual impacts.</p> <p><b>Sustainability</b></p> <p>The design team is committed to designing schools based on sustainable environmental principles from the basic concept through to detail design. We have designed the form of the building to passively manage; daylight and direct sunlight, solar gains and climatic control, ventilation, water management, acoustics and energy use. The design will also utilise green materials from sustainable sources where possible, and will be built from precast concrete and prefabricated elements for reduced embodied energy. Wind power and biomass will be used to generate heat and power throughout the life cycle of the building. Our initial BREEAM assessment shows that it is likely that we will achieve a "Very Good" rating as a minimum, with "Excellent" the most likely outcome.</p> <p>A biomass facility and wind turbine are considered to be the most appropriate sources of renewable energy in this location, to achieve the required amount of energy to meet the requirements of the SEN. The resources will take advantage of the local climatic conditions, whilst also reflecting the site context and adjacent uses.</p> |
| <b>Accessibility</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                      | <p>The proposals will require occasional access for maintenance purposes in line with a specified schedule. Parking will be directly outside the building to minimise heavy lifting.</p> <p>The proposals will also require weekly deliveries of wood chips/pellets – the fuel for the boilers</p> <p>The site is gently sloping, and will require slight cut and fill at the ground works stage. The main entrance route will be graded to be effectively flat with a no gradient steeper than 1:21. The building is single storey, offering level access throughout. The new building will also be provided with level thresholds to outside</p> <p>The Energy Centre will be constructed in compliance with Building Regulations Approved Documents M and BS8300. All entrance doors will provide minimum of 926mm clear openings with closures meeting the requirements of Approved Document Part M.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

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