

## EXECUTIVE BOARD – 19 November 2019

<b>Subject:</b>	Social Housing Energy Retrofit (Energiesprong)
<b>Corporate Director(s)/Director(s):</b>	Chris Henning (Corporate Director of Development and Growth) Andy Vaughan (Corporate Director Commercial and Operations)
<b>Portfolio Holder(s):</b>	Councillor Sally Longford, Deputy Leader of the Council and Portfolio Holder for Energy, Environment and Democratic Services  Councillor Linda Woodings, Portfolio Holder for Planning, Housing and Heritage
<b>Report author and contact details:</b>	Wayne Bexton, Head of Energy Services Tel: 0115 876 4943 E: <a href="mailto:Wayne.bexton@nottinghamcity.gov.uk">Wayne.bexton@nottinghamcity.gov.uk</a>
<b>Subject to call-in:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Key Decision:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Criteria for Key Decision:</b>	
<b>(a)</b> <input checked="" type="checkbox"/> Expenditure <input type="checkbox"/> Income <input type="checkbox"/> Savings of £1,000,000 or more taking account of the overall impact of the decision	
<b>and/or</b>	
<b>(b)</b> Significant impact on communities living or working in two or more wards in the City <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Type of expenditure:</b> <input checked="" type="checkbox"/> Revenue <input checked="" type="checkbox"/> Capital	
<b>Total value of the decision:</b> £14.2m	
<b>Wards affected:</b> All	
<b>Date of consultation with Portfolio Holder(s):</b> 18 November 2019	
<b>Relevant Council Plan Key Theme:</b>	
Strategic Regeneration and Development	<input checked="" type="checkbox"/>
Schools	<input type="checkbox"/>
Planning and Housing	<input checked="" type="checkbox"/>
Community Services	<input type="checkbox"/>
Energy, Sustainability and Customer	<input checked="" type="checkbox"/>
Jobs, Growth and Transport	<input type="checkbox"/>
Adults, Health and Community Sector	<input type="checkbox"/>
Children, Early Intervention and Early Years	<input type="checkbox"/>
Leisure and Culture	<input type="checkbox"/>
Resources and Neighbourhood Regeneration	<input type="checkbox"/>
<b>Summary of issues (including benefits to citizens/service users):</b>	
<p>The City Council has a proud track record of environmental improvement to the city's housing stock, ranging from wholesale home insulation schemes through to solar panels.</p> <p>The City Council, in conjunction with Nottingham City Homes (NCH), have also delivered 27 whole house interventions to achieve net-zero carbon emission standards (Energiesprong initiative). These required a combination of different energy saving initiatives on the whole house to deliver the maximum environmental and financial benefit. A further 138 properties are currently being worked on.</p> <p>This ground-breaking work has been recognised nationally due to its innovation and benefits in tackling fuel poverty.</p> <p>Tenants of these properties have seen an annual reduction of c. £250 in their fuel bills and an</p>	

annual reduction in carbon of c. 3 tonnes.

This report proposes a further rollout of this approach, utilising funding allocated within the Housing Revenue Account, supplemented by a £5.7M Government grant to a further 262 properties.

This project presents a unique opportunity to build upon the success of this trailblazing programme and expand its delivery to a further 262 properties.

Whilst this is to be welcomed and beneficial for the tenants within scope, the scale of the retrofitting challenge throughout the city is sizeable given the aged housing stock.

A key part of this project is to combine energy measures and to work through how unit costs can be reduced and thus making such solutions scalable. Some of this requires the use of specialist contractors.

In pursuit of wider agendas, the Council will also trial a range of delivery mechanisms so that benefit is maximised and not only centred on the tenants within scope but also creating jobs in Nottingham.

As this approach is mainstreamed and becomes more affordable, we will use the learning elsewhere, both within Nottingham and beyond. Nottingham will position itself to support others.

Nottingham homes will benefit from this initiative, delivering net zero energy homes which are warm, desirable and affordable for tenants, therefore reducing the health impacts of cold homes.

The project secures significant government grant (£5.7m) for the City and creates the potential opportunity for NCH to act as Principal Contractor in the deployment of these retrofit solutions.

**Exempt information: State 'None' or complete the following**

An appendix to the report is exempt from publication under paragraph 3 of Schedule 12A to the Local Government Act 1972 because it contains information relating to commercial pricing and, having regard to all the circumstances, the public interest in maintaining the exemption outweighs the public interest in disclosing the information. It is not in the public interest to disclose this information because commercial pricing information is included which would impact on the ability of the council to deliver best value.

**Recommendation(s):**

1. To note the progress made on the Energiesprong project delivery and the impact made on both carbon reduction and fuel poverty (see Section 1.1).
2. To approve acceptance of grants totalling £5.7m, via Department for Business Energy and Industrial Strategy (BEIS) Whole House Retrofit and Interreg North West Europe MUSTBEO and delegate authority to the Head of Energy Services to sign a contract with BEIS to accept the grant.
3. To include in the Public Sector Housing Capital Programme additional Retrofit schemes to the value of £14.2m funded by grant and Major Repairs Reserve contributions from the Housing Revenue Account (HRA), subject to sign off by the Section 151 Officer of the business case as detailed in the Financial Comments to this report.
4. To delegate authority to the Corporate Director for Commercial and Operations in consultation with the Corporate Director for Development and Growth and the Portfolio Holders for Housing and Energy to agree the procurement route, and following that to appoint the Principal contractor and other contractors as necessary, approving dispensation from financial

regulations to negotiate and award contracts to specialist suppliers named in section 2.14.

5. To approve the establishment of a multi-agency project board as set out in 1.3 to lead this programme.
6. To agree the leaseholder expenditure as detailed in the exempt appendix.

## 1 **REASONS FOR RECOMMENDATIONS**

- 1.1 To meet Nottingham City Council's 2028 carbon neutral commitment, the City Council has to make significant improvements to the majority of our domestic properties in the City.
- 1.2 Nottingham City Council (NCC), in conjunction with Nottingham City Homes (NCH), has delivered 27 whole house interventions to achieve net zero standards (Energiesprong initiative). A further 138 properties are currently being worked on and this programme has been recognised nationally due to its innovation and benefits in tackling fuel poverty.
- 1.3 Our Remourban programme at the 'Courts in Sneinton allowed the new low carbon technical solutions fit for 2050 to be piloted, this was followed by Interreg E=0, and now the European Regional Development Fund DREEM project.
- 1.4 Our next challenge is to start to bring the cost down for achieving these higher standards, so that these solutions can be more rapidly scaled to meet our carbon neutral targets, which are just 9 years away. Our target is to reduce costs to between £25k and £45k for a whole house retrofit.
- 1.5 It is recognised that the current costs are prohibitive and is why Government Grant has been provided, however, to ensure this is scaleable and becomes an integral part of the city's carbon reduction programme then unit cost must be reduced and how this can be achieved is an essential part of this project.
- 1.6 This project sees the whole house energy retrofitting of 262 properties. The precise measures used will be individual to each property. We also get the chance to develop and test new methodologies of getting to the same low energy solutions, using similar measures and components.
- 1.7 The work included in this approval is as follows:
  1. Retrofit of homes to achieve a high level of energy performance, using the Energiesprong methodology, to the cross wall flats<sup>1</sup> on Eddlestone Drive in Clifton - These are an on-going concern and source of complaints both in terms of appearance, and also energy performance, so they are ideal for an Energiesprong whole house regeneration retrofit.
  2. Energiesprong to the cross wall flats in St Peters Street, Radford. These are adjacent to the houses and bungalows which are already receiving an Energiesprong makeover in this area.

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<sup>1</sup> Cross wall flats have concrete structural walls to each side of the property but the front and rear walls (the cross walls) are made from an alternative material, often timber, which is thin and therefore very cold, and also difficult to maintain.

3. Phased retrofit of homes to achieve a high level of energy performance, using the Destination Zero (DZ) methodology, to 96 solid brick homes around the City, with the 96 homes being representative of the NCC un-insulated solid brick homes around the city of which there are c5000.

### 1.8 Table A: Properties included in this Programme

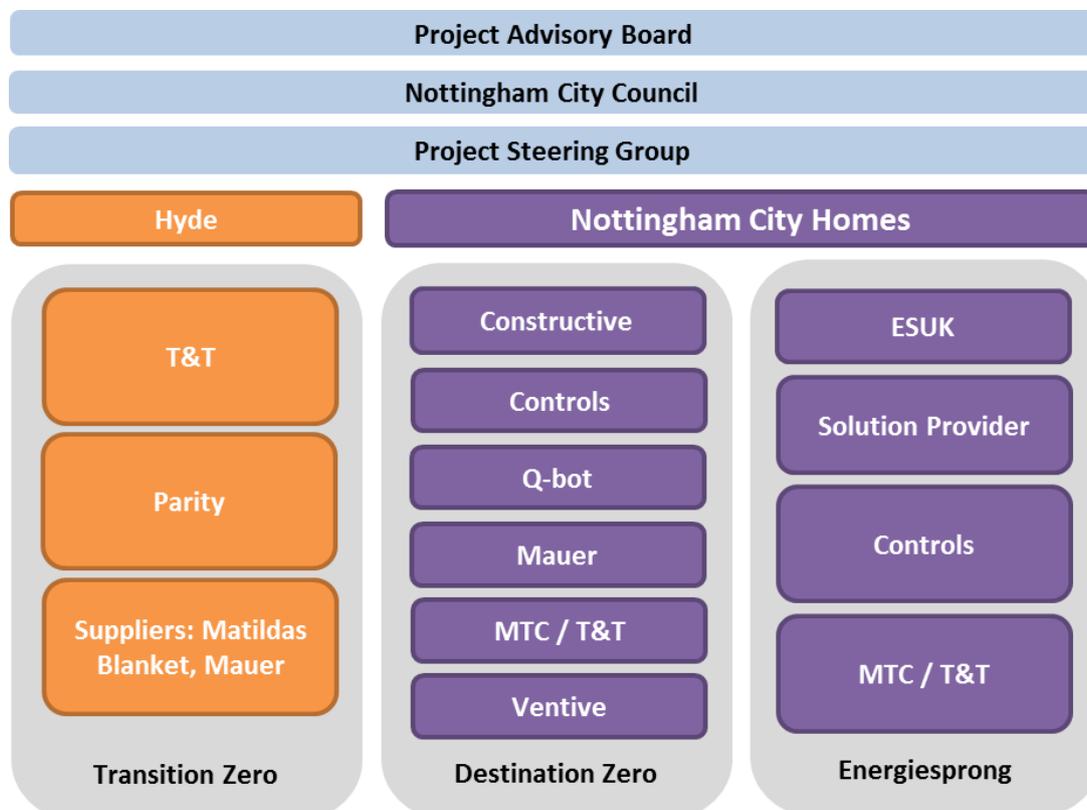
No	Archetype	Solution	Measures
166 Clifton/ Radford	Cross Wall Flats	Energiesprong	<p>External Wall Insulation</p> <p>New windows</p> <p>New Insulated roof</p> <p>Floor insulation</p> <p>Solar Panels and Energy centre with sustainable heat source, smart controls and energy storage</p> <p>Performance guarantee provided by Solution Provider</p>
96 Citywide	Solid Brick	Destination Zero	<p>External Wall Insulation</p> <p>New windows and doors where applicable</p> <p>Floor insulation</p> <p>Solar Panels where applicable</p> <p>Battery storage and sustainable heat source (heat pumps) on some properties</p> <p>Full design and integration of measures</p>
262			

- 1.9 Energiesprong is a model which focuses on achieving net zero energy retrofits through offsite manufacture, and driving innovation to reduce cost. It also has a business case which can be used to make the cost of delivering the work self-financing. The model is new to the UK, and we want to test ways we can adapt the model to achieve similar energy standards at lower cost. We also believe that we should be able to deliver

measures incrementally on some properties, which would reduce cost. We want to ensure we maximise opportunities for insourcing work, creating new jobs and training opportunities in Nottingham.

## 1.10 Project Governance

**Table B: Overall Governance Structure**



**1.11 Table C: Internal Governance**

Meeting Title	Role	Who (Subject to ongoing review)
Project Advisory Board (Quarterly)	<ul style="list-style-type: none"> <li>• Overview</li> <li>• Vision</li> <li>• Interconnection</li> </ul>	NCC Andy Vaughan NCH Delroy Beverley NCC Wayne Bexton NTU Anton Ianakiev UoN Mark Gillot BEIS rep ESUK Arnout Andrews NCH Emily Braham & Steve Edlin NCC Finance Hyde Housing
Project Steering Group (bi-monthly)	<ul style="list-style-type: none"> <li>• Reporting progress - Milestones</li> <li>• Risk Register</li> <li>• Issues</li> <li>• Successes</li> <li>• Interconnection between delivery teams.</li> </ul>	NCC: Project Sponsor - Wayne Bexton Project Manager – Katie Greenhalgh / Laura Chippendale NCC Finance Delivery work stream leaders - TBC

		ESUK NCH delivery teams as required NCH finance T & T / Hyde as required
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## **2 BACKGROUND (INCLUDING OUTCOMES OF CONSULTATION)**

### **2.1 Energiesprong**

2.2 Energiesprong is a model for deep retrofit which is technology agnostic, contractor agnostic, solution agnostic. It is about a self-financing model, which drives up quality, which is scaleable, to tackle the UK's huge retrofit challenge.

2.3 EnergiesprongUK has developed the model, with the input from housing providers and supply chain over the last few years. ESUK manages the tools such as the finance model, and brings together the Housing and suppliers, and works as an intermediary to support the project delivery. It also has links across the Country which is useful for disseminating the model, and outputs, and also ensuring higher scale and therefore cost reduction.

2.4 To date ESUK has supported Nottingham with projects which are on site, at no cost to Nottingham, due to other funding which has paid for key individuals to work within the Nottingham team. ESUK has also supported other Energiesprong projects in the UK, developing testing, and refining documents for procurement for example, and supporting supply chain to develop solutions for energy delivery and monitoring, the learning from which can then be applied into the Nottingham project. The value of this should not be underestimated, and is recognised by BEIS. The grant has been awarded on the basis that BEIS know Energiesprong UK has a role in this delivery and dissemination, and that the project is delivering the Energiesprong model.

2.5 The Whole House retrofit project was structured after a long period of discussion between ESUK and Government. The bid was shaped in line with ESUK input. ESUK chose to support only two bids with Housing Providers despite having requests from several others. Nottingham being one that they chose to support. Between the two Whole House Retrofit projects which include Energiesprong, around 70% of the grant funding has been secured so it is clear that this was a focus for Government. One of the other two projects which has secured funding has asked ESUK to support them deliver using the Energiesprong model, and had asked as part of the bidding but were rejected at the time as ESUK wanted to support Nottingham.

2.6 EnergiesprongUK is set up to drive forward deep retrofit to achieve the UK carbon targets. It is not for profit and its mission is to not be needed and therefore not exist in 5 years.

- 2.7 The Energiesprong model is focused on scaling up retrofit to meet the significant numbers needed to achieve the UK's climate change targets and our own Carbon Neutral ambitions.
- 2.8 We have now completed 27 homes with the Energiesprong model, and are on site with 138 more, which are part-funded by ERDF.
- 2.9 The MUSTBE0 project and BEIS Whole House Retrofit combined have given Nottingham the opportunity to deliver on an additional 262 properties to Energiesprong standards (note measures in table A).
- 2.10 The Energiesprong model requires a 'Solution Provider' to design and install to achieve a performance outcome which they guarantee.
- 2.11 Destination Zero
- 2.12 The DZ work stream is about approaching the whole house challenge without a 'Solution Provider'. In this scenario NCC/NCH will work with a designer to ensure confidence that the measures being proposed will achieve the prescribed performance outcome.
- 2.13 When installed all together as a whole house retrofit, NCH can then provide the same type of guarantee of comfort and cost to the tenants.
- 2.14 The other benefit of DZ is that the measures can be installed incrementally rather than as a whole house retrofit and this can be managed in line with property stock maintenance regimes.
- 2.15 The project will test both the whole house application and the incremental approach, and assess the impact on tenant bills from different measures, as well as the full solution. This will feed back into analysis of the business case.
- 2.16 The final benefit for DZ is that we have structured this as a training opportunity for our own in house teams to learn how to install these innovative products, which we see as being used for a large number of homes in Nottingham over the coming years, both ours, and those owned by others. This will ensure that not only will we have the opportunity to become the 'Solution Provider' and manage and co-ordinate the works on site, we will also be able to install the components, utilising local labour, supply chains and companies.
- 2.17 City Council and NCH Project Management
- 2.18 The City Council will Chair the Project Advisory Board and the Project Steering Group with NCH coordinating the work to the 262 NCC properties in the bid, in line with BEIS approved NCC/NCH management arrangements. The DZ work stream will be managed in house. Nottingham City Council and NCH will also review their readiness to act as an 'Energiesprong Service Provider', and deliver the 'Energiesprong' part of the project. Learning from this project will ensure the City Council is well placed for delivering at greater volume to achieve our carbon neutral aspirations and build on our track record of delivering energy projects and programmes.
- 2.19 The DZ work stream includes several pre-selected partners. As it is crucial for the solution to achieve a particular energy performance for the funding, we

have selected components that we know will work together to achieve this. The following are named sub-contractors in our project:

- Energiesprong UK (Not for profit SME supporting Nottingham with delivery of the project and dissemination of findings across both work streams)
- Manufacturing Technology Centre (Supporting with cost reduction across the project)
- Constructive Thinking (Architect and digital designer for offsite manufacture)
- Mauer (innovative offsite wall insulation and facades matching existing brick)
- Q-bot (innovative under floor insulation)
- EON (installers for Mauer bringing additional ECO funding & ECO funding Q-bot)
- Ventive (suppliers of innovative heat recovery / heat pump units with battery storage)

2.20 Contractors were sourced for their unique, cost effective, innovative solutions which provide the opportunity to upskill our workforce and drive down the cost of Energy Retrofit projects.

#### 2.21 Timescales

<b>Funding Stream</b>	<b>Project Start</b>	<b>Works on Site</b>	<b>Works completion</b>	<b>Project Completion</b>
BEIS Whole House Retrofit – DZ (96 solid brick homes around the City) (say more about location)	Dec-19	Jan-20	Mar-21	Sep-21
BEIS WHR – Energiesprong (66 flats on Eddlestone Drive in Clifton)	Dec-19	Apr-21	Mar-21	Sep-21
MUSTBE0 Interreg – Energiesprong (100 flats in St Peters St, Radford)	Jan-19	Oct-20	Oct-21	Jun-22

#### 2.22 Learning and Outcomes

2.23 As part of the project we have committed to reviewing how the different approaches combine to provide a carbon neutral asset management strategy.

2.24 The BEIS Whole House retrofit project has been structured with the intention of building internal capacity to ensure that NCC and NCH in house teams are able to manage and deliver the majority of the retrofit work required to achieve Nottingham’s carbon neutral target. This will reduce the cost of achieving Carbon neutral objectives, upskill our workforce and provide a commercial opportunity to roll this approach out to others.

2.25 The project includes two work streams, Energiesprong and Destination Zero. The DZ work stream is focused specifically on building in house capacity – effectively this is a self-delivery version of Energiesprong. The work stream includes a budget for an internal construction manager, rather than a main contractor. It also specifically targets measures which are suited to developing in house delivery capacity, and which have significant potential for roll out in Nottingham. The project is an opportunity to test and learn how to deliver a more cost effective deep retrofit, which can then be scaled up across NCC homes as well as those privately owned.

2.26 As both Energiesprong and Destination Zero workstreams are intended to reduce cost, a Cost reduction work package will be set up as part of the Whole House Retrofit project. This will include partners Manufacturing Technology Centre and Turner and Townsend. Details of component and installation costs will be shared along with cost reduction methodologies, and a report will be shared at the end of the Whole House Retrofit project. The costs of the measures will also be compared against the existing cost of measures in the HRA Business plan to help inform the next phases of producing our 5 and 10 year business plans.

2.27 Understanding the detail of the cost model will also allow us to understand where NCC should focus efforts to be part of the supply chain.

#### 2.28 Leaseholders

2.29 There are 11 leaseholders in St Peters St, flats who will require the work to be delivered and 15 in Clifton. The approved major repairs works leaseholder policy will be followed with a capped amount payable by each leaseholder in accordance with their lease. The remainder of the cost will be made up from grant funding. However it should be noted that the policy allows the leaseholder contribution to be paid over a long period of time to ensure affordability for leaseholders, which will mean the General Fund will need to cover these loans. There may also be some leaseholders with leases which do not require them to contribute.

### **3 OTHER OPTIONS CONSIDERED IN MAKING RECOMMENDATIONS**

3.1 Do nothing – this was ruled out because the City has committed to be carbon neutral by 2028. We want to achieve this in the most cost effective way possible, and these projects enable us to develop cost reduction strategies and asset management plans about how we best achieve targets, whilst ensuring tenants are protected from fuel poverty. It is recognised that HRA match funding has been allocated to this project and we considered utilising this HRA funding in a different way. We discounted this because the benefits are holistic, scalable and guarantee standards for 30 years.

3.2 The incremental approach to installing low hanging fruit energy efficiency measures, which is typical across the UK housing stock, will not achieve zero carbon standards. The piecemeal approach costs the local authority or housing association more and leads to non-compatible solutions being procured separately.

3.3 Whilst the cost for each home referenced in this report is currently high (average £55k), this budget is funded with the following:

- Money which is already allocated against those particular properties, within the 30 year HRA programme, with the cost of borrowing included on an 'invest to save' basis (exempt appendix).
- Additional revenues which are generated through the solutions (Eg: RHI or grid balancing).
- Grant funding to bridge the gap between the total of the income and savings above, and the current cost.

3.4 As a result the project is cost neutral to the HRA.

3.5 Increasing in scale of deployment will mean costs reduce therefore reducing the cost of delivering the same high levels of energy performance to all properties, meaning a reducing amount of grant will be required.

3.6 Other projects using HRA funds will not provide the cost effectiveness and impact of the Deep Retrofit approaches. These will deliver 2050 standards now, achieving the highest carbon saving possible in a cost effective and efficient way.

#### **4 FINANCE COLLEAGUE COMMENTS (INCLUDING IMPLICATIONS AND VALUE FOR MONEY/VAT)**

4.1 The Portfolio Holder with responsibility for Finance has been consulted and is in agreement with the recommendation set out in Recommendation 4 to dispense with Contract Procedure Rule 5.1.2 (requirements to obtain tenders) under Finance Regulation 3.29. Consultation with the Portfolio Holder took place on 11 November 2019.

4.2 The Section 151 Officer has agreed to the dispensation from Contract Procedure Rule 5.1.2 (requirement to obtain tenders) under Financial Regulation 3.29, as described in the body of the report to enable the use of specialist suppliers offering innovative solutions to meet the required energy performance standards in the timescales needed to access the grant funding. Dispensation is subject to the sign off of the financial models, appropriate due diligence and meeting the financial criteria set out in the exempt financial comments.

4.3 For full financial comments see exempt appendix 5.

Julie Dorrington, Senior Accountant (HRA) - 15 November 2019.

Tom Straw, Senior Accountant (Capital Programme) – 15 November 2019

Theresa Channell – Head of Strategic Finance & Deputy Section 151 Officer – 15 November 2019

#### **5 LEGAL AND PROCUREMENT COLLEAGUE COMMENTS (INCLUDING RISK MANAGEMENT ISSUES, AND LEGAL, CRIME AND DISORDER ACT AND PROCUREMENT IMPLICATIONS)**

5.1 No significant procurement issues with this report. The Procurement Team will assist to ensure that any appointments made are compliant with Nottingham City's Finance & Contract Procedure Rules, and where necessary with appropriate national legislation.

Procurement comments provided by Jonathan Whitmarsh, Lead Procurement Officer, Places Category - 11 November 2019

- 5.2 The City Council must ensure it is able to comply with the terms of the grant funding from BEIS including delivering any outputs. The City Council should include in contracts it awards which include grant funding conditions which enable the City Council to recover funding if the City Council is obliged to repay any grant. It must comply with any procurement and tender requirements (if any) included in the grant conditions in addition to complying with the City Council's own Financial Regulations. It is understood that the dispensation is being sought in connection with specific contractors who have been notified in the grant application and who have exclusive rights in technology necessary for delivering the project. A direct award to these contractors is permitted under the Public Contracts Regulations 2015. The City Council should satisfy itself as to whether a parent company guarantee or other form of security (such as a bond) is required from the chosen principal contractor.
- 5.3 It is understood the legal basis for recovering the contribution from leaseholders is set out in the policy referred to above.
- 5.4 It should be noted that Energisprong UK Limited is a not for profit member organisation. NCH is a member of Energiesprong UK Limited and is represented on the board by an NCH employee (nominated by NCH) who now works one day per week for Energiesprong UK Limited. The employee receives a salary for that role

Andrew James Team Leader – Commercial, Employment and Education - 15 November 2019.

## **6 STRATEGIC ASSETS & PROPERTY COLLEAGUE COMMENTS (FOR DECISIONS RELATING TO ALL PROPERTY ASSETS AND ASSOCIATED INFRASTRUCTURE)**

6.1 N/A

## **7 SOCIAL VALUE CONSIDERATIONS**

7.1 The projects will create warmer, healthier homes for 262 tenants and leaseholders, and through cost reduction will open up the opportunity to deliver the same opportunities for many more tenants.

Through the inclusion of aims to ensure our in house teams can develop their own capacity, we can ensure that training and employment opportunities will be offered to NCC residents and NCH tenants.

## **8 REGARD TO THE NHS CONSTITUTION**

8.1 The work will make warmer and healthier homes, which will reduce the impact of cold winters and hot summers, and therefore reduce costs to the NHS. Cold homes are known to affect both physical and mental health.

Experience from the Energiesprong retrofits delivered to date shows that tenants who hoard due to mental health have benefited significantly from the support they receive to clear their homes prior to the retrofit.

## **9 EQUALITY IMPACT ASSESSMENT (EIA)**

9.1 Has the equality impact of the proposals in this report been assessed?

No

An EIA is not required because:

(Please explain why an EIA is not necessary)

Yes

X

Attached as Appendix 4, and due regard will be given to any implications identified in it.

**10 LIST OF BACKGROUND PAPERS RELIED UPON IN WRITING THIS REPORT  
(NOT INCLUDING PUBLISHED DOCUMENTS OR CONFIDENTIAL OR EXEMPT  
INFORMATION)**

10.1 None

**11 PUBLISHED DOCUMENTS REFERRED TO IN THIS REPORT**

11.1 None