

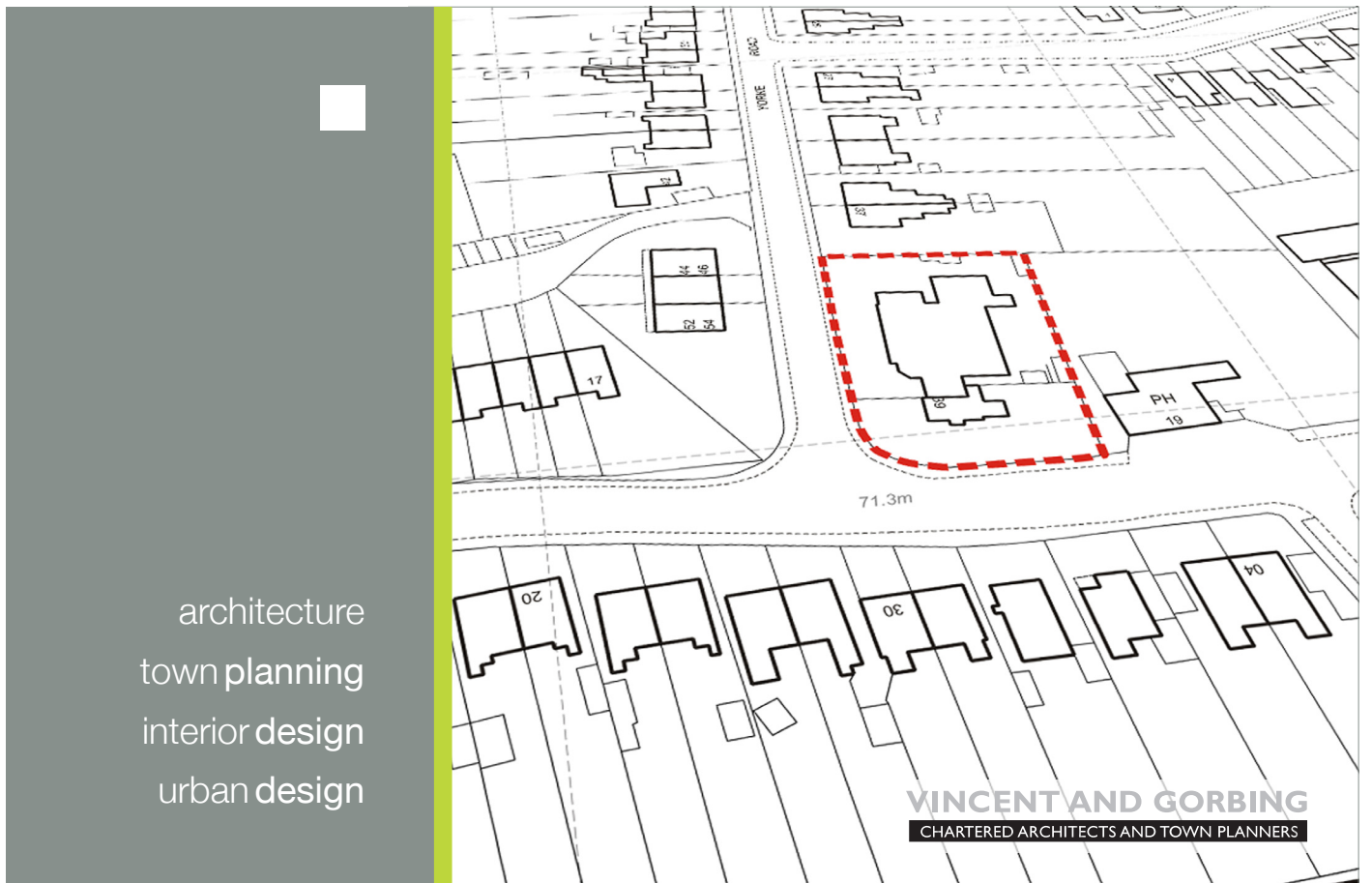


Land at former school, Yorke Road Croxley Green

Sustainability and Renewable Energy Statement November 2009

on behalf of Leukaemia Research

prepared by Vincent and Gorbing



LAND AT FORMER SCHOOL, YORKE ROAD, CROXLEY GREEN

SUSTAINABILITY AND RENEWABLE ENERGY STATEMENT

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1.0 Introduction

The Council's Sustainable Communities SPD requires applicants to submit a Sustainability Statement (otherwise known as a Natural Resource Impact Analysis) when making a planning application and prior to the grant of planning consent, for all development (either new build or conversion) with a floorspace of 100m² or five or more residential units. The Statement should set down how a development achieves the Council's Sustainable Communities objectives in its Strategic Plan.

This Statement has been drafted to meet this requirement.

The planning application is for residential development. It is made in outline only with all matters reserved except access. An illustrative layout has been prepared which indicates that the scheme could accommodate five residential units.

Consideration has been given to a wide range of sustainability issues, including renewable energy technologies that might be applicable to this site and the proposals. However, given that the application is in outline only, in certain respects (particularly the use of low carbon technologies) detailed assessments will be required to consider feasibility once outline planning permission has been granted and the detailed design of the units progresses. The Council will wish to consider, in collaboration with the applicant, the appropriate use of planning conditions to address this matter at reserved matter stage.

2.0 Planning Policy Context

The East of England Plan seeks to meet national climate change and carbon reduction objectives. It sets out a requirement of at least 10% of energy to be generated from decentralised or low carbon sources unless this is not feasible or viable. However, this policy applies only to developments of more than 10 dwellings, and is therefore not applicable to this development.

Saved Local Plan policies of relevance are :-

GEN 1 : Making development more sustainable :- which encourages the application of sustainable development principles, assessed against a checklist

D.2 Energy Efficient Building forms :- which encourages housing development within those parts of the main settlements where there is good access to passenger transport or community facilities and services to adopted of energy efficient forms such as flats, town houses, terraces or courtyard forms or a mixture of those.

D.3 Energy Efficient Layout :- encourages consideration of orientation and avoidance of overshadowing of or from other buildings.

D.7 Design for Water Conservation :- which requires development to have regard to water conservation in the design of proposals.

The Sustainable Communities Supplementary Planning Document includes the checklist that has been used in the production of this statement. This sets out a number of non-statutory policies on sustainability.

3.0 Assessment against Sustainability Checklist

The Sustainability Checklist sets out issues to be considered. It identifies those which apply to different types of development. In particular, only certain criteria are applicable to developments of 9 houses or less. These are addressed as follows. In each case the questions should be preceded by the phrase “Does this development”

1. Land use

Provide local facilities or favour the central town over green field sites?

Avoid loss of open land or urban open space?

Use derelict/under-used/vacant land or buildings?

Encourage a long period of use?

As set out in the planning statement, the use of the land will for housing contribute positively to sustainable development objectives. It represents the re-use of a redundant school site in an accessible location. Detailed design can ensure that the development is durable in its construction.

2. Minerals and soils

Include a proper site investigation to identify areas of soil contamination where necessary, and take correct measures for decontamination?

The application is supported by a geo-environmental desk-based assessment. This does not raise any issues in terms of ground conditions, although it recommends an intrusive investigation, including asbestos survey, before development is undertaken.

3. Waste

Reduce the size of the waste stream, including toxic and contaminated waste, and ensure that what is produced and used is safely handled?

Encourage the use and purchase of recycled, recyclable, and durable products?

The redevelopment of the site is unlikely to yield any toxic waste streams, although it is possible that asbestos may be present; this would need to be properly handled and removed.

Waste minimization could be achieved by the use of re-claimed materials from the demolition of the existing buildings within the new development. This may be appropriate if the quality of existing bricks and roof materials is suitable. Other materials could be used as part of the sub-base of the proposed parking area.

4. Energy

Maximise energy efficiency in buildings?

Avoid overshadowing other buildings?

Generate energy sustainably

Consider the full energy costs of extraction, manufacture, transport, use, and disposal both in construction and operation?

Detailed design of the buildings can ensure maximum energy efficiency. The energy efficiency of the new dwellings will be considerably greater than could be achieved through conversion of the buildings.

The grouping of the units in a terrace will assist energy efficiency. The layout of the development, whilst oriented with windows facing east and west, still allows for an element of solar gain given the disposition of surrounding buildings.

The proposed units are located well away from existing buildings and will not cause any overshadowing.

Energy generation options are considered further in Section 4.0 below.

5. Air, water, noise, light

Reduce the need for water?

Protect the hydrology of the site and surrounding area and prevent flooding?

Reduce noise levels?

A number of options exist to reduce water consumption. All units would be fitted with water meters and storage butts of the collection and use in garden areas. 'Grey' water re-cycling may also be possible given the size of each plot.

Permeable surfaces for car spaces and driveways could be used in order to minimize run-off into the existing surface water drainage.

The development itself will not generate any unusual noise. Noise attenuation by the use of suitably specified glazing units may be appropriate given the juxtaposition of the site with adjoining roads.

6. Nature

Protect designated sites and other sites/features of nature conservation importance?

Conserve and make positive provision for nature conservation?

Ensure that waste products do not harm wildlife?

Avoid the use of tropical hardwoods?

No ecological assets will be adversely impacted by the development. The site is not a designated site and contains no features of nature conservation interest. The development offers the opportunity for additional soft areas to be introduced, new tree planting, and a native hedgerow around the boundary.

As noted above, waste products will be minimized and carefully handled to avoid any ecological impact. The use of hardwoods be avoided in detailed specifications once the design detail emerges.

7. Local needs

Meet local needs?

The development will contribute to meeting overall housing targets within the District.

8. Basic needs

Work towards the eradication of poverty and a decent quality of life for all?

The provision of additional housing is a key plank of the Government's sustainable development agenda as a crucial basic need.

10. Health

Avoid unsafe building materials?

As noted above, if any asbestos were present, this would need to be removed with requisite attention to health and safety considerations.

11. Access

Improve access to buildings for all?

The proposals will comply with all standards in respect of inclusive access and, given that the scheme is a new build proposal, can address inclusive access issues throughout the detailed design process to a much greater extent than would be the case of the proposals were for conversion of the property.

12 Safety

Reduce crime and increase the public's perception of safety?

All of the external spaces benefit from passive surveillance and also introduce much better surveillance of the adjoining highway. Detailed design would ensure a high quality of security hardware to windows and doors.

14. Participation

Benefit the community as a whole?

Overall, the scheme will allow for the re-use of an otherwise redundant site which, if left, is likely to be prone to vandalism and trespass. Bringing the site back into active use will therefore benefit the community as a whole.

15. Leisure, cultural and social activities

Protect and improve the settings and features of archaeological and historical interest?

The site is not within a conservation area, nor are the buildings listed. No features of archaeological value will be adversely affected by development. Whilst the buildings are considered to have local interest by the LPA, there are significant sustainability

advantages in redevelopment, including better energy efficiency and much improved internal living conditions.

16. Aesthetics

Protect designated landscape sites?

Integrate well into its surroundings?

Include good standards of screening and landscaping?

Take opportunities to improve the street scene or appearance of the area?

The site is not the subject of any landscape designation. Whilst in outline only, the development offer the opportunity of a high quality of landscaping and, given the protection of existing trees, the layout will ensure that the scheme is well integrated into the urban design context of the site.

Given the above assessment, it is considered that the site will positively contribute to the meeting of sustainability objectives in virtually all aspects.

4.0 Energy Minimisation and consumption

A number of appropriate solutions to low carbon space heating would be possible, by means of either heat pump or wood fuel boilers, combined with under-floor heat distribution, and zero carbon electricity generation by green tariffs from recognized suppliers (such as Good Energy).

The roofs of the houses are orientated to the east and west which is considered to be unsuitable for the installation of PV arrays, as they will not be able to function to their optimum output level.

A detailed proposal for the Code for Sustainable Homes assessment of the various options would be carried out after detailed design at the pre-construction phase when specific technical design information is available. This proposal would include a heat loss assessment/ calculation to determine the annual and seasonal heating and electrical requirements and determine the target CO₂ emissions reduction.

The incorporation of high efficiency lighting systems in the design, the maximizing of insulation and the appropriate use of high thermal mass construction materials would help to significantly reduce energy use of the units and hence assist in the reduction of CO₂ emissions.

A full Energy Assessment cannot be undertaken given that the buildings have not been designed. From experience elsewhere, however, typical U values consistent with CSH level 3 and a peak heat loss rate of 40-45W/m² can be used to consider the feasibility and sizing of plant necessary. Further assessment would be needed once the detailed designs for the scheme emerge.

New build houses are likely to be best heated by individual wood pellet boilers to serve under-floor pipe networks and solar hot water storage tanks. As standard, these boilers would be manually fed but an option for auto-feed systems with semi-basement pellet stores beneath patios could be considered. From experience elsewhere, the heat load at a maximum would be some 9kW. A manually-fed pellet boiler that will modulate between 3kW -10kW located in the kitchen or living room area to feed the UFH central heating system and a hot water cylinder would therefore be appropriate. Approximately 2.5 tonnes of pellets would be required each year and, if compared with gas heating, some 2.5 tonnes of CO₂ per year would be saved.

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