

Broadland

SHIFT Sustainability Report

2019



Welcome to your 2019 sustainability report

This report is a gap analysis between your current environmental impacts and safe levels of impact. The safe levels are science-based targets which have been derived by government institutions and reflect limits that, if attained, will have positive benefits for long term human wellbeing.

Although there is a fair way to go before we have a truly sustainable social housing stock, there are emerging drivers that will impact sustainability within social landlord organisations. These can be broadly categorised as follows:

- increased staff and resident desire for "action" the mass climate protests and media coverage of plastic waste has highlighted these concerns
- financial benefits as well as residents benefitting from improved homes, there is
 increased evidence showing financial benefits to landlords. The most novel source is via
 "pay-as-you-save" finance mechanisms which bring in new cash for the landlord. As
 well as this, financial savings can come from direct energy bill savings, reduced
 maintenance costs and reduce staff retention costs
- increased Government policy signals most recently the introduction of Streamlined Energy and Carbon Reporting (SECR) legislation which is impacting some landlords. In addition, the 25 Environment Plan, Clean Growth Strategy, Fuel Poverty, Minimum Energy Efficiency Targets all signal that Government is requiring more compliance
- "right thing to do" social landlords recognise that their organisations and housing stock have a huge impact on the environment and that they ought to address this

The best way to deal with these drivers remains to take a strategic approach and embed sustainability into an organisation. Having an experienced third party review the impacts each year helps ensure that the strategy is being adhered to, so that the benefits can be realised.

SHIFT's unique environmental scoring system provides a standard to attain. Bronze, silver and gold reflect the level of environmental performance, whilst the platinum level signifies a landlord that is on a trajectory to reach sustainable environmental impacts. Attaining any SHIFT standard helps landlords demonstrate to stakeholders that they are "doing the right thing" and doing the best for staff and residents alike.

This report showcases not only your performance but how far your organisation can go. As always, we look forward to supporting you on your journey to sustainability.

Suss Housing Team

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Executive summary

This report presents the sustainability performance of Broadland across strategy and leadership, existing homes and offices, supply chains and operations and new builds. It spans energy and resource use, transport and travel, resident engagement, climate risk, biodiversity and responsible sourcing, thereby providing a comprehensive overview of your organisation's environmental footprint.

Broadland Housing Association provides around 5,000 quality homes across Norfolk and north Suffolk. They believe everyone deserves a home that meets their needs. Their growing range of properties includes everything from family homes and modern apartments, right through to sheltered housing and housing with care homes. Their business is about people, helping to create thriving neighbourhoods and communities.

The results will show, as best as the data allows, the gaps between Broadland's current environmental performance and environmentally safe levels of impact.

Broadland has achieved the gold standard with a score of 69.70. It ranked 1st out of the 40 most recent SHIFT assessments. Over the next



sections you will see the breakdown of the score and recommendations. A snapshot of key performance areas is given below:



Throughout the report you will see your organisation's sustainability performance across key areas of your business and how it compares to that of other SHIFT landlords.

The importance of SHIFT is that it drives sustainability performance improvement through reporting and benchmarking. This report offers suggestions on how these improvements can be made.

Overall performance

Environmental issue	Absolute ¹	Intensity ²	Intensity target for SHIFT platinum ³	Long term intensity target (by 2050 unless stated otherwise)
CO2 - homes (tonnes and SAP)	19,099	73	SAP 72.45	86
CO2 reduction - resident engagement (tonnes and kg/home)	863	165	n/a	n/a
CO2 – offices (tonnes and kgs/m2)	31	38	83 kg/m2	25 kg/m2
CO2 – business mileage (tonnes and kg/home)	58	11.1	n/a	n/a
CO2 – Maintenance mileage (tonnes and kg/home)	99	19.0	n/a	n/a
Water – homes (million m3 and lpd)	0.6	131	143 lpd	130 lpd by 2030
Water – offices (m3 and m3/FTE)	575	5.1	9.6 m3/FTE	3 m3/FTE by 2030
Waste to landfill – homes (tonnes and % recycling increase)	1786	19	3.3% increase	45% increase
Waste generated – offices (tonnes and kg/FTE)	7.5	112	n/a	n/a
Responsible materials - maintenance (%)	54	54	41%	100%
Responsible materials - office (%)	68	68	56%	100%
Adaptation to climate change – (homes protected from flooding and %)	5128	98	28.4% protected	100%
Adaptation to climate change – (homes protected from overheating and %)	5128	98	28.4% protected	100%
Biodiversity value (% land protected)	49.6	49.6	ТВА	17%

1 - in line with best practice environmental reporting, the absolute environmental impact is given here – this gives an overall assessment of impact

2 – again, in line with best practice environmental reporting, the intensity is given. Intensity is the environmental impact per meaningful unit. E.g. per home managed or per m2 of office space. Intensity allows organisations to monitor progress towards long term aims, even if they change in size e.g. gain more homes or office space. Intensity is used for SHIFT scoring and benchmarking.

3 – When green is displayed, you are achieving or exceeding the platinum intensity target for the year stated. When red is displayed, the platinum intensity target has not been met.

Strategy and leadership

A strong sustainability strategy underpins robust environmental monitoring and performance at any organisation, by setting out a clear direction of travel in both the short and long term, as well as SMART KPIs to measure progress against. Points for this section are therefore awarded for specific, measurable, achievable, realistic and time-bound targets only, for a range of areas including energy efficiency, waste, water and climate adaptation.

Broadland's excellent 2016-2019 environmental strategy has clear senior level commitment and the Group Environmental Policy is publically available on the website demonstrating public accountability. The strategy has SMART targets for all environmental issues affecting social landlords (e.g. average SAP 73 by 2019). There is clear responsibility for delivering the strategy shown, in the Corporate Strategy 6 month Update 28th Nov 2018 given by Executive Property Director. The strategy scores 15 out of 15 for SHIFT.

For any future Sustainability Strategy, it is recommended that SMART targets are set for energy efficiency, water use, waste and recycling, sustainable transport, resident engagement and sustainable materials, as well as ecology and climate resilience. Targets will ideally span both housing stock and offices, and cover both short-term wins and long-term ambitions. Contact Suss Housing for further advice and support on strategy development.





Existing Homes

In the SHIFT assessment the environmental impact of your housing stock and its maintenance are assessed. Most of the homes that exist now will be in use in 2050. Therefore, it is essential to ensure that existing homes have safe levels of environmental impact. Your performance on each of these areas is presented below. The emission figures are based on the DEFRA conversion factors for 2018.

Average SAP

A housing association's stock is responsible on average for 99% of its total carbon footprint¹, so it is essential for landlords to foster energy efficiency improvements in their homes as a vital measure for reducing their overall environmental impact. The most effective way to measure this is with SAP – the Standard Assessment Procedure. The science-based target for all housing is an average SAP of 86 by 2050 – this target is necessary to achieve climate-change targets set in the Climate Change Act of 2008. Note, this may change in the future as the Act has recently been amended to 100% reduction in emissions.

As demonstrated below, there is currently a large performance gap which will be challenging to fill, but we strongly encourage you to build and retrofit to the highest possible standards in order to lead the way towards a low carbon future.



Average SAP for Broadland's stock was 72.9. This data was provided from the Surveyor Supervisor's report.

¹ Sustainable Homes (2017) The Review: Safe as Houses



Average SAP score from whole housing stock

Energy efficiency improvements - what's next?

At 72.9 Broadland's average SAP score is higher than the social housing average and the average for SHIFT landlords (70.3). To be on a trajectory for achieving the 2050 target for 80% CO_2 reduction (SAP 86), landlords need to be currently at an average of SAP 72.45.

Having a detailed and costed deep retrofit strategy is the most effective way of approaching this task and there are quite a few services emerging to help. In addition there are financial opportunities for landlords when the energy efficiency of the stock is high.

Fuel poverty

Homes with the lowest SAP scores are those most difficult to heat, so to minimise the risk of fuel poverty it is particularly important to tackle these least efficient homes. This SHIFT question aligns with the Government's fuel poverty strategy. In essence, the strategy aims for all homes to be EPC C (equivalent to SAP 69) or better by 2030. The diagram below shows a snapshot of current social landlord's EPC performance taken from "Housing 2050" research carried out by Sustainable Homes. It shows that 70.1% of social homes were EPC C or better.



76.7% of Broadland's homes are EPC C or better. This data was provided by the Surveyor Supervisor. As with the average SAP, the base data is in the process of being updated and it is recommended that Broadland make strategic plans to achieve 100% of homes to achieve EPC C or better by 2030 as well as an average SAP of 86 for the stock.

Resident engagement

Resident engagement is an important way of informing residents about the ways they can make a difference and empowering them to save both energy and money.

Broadland has carried out extensive resident engagement on energy efficiency. Examples of active engagement include advice given during new heating installs and trialling Switchee heating controsl. Examples of passive engagement include advice given on wesbite (e.g. links to Energy savings Trust). The SHIFT calculator estimates that 164.9 kg CO₂ per home managed (~863 tonnes in total) was saved as a result of providing this advice.



By far the most effective way to encourage changes to habits is with active, ongoing engagement beyond passive measures such as website and leaflet information. This can include resident groups, face-to face meetings and roadshows. Other landlords also contract Gas Safe engineers to give advice during routine service visits.

Sustainable transport

Transport facilities and initiatives for residents can help to encourage sustainable travel choices which reduce carbon emissions. This metric is based on the provision of cycle storage facilities as well as transport advice, from travel maps and timetables to cycling and eco-driving training.

Data provided by the PA to Exec Property Director and Comms Assistant showed that 30% of stock had cycle storage. This was calculated by adding this year's new build to last year's SHIFT data. In addition, 16% of households received address specific information on sustainable transport including links to Norfolk cycle paths. These measures are estimated to save around 58.4 kgs CO2 per home. Below you can see how your performance compares to other SHIFT landlords.



Measures and initiatives which enable residents to travel more sustainably.

Transport improvements – what's next?

With greener communities in mind, many housing organisations are looking at transport options for new developments, including negotiations with public transport operators to provide additional links and car-sharing clubs and electric vehicle (EV) charging points. EVs are providing increasingly cost-effective and lower-carbon means of transport for residents, while at the same time offer new, cost-neutral ways for landlords to facilitate this are becoming available.

Government is considering bringing forward its (currently 2040) target for removing petrol and diesel cars from sale, so demand from residents for charging facilities will rise in coming years. Forward-thinking landlords need to consider how to address this demand.

Home recycling

This SHIFT metric reflects the measures that landlords can take to encourage additional recycling by residents, above and beyond what local authorities are doing to boost recycling rates. In particular, this can be done by providing internal recycling bins, which enable residents to recycle without having to go outside.

54% of stock have internal recycling bins installed. This is as a result of new build and retrofit fit install during kitchen replacements. Resident engagement on recycling has been positive with plenty of information shared via social media (Facebook posts and twitter posts) as well as active engagement such as beach cleans.

Combined, these measures encourage an estimated 19.2.3% increase in recycling over and above local authority average.



Water

It is becoming ever more important to introduce water-saving measures as the changing climate and housing pressure increase the risk of water stress nationally.

Broadland used data from last year's SHIFT and added this year's 67 new build information which have good water efficiency. Broadland have also used detailed survey information from Anglian Water to find that 97% of their stock have water meters. The April 2018 issue of "Door

to door" (issued to 100% of residents) had water saving tips. These measures combine to give a water efficiency of 130.8 litres per person per day using the SHIFT water efficiency estimator.



Below you can see how this compares with the SHIFT network and science-based targets.

Water consumption for housing stock (litres per person per day - calculated using SHIFT calculator)

Homes at risk of flooding and overheating

As climate change intensifies and extreme weather patterns become ever more common, the resilience of your business and stock is increasingly important to consider. This is experienced most directly through the flooding and overheating risk of housing stock and offices.

Using a manual investigation of Environment Agency flood maps, Broadland found that 98% of their properties were at low risk of flooding from rivers and surface water.

Other landlords have worked with GIS students to produce flood mapping for their stock. Some landlords use information from their insurers, but this may only project flooding for 1 year and not the next 30 years which will be more useful for planning. In any case, please make sure your analysis includes surface water flooding which is projected to become the most frequent form of flooding.

Building in low flood areas, building flood resilient housing, signing up to early flood warnings and having response mechanisms in place are all ways in which landlords have dealt with flood risk.

Climate projections herald shorter bursts of higher-intensity rainfall, which affect the way that existing water-processing infrastructure will cope. Green roofs and SuDS (Sustainable Drainage Systems) are ways of reducing surface water runoff and combatting flooding events.



Percentage of stock for which a flood risk assessment has been carried out, and which have a low risk of flooding

Broadland have used the CROHM estimate of overheating risk to find that 98% of stock is at low risk of overheating and this value has been recorded for this assessment. It is recommended that Broadland ensures that the overheating risk assessment includes projected summer temperatures (central estimate for 2050) and the risks associated with communal heating (hot service pipes in corridors). This will give the most accurate risk and it is not totally clear whether the CROHM approach does this. It is also recommended that any refurbishments that involve fabric upgrades are assessed for overheating.



Percentage of stock for which an overheating risk assessment has been carried out, and have a low risk of overheating

As hot dry periods become more of a feature of British summers, excess summer deaths are set to rise, and overheating risk assessments are becoming more and more important, particularly where older residents are likely to be living. As temperatures rise outside, the home can provide a refuge, but if the building retains heat there is nowhere to go for some vulnerable residents. Landlords with an understanding of their at-risk homes are better prepared for hot weather events.

Climate resilience – what's next?

It is recommended that you carry out an assessment of your stock's overheating risk. This can be conducted using SHIFT's overheating factor checklist and will take into account projected temperature changes in future. Suss Housing can provide advice on this, and contact details of other means of assessing this.

Include flood and overheating mitigation strategies, such as SuDS, cross-ventilation and solar shading, in specifications for new builds.

In the longer term, develop a programme for retrofitting existing stock with low-regret adaptation measures for overheating and flooding, such as blinds and shutters and increased vegetation where feasible.

Ecology

Access to green spaces and biodiversity can deliver major benefits to our health and wellbeing. These include air quality improvement, flood attenuation and cooling during heatwaves. SHIFT estimates the biodiversity value of the green spaces managed by Broadland, which in turn leads to proportionally higher social value.

Broadland have carried out detailed sampling of garden sizes and communal area sizes for apartments. From this data and using SHIFT defaults on typical distributions of grass and tree planting, Broadland found that the equivalent of 49.6% of their land was "protected". This compares well with the UK target of 17% protected and Broadland should seek to maintain this high level.

Supply Chain

Maintenance fleet

Carbon emissions from home maintenance activities were based on the annual mileage of both contracted and in-house maintenance fleets. They are measured per home managed and indicate the efficiency of maintenance travel. Although this will depend partially on the distribution of stock, there are measures that can be taken to reduce fuel costs by switching to a smaller or an electric fleet, providing training on fuel-efficient driving practices. Your performance is shown below.

Mileage data from the Livetrak trackers installed in vans was extracted and the commuting element subtracted due to Broadland's Homestart policy. In addition, subcontractor emissions were estimated based on the number of jobs issued and making a comparison to DLO emissions. In all around 99 tonnes of CO2 were emitted which is equivalent to 19kgs CO2 per home managed.

It is recommended that Broadland require major contractors to respond to environmental surveys in order to gain more accurate figures and to reduce workload on Broadland staff when assessing environmental performance. As well as a strong environmental case, there is a financial business case for doing so and other landlords have made it a requirement on their contractors.



Carbon emissions from maintenance fleet, kilograms CO₂ per home managed

Transport improvements - what's next?

A significant part of the hidden costs of routine maintenance is travel, so efficiencies by the contractor in providing the correct vehicle with an operative and the correct parts on board – can help to make useful savings. Procurement contracts can include this, along with service level agreements on waste and recycling.

Refurbishment recycling

Detailed breakdowns of waste treatment are normally available from contractors and DLO's. Good reporting and recycling practices should be factored into the decision-making when contractors are selected.

Data provided by waste contractor Reconomy and researched by the PA to Executive Property Director found that the DLO recycling rate was 96%.



Percentage refurbishment waste recycled

Waste reductions - what's next?

A surprising amount of what gets thrown away is brand new and still in its packaging, so clever purchasing and procurement can save expenditure. When waste disposal is managed by contractors, there is a legal responsibility for the originator to be clear on how disposal is conducted – as well as a financial cost, particularly for anything that ends in landfill. Less spent on waste means more spent on improving homes.

Maintenance materials

Housing providers can influence sustainability beyond their own organisation by engaging with suppliers and using their purchasing power to encourage best practices. Responsible sourcing practices were assessed for maintenance products, including pesticides, cleaning products and building materials, as well as office consumables.

Extensive research by the PA to Executive Property Director found the extent to which responsibly sourced materials were used by the DLO. The research investigated Travis Perkins, Osma and Polypipe and BRE Green Guide to specification. In all it was estimated that around 53.5% of materials we responsibly sourced. It is suggested that in future Broadland survey their largest suppliers to make this data gathering exercise easier. The SHIFT survey form can be used to engage with the supply chain.



Offices

Tackling office energy usage will affect your organisation's bottom line by reducing operational costs and carbon emissions.

Gas and electricity use data collected by Head of IT and Facilities representing Broadland's 4 main offices was converted into CO2 emissions data. 65 tonnes or 38.17 kgs CO2 / m2 were emitted in the most recent 12 months. As a result of this assessment the Great Yarmouth office was identified as ahigh energy user and is under further investigation.

The chart below shows how this compares to other SHIFT landlords' office energy use. The target for offices is 25kg per m^2 of office space – this represents an 80% reduction on 1990 levels of UK energy use for offices.



All office energy use - calculated as kilograms of carbon dioxide, per square metre of office space

Business mileage

Controlling business mileage expenditure can make a real difference to landlords. The SHIFT metric for business mileage looks at car claims, public transport usage and air miles (if applicable).



Carbon emissions from business travel, kilograms CO2 per home managed

Total emissions for business mileage were around 58 tonnes or 11.1 kg CO2 per home managed. The base data for this was public travel expenses, flight data and business mileage claims.

Waste

As interest rises in the circular economy, alongside awareness of the damaging impacts of plastic pollution in particular, companies from all sectors are ramping up efforts to tackle waste. Quantifying total waste outputs and treatment is an important first step.

The waste generated by Broadland's office based employees was around 12.5 tonnes (or 112 kgs per employee) in the last financial year. The base data for this calculation came from the landlord's calculations on number of bins collected and confidential waste collection reports.

Recycling rates were estimated at 78% by calculating recycling waste collected and comparing to overall waste generation. Broadland may find it easier and more accurate in future to gain this information from their waste contractor.

The chart below shows how your office waste treatment compares to the SHIFT landlord average.





Waste reductions - what's next?

As the first of the 3 Rs is 'Reduce' (reduce, re-use, recycle) – the first step in waste management is simply to buy less. Reduce the need for purchasing new stuff, for example by buying less paper and envelopes increasing the switch to electronic mail; or repurpose furniture and fittings too, by building relationships with local recycling initiatives.

Office consumables

During the SHIFT office visit it was noted that around 68% of materials were responsibly sourced. In future a more accurate figure can be obtained from your supplier. Most suppliers now provide a "Green Switch" report.



Responsible sourcing of office consumables

Water

Water bill data collated by Head of IT and Facilities indicates that 575 m3 of water was used in the 4 main offices last year. This equates to 5.1 m3 per employee. Nevertheless, should opportunities arise plans should be made to achieve 3 m3 per employee by 2030. The chart below shows how Broadland ranks against other SHIFT landlords.



Office water use per year (m³ per employee)

Offices at risk of flooding and overheating

Observations from the H&S Manager and Head of IT and Facilities indicated that the Dereham office was at risk of overheating, but other offices were good. In the short term measures have been taken to reduce the effects of overheating (e.g. relaxed dress code). "Partial" risk has been recorded for SHIFT.

Summer temperatures are projected to rise which will exacerbate existing conditions. Passive cooling systems (e.g. brise soleil, reflective windows) are preferred, but low energy air conditioning is also available.

Flood barriers have been installed at the Great Yarmouth office and all other offices are at low risk. Low risk has been recorded for SHIFT.

New build

When building new properties, it is crucial to take a long-term perspective to ensure they are future-ready for carbon reduction targets and climate change. Despite the loss of the Code for Sustainable Homes, guidelines and voluntary standards are still available and can be used to ensure that new properties are built to extremely high sustainability standards.

Energy efficiency is an important part of the score awarded in this new build section. Compliance with current Building Regulations generally results in new homes reaching a SAP score above 80 (EPC level B). At the same time, emissions targets for 2050 imply that ALL homes in the UK should be at an average of 86 by then. In other words, to reach that target developers should aspire to build to zero-carbon standards now.

As well as energy efficiency, the SHIFT metric factors in a range of measures to determine the sustainability of new builds, including energy efficiency, ecological enhancements and sustainable transport support.

Figures provided for this assessment by the Development Support Officer, indicated that most new homes complied with building regulations and did not aim for higher SAP ratings. Nevertheless around 6% of new homes did have a SAP rating of 86 or greater which will help average SAP. However, new homes were positively identified as low flood and overheating risk.

No third party verification took place on schemes. In future it is recommended that some form of verification takes place. This will help ensure that designed environmental features are present in the "as built" home, bridging the so called "performance gap".

Using the SHIFT calculator for new build and the data above, the sustainability score for Broadland new build homes was 3.44 out of 15. This can be improved by building to higher SAP ratings, including cycle storage, internal recycling bins and ecological features. In addition, independent third party verification will close the performance gap. Audits such as Post-Occupancy Evaluation, PassivHaus or HQM can help. Broadland may also choose to devise its own methodology of third party verification.

The graph below shows how Broadland new build sustainability compares to other SHIFT landlords.



Sustainability percentage score of recent new build housing (last two years)

Sector overview

Overall, we have seen encouraging progress made by our SHIFT landlords over the last year. The energy efficiency of SHIFT landlords' stock continues to outperform the social housing sector average, while data collection and granularity is continuing to improve steadily for most areas.

The following sections particularly stood out in terms of progress made and opportunities for improvement:

Sustainability Strategies - It is especially encouraging to see a rise in SMART target setting within sustainability strategies. This underpins substantive, measurable action, so we anticipate an increase in quantified projects and improvements in future.

Sustainable transport options - There is still plenty of room for improvement on sustainable travel initiatives, so this is an important area for landlords to focus attention. The rise of electric vehicles offers an opportunity to refocus attention on the ways that the built environment can foster a culture of healthy, low-emission travel. Infrastructure that supports walking, cycling and public transport can be a fantastic way to reduce emissions and promote resident wellbeing.

Responsible sourcing – there was great variety in organisations' levels of responsible sourcing for both office and refurbishment materials. Specifications requiring sustainable, ethically sourced products, and collaboration with suppliers to improve their environmental practices are key ways of extending your sustainable footprint beyond the direct assets and operations of the organisation.

Ecology – The natural capital metric has been reworked for this year's SHIFT assessment in order to capture the full extent of housing providers' ecological enhancements. While there is still plenty of scope for increased development of green spaces and biodiversity measures, it is good to see green spaces being measured and valued.

SHIFT landlords work hard to reduce environmental impacts. The SHIFT assessment displays and celebrates this work and gives the chance to take stock and plan for further improvements. It also tries to challenge housing associations to push boundaries and go beyond comfort zones when it comes to sustainability. This is an exciting time, with the emergence of electric vehicles, battery storage, and better recognition of biodiversity benefits and climate adaptation requirements, to name just a few areas. SHIFT landlords must make the most of these opportunities if they are to be truly sustainable organisations. This is not an overnight process and improvements can take a long time to mature. However, we need action now to deliver a sustainable and affordable social housing stock in the future, and SHIFT landlords can play a central role in achieving this goal.

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