

REPORT TO SUSTAINABILITY COMMITTEE – 15 JUNE 2022

ENERGY EFFICIENCY PROGRESS IN COUNCIL HOUSES

1 Executive Summary/Recommendations

1.1 This report is to update the Sustainability Committee further to a report to Communities Committee ([Item 10](#)) on 24 March 2022. Communities Committee requested that a report be submitted to the Sustainability Committee detailing the work undertaken by Housing and Building Standards to meet energy efficiency standards and to move towards Net Zero, with said report providing Sustainability Committee with the information to monitor the overall strategic progress of Aberdeenshire Council in becoming a carbon neutral Council, and that this also be reported to the Communities Committee.

1.2 The Committee is recommended to:

1.2.1 Acknowledge the report and consider how the work of Housing & Building Standards sits with the wider work of Aberdeenshire Council in becoming a carbon neutral council.

2 Decision Making Route

2.1 The Scottish Government published the national Climate Change Plan, 2018-2032, the third report on policies and proposals in February 2018. New primary legislation has since been brought forward as a response to the global climate emergency. The Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 commenced in March 2020. The legislation sets annual and interim targets for Scotland to reach Net-Zero emissions by 2045, a more ambitious target, and included a commitment to review the Climate Change Plan in light of this. The updated Climate Change Plan was published 16 December 2020, with the next full plan expected to be published in early 2025. The updated Plan sets out an accelerated route to reducing emissions, including the new interim target of 75 per cent reductions by 2030. It also focusses on how this will contribute to a 'green recovery' from COVID-19. The updated Plan includes a full list of policies that have been maintained or made more ambitious and where new policies have been added and there are several implications for the housing sector.

2.1.1 EESSH (Energy Efficiency Standards in Social Housing) was introduced in March 2014 and set a first milestone for social landlords to meet for social rented homes by 31 December 2020.

2.1.2 EESSH2 followed and sets out that all Social Landlord properties must meet and EPC Band B (Energy Efficiency rating), or is as energy efficient as practically possible, by the end of December 2032 and within the limits of cost, technology and necessary consent. It also set a minimum standard that no social housing should be considered for re-let with EPC less than Band D from December 2025.

- 2.2 An informal workshop was held for all Councillors on Monday, 28 February 2022. The workshop focused on the national and legislative responsibilities of the Council in its move towards becoming a Net Zero Council and outlined the actions that the Housing Service is undertaking. The workshop concluded that a paper be referred to Sustainability Committee detailing the move to Net Zero, the changes to our Housing Stock and looking to explore the linkages between the different workstreams under way to become a carbon neutral council. The workshop also requested that a Member Officer Working Group (MOWG) on fuel poverty be considered.
- 2.3 Communities Committee on 24 March 2022 agreed, “That a report be presented to the Sustainability Committee detailing the work undertaken by Housing and Building Standards to meet energy efficiency standards and to move towards Net Zero, with said report providing Sustainability Committee with the information to monitor the overall strategic progress of Aberdeenshire Council in becoming a carbon neutral council, and that this also be reported to the Communities Committee”.

3 Discussion

- 3.1 The Scottish Government has clarified that, ‘We will also work with social landlords to bring forward the review of the existing Energy Efficiency Standard for Social Housing (EESH2) to now conclude in 2023 rather than 2025 with a view to strengthening and realigning the standard with net zero requirements’. This highlights that standards for social housing are being currently a constantly changing target, making long term planning challenging.
- 3.2 The EESH milestones are defined by the Standard Assessment Procedure (SAP) 2012 methodology recorded in Energy Performance Certificates (EPCs). The first EESH milestone set a single minimum Energy Efficiency rating for each home rented by social landlords. The target varied dependent upon the dwelling type and the fuel type used to heat it. In terms of the SAP 2012 methodology the target varied between a rating of 47 (in EPC band E) for an oil heated house, and 69 (in EPC band C) for a gas heated flat.
- 3.3 The EESH was reviewed in 2017-2019. The EESH Review Group included representatives from: Scottish Government; Local Authorities; Registered Social Landlords; Historic Environment Scotland; the Scottish Federation of Housing Associations; the Glasgow and West of Scotland Forum of Housing Associations; the Convention of Scottish Local Authorities; and the Scottish Housing Regulator.
- 3.4 The EESH Review Group considered proposals and agreed new EESH2 milestones as follows:
- 3.4.1 All social housing meets, or can be treated as meeting, EPC **Band B** (Energy Efficiency rating), or is as energy efficient as practically possible, by the end of **December 2032** and within the limits of cost, technology and necessary consent. The 2032 milestone was to have undertaken a formal review in 2025

(now brought forward to 2023 but may even occur in 2022) to assess progress and confirm additional requirements of the 2032 milestone and consider the addition of Air Quality and Environmental Impact.

- 3.4.2 It was further agreed that no social housing is to be re-let below EPC **Band D** from **December 2025**, subject to temporary specified exemptions.
- 3.5 EESSH2 will contribute to the requirements of the Climate Change (Scotland) Act 2019, which sets targets to reduce Scotland's emissions of all greenhouse gases to net-zero by 2045 at the latest, with interim targets for reductions of at least 56% by 2020, 75% by 2030, and 90% by 2040.
- 3.6 The Scottish Government's, Heat in Building Strategy, published in October 2021, advises that:
 - 3.6.1 In order to meet our interim climate targets and ensure long-term delivery of our net zero objectives, **by 2030** the vast majority of the 170,000 off-gas **homes that currently use** high emissions **oil, LPG, and solid fuels**, as well as at least 1 million homes currently using mains gas, **must convert to zero emissions heating**.
 - 3.6.2 To meet the ambition for energy efficiency and zero emissions heat deployment set out above, we **need to quickly ramp up the number of installations of low and zero emissions heating systems** being installed per annum.
- 3.7 As of 31 March 2021, 60% of Aberdeenshire's Council housing stock met the Energy Efficiency Standard for Social Housing (ESSH).
- 3.8 ESSH allows for stock that cannot be brought up to the required standard for technical or social reasons provided these are reviewed regularly. Council properties that cannot be brought up to the standard due to tenant refusals are reviewed annually, and work is carried out at change of tenancy to ensure the property is brought up to the standard.
- 3.9 Due to previous delays with the Housing Improvement Programme (HIP) and technical limitations it had already been identified that Aberdeenshire Council would not be able to achieve ESSH standards for all housing by the deadline of December 2020. In addition, the Covid Pandemic had a significant impact on work to meet ESSH, due to lockdown, restrictions on entering homes for non-essential works, and tenants shielding or self-isolating. Despite this a further 702 properties were brought up to the required energy efficiency standards in 2020/21 increasing ESSH compliance from 55% in 2019-20 to 60% in 2020-21 this is estimated to increase further to 68% in 2021/22.
- 3.10 The Housing Service is working to identify alternative technologies and ways of delivering improvements to ensure that as many properties as possible are brought up to the standard. The Housing service currently anticipates that around 1500 properties will require an exemption from the ESSH standard (mainly on technical grounds), which accounts for around 11% of our housing

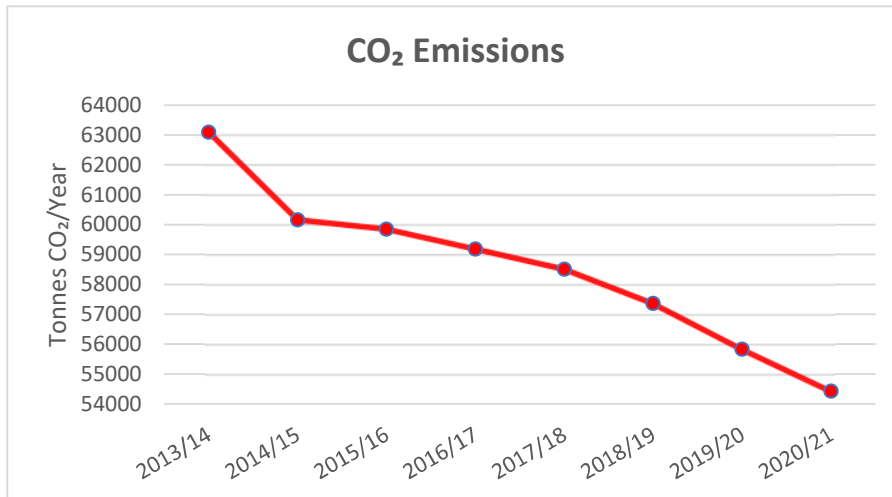
stock. This means that upon completion of the current HIP and EESSH plan, approximately 89% of our stock will comply with EESSH.

- 3.11 Aberdeenshire Council is currently considering its approach to compliance with EESSH2 by both the interim 2025 and 2032 deadlines and the impact of Net Zero.
- 3.12 The Council continues to review EESSH targets in light of EESSH2 and in line with the Scottish Government's guidance on EESSH may reschedule investment to maximise compliance with the 2032 milestone. While the uncertainty caused by the pandemic has delayed this work, Aberdeenshire Council has started work on scoping and planning this work.
- 3.13 Work continues through the Housing Improvement Programme (HIP) and on the backlog of work delayed due to the pandemic. However, further resourcing challenges in terms of materials and labour mean that it is very unlikely that we will meet our original target of 80% compliance by the end of 2021/22. However, work has been incorporated into HIP year 4, to ensure that progress continues to be made and ensures that the houses in Bands G, E & F are improved towards the EESSH2 2025 band D target.
- 3.14 This approach will be for works that are difficult to achieve due to ongoing Covid-19 impacts and are more economically and technically challenging, but which can be demonstrated to be the most cost-effective approach within an overall programme of work to improve the energy efficiency of the landlord's housing stock as part of EESSH2. The Service will also conduct a review to confirm which stock is are viable and sustainable long-term assets. The Housing Service appointed Property Services to undertake an analysis of all the stock to determine the most efficient and effective methods for improving the energy efficiency to meet EESSH2 and ensuring that progress towards Net Zero aspirations for 2040 are not compromised. To this end Property Services appointed consultants to assist in this analysis, Arcadis and Changeworks, who are currently undertaking their research with results anticipated in summer 2022.
- 3.15 During 2021/22, the Housing Improvement Programme (HIP), along with the reactive heating contract and Internal Wall Insulation work at voids, have resulted in multiple properties with improved energy efficiency. These upgrades are shown in the table below:

Component	Total
Cavity Wall Insulation	4
Ext. Doors (Dwelling)	244
Ext. Wall Insulation	48
Heating Boiler (Gas)	393
Heating Boiler (Oil)	15
Heating System (Quantum)	341
Int. Wall Insulation	93
Photovoltaic System	478
Windows	365
Grand Total	1981

3.16 The 1,981 upgrades were carried out in 1,631 properties, some properties had multiple works. These upgrades have contributed to an overall carbon emission saving of 1,410 tonnes of CO₂ per year as illustrated below. For properties where new upgrades have been installed the reduction in CO₂ emissions has been modelled based on data obtained from EPCs.

Year	CO ₂ Tonnes per Year	Average per Property
2013/14	63099	5.061
2014/15	60166	4.696
2015/16	59849	4.658
2016/17	59184	4.599
2017/18	58512	4.506
2018/19	57362	4.434
2019/20	55835	4.300
2020/21	54430	4.171



3.17 There has also been a slight decrease in the overall running costs this year as shown in the table below. This will mainly be down to the new heating systems, insulation and Photovoltaics (PVs) that have been installed.

Year	Running Costs per Year
2013/14	£6,517,591
2014/15	£6,290,185
2015/16	£6,293,801
2016/17	£6,247,229
2017/18	£6,227,570
2018/19	£6,217,802
2019/20	£6,183,265
2020/21	£6,165,260

3.18 The average SAP rating of the stock is now D68. This is based on actual EPC data, (the Council currently has valid EPCs for 99% of its stock, so estimates and modelling are extremely accurate) with some modelled data where new upgrades have been carried out and a new EPC not yet provided.

Year	Average SAP
2009/10	57
2010/11	60
2011/12	61
2012/13	62
2013/14	63
2014/15	64
2015/16	63
2016/17	63
2017/18	63
2018/19	64
2019/20	66
2020/21	68

3.19 The focus for 2022/23 is continuing to work towards the Energy Efficiency Standard for Social Housing (ESSH and ESSH 2). The contracts for ESSH are still ongoing and are focused on Insulation, Heating and Renewables in the continued drive to increase energy efficiency, reduce carbon emissions and eradicate fuel poverty. ESSH 2 contracts are being developed in the same form. The table below shows the remaining planned upgrades for the ESSH contracts.

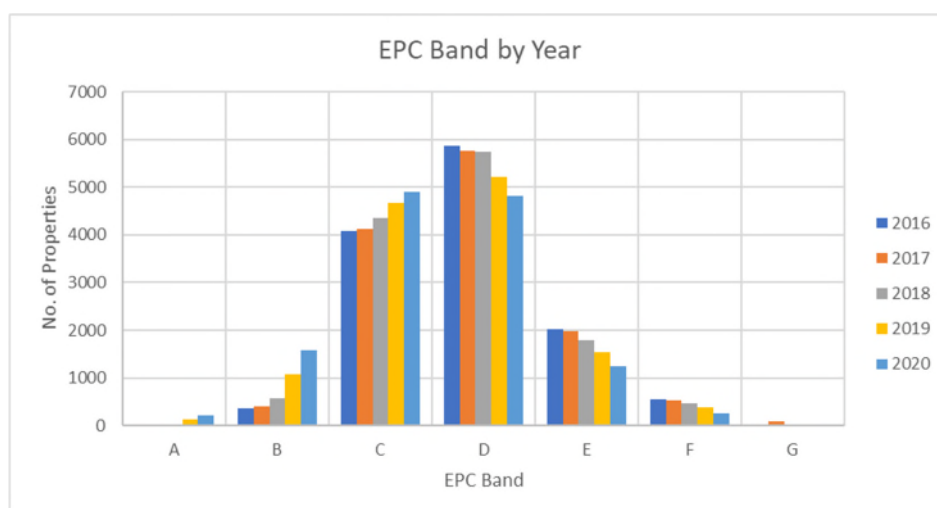
Component	Total
Cavity Wall Insulation	1,815
Ext. Wall Insulation	666
Heating Boiler (Gas)	3,006
Heating System (Quantum)	1,328
Int. Wall Insulation	36
Photovoltaic System	3,528
Grand Total	10,379

3.20 A trial project of Smart Solar Storage using batteries and Smart Technology with PVs is currently being undertaken and if successful could be extended so that many properties, which currently have grid constraints (which is preventing the installation of PVs and Net Zero heating) can benefit. This will also be useful when setting upgrades to meet ESSH 2, due to a potential increase in SAP rating with using batteries and further reductions in CO2 emissions and running costs.

3.21 The table below shows the number of energy efficiency upgrades undertaken through HIP up to the end of year 3, there are also other works undertaken through HIP not energy efficiency related such as Kitchen, Bathroom, communal doors and rewiring which total another almost 6,000 upgrades. Energy Efficiency upgrades are shown below.

Component	Total
Cavity Wall Insulation	193
Ext. Wall Insulation	434
Heating Boiler	3,465
Windows & Doors	4,398
Int. Wall Insulation	36
Photovoltaic System	5,324
Internal Wall Insulation	324
Underfloor Insulation	3
Rooms in the roof	10
Smart Solar Storage Project	500
Grand Total	14,687

3.22 The continued improvements made to the energy efficiency of the housing stock is evident in the EPC figures. This chart shows the number of properties in each EPC band for the 2020/21 financial year and the 4 years prior to that. An increase in bands A, B and C can be seen, whereas the numbers for lower bands D, E, F and G are decreasing.

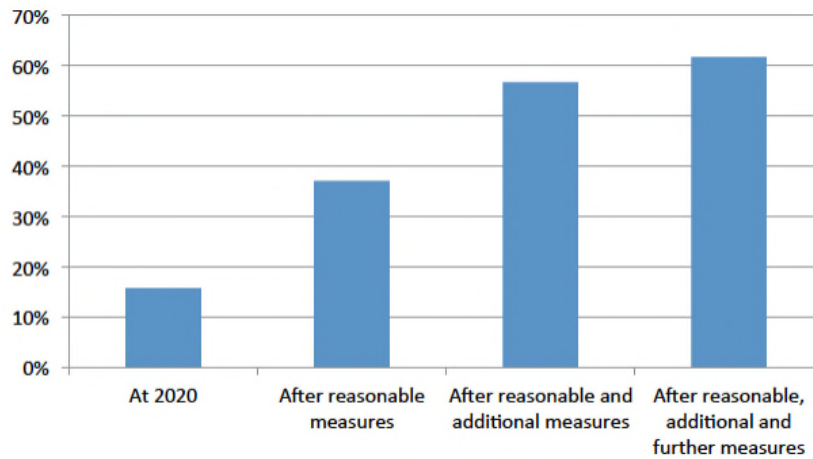


3.23 As mentioned earlier EESSH2 is about to undergo a major review and that this is likely to change the monitoring and targets for landlords, bringing them more in line with Net Zero aspirations The Scottish Housing Regulator (SHR) advised that:

‘the decision to collect data from 1 April 2021 on new indicators for EESSH2 has been overturned, in anticipation of the SG further review of EESSH as a result of the Zero Emissions in Social Housing Taskforce (ZEST) which included a recommendation to bring forward the review of EESSH2 to begin as soon as possible.’

Once details of the information the SHR will be collecting is confirmed this will enable Sustainability Committee to monitor progress towards achieving the EESSH2 2025 and 2032 targets. Once this data collection occurs nationally it will be available to present to Sustainability Committee annually.

3.24 The Scottish Government in its EESSH2 guidance used case studies from a number of landlords to model how many houses could be brought up EPC Band B with existing technology, details of which are shown in appendix 1. The chart below shows the modelled EESSH2 attainment rates anticipated.



3.25 In summary, the Housing Service continues to make good progress towards meeting its energy efficiency commitments as demonstrated in the table below.

	EESSH 2		No. of Properties by SAP Band						
	Pass	Fail	A	B	C	D	E	F	G
Current Position	14%	86%	220	1655	4973	4737	1212	235	14
End of HIP Y3	25%	75%	314	2952	5538	3352	782	103	5
End of HIP Y4	28%	72%	328	3359	5448	3323	537	51	0

3.26 The Housing Service will continue the improvements to its stock through HIP2 which Property Services are currently developing, this contract to run over four years will focus on driving energy efficiency improvements and ensuring that the Aberdeenshire’s Council housing meets the EESSH2 2025 standard by the end of December 2025.

4 Council Priorities, Implications and Risk

4.1 This report relates to the following Council Priorities:

Pillar	Priority
Our People	Education Health & Wellbeing
Our Environment	Resilient Communities
Our Economy	Economy & Enterprise Estate Modernisation

This report helps deliver a number of Strategic Priorities within the undernoted Council Pillars:

4.1.1 Our People

- Promoting tenant well-being by having well designed upgrades, able to adapt and respond to changing occupant requirements and future climate change

4.1.2 Our Environment

- Contributing to providing low carbon homes through the use of renewable technology, innovative insulation solutions and efficient controllable heating
- Providing warm, high quality, affordable homes to meet the Energy Efficient Standards for Social Housing 2 (ESSH2) targets

4.1.3 Our Economy

- Creating sub-contracting opportunities with local Small and Medium Enterprises (SME's)
- Developing the local supply chain by supporting and mentoring SME's and 3rd Sector Organisation
- Providing opportunities for employment to local people

4.1.4 **Other Priorities**

This report helps deliver against these priorities of the Aberdeenshire Local Housing Strategy 2018-2023:

4.1.5 Fuel Poverty, Sustainability and Energy Efficient by:

- Improving the energy efficiency of housing and reducing fuel costs for tenants, contributing to tenant well-being

4.1.6 Independent Living by:

- Provides upgrades that are configured for those with particular needs and providing adaptations to reduce unmet needs, contributing to supporting tenants to live as independently as possible

4.2 The table below shows whether risks and implications apply if the recommendation is agreed.

Subject	Yes	No	N/A
Financial	x		
Staffing	x		
Equalities and Fairer Scotland Duty			x
Children and Young People's Rights and Wellbeing			x
Health and Wellbeing			x
Town Centre First			x
Sustainability			x

4.2.1 There are financial implications contained within this report however they are contained within the current budgets.

- 4.2.2 There is a considerable resource allocated to managing the Housing Improvement Programme commensurate with the scale and ambition of the requirements.
- 4.3 An integrated impact assessment (IIA) was carried out for the Housing Improvement Programme (HIP) and was referenced in the previous Communities Committee Report of 9 December 2021 and is not duplicated here and confirm that no new or revised activity has been introduced since. The assessment detailed the following positive impacts:
- 4.3.1 The Contract will have a positive impact on the Wellbeing Indicators by undertaking multiple upgrades contributing to providing warm, high quality, affordable homes, with provision for adaptations to meet any particular needs of a child or young person, with a disability, respecting their views, to provide an adequate standard of independent living, in the best interest of the child or young person.
- 4.3.2 Children and young people will have opportunities to take part in positive activities such as attending industry awareness days, workplace visits and career events. Young people have been given the opportunity to become economically stable and attain qualifications and experience through apprenticeships, mentoring opportunities and work placements, as available via the four contractors.
- 4.3.3 The Energy Efficient Standard for Social Housing² (ESSH2) sets out the minimum energy efficiency standard for social housing and upgrades being delivered on the Contract include insulation, Photovoltaics, heating, windows and doors all of which contribute towards achieving the ESSH2 target.
- 4.3.4 The Contract undertakes upgrades to improve building fabric to prevent long-term dampness and deterioration. Installation of ventilation is included in many of the upgrades, to minimise condensation, contributing to climate change adaptation.
- 4.3.5 Waste material from the contract is managed by the contractors to ensure minimum materials are transferred to landfill. A measure of the proportion of waste, by weight, that is generated across the contract that is recycled, reused, or otherwise diverted from landfill.
- 4.4 The following Risks have been identified for the Housing Improvement Programme (HIP) as relevant to the matter on a Corporate Level:

Corporate Risks ([*Corporate Risk Register*](#))

- ACORP001 – Budget Pressures – Although the framework total value is £160m, it is based on the accumulation of four frameworks which are further subdivided into annual Call-off contracts. The contracts allow the Council flexibility around the volume of the goods and or services purchased through the framework and should only place orders for goods and services if there are sufficient funds to do so. Any budget pressure can be accommodated within the yearly Call-off contracts by

adjusting the number of houses and component upgrades to be included.

- ACORP002 – Changes in Government Policy, Legislation and Regulation – Any change can be factored into the yearly Call-off Contracts as per description in ACORP001 above. The Council is also required to adhere to relevant regulations and standards as set out by Scottish Government, including achieving EESSH2 by 2032. The focus for the remaining two years on HIP will be to continue to deliver EESSH2 works.
- ACORP003 – Workforce – Being a four-year framework should minimise the risk and provide contractors with a programme that will enhance workforce provision.
- ACORP005 – Working with other Organisations – the detailed four-year programme of works will reduce risks associated with the supply chain. However, it is largely dependent on the four contractors delivering on contracted works. There are risks associated with this in terms of them being able to deliver the required programme in the required timescales and budget and the supply chain being able to meet the demands, which has and continues to cause challenges on this Contract. Delays in accessing addresses, Scope variations and unexpected challenges being found have caused delays on the Year 1 and Year 2 programme of works. This risk increased significantly with the Covid-19 outbreak; Brexit; ; market recovery, supplier opportunism and the Ukrainian crises have impacted on labour and material availability on the overall programme,
- ACORP006 – Reputation Management – Dedicated and well-informed framework contractors together with the challenging but achievable KPIs will reduce reputational risk. Contractors have ensured continued communication with tenants with respect to Coronavirus and how it has/will impact on their upgrades, keeping their reputation intact.
- ACORP007 – Social Risk – The framework makes provision for detailed Community Benefits that the local community will benefit from. The four framework contractors have signed up to these and are in the process of delivering them with some outstanding results. Although have been delayed in delivering some Community Benefits due to the restrictions with social gatherings previously set by the Scottish and UK Government
- ACORP009 – Operational Risk Management – The framework contract make provision for health and safety requirements associated with works. The contractors have been greatly impacted by the spread of COVID-19 and Brexit and are continually considering their contingency measures to protect their assets and workforce.

- ACORP010 – Environmental Challenges – The framework specification includes mitigation and adaption measures against climate change in the design of upgrades to the fabric of the properties and the inclusion of ventilation measures.
- Directorate Risks ([Directorate Risk Registers](#))*
- BSSR001 – Balancing the Books – the four-year framework and yearly Call-off contracts will enhance financial management thus reducing the risk to the approved budget.
 - BSSR005 – Workforce Fit for the Future – The four-year framework allows the development and retaining of our best employees.

5 Scheme of Governance

- 5.1 The Head of Finance and Monitoring Officer within Business Services have been consulted in the preparation of this report and any comments received have been incorporated within the report. They are satisfied that the report complies with the Scheme of Governance and relevant legislation.
- 5.2 The Committee is able to review and monitor this item in terms of Section R.1.1a of the List of Committee Powers in Part 2A of the Scheme of Governance for a decision on any Housing policy issue and resource matter (within agreed budgets).

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Report prepared by Dave Thomson,
Housing Manager (Asset Management & Repairs)
Date: 3 May 2022

List of Appendices:
Appendix 1 – Within the limits of technology

Appendix 1 - Within the limits of technology

From EESSH2 guidance – November 2020 (Version 2.2)

41. The three categories of measure are as follows. Note that any measure is also subject to considerations of cost-effectiveness.

Reasonable Measures	Additional Measures	Further Measures
Double glazing Secondary glazing Heating controls Storage heaters Loft insulation top up Floor insulation Compact fluorescent lighting External Solid Wall insulation Internal Solid Wall insulation Water heat reclamation Thermostatic Radiator Valves (TRVs) Cavity Wall Insulation Hot water tank and pipe insulation Replace secondary heating Flat roof insulation Room-in-the-roof insulation Switch from storage heaters to electric wet Switch from storage heaters to gas Switch from storage heaters to air source heat pump Switch from storage heaters to quantum storage	Biomass boiler Air source heat pump Ground source heat pump Solar hot water (solar thermal) Solar Photovoltaic (PV) Micro combined heat and power	Insulated doors Additional layers of insulation – e.g. CWI and EWI Triple glazing Flue Gas Heat Recovery Battery storage linked to PVs

42. Landlords should consider what impact alternative measures could make.

43. There should be a process for reviewing any decision that improvement to band B is not technically possible at least once every 5 years.

44. Note that measures involving switching from existing heating system to condensing gas boiler or upgrading existing gas boiler, which were included as reasonable measures for the first milestone of the EESSH, are not included because climate change targets will require decarbonisation of the heat network.