

New



Revision



Core Business

Environmental and Sustainability

Scope:	This policy applies to Circle 33 Housing Trust, Old Ford Housing Association, South Anglia Housing and Wherry Housing Association
Effective Date:	September 2007
Review Date:	September 2010
Signed Off:	Group Policy Forum 27 th September 2007
Last Update (Summary):	n/a
Author:	Alistair Jones, Head of Development Strategy and Policy
Policy Owned by:	Policy
KLOE:	Natural Environment KLOE
QAF (Supported Housing):	n/a
Statute:	
Regulatory Code:	3.4 3.7
Consultation:	SMPRG, GPF

Environmental and Sustainability Policy

1 Scope

- 1.1 Circle Anglia is a large, established social landlord with owned and managed properties in London, the south-east of England and East Anglia. As a major provider of housing, related services and employment Circle Anglia has a responsibility to promote environmental sustainability within the buildings we own and manage and to demonstrate our commitment to achieving “environmental best practice”. We support the Government and the Tenant Services Authority (TSA) objectives in improving environmental standards.
- 1.2 This policy is an integral part of our corporate business strategy and we will ensure that activities at every level are designed to promote and achieve environmental sustainability.
- 1.3 This policy will primarily focus on the built form i.e. our existing stock and new build programme including property owned and managed by the Supported Housing Department. This policy does not address the impact of economic and social factors on our residents and the wider “community sustainability” agenda.
- 1.4 Our challenge in managing our extensive housing stock and delivering a large new-build development programme is to drive down capital and maintenance costs and drive up construction quality. Our aim is to achieve better and more consistent products and services to improve the quality of life for our residents and others in the community. We will also meet rising environmental standards driven by the “Climate Change” agenda. We are working with strategic partners who can help us to build homes more efficiently, innovatively and cost effectively through a range of procurement routes.

Responsibility

- 1.5 The Board and Group Executive Team are ultimately responsible for this policy.
- 1.6 All staff have the responsibility of understanding and promoting the policy.

2 Policy Statement

- 2.1 Circle Anglia works to improve people's life chances through providing great homes and reliable services to residents, and through helping build sustainable communities where people want to live and work.
- 2.2 Circle Anglia recognises that a significant environmental impact results from our extensive housing stock and new development through the consumption of energy and water, the use of transport and materials and the production of waste including carbon.
- 2.3 We take account of environmental protection factors in maintaining, refurbishing and increasing the energy efficiency of our existing housing stock as well as in planning, designing and building homes. We enable residents to operate their homes and heating systems efficiently.
- 2.4 We actively reduce the environmental impact of our work - ranging from the provision of energy efficient homes to environmentally friendly offices
- 2.5 We are committed to purchasing and sourcing materials locally and using local labour.
- 2.6 We will encourage staff awareness of sustainable energy best practice and to promote 'ownership' of energy efficiency by housing managers, senior managers and other non-technical staff
- 2.7 In defining our policy we will be aware of
 - Legal and statutory requirements
 - Appropriate technology and innovation
 - Operational requirements of all departments
 - Views of all our stakeholders
- 2.8 We are also introducing a robust assessment and reporting mechanism to assess performance against "environmental best practice" standards.

3 Building new homes

- 3.1 Circle Anglia designs and constructs homes to be comfortable, durable and of low maintenance and in developing sustainable and environmentally friendly new homes we ensure a better quality of life for our residents both now and in the future. We are committed to achieving continuous improvement in our construction, procurement and management systems and use Best Practice,

Innovation and Sustainability checklists at project inception to highlight options that are available and identify those that best fit the project scope and budget.

- 3.2 We review our methods of procuring new homes and publicise our successful innovations to influence other home providers. We monitor and assess the benefits to residents of innovations in terms of cost, savings and improved comfort.
- 3.3 We will review the lifetime costs of design and new components and systems taking a long-term view about maintenance and management costs.
- 3.4 For new homes with grant funding we always carry out a Housing Quality Indicator's assessment and meet the former Housing Corporation's Schemework Development Standards (SDS) We also often exceed Building Regulations by specifying high standards for energy efficiency, environmental sustainability and acoustic performance. The main tool which we use to demonstrate environmental sustainability is EcoHomes assessment. The minimum standard for all formerly Housing Corporation funded new build properties in 2006/08 is an EcoHomes rating of 'Very Good' (See Appendix 2).
- 3.5 During the development process we
 - Carry out an environmental appraisal of existing sites during the planning process and seek to encourage ecological enhancement and biodiversity through the landscaping and planting of external areas.
 - Use natural, sustainable and renewable materials with low embodied energy (wood from managed sources, bath panels from recycled yoghurt pots!) which also reduces toxic emissions and allergic reactions.
 - Reduce energy use, water use, construction waste and carbon dioxide emissions
 - Build to Lifetime Homes standards making homes more easily adaptable as places to live and work in the future.
 - Monitor contractors in sourcing employees and materials locally to support the local economy and promote construction and development training initiatives
 - Ensure good environmental practice and Health and Safety via the Considerate Constructors Scheme

Continuous Improvement

- 3.6 External stakeholders and internal departments are working together to review existing and more recently completed schemes. Feedback from project

reviews helps to inform revisions to Design and Technical briefing documents for new build projects. A cross Departmental Working Group looked at increasing the performance in use of components and products to reduce long term maintenance costs. The Group also responded to the potential impact of changing weather patterns on our housing stock. We are tackling the more frequent events such as higher winds and longer and heavier downpours by specifying stronger roofing detailing, providing larger rain water pipes and guttering and by increasing water attenuation and storm drainage systems. We are seeking greater input from the Environment Agency and better information about present and future risks from building adjacent to the “flood plain”.

Energy

3.7 Buildings forms and layouts are designed to maximise energy conservation and benefit from passive solar gain. We are producing highly insulated and airtight building envelopes together with energy efficient heating and electrical systems. These measures improve the thermal performance of our homes and reduce the use of gas and electricity and therefore the running costs for end users.

3.8 We will:

- Achieve NHER energy ratings between 9 and 10 and SAP ratings 5 points above the former Housing Corporation’s recommendations
- Provide a Carbon Index for all new developments
- Use low energy lighting, energy efficient white goods and enhanced insulation to reduce CO₂ emissions;
- Use Best Practice energy efficiency construction details
- We continue to inform and educate residents about energy issues and efficiencies they can achieve in their homes

Energy from renewable sources

3.9 Circle Anglia with contractor partners will continue to investigate new and promising technologies and products as they come onto the market. We have explored sources of renewable energy on several pilot projects notably Mabley St, Hackney and Cambourne, Cambridge. On these two projects we have installed solar panels to supplement hot water supply and photo voltaic cells for electricity generation. We will achieve EcoHomes Excellent on current proposals for future schemes where 10% of energy will be from renewable sources as required by the London Plan (See Appendix 2).

Energy Supply Companies (ESCos)

- 3.10 On a number of large developments combined heat and power plants (CHP) are required as part of gaining planning consent and meeting renewable energy requirements. The power supply to these developments comes from a single source and supplies occupiers and landlords. We are talking to Energy Supply Companies about them taking over long term running and management of the CHP system in return for a capital contribution for supply and installation of the plant. This contribution is based upon the likely take up of supply through the ESCos by residents etc and the cost to the user is pegged at average supplier cost.

Water

- 3.11 Water is becoming an increasingly scarce resource as demand continues to increase. Our homes include low flow showers, spray taps and dual flush WC's as standard. All new homes have water meters. Recycling of rainwater reduces mains use for garden watering - rain water storage butts are provided to all houses
- 3.12 Setting EcoHomes targets "Very Good" encourages water efficient approaches.
- 3.13 Water supply companies should be consulted about scheme specific water saving measures
- 3.14 Prefabricated construction OSM /MMC reduces wet construction and water use. Hard landscape areas, where possible, to be made permeable to allow water to soak through and reduce surface run off. Landscaping materials include drought resisting plant species

Waste

- 3.15 On three development programmes independent consultants have tracked trends across projects for 'process and material waste' via cost of preliminaries and skip usage on each project as a percentage of build cost. We ensure that waste minimisation is set as a project objective.
- 3.16 On all projects we are working with project partners to:
- Minimise waste produced on site and monitor the use of skips;
 - Maximise the opportunities for recycling materials during site operations (e.g. by reusing existing hardcore, recycling of wood and

plasterboard); recycling management – timber and plaster separated at source into identified containers – reducing cost of land fill.

- Project Teams will analyse successes of waste minimisation during construction and findings will be incorporated into new projects.
- We support recycling by residents by providing collection points for paper and garden waste and utilising LA recycling strategies.

4 Improving energy efficiency of existing homes

4.1 Circle Anglia is providing considerable investment in its large, varied and geographically diverse housing stock to meet challenging programmes of improvement through component replacement and planned and cyclical maintenance.

4.2 We are concentrating on raising the overall standard of our stock by means of a whole-stock energy efficiency and affordable warmth strategy that embraces building fabric, servicing systems (environmentally sound heating, hot water, ventilation and lighting) and investigation into the use of renewable energy, in both new and existing dwellings. Circle Anglia believes that this step is essential if carbon reduction, Decent Homes and affordable warmth targets (including reduced running costs to residents) are to be met by the development of a comprehensive, medium-term strategy for the stock (2006 to 2012).

Decent Homes and the Sustainability Approach: Decent Homes, decent places

4.3 Decent Homes is a Government led initiative, introduced in 2000. All housing owned by housing associations within England must be brought up to this Standard by December 2010. Decent Homes is a 'minimum standard' and the government recommended in 2004 that social landlords should aspire and plan for 'decency plus'. In other words a better standard that also takes account of the views and aspirations of residents. To date Circle Anglia have brought up 800 homes to Decent Homes standard in 05/06 and a further target of 1300 homes per annum is planned to meet the 2010 target.

4.4 We are using the latest stock condition database to assist in the programming of Decent Homes works within geographical areas to ensure effective use of resources over time. Circle Anglia's Decent Homes programme gives us the opportunity to carry out additional energy efficiency works to increase levels of thermal comfort (see Appendix 1 - Impact versus Cost)

- 4.5 We are considering Circle Anglia's capital and maintenance costs, residents' fuel use and fuel costs, and the carbon dioxide emissions associated with the use of energy in the stock. Rather than focusing on a particular site, issue or technology we are considering energy efficiency, building fabric and building services as they affect Circle Anglia as a whole. Circle Anglia will deliver affordable warmth to address fuel poverty, reductions in carbon emissions and environmental sustainability, whilst also meeting other key targets. We are improving the specification of our reinvestment programmes and re-let works to ensure increased energy efficiency in properties and reduced utility costs to residents.
- 4.6 Across the Group we have measured average SAP ratings (annual fuel cost for heating and hot water per square meter of floor space) for general need properties. We have established annual improvement targets.

Stock Condition Data

- 4.7 The stock condition data base represents a measure of a percentage of our stock and helps us to establish improvement works already completed and also work which remains to be done. At the end of each Decent Homes works package the condition of the stock is recorded to confirm its measure of "decency". This is an ongoing process and will continue until all properties have been upgraded.
- 4.8 The table in appendix 1 indicates a number of potential energy saving products. Circle Anglia takes a measured approach to elements of work which provide sustainability and are measured to consider the repayment benefit and cost savings over a longer period of time. The relationship between payback periods, long term benefits and quick wins will often depend on the scheme type and design. In the current market where costs are of paramount importance, the cost benefit ratio is not always easy to justify. The opportunity to provide an "affordable level" of improvement must be considered by teams and project leaders.
- 4.9 We will encourage our residents to utilise public funding for energy saving works. Where we can demonstrate that the investment is matched by the benefit to our residents we will:
- use condensing boilers in the installation/replacement of gas central heating
 - install thermostatic radiator valves
 - provide double glazing with low emissivity glass

- install low energy lighting, draught stripping and loft insulation lagging of pipes and tanks
- provide low water consumption fittings (e.g. spray taps, low flow showers, low capacity baths, dual flush toilets, rainwater recycling)

5 Circle Anglia's Offices

5.1 Circle Anglia will identify and provide facilities that support its policy by:

- using only recycled stationery and we recycle our waste paper and toner cartridges
- retaining and re-using furniture and equipment for our offices
- using electronic mail communication and an in-house Intranet system in place which reduces the quantity of paper and photocopying used.
- continuing to use and promote the use of Electronic Document Management systems and the Intranet to reduce the amount of paper that is reproduced and retained
- we are extending, improving and integrating IT systems across Circle Anglia
- reducing office waste, monitoring the use of resources, phasing out use of ozone depleting substances, use sustainable sources and comply with EU and international trading rules, use of the European Commission's mandatory energy labelling scheme.

Computer and IT equipment

- 5.2 Disposal by Transfer: Our method of disposing of computer equipment is to find other departments that can use the equipment. Efforts are made to ensure that IT equipment is utilised to maximum benefit of the group and steps are made to see if the equipment could be used elsewhere.
- 5.3 Disposal by Donation: Where equipment has limited re-sale value, consideration should be given to whether it can be donated to any charitable or community project.
- 5.4 Disposal by Recycling: If the equipment cannot be re-used, it is recycled or disposed of in an environmentally friendly manner.
- 5.5 Energy saving: We are currently procuring new PC's and monitors and we will replace all CRT monitors in a not too distant future. The big advantage with TFT monitors compared to CRT is that they consume less than half the energy. With the new PC's we are looking into power efficient and fast processors which means that during operation the power consumption will be less and staff will be more likely to shut down their PC's if the booting time is

reduced. With old equipment we are using two organisations - Computers for Charity and Schools Connect. They collect old IT equipment and refurbish them and sell them to schools etc.

Energy Efficiency

- 5.6 We will improve energy efficiency of new and existing office premises by:
- conducting an energy audit of our existing office accommodation and will where necessary introduce more energy efficient strategies
 - seeking to purchase a proportion of “green” energy under the new long term purchasing agreement for energy for Circle Anglia where it provides good value for money
 - seeking to provide through the offices strategy review any new office accommodation accessible to transport links and providing a comfortable, internal environment at an affordable cost with low energy designs for lighting, heating and ventilation systems.
 - regularly providing advice and information for staff on energy efficiency in the office on how to reduce waste by recycling, switching off computers and lights when not in use.
- 5.7 All Circle Anglia group companies are entitled to purchase against Procurement for Housing contracts. Currently being evaluated or used within the Circle Anglia group include contracts for office supplies and computer equipment, vehicle leasing, mobile phones and energy supplies.

6 Travel

- 6.1 We have a number of designated essential car users and have few parking spaces available at our offices in London, encouraging staff to use public transport where this is available. In the Eastern Region the wide geographical spread of our existing stock and new build developments requires a greater take up of essential car use to access locations less accessible by public transport.
- 6.2 We will examine opportunities to incentivise use of lower emission cars
- 6.3 We will encourage incentivise car sharing or car pools
- 6.4 We promote the use of bicycles by offering bike loans, allowances and mileage rates as an alternative to car travel as well as facilities for bike parking.
- 6.5 Our use of video conferencing between all offices is an alternative to travelling

7 Spreading the environmental message

- 7.1 Circle Anglia will regularly communicate with our residents on environmental issues. This will be through the residents' newsletters, posters, leaflets etc.
- 7.2 We will work with local authorities on initiatives to recycle household waste.
- 7.3 We will raise staff awareness so that they can promote our environmental initiatives to residents and other stakeholders.
- 7.4 We will maximise publicity for our pilot innovations and publish the cost benefit results

8 Monitoring

- 8.1 Circle Anglia has achieved Construction Client Charter Status. The ongoing monitoring of the environmental aspects of the Charter will relate directly to this policy

Environmental performance targets

- 8.2 Delivery of this policy will be demonstrated by setting quantifiable environmental targets and then monitoring progress in achieving them. With RLF we are continuing to monitor project KPIs including cost and time predictability, physical waste, innovation uptake.

9 Equality and Diversity

- 9.1 It is essential to recognise that customers of all races, ages, religions, gender, sexual orientation and disability should be treated equally and fairly.
- 9.2 All customers will have access to this document upon request or from our website www.circleanglia.org/residents
- 9.3 This document and accompanying leaflet can be translated or provided in alternative formats (e.g. Braille, large print, audio) upon request.
- 9.4 Equality and Diversity training is mandatory for all staff.

10 Publicising the Policy

- 10.1 Circle Anglia publicises its policy on Environmental and Sustainability to residents and staff in a number of ways:
 - Resident Handbook
 - Leaflets

- Resident Newsletter
- Resident Website
- CIRANO
- Policy Briefings and
- Training

Glossary

Housing Quality Indicator's Assessment	The Housing Quality Indicator system (HQI) is a measurement and assessment tool designed to allow housing schemes to be evaluated on the basis of quality rather than simply of cost. The HQI assesses the quality of a housing project using three main categories: location, design and performance.
Schemework Development Standards (SDS)	The Scheme Development Standards (SDS) set out the former Housing Corporation's requirements and recommendations for all housing projects which receive Social Housing Grant (SHG). It is a guide for housing associations and their partners.
EcoHomes	See Appendix 2
Lifetime Homes	Lifetime Homes make life as easy as possible, for as long as possible because they are thoughtfully designed. They are homes for everyone and bring benefits to anyone who lives in them because of the individual choices that they make possible. The flexibility and adaptability of Lifetime Homes accommodate life events quickly, cost-effectively and without upheaval.
Considerate Constructors	The Considerate Constructors Scheme is the national initiative, set up by the construction industry, to improve its image. Sites that register with the Scheme sign up and are monitored against a Code of Considerate Practice, designed to encourage best practice beyond statutory requirements.
NHER	See Appendix 2
SAP and Carbon Index	See Appendix 2
Combined Heat and Power Plants	CHP is the use of a heat engine or a power station to simultaneously generate both electricity and useful heat.
MMC / OSM	Modern Methods of Construction (MMC) are those which provide an efficient product management process to ensure more products of better quality in less time. It has been defined in various ways: pre-fabrication, offsite production and offsite manufacturing (OSM).
Decent Homes	A Decent Home is one which is wind and weather tight, warm and has modern facilities. The Government has made this standard the cornerstone for improving people's quality of life in the home.
CRT and TFT	Types of computer screens

Connected Policies:	Development Procedure Guide Design and Technical Brief
Forms and Letters:	
Leaflets:	

APPENDIX 1: IMPACT VERSUS COST

Initiatives which provide long term benefit usually come with cost and budget implications are often reason enough to reduce their use. The table below indicates material or products which would provide benefit. A number of the options tabled would require a wholesale change in the way in which we provide and even procure our products and systems. There are other items for which the correlation between cost and impact are well matched. The impact for the end user can sometimes be immediately apparent and other times provide a slower and longer-term payback in both cost saving and benefit or well being.

Key to table:

- **Reasonable:** Indicates that the correlation between achievability and cost are worth consideration and implementation.
- **Low:** Indicates that the correlation between achievability and cost are high. The ability to provide benefit is possible within the existing Decent Homes programme.
- **High:** Indicates that the correlation between achievability and cost are low and difficult to achieve. The ability to provide benefit is unlikely within the existing Decent Homes programme.

Elemental Proposal	In Practice	Positive Impact	Cost
Thermostatic radiator valves. Undertaken as part of a Central Heating replacement programme or as an Independent upgrade to existing systems. Energy saving measure.	Yes	Reasonable	Reasonable
Energy efficient boilers Replacement of boilers beyond their reasonable life with Low emission and heat saving systems. Found to be energy saving more efficient, payback on cost long term however effectiveness immediate.	Yes (partial)	High	High
Low energy lighting Replacement of communal and individual lighting with Energy efficient fittings. Energy saving source payback good over short term.	Yes	High	Reasonable
Loft insulation to 200mm Programme to replace tired or non existent insulation up to 200mm. Energy efficiency heat saving. Payback good long term benefit.	No	Reasonable	Reasonable
Cavity wall insulation Expensive but beneficial, measured assessment of stock required for this programme. Energy saving measure. Payback longer term.	No	High	High
Temperature controlled hot water. Temperature limiters fitted to existing systems or new installations,	No	High	Reasonable

Energy saving measure to ensure efficiency of heating devices.			
Draught proofing Funding available for draught proofing openings. Energy saving device measurement difficult.	No	Reasonable	Low
Tin foil reflection (Heating) Possible to add to TRV replacement or at radiator renewal stage. Minimal cost minimal heat saving.	No	Reasonable	Low
Double flush systems. Decent Homes replacement programme work. Water saving device immediate effect.	Yes	Reasonable	Reasonable
Water restricting devices (older systems) As above as part of Decent Homes work or on elemental replacement of bathroom elements. Water saving measures	No	Reasonable	Low
Shower installations Offered as part of the Decent Homes package as alternative to baths. Water and energy saving measure.	Yes	High	High
Reduced capacity baths Offered as part of the Decent Homes Package as alternative to existing bath. Water saving measure	Yes	High	High
Shower taps to dwellings Diversion of water flow and reduction of pressure. Water saving measure.	No	Reasonable	Low
Press shower taps to shared units Where communal systems operate a policy of shared facilities. Should be considered as standard fittings.	No	High	Reasonable
Install water meters Driven by the water utility and to be fostered by Circle/Anglia. Possibly at time of void and refurb. Water saving measure.	No	High	High
Timed light switches In place to a number of communal facilities Energy saving measure successful and controlled.	No	Reasonable	Low
Heat recovery ventilation Systems replacing existing heat recovery units. Minimal number. Energy saving measure.	No	High	High
Rain recycling Water butts and water collection systems. Deep trough surface drainage, soakaways, Water saving measure. Easily achievable.	Yes	Reasonable	Low
Purchase of A rated domestic appliances. Ability to drive this through our residents is difficult however new build and possibly agency managed stock can be influenced. Energy saving measure, driven through Circle/Anglia.	No	High	Reasonable
Solar Panels On new build only where feasible. Energy saving measure.	No	High	High

APPENDIX 2: STANDARDS

EcoHomes

The main tool which we use to demonstrate environmental sustainability is EcoHomes assessment. The minimum standard for all former Housing Corporation funded new build properties in 2006/08 is an EcoHomes rating of 'Very Good'. The EcoHomes rating system has been developed by the Building Research Establishment (BRE) as a tool for assessing the environmental sustainability of new homes and major refurbishments. Seven categories (energy, water, pollution, materials, transport, ecology/land use and health and well-being) are marked and the scheme awarded either a pass, good, very good or excellent. Many of Circle Anglia's schemes in the 2006 / 2008 programme will achieve a Very Good rating and we are seeking new ways to improve our performance in this area. Circle Anglia has sponsored two employees in achieving BRE EcoHomes assessor status.

Code for Sustainable Homes

The Code and guidance manual was launched in Dec 2006 and will be operational in April 07. All homes receiving Government funding will be required to meet the Code and all local authorities will be encouraged to apply similar standards for private homes. As discussed above former Housing Corporation funded homes in the 2006-2008 programme satisfying the EcoHomes 'Very Good' criteria will be deemed to comply with the Code level 3*.

There will be no exact cross - read between the Code and EcoHomes. The Code will have a five star rating system for homes on energy efficiency and environmental sustainability, which will easily translate to homebuyers. The first star rating will be higher than Building Regulations, with the highest star rating requiring cutting edge technology to achieve carbon neutral development.

The Code will comprise six compulsory elements: energy efficiency in the fabric of the building and appliances in the building, water efficiency, surface water management, site waste management, household waste management and use of materials. Additional elements such as Lifetime Homes, increased sound insulation and higher day lighting standards may be required to achieve the higher star ratings. New publicly funded schemes will be expected to achieve a three star rating which will approximate to EcoHomes 'Very Good'.

Other definitions

The **NHER** of a dwelling is based on the total annual fuel use, for heating, hot water, cooking, lighting and the use of appliances, per square metre of floor space, under standard occupancy. NHERs are quoted on a scale of 0 (poor) to 10 (excellent), and are location dependent.

SAP is annual fuel cost heating and hot water per m² of floor space.

APPENDIX 3: CIRCLE ANGLIA PROJECTS

Mabley Street, Hackney

CA developed 12 homes 6 homes that were fully compliant with the BRE's Integer homes standard. 6 conventional houses were built and act as a comparison. Under floor heating, solar and photo voltaic panels, grey water recycling Information technology / monitoring systems

The project achieved 21 (of a possible 22) credits in the UK's Environmental Standard Award and the maximum possible NHER and SAP ratings.

Cambourne Village, Cambridge

Included 16 low energy steel framed houses

Light Grade steel frame 65% recycled steel and is itself 100% recyclable Cold-formed sections are cut to exact lengths in the factory to reduce waste.

Solar and photo voltaic panels, highly insulated timber clad wall panels (20% better than BRegs), whole house heat recovery system, room in the roof, unheated sun conservatory

Peartree Estate, Welwyn Garden City,

Timber framed construction - achieved EcoHomes "Good". Solar panels used on 4 houses.

Roe Hill House, Hatfield

Solar panels used to supplement hot water from communal boiler in supported care home

Wellfield Rd, Hatfield

Photo voltaic panels used to power batteries for external lighting

London Wide Initiative (pre-start on site)

2000 homes, 10% renewable energy, EcoHomes Excellent, 100% MMC (light grade steel frame) including FABs