



Audit of Ecology Building Society's Environmental Policy

May 2015

Carried out by Emma Webster
Yorkshire Energy Partnership

Emma.webster@energypartnership.org.uk

Telephone:01904 545030

Tower House, Fishergate, York, YO104UA



Environmental Audit for Ecology Building Society

An audit of Ecology Building Society's environmental policy took place on Thursday 14th May 2015 (the Ecology Building Society is referred to as 'EBS' or 'the Society' hereafter in this report).

In support of the Society's aims to have a robust environmental policy there is an internal requirement to have the policy periodically audited by an external party. Previous audits have taken place in 2005, 2007, 2008 and 2011, and it was decided that a repeat of the process was now due.

Audit objective

In 2014 EBS implemented the Investors in the Environment (iE) accreditation, and were awarded 'Green level' in January 2015 after an onsite audit in December 2014. The iE accreditation forms an Environmental Management System (EMS) which primarily covers the use of the Society's operational aspects, so will be given due consideration in this audit and report.

This audit will have a broader focus than this operational iE EMS however, as it will focus on the environmental policy (which has a broader scope than iE alone) as well as any other issues pertaining to environmental management. As well as ascertaining if EBS actively follow their policy and if their policy is in need of review, the audit will highlight areas of best practice, and make recommendations for improvement where required.

There are no external standards with which this needs to comply.

The audit report will be provided to the Chief Executive who will provide comment. The report will then be communicated through the management forum and cascaded to all staff. For the benefit of members and wider stakeholders, it will be published on the Society website.

Scope of this audit

The scope of the audit was the Society's singular office, based at 7 Belton Road, Silsden, Nr Keighley, BD20 0EE.

EBS is a mutual society which takes in investment money and provides mortgages to members. The projects which EBS supports are beyond the scope of this audit, although the principles, by which the Society operates this model, will be considered.

Documents examined

The following documents were considered during the course of the audit:



Ecology Building Society's Environmental Policy Statement 2014
Memorandum of Ecology Building Society
Annual Review 2014
Environmental Audit Report 2008
Environmental Audit Report 2011
Corporate Plan 2015
Lending Policy (July 2014)
Procurement Policy (February 2013)
Statement on Corporate Responsibility Policy (2007)
Travel Plan (2014)
Investors in the Environment EMS documents (targets, resource use data and action plans) (2014/15)
Investors in the Environment Audit Report (2015)
Thermal Imaging Survey Report (2015)
Website
HQ Environmental Specification
The Landscaping Design Report (2005)

Interviewed on site

The following members of staff were interviewed during the audit:

John Ainley (compliance)
Hilary Smith (reception and procurement)
Neils Corfield (the permaculture gardener, who is not directly employed by the Society)

Recommendations of last audit

The last audit which was carried out in 2011 recommended that EBS implement a formal process for purchasing. It ascertained that although purchasing decisions had been made with the right intentions, they did not always have a firm environmental footing. It is good to see that a formal process is now in place, and this will be discussed further in the report.

The audit also recommended that formalised environmental awareness training should also be implemented throughout the organisation, in order to support their aim for sound environmental awareness at all levels of decision making. No formalised training or strategy has been put in place to date, however 'in house' briefings and on site visits are used to raise awareness and engage staff. The approach to training will be discussed further in the report.

There was also a recommendation to put a formal EMS in place, which has been implemented in the form of the iiE Green accreditation. This decision and process will also be examined further in the report.



AuditReport

1 Context

EBS is a mutual building society which was originally setup in 1981. They are now based in a purpose built office building in Silsden near Keighley. Reflected in their name, the Society has always been guided by the same ethos-to build a more sustainable society through their business activity.

1.1 The Society has 23 members of staff and very low staff turnover, which tends to suggest a satisfied workforce. Conversations with staff during the site visit would support this assumption. Due to the continuing success of the business, EBS are due to expand their team of mortgage advisors and have plans to extend the property to accommodate this growth.

2 EnvironmentalPolicy

The environmental policy meets best practice recommendations in that it sets out both the high level environmental aims of the organisation as well as offering specifics in a concise and organised way. The policy commits to continual improvement and legal compliance, it has been reviewed within the last 12 months and is signed by senior management.

2. This audit report will examine the key areas of the business and will refer back to the environmental policy throughout, to show any areas of strength and weakness in delivery and communication of the policy.

3 Memorandum of Ecology Building Society

The memorandum clearly sets out the principal purposes of the Society, with the furthering of the ecological policies given attention throughout. The ecological policies are defined as; the saving of non-renewable energy of other scarce resources, the growth of a sustainable housing stock and the development of building practices, ways of living or uses of land with a low ecological impact.

3. The memorandum, which is akin to a formalised mission statement, suggests that the environmental aims of the organisation are enshrined and form the bedrock of the Society's activities, and fully supports the organisations environmental policy.

4 The Lending Policy

The lending policy is designed to combine the requirements of prudent lending with ecological and environmental concern, as well as ensuring compliance with financial legislation. The lending activity is aimed at fostering the creation and maintenance of sustainable housing stock and to a lesser degree supporting green enterprise. It is the practical application of the mission statement contained in the memorandum.



4.1 The criteria for lending is broken down into 5 broad categories; sustainable housing practices, Sustainable lifestyles & economic activity, ecologically positive projects and ventures, lending to make or sustain the market and difficult to sell properties.

4.2 Lending may also be rejected on ecological grounds, on a qualitative basis.

4.3 Discounts are applied to the standard mortgage rate for new build and renovation if it meets particular standards, which follow established, certified criteria. These include properties which achieve high ratings with the following schemes; Energy Performance Certificates, Code for Sustainable Homes, Passivhaus, Eco-Homes and AECB. These certification types are largely concerned with the reduction of energy usage and therefore carbon emissions.

4.4 The sustainable housing practices that are supported include sustainable building technologies such as timber frame, high insulation, use of micro-renewables, reclaimed materials, cob, rammed earth, mud block and straw bales.

4.) These aspects all support the Society's environmental policy which sets out the requirement to pursue credit provision activities that result in positive environmental outcomes and promote sustainable development.

4. The lending policy doesn't explicitly consider aspects of climate change adaptation, particularly the need for buildings to perform well in a warmer climate. For example ensuring properties have adequate natural ventilation (unless they are building to the passivhaus standard), and to ensure glazing and orientation minimises solar gain. Without forethought a property could potentially become unliveable in the future.

4. The Society has confirmed they will not provide lending for a property on a floodplain.

4. Integrating a mechanism for ensuring adaptation is considered would help minimise the risk of 'stranded assets' to the Society as the lender, and support their ethical stand point in terms of social responsibility. The market for adaptation services is currently weak, however the need for a plan to adapt the UK's housing stock is already urgent. The EBS could play an important role in stimulating this market and raising awareness.

4. There is a procedure set out in the lending policy for agreeing lending and a quality assurance review for each case ensures the policy has been applied. A Board Lending Committee considers new lending initiatives and cases that have been referred to them, and extraordinary cases are referred to the CEO, COO and FD for an agreed decision.

4. A robust procedure for decision making is evident, to support environmental, financial and regulatory objectives. The environmental policy sets out that environmental awareness and sustainability is evident at all levels of decision making and formal environmental training for key staff would support this, this is explored further in section 12.

5 The EBS Premises



In line with the Society's values the EBS building has been built to incorporate sustainable building practice and technologies.

Structure & building fabric

5.1 The structure was designed to make good use of thermal mass, using high levels of insulation and to be made as air tight as possible. The windows and doors are of high quality timber and low emissivity glass has been used in argon filled, double glazed units. Sustainable building materials have also been used where possible, such as the aforementioned windows and doors, areas of dry stonewall and the straw built extension to the main building.

5.2 The building fabric is in good condition, with no obvious maintenance required. The favourable condition is supported by a thermal imaging survey that was conducted in March 2014, which showed no evidence of gaps allowing draughts into the building from the outside, or poorly insulated areas.

5.3 A good proportion of the main building has a sedum roof, which supports the Society's objective to support biodiversity, as well as their mandate to promote sustainable building practices.

Lighting

5. The building has good natural light, providing a pleasant working environment with views from the main open plan area onto the gardens. Despite this, the lighting still needs to be on within the building in office areas, to maintain adequate levels for computer work.

5. The HQ Environmental specification specifies high efficiency lighting, and it's likely that the lighting installed was classed as such at the time. Lighting technology has advanced however and investigation into the latest LED technology is recommended. A capital investment would be required, however payback periods tend to be good and reduced consumption could lead to a pay back of around 2 years. Assessment of whether lighting sensors would be advantageous at this stage, where both light levels and occupancy should also be taken into account.

Heating & Renewables

5. The heating system installed is a gas fired condensing boiler which operates at relatively low temperatures. The heat is distributed via a wet radiator system and temperatures are controlled by a Building Management System (BMS).

5. It was identified during the thermal imaging audit that some of the pipes delivering hot water to the radiators would benefit from insulation to reduce heat loss (residual heat loss will be emitted to the environment but efficiency is maximised if it's conserved to the point of delivery). The heating plant is largely well insulated.

5. Hot water is also provided by a Solar Thermal installation as a way of reducing gas consumption.

5. There are 2 solar Photo Voltaic(PV) arrays in use at the site, to reduce the need for electricity from the grid. A meter display unit is installed within the reception area, to show staff and visitors how the PV panels are performing. The electricity EBS need to purchase from the grid is sourced from Ecotricity to ensure it's been generated via renewable technology.

Rainwater harvesting

5. A rainwater harvesting system is in place, to reduce the need for water from the supplier. There is however some issues with the performance of the system, as levels of water consumption have risen significantly over the last couple of years. Other possible reasons for the rise have been given consideration, such as a change in the cleaning contractor, and more members of staff using the shower facilities. While these will have also had an affect the rainwater harvesting system has shown that water is being drawn in from the mains to a degree which may suggest either a fault or a design flaw. The water consumption is monitored closely, which is good practice, and it's recommended that further investigations are made a priority until a satisfactory solution is found.

Straw built extension

5. A straw built extension was added to the original premises, in order to provide a meeting room and a space for the local community to make use of. It is a circular structure with an atrium roof and is finished internally with clay plaster which has been lime washed. The use of sustainable materials and technologies supports the Society's environmental policy, as does making the space available to the wider community.

= @

... There have been some issues with heating the space. The main wet heating system has been extended to this room however heating levels are not always adequate during the colder months. This has lead to the use of plug-in oil filled radiators, or fan heaters. The issue may be related to the thermal values of building fabric, but is also likely to be due to all of the walls being 'outside' walls (other than the small area where the corridor adjoins). The South elevation is also masked by the main building, with the North and the West being more exposed.

6 A life cycle analysis approach would be a good way to asses which additional heating methods should be used. For example would an additional central heating radiator be the best option, which would use less energy 'in use' but would involve additional pipe work and potential changes to the existing system? Or is it preferable to continue to use electric heaters which use more energy but have already been purchased, and run off renewable energy (either the PV or from energy purchased from Ecotricity)? Possible alternatives are infrared heating, or the installation of a small biomass stove. Alternatively there could be a policy that the room isn't used during the coldest months if a meeting room is available in the new extension, which is being considered.

6. It is recommended that a life cycle analysis approach is also applied to the design and planning of the new extension, to ensure a methodical environmental assessment is made and the choices undertaken can be justified.

7 External Premises

The EBS building is located on a reasonable sized site, with provision for parking and a permaculture garden.

7.1 There is an area of hard standing which provides a parking area for staff and visitors. An electric vehicle charging point has now been installed, which is a very practical way to encourage staff and visitors to make a more sustainable car choice.

7.2 The garden, as well as providing a pleasant outdoor environment for staff, supports biodiversity and is designed and managed using permaculture principles.

7.3 The Society continues to invest in their garden, with ongoing planting of dwarf apple trees, fruit bushes and honeysuckles for the bees. A new raised bed for herbs and salads will be complemented with a pleasant seating area for staff.

7.4 A suggestion for promoting biodiversity more widely and increasing community involvement would be to invite local community groups and schools to the site. They could have the opportunity to learn about permaculture and have some practical involvement with planting. In addition a family community open day would also be a good way of engaging the local community on all aspects of the work of EBS, and produce could be passed onto those that take part.

8 Environmental Management & Resource Efficiency

After previous recommendations the Society now has an EMS in place called Investors in the Environment. They achieved Green level accreditation (the top level) after being audited in December 2014.

8.1 This particular EMS is designed for SMEs to be able to manage their environmental impacts and demonstrate continual improvement, without having to invest a great deal of time and money in the process. Like other accredited systems the system is audited and certified by a third party.

8.2 The system focuses largely on resource efficiency, and EBS has to closely monitor their use of gas, electric, water, mileage, paper and toner cartridges to remain compliant. The Society has to set SMART targets to reduce their resource consumption (or become more efficient) year on year, by following a documented and evidenced action plan.

8.3 The December 2014 audit compared resource use with the 2013 figures, and EBS had achieved the following efficiencies over the time frame;

8.3.1 A 21% reduction in electricity purchased, due to the revised efficiency of the BMS, where the air handling system is used more efficiently. The second solar PV array which was installed in November 2013 is also likely to have contributed to the reduction.

8.3.2 A 54% reduction in gas use when staff numbers are factored in. In absolute terms there has been a 48% reduction. This is also likely to have been impacted by work with the BMS.

8.3.3 Consumption of printer cartridges has reduced by 35% partly due to the purchase of a more efficient printer midway through 2014; paper use by 6% and mileage by 2%.

Waste

8.4 There is a requirement within the EMS for EBS to recycle their waste. A comprehensive recycling system is in place with plastic, tin, and paper recycled and onsite composting taking place. A documented waste plan would develop this further, and information about how WEEE is dealt with should be included. IT hardware is updated periodically and utilising a social enterprise to safely and securely refurbish and dispose of IT equipment would support the Society's environmental and social objectives.

8.5 It is also recommended that EBS start to monitor the amount of waste they are producing (both recycling and landfill) and that they begin to target reductions for their waste paper.

Travel

8.6 The Society also have a travel plan as part of their EMS requirements, which sets out their intentions to encourage sustainable travel choices both for staff commuting and travel for business purposes. In line with best practice staff are mandated to consider the travel hierarchy when making business journeys and there is a target to reduce mileage by 2% year on year.

8.7 Practical actions to increase sustainable travel includes providing hybrid vehicles for the Chief Executive and Business Development Manager, an EV charging point at the office and secure cycle storage.

8.8 It is recommended that EBS introduce video conferencing/Skype for some of their meetings, and monitor the success of this. Targeting an increase of this type of meeting would support the EMS.

8.9 It is also recommended that it becomes common practice to make visitors to the site aware of the offices proximity to the train station to encourage use of public transport.

Carbon emissions

8.10 There is a requirement within the EMS to map your carbon footprint, and admirably EBS has been doing this since 1981. In 2011 they changed to a system which includes their supply chain emissions which indicates that 36% of the total footprint was taken up by services. This highlights the need to give supply chain sufficient consideration in their management of environmental impacts.

8.11 The Society has been offsetting their emissions from the outset (which is beyond the requirements of the iiE EMS) and currently do this through the Conchabamba project, a social project that supports tree planting in the Bolivian rainforest. The project aims to make it financially viable for farmers to grow indigenous tree species, rather than having to deforest to grow other crops, which ultimately damages the land.

8.11.1 Carbon offsetting is a good way to enhance your green credentials if much is being done to reduce the emissions in the first place, which would be a fair assessment of the way EBS operates. It can be controversial however, as it can be difficult to verify the reliability of information provided by the offsetting party. It is recommended that an audit of sorts is carried out on a third party before selecting them for this purpose, or if continuing their use over a number of years.

9 Additional/alternative EMS

Previous audits have recommended that EBS implement an EMS with both ISO14001 (the internationally accepted standard for environmental management) and BS8900:2006 (the British Standard for managing sustainable development) suggested. EBS have taken the decision that they don't want to pursue this kind of standard at this time, feeling the resource required isn't currently warranted as values and the importance of environmental concerns is entrenched.

The Investors in the Environment accreditation has been selected as a system to manage the operational environmental impacts of the organisation, ensure focus on resource efficiency internally and support continuous improvement.

10 Legal Register

The Society doesn't currently have a legal register in place for environmental legislation, which is something they should consider in the future. There is no legal requirement to have one but it is considered good practice and is a useful way of ensuring that you are compliant with all legislation that applies. Examples of legislation that is relevant to EBS includes the Waste Regulations 2011, Hazardous Waste Regulations 2005 & wider duty of care, as well as the Waste Electrical and Electronic Equipment Regulations.

11 Supply Chain & Procurement

As previously mentioned the last analysis of the Society's carbon footprint indicated that 36% could be attributed to the supply chain. This, along with ethical ethos and environmental policy make this an important area for EBS. The Society only uses counterparties which have been assessed for their ethical position, and they use a set methodology for this to ensure a consistent approach.

11.1 Previous audits have recommended that EBS strengthen their procurement policies and procedures to ensure purchasing decisions are consistent with the Society's ethos. There is a Procurement Policy in place, which stresses the need to minimise negative environmental impact and maximise environmental benefit.

11.2 In line with good practice the approach to procurement is informed by lifecycle analysis (how a product is created, used and disposed of). It covers: assurance of need, minimising resource use, minimising carbon footprint, supporting the local economy, supporting ethical and environmental businesses and transparency and engagement.

11.2 There is a procurement checklist for all services which are purchased (repeat or otherwise), and a 2 stage authorisation process. This requires a light touch for repeat orders and executive approval when a fuller assessment is required.

11.3 If the product or supplier hasn't been used before, there has been anything unsatisfactory, the need could be met in another way, there is likely to be any technical/sustainable changes since last purchase or if no recent cost comparisons have been obtained; then the stage 2 analysis must take place.

11.4 Stage 2 requires: a fuller assessment of need, repeat use etc., and potential to meet the need in other ways, supplier's energy efficiency, locality/transport issues, assessment of environmental policy/ethical trading policy, ethical or environmental accreditations and an overall assessment of balance between sustainability, cost and fitness for purpose.

11.5 The system appears simple and it certainly makes issues of sustainability central to all purchasing activity at the Society. It is also thorough, clearly taking into account the key issues.

11.6 It was suggested during the audit that the current system isn't staff friendly, largely due to the extra time it takes to place an order. This may be because the system is paper based, where all forms are printed, completed and scanned back in, as well as being filed in hardcopy format. It was also highlighted that face to face training wasn't provided on the process when it was brought into effect; rather it was communicated by email. It is recommended that members of staff who order goods and services are engaged on the process to see if there are any ways it could be simplified, even if this is just a case of making the system paperless.

11.7 During the audit a brief assessment of office stationary and consumables was made and it was evident that largely goods had eco credentials. For example A4 notepads were 100% recycled as were compliment slips, envelopes and letterheads. The A4 printer paper did not appear to be recycled, although it did boast the EU Eco label and FSC Mix label.

11.8 It clearly states on the hard copy of the Annual Report 2014 that it was printed on 100% post consumer recycled paper.

11.9 There was evidence of reuse, with used envelopes being stored to be used again, along with some boxed scrap paper.

11.10 The hand wash supplied at the site was Ecover and the toilet paper was 100% recycled. The kitchen roll had no environmental credentials however.

11.11 It is recommended that internal audits are carried out periodically, to check the system is being followed and is working effectively.

12 Internal Communications & Training



EBS have not provided accredited environmental training for staff, rather bespoke informal sessions with training on the environmental policy provided in 2012 and the carbon footprint in 2013. The Society has also been arranging site visits of specific developments to raise awareness of ecological building practices and sustainable communities.

12.1 Updates on environmental issues are provided through occasional briefings and the management forum, where information is cascaded to team members. Updates are provided when audits have been completed, such as the Investors in the Environment accreditation audit and bespoke audits such as this.

12.2 There are no environmental staff induction materials at the moment, so introducing a formal programme is recommended, particularly as the Society is planning on growing their staff numbers. Alternatively environmental materials could be added to the EBS staff handbook.

12.3 EBS may want to consider going through a training needs analysis exercise, to identify areas where staff may need additional training. A combination of bespoke and accredited training can fill any gaps that may be identified.

12.4 It is also recommended that environmental training is logged, to build up an ongoing profile of staff awareness and support the Society's policy to promote environmental decision making at all levels.

13 External Communications

It is good practice to share information about your environmental credentials with your stakeholders, as it encourages awareness and good practice in other organisations and the general public. The Society also has a specific commitment within their environmental policy to publish improvements and future targets on their website and in their annual reports.

Annual Report 2014

13.1 The annual report 2014 has very strong financial content (as would be expected) and the report indicates a strong model and financial success. There is however a consistent link with values throughout, with each section (savings and liquidity, mortgage lending etc.) containing comments which highlight the links to environmental responsibility and good corporate governance. These are clearly highlighted in green, to make these messages clear to the reader.

For example, asset growth is reported and countered with the statement:

“The Society does not pursue growth for its own sake, rather we view growth as a sign of our success in meeting the needs of social investors and supporting our borrowers to build, renovate or buy sustainable properties”.

13.2 Case studies about some of the projects that have been supported are a useful addition.



13.3 The iiE Green accreditation is mentioned, along with most recent actions and some key actions which are planned in. Key percentage savings are highlighted as well as the carbon footprint and methodology. A clear statement about future targets could be a useful addition.

13.4 It was noted in the Annual Report that the 2014 AGM was a member's meet up with the theme 'Communities for Change'. This included workshops and speakers to consider the role of financial communities and built communities in facilitating a shift to a more sustainable future and economy.

The website

13.5 Environmental communication on the EBS website is also strong, with a wealth of information about how they deliver their mission statement through the work they do, and about their own green credentials. This could be taken even further, with an iiE EMS pack available as a PDF within the 'Our Sustainability' section of the website.

14 Corporate Social Responsibility

Social sustainability is mentioned within the environmental policy, and this certainly appears to feed into the Society's governance, operations and lending policy. There is also a thorough Corporate Social Responsibility Policy (2007) in place, and the goals stated are evidenced in other areas suggesting the values are entrenched.

14.1 Social responsibility is inherent in the structure of the organisation as it's a mutual, where members own the organisation, and 'vote in' the directors. Profits are re-invested and no dividends are paid (keeping interest rates competitive).

14.2 The EBS model supports affordable housing as lower running costs are inherent in a sustainable build in the long term.

14.3 In addition to this EBS lend in support of social forms of tenure through means such as community land trusts and shared ownership.

14.4 The Society is a member of various organisations with common values, to give time, as well as money to furthering their aims for more cohesive, empowered and sustainable communities.

14.5 Financial support is provided to a number of organisations, either directly or through the associated charitable foundation. (LATCH, Birmingham FOE, Plunkett Foundation, Skelton Grange Environment Centre, Sheffield Open Homes, Warwick and Leamington Beekeepers).

14.6 Localised charitable events and contributions were also credited in the Annual Report, as well as the staff responsible. These included bring and buy sales, coffee mornings and clothing aid for the survivors of the Philippines typhoon.

14.7 Linking back to 7.4, the Society could increase community involvement by inviting local community groups and schools to the site. They could have the opportunity to learn about sustainable buildings and technologies as well as permaculture. As mentioned previously a family



community open day would also be a good way of engaging the local community on all aspects of The work of EBS, and produce could be passed onto those that take part.

Summary

In conclusion EBS has a robust environmental policy, which is entrenched within the business model itself, the services and operations and which is supported from the very top of the organisation.

It appears that all areas of the business have been considered, and there are many areas of best practice, including the office building itself (with its environmental specification and use of renewables), carbon offsetting and permaculture garden.

The Society's commitment to continual improvement is supported by this audit process itself (and their desire to find areas of improvement) and by the introduction of the Investors in the Environment EMS. This will provide an ongoing structure to ensure effective management of resources and potential impacts and be a useful way of engaging staff and wider stakeholders about the Society's environmental performance.

The improvement points raised are summarised as follows:

- Integration of a mechanism within the lending policy for ensuring climate change adaptation is considered in new builds and renovations.
- Investigate an upgrade of the office lighting to LED.
- Ensuring the rainwater harvesting system is working effectively, without drawing unnecessary clean water from the main supply.
- Assess heating method in the straw built extension.
- Put an environmental legal register in place.
- Review the existing procurement procedure with staff to see if it could be made more user friendly without compromising on effectiveness.
- Consider making the procurement procedure paperless.
- Carry out a training needs analysis, to ensure environmental training is consistent and start a training log to evidence performance in this area.
- Introduce an induction pack for new staff with appropriate environmental content (or consider a staff handbook for all if a need is established as above).
- Consider inviting in schools and community groups to learn about the work of the Society, the technologies used onsite and the permaculture garden.