

Welcome to

# The cost of progress – factoring decarbonisation into your business plan

Thursday 26 August 2021



# The cost of progress

Factoring decarbonisation into your business plan | 19<sup>th</sup> August 2021

For what comes next  
[tltsolicitors.com](https://tltsolicitors.com)




# The net zero carbon emissions challenge

- UK to achieve net zero carbon emissions by 2050;
- Retrofitting and decarbonising property is one of the main challenges to arise from the net zero carbon target;
- Specific challenges within the social rented sector;



## Meeting the cost of retrofitting properties

- It is estimated that the cost of retrofitting all social homes in the UK to zero carbon is likely to be in the region of £100bn;
  - Social Housing Decarbonisation Fund;
  - Green and sustainable finance opportunities;
  - Regulatory expectations.
- 




# Green and sustainable finance opportunities

- Banks;
- Equity investors;
- Central/Local Government



## Green energy

- District heating networks;
  - Electrical vehicle charging points;
  - Partnering with clean energy developers
- 

# Biodiversity

- Green and sustainable finance extends to the wider estate and environment;
- What can registered providers do on developments?



# Final Thoughts

- Balancing act;
- Partnerships with banks and private equity investors;
- Partnerships with clean energy developers;
- Factoring in biodiversity on developments





**Any questions?**

# Planning for the net zero transition

**Rose Bean**

# Uk Progress

- 20% covered by policy
- Up to £50bn per year green investment by 2030
- £9-12bn per year Government investment
- 3.8bn social housing decarbonisation fund

# Climate Change – Related Risks



- Physical risks
- Transitional risks
- Reputational implications

# Readying your Business



- Align organisational purpose, strategy, business model
- Carbon footprint & science-based targets
- Current and long-term risks
- New build versus retrofit, disposals
- Collaboration

# Introducing the Greener Futures Partnership



The Greener Futures Partnership is a unique collaboration of five of England's leading not-for-profit social housing providers: Abri, Anchor Hanover, Home Group, the Hyde Group and Sanctuary Group, which share the core objective of creating sustainable tenancies, homes and communities.



# What makes the GFP different



TRUE COLLABORATION



IMPORTANT VOICE



DEFINED PLAN

# GFP – Year One

Sharing our property datasets and analysis of building ‘archetypes’

Developing a shared understanding of fuel poverty and deprivation levels across geography and homes

Engaging with customers to understand their views and attitudes to sustainability

Delivering recommendations for a new energy ratings system, as well as standards and targets for our homes

Delivering pathways for ‘greening’ homes, including technology and materials

Engaging with key stakeholders and policy makers to show how we’ve shaped our proposals

# GFP – Plans to 2025

Designing and delivering work programmes that benefit customers from the outset

Engaging with regulators and funders on the changes needed to support programme delivery

Joint procurement of materials and labour, and joint development of new technologies

Engaging with customers before, during and after work programmes, to measure benefits

Encouraging and supporting customers to adopt sustainable ways of living

Delivering skills and training programmes

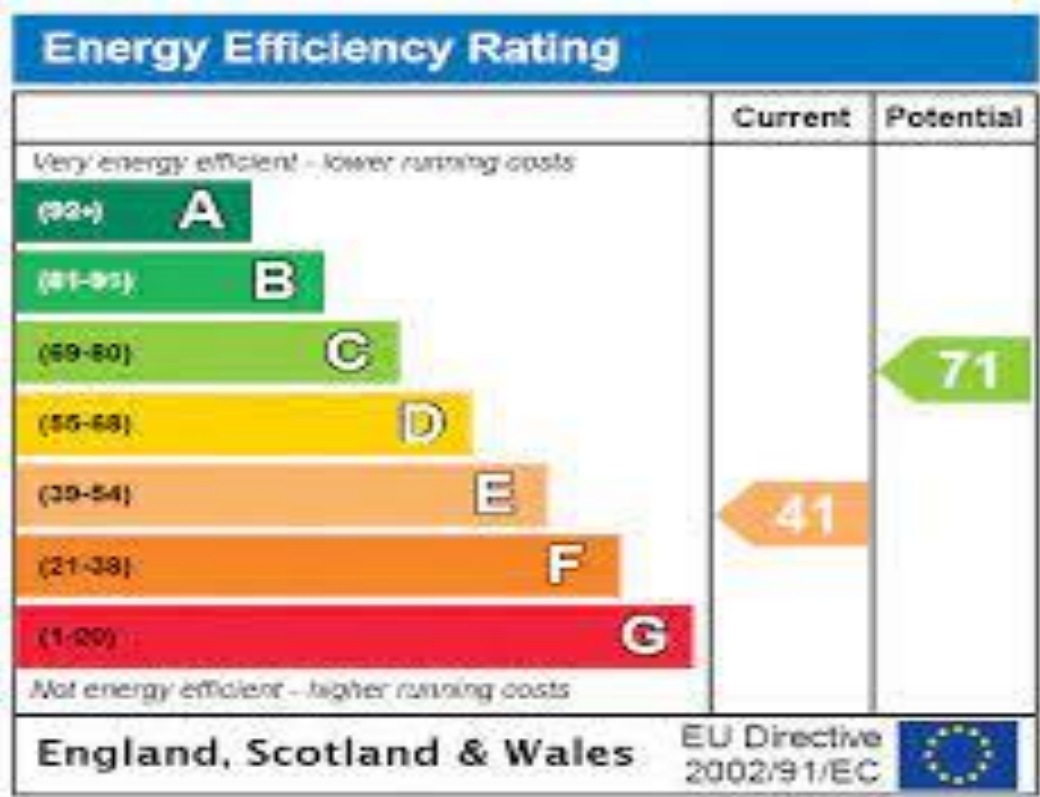
# **Funding the decarbonisation agenda and what it means for business planning**

**Ian Parker**

# Agenda

- EPC rating of current homes
- Works required?
- Likely costs?
- Timetable for the works
- How can costs be reduced
- Impact on the business plan
- Other issues
- Next steps
- Bibliography

# Do you know the EPC rating of all your homes and other assets – current and potential (PAS 2035 reviews)





# Works required



# Likely costs of works?

- **Information source:**

Climate Change Committee –

**The Sixth Carbon Budget (Buildings)  
@ 2019 prices**



# Likely cost of works?

**Table B3.2**

Energy efficiency assumptions for key measures in existing homes

	Technical potential (millions of homes)	Economic potential (millions of homes)	Costs for a semi-detached home (£)	% reduction in space heat demand for a semi-detached home
External wall insulation	7.4	7.4	8590	18%
Internal wall insulation			7320	15%
Cavity wall insulation (easy to treat)	5.9	3.1	630	10%
Cavity wall insulation (hard to treat)			2480	
Loft insulation (easy to treat)	13.3	10.8	440	4%
Loft insulation (hard to treat)			740	

# Likely cost of works?

**Table M3.1**

Heat technology assumptions used in our residential analysis for existing homes in 2020

	Efficiency	Lifetime (years)	Fixed cost (£)	Variable cost (£)	Opex (£/year)
Air source heat pumps*	300%	15	4,430	370	100
Ground source heat pumps*	326%	20	9,070	530	100
Hybrid heat pumps**					
With hydrogen	See respective components		5,940	370	160
With biofuels			6,370	370	220
Hydrogen boiler	80%	15	2,960	N/A	100
Biofuel boiler	84%	15	3,130	N/A	100
Electrification (storage heater)	100%	15	N/A	780	100
Gas boiler	87%	15	2,860	N/A	100
Oil boiler	84%	15	3,130	N/A	100

Notes: Costs are in £2019 and rounded to the nearest 10. Boiler costs presented for a 24kW boiler. \* Heat pump efficiencies represent the combined SPF assumed for 2020 at 40°C flow temperature (the weighted average flow temperature for heat pumps in our Balanced Pathway). \*\* While both GSHP and ASHP hybrids were tested in the modelling, ASHP hybrids were found to be more cost effective and are therefore the variant we present here.

# BUT

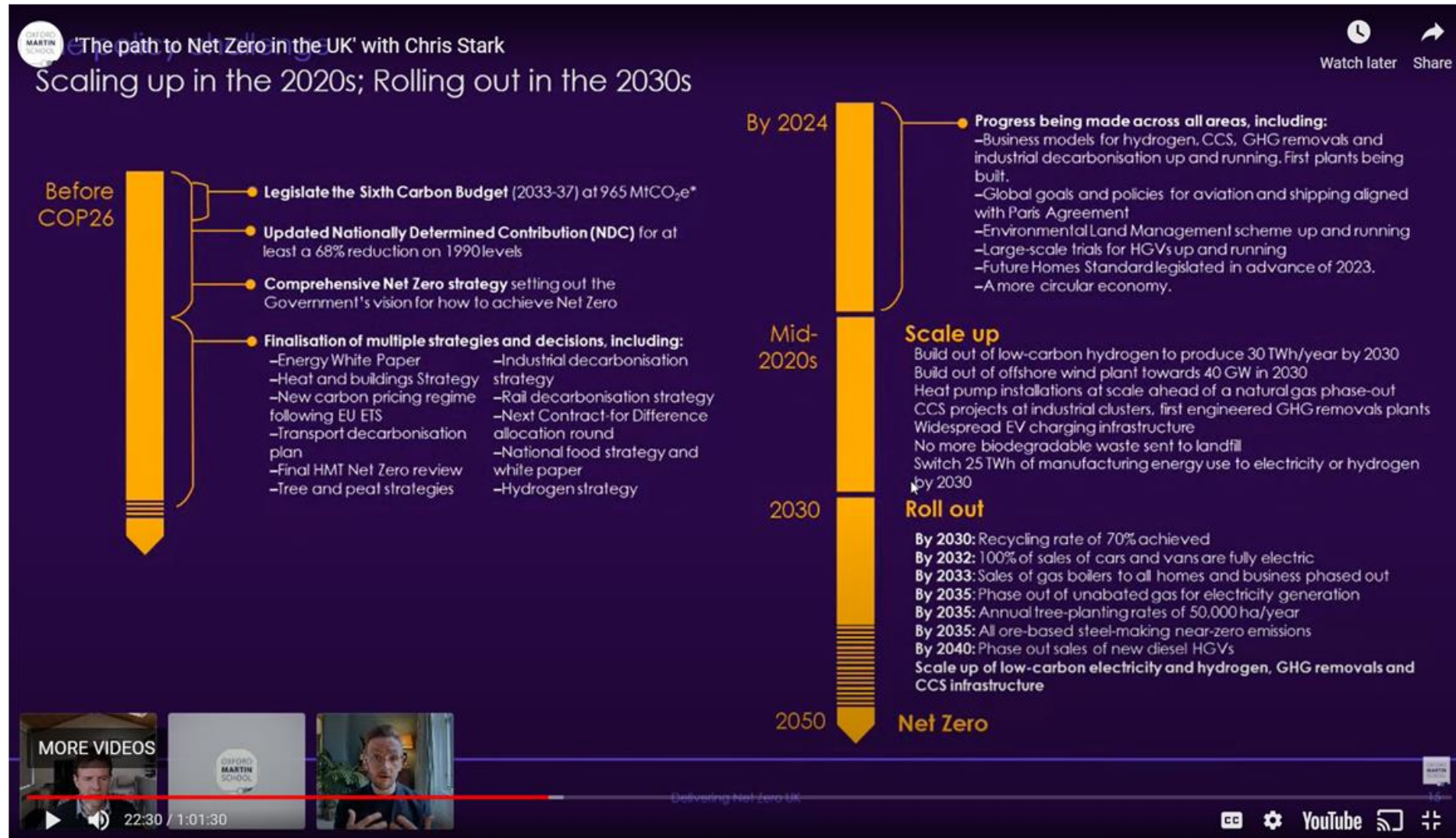
- Surveyors are predicting higher costs
- Housing association in Wales anticipates £35k per home
- London ALMO predicting £25k per home
- North West RP survey worked out at £34k per home
- Air Source Heat Pumps currently cost around £15k including installation but prices expected to fall
- Will all your homes be able to be retrofitted?
- What will you do with the homes you cannot retrofit?

# Timetable for the works

- Many RPs budgeting from now to 2050
- Climate Change Committee indicating works should be done by 2030
- COP26 will Boris Johnson bring forward the deadlines?
- Climate Change Committee stating that works on buildings should start **NOW**
- National Audit Office expects pilot works to be undertaken



# Carbon Neutral Timetable



# How can the costs be reduced (1)

- **Technological advances** – CCC expect all cars to be electric by 2028! Will the EPC-C date be changed from 2030?
- **Recently the PM outlined a Ten Point Plan for a Green Industrial Revolution for 250,000 jobs:**
  7. Homes and public buildings: Making our homes, schools and hospitals greener, warmer and more energy efficient, whilst creating 50,000 jobs by 2030, and a target to install 600,000 heat pumps every year by 2028.

<https://www.gov.uk/government/news/pm-outlines-his-ten-point-plan-for-a-green-industrial-revolution-for-250000-jobs>

- **Procurement frameworks**

## How can the costs be reduced (2)

- **Undertaking some works in house** – eg, insulation, draught proofing
- **Reduced VAT on green goods?** – LAs can recover VAT but RPs cannot
- **Tenant behaviour** – support for the works
- **RIBA suggesting rents could be increased** as heating costs will fall!
- **Grants from the Government** – £160m available for the period up to 2023 and total £3.8bn over the next 10 years!

# Social Housing Decarbonisation Fund – First Wave

- The Department of Business, Energy and Industrial Strategy (BEIS) has estimated that this round of funding (£160m) will see up to 38,000 social homes receive energy-efficiency upgrades such as insulation or new doors, windows and heating systems.
- Key dates:
  - 23 August 2021 – competition launch
  - 3 September 2021 – 2-week clarification period
  - 15 October 2021 – deadline for submission of proposals
  - By end of December 2021 – notification of competition results
  - January 2022 – grant awards
  - 31 January 2023 – project closure

# What impact will the extra costs have on the business plan – stress tested

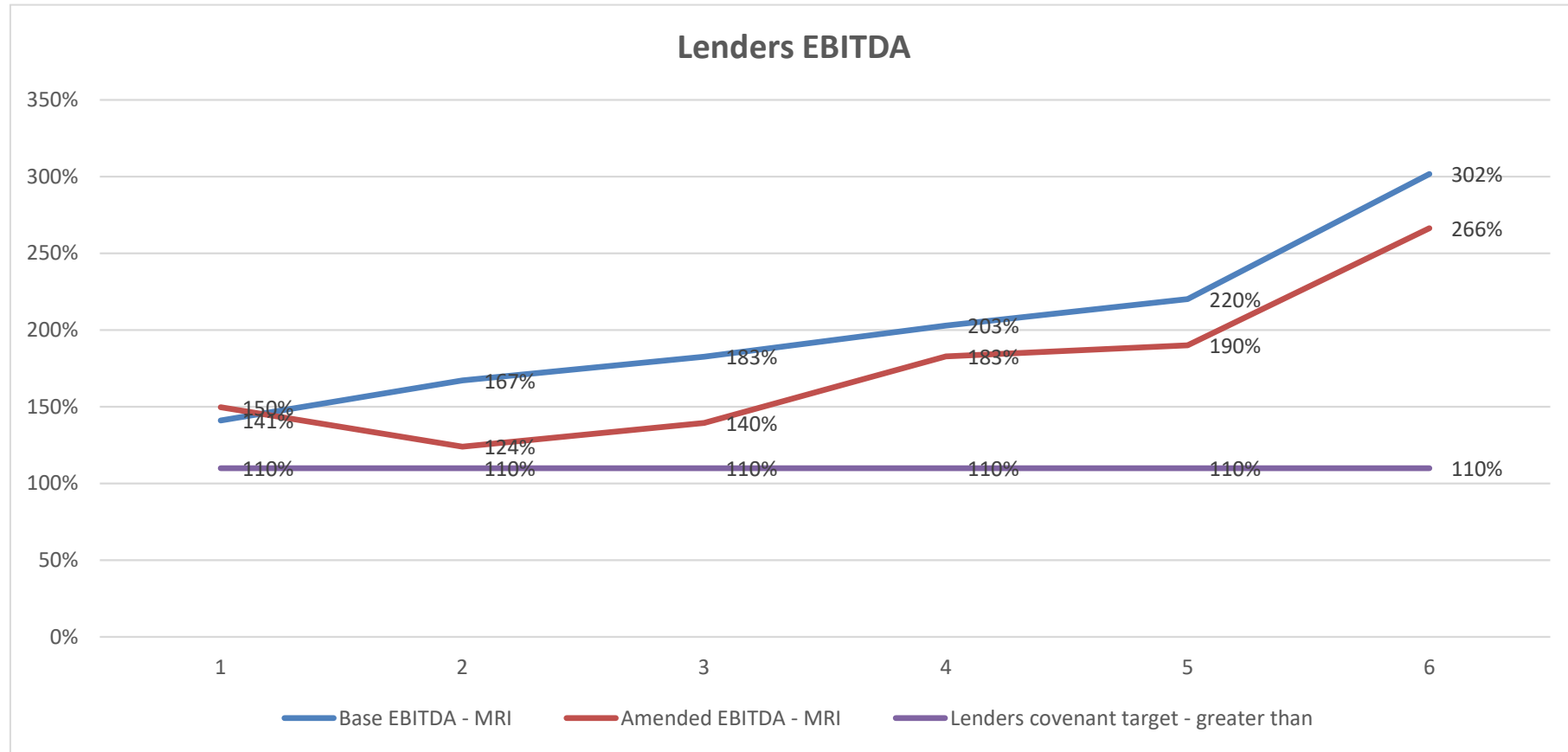
				2021.22	2022.23	2023.24	2024.25	2025.26
SOCI heading		From	To	Year 1 £000s	Year 2 £000s	Year 3 £000s	Year 4 £000s	Year 5 £000s
Income from Social Housing Lettings				24,741	25,922	26,982	27,943	29,131
Other income				723	685	661	642	629
Turnover				25,463	26,607	27,643	28,585	29,759
Expenditure on Social Housing Lettings				(17,277)	(18,521)	(19,419)	(20,253)	(21,413)
Other costs				(206)	(310)	(474)	(581)	(632)
Operating Expenditure				(17,483)	(18,831)	(19,892)	(20,834)	(22,045)
Operating Surplus				7,981	7,776	7,750	7,751	7,715
Interest Receivable and similar receipts				2	1	1	1	4
Interest payable and similar charges				(12,290)	(3,524)	(3,663)	(3,651)	(3,691)
Movement in fair value of financial				188	-	-	-	-
Surplus for the year before tax				(4,119)	4,253	4,089	4,101	4,028
<b>Impact on the annual surplus</b>	<b>The figures below can be changed</b>	<b>From</b>	<b>To</b>					
Rent increase lower by	2.00%	2	3	-	(421)	(875)	(909)	(951)
Increase in voids	0.25%	2	2	-	(59)	-	-	-
Increase in bad debts	1.00%	2	5	-	-	-	-	-
GDPR fine (£000s)	-£ 509	2	2	-	(509)	-	-	-
Increase in management costs	3.00%	2	4	-	-	-	-	-
Average interest rate rises/(reduces)	1.00%	2	10	-	-	-	-	-
One off charges e.g. Fraud (£000s) -ve	-£ 200	3	3	-	-	(200)	-	-
HSE PPE prosecution and fine (£000s) -ve	-£ 100	2	2	-	(100)	-	-	-
Routine maintenance costs rise	12.50%	2	3	-	(746)	(767)	-	-
DHS/Climate works 5 yr programme - cost per home	£ 15,000	2	10	-	-	-	-	-
<b>Input the % to be charged to revenue</b>	<b>100.0%</b>							
Lost net income due to reduced dev programme				0	-13	-70	-171	-510
Changed depreciation				0	0	0	0	0
Savings				320	327	334	342	349
Total				320	-1,522	-1,578	-738	-1,111
Amended surplus/(deficit)				-3,799	2,731	2,511	3,363	2,917

# What impact will the extra costs have on the business plan – stress tested

SOFP heading			Year 1 £000s	Year 2 £000s	Year 3 £000s	Year 4 £000s	Year 5 £000s
Total Fixed Assets			221,762	228,182	230,021	236,190	248,994
Other current assets			4,946	5,050	4,995	5,266	5,365
Cash			<b>1,205</b>	<b>4,765</b>	<b>6,026</b>	<b>6,954</b>	<b>4,525</b>
Total Current Assets			6,150	9,815	11,022	12,220	9,890
Total creditors: amounts due less 1 year			6,353	6,480	6,609	6,742	6,876
Net Current assets			(202)	3,335	4,412	5,479	3,014
Total assets less current liabilities			221,560	231,518	234,433	241,669	252,008
Total creditors: amounts due more 1 year			194,292	201,518	201,923	205,796	213,219
Reserves			27,268	29,999	32,510	35,873	38,789
Total long term creditors and reserves			221,560	231,518	234,433	241,669	252,008



# Impact on the business plan – stress tested



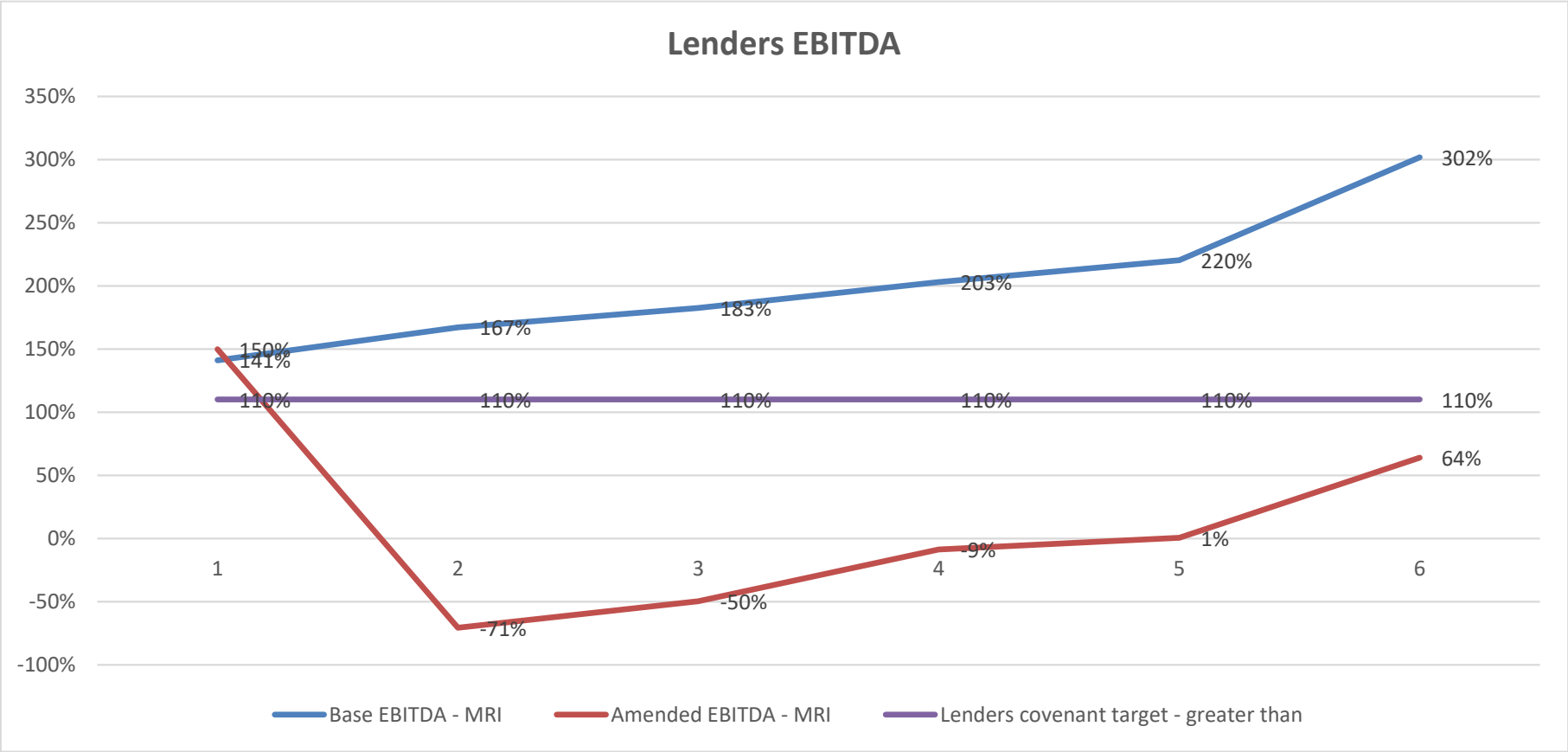
# Impact on the business plan – stress tested plus decarbonisation works

				2021.22	2022.23	2023.24	2024.25	2025.26
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Movement in fair value of financial				188	-	-	-	-
Surplus for the year before tax				(4,119)	4,253	4,089	4,101	4,028
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Increase in bad debts	1.00%	2	5	-	-	-	-	-
GDPR fine (£000s)	-£ 509	2	2	-	(509)	-	-	-
Increase in management costs	3.00%	2	4	-	-	-	-	-
Average interest rate rises/(reduces)	1.00%	2	10	-	-	-	-	-
One off charges e.g. Fraud (£000s) -ve	-£ 200	3	3	-	-	(200)	-	-
HSE PPE prosecution and fine (£000s) -ve	-£ 100	2	2	-	(100)	-	-	-
Routine maintenance costs rise	12.50%	2	3	-	(746)	(767)	-	-
DHS/Climate works 5 yr programme - cost per home	£ 15,000	2	10	-	(6,857)	(6,928)	(6,992)	(6,995)
<b>Input the % to be charged to revenue</b>	<b>100.0%</b>							
Lost net income due to reduced dev programme				0	-13	-70	-171	-510
Changed depreciation				0	0	0	0	0
Savings				320	327	334	342	349
Total				320	-8,379	-8,506	-7,730	-8,106
Amended surplus/(deficit)				-3,799	-4,126	-4,417	-3,629	-4,078

# Impact on the business plan – stress tested plus decarbonisation works

SOFP heading			Year 1 £000s	Year 2 £000s	Year 3 £000s	Year 4 £000s	Year 5 £000s
Total Fixed Assets			221,762	228,182	230,021	236,190	248,994
Other current assets			4,946	5,050	4,995	5,266	5,365
Cash			1,205	(2,092)	(7,759)	(13,822)	(23,247)
Total Current Assets			6,150	2,958	(2,763)	(8,557)	(17,882)
Total creditors: amounts due less 1 year			6,353	6,480	6,609	6,742	6,876
Net Current assets			(202)	(3,521)	(9,373)	(15,298)	(24,758)
Total assets less current liabilities			221,560	224,661	220,648	220,892	224,236
Total creditors: amounts due more 1 year			194,292	201,518	201,923	205,796	213,219
Reserves			27,268	23,143	18,725	15,096	11,017
Total long term creditors and reserves			221,560	224,661	220,648	220,892	224,236

# Impact on the business plan – stress tested plus decarbonisation works



# Other issues

- Impairment on homes and buildings that cannot be retrofitted
- Can the costs be capitalised?
- Accelerated component depreciation – reduced expected life
- Will the costs be excluded from the covenant calculations – will the RSH have the same view?
- Can you borrow to fund the extra costs? And at what price?
- Need to report on Environmental, social and governance (ESG) and Climate Change in your financial statements

# Next steps

- **Identify the energy rating of your homes**
- Understand the possible **impact on your business plan**
- Communicate the possible outcome to your Board and staff
- **Keep your tenants informed** about the Green Agenda – watch out for disrupters like Nigel Farage
- Add decarbonisation and climate change to your **risk map**
- Look to join **sector wide procurement arrangements**
- **Talk to your funders** – Fitch expect gearing ratios to rise and interest cover to fall
- **Set up a task force** to deal with the issues that will arise
- **Need clear guidance** from central government about timetable and funding

# Bibliography (1)

- Climate Change Committee – The sixth budget report  
<https://www.theccc.org.uk/publication/sixth-carbon-budget/>  
<https://www.theccc.org.uk/publication/development-of-trajectories-for-residential-heat-decarbonisation-to-inform-the-sixth-carbon-budget-element-energy/>
- ESG reporting  
<https://esgsocialhousing.co.uk/document-library/>
- Watch “The path to Net Zero in the UK' with Chris Stark" on YouTube  
<https://www.youtube.com/watch?v=JY-TCQWyGrM>

## Bibliography (2)

- RIBA – Greener Homes (Chapter 7 – Social Housing)  
<https://www.architecture.com/-/media/GatherContent/Paywalled-resource-with-many-PDFs-VPC/Additional-Documents/GreenerHomespdf.pdf>
- Social Housing Retrofit accelerator  
<https://socialhousingretrofit.org.uk/>
- Climate change risk: A good practice guide for Audit and Risk Assurance Committees  
<https://www.nao.org.uk>
- Social Housing Decarbonisation Fund Competition Guidance Notes  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1012788/shdf-wave-1-guidance.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1012788/shdf-wave-1-guidance.pdf)



**And finally.....**

**ACT  
NOW!**

The logo features the word "ACT" in blue and "NOW!" in green. The letter "O" in "NOW!" is replaced by a green clock face with a white center and black hands.

**...any questions?**

# Thoughts on a new approach to funding

**Adrian Jolliffe, Managing Director, 2TIX LTD**

# How to fund the decarbonisation agenda?

## Income

### Recurring

- Higher rents
- Lower voids / quicker relets
- Renewable Heat Incentive payments
- Seek other sources of income at minimal marginal cost

### One-off

- Sell high cost core assets
- Sell peripheral assets
- Borrow
- Government capital Grant
- Government Interest free loan

## Expenditure

### Recurring

- Improve efficiency, cut recurring costs
  - Staff
  - Management
  - Maintenance
- Refinance
  - to change covenants
  - to lower interest cost
  - to spread capital repayments
- Reduce development / cross subsidy
- Reduce elective expenditure

### One-off

- JV - Share Costs
- Merger
- Defer Costs
- Extend Component Lives
- Restructure debt repayment
- Refinance to defer repayments

## Less resilience

### Borrowers accept less resilience

(less headroom, more risk)  
Renegotiate existing covenants  
Negotiate Covenant waiver

### Lenders accept less resilience

Permanent change to covenants

# Income

## Recurring

- Higher rents
- Lower voids/quicker relets
- Renewable Heat Incentive payments
- Seek other sources of income at minimal marginal cost

## One-off

- Sell high cost core assets/Sell peripheral assets
- Borrow
- Government capital Grant
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# Expenditure

## Recurring

- Improve efficiency, cut recurring costs
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## One-off

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- Defer Costs/Extend Component Lives
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# Less resilience

## **Borrowers accept less resilience**

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- Renegotiate existing covenants
- Negotiate covenant waiver

## **Lenders accept less resilience**

- Permanent change to covenants

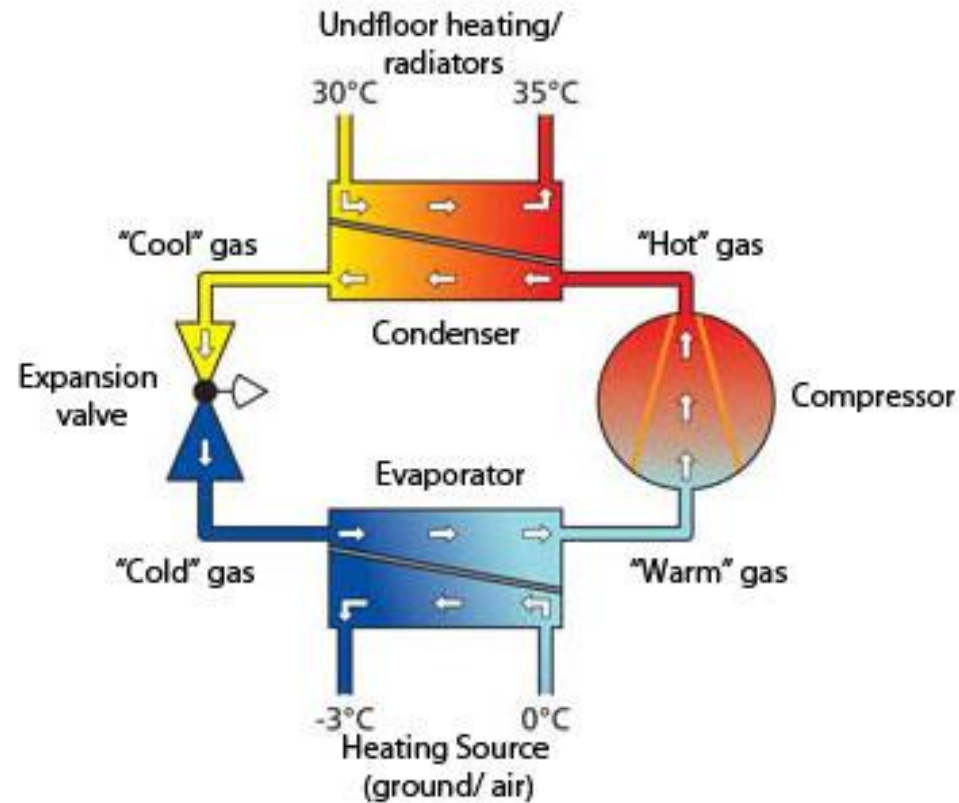
**...any questions?**



# Living with a heat pump

**Adrian Jolliffe, Managing Director, 2TIX LTD**

# Living with a heat pump by an early adopter



# Domestic heat pumps



# My air source heat pump



# Installation – it's not just the heat pump

- Hot water storage cylinder required – no instant hot water
- Bigger radiators (double sized, underfloor or whole wall?)
- 60C – lower hot water temperature than a combi boiler
- Immersion heater required – backup and weekly protection from legionella
- New pipework required? (no microbore)
- More insulation/ventilation – to make best use of system





# Operation – simple

- Uses standard central heating controls
- Longer running time
- Winter operation less efficient
- Running costs
- Maintenance costs
- Replacement costs



# Safety and maintenance

- SAFETY
  - Gas – heat pump compressed gas
  - Water – closed hot water system
  - Electricity – 5KW
- MAINTENANCE
  - Annual
  - Repairs



# Retrofit Example

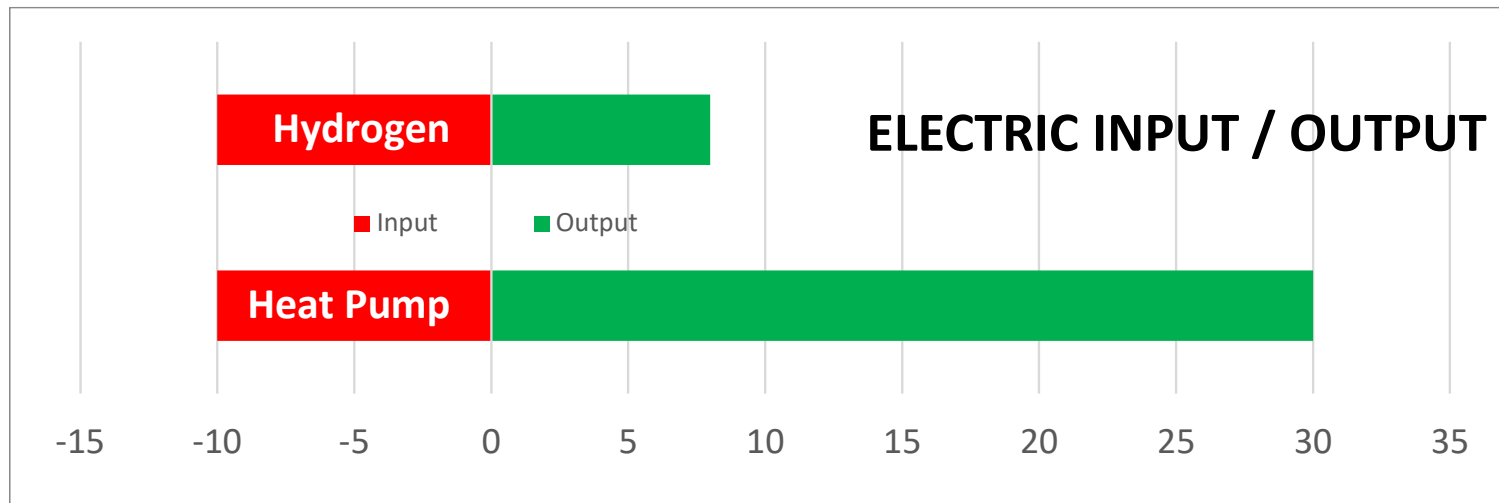
- Heat Pump retrofit
- Social housing in Northants
- This area has gas
- 18 external units – one for each flat





# Living with a heat pump – summary

- It just sits outside (quietly!) producing heat
- Familiar heating controls
- Doesn't produce instant heat – it needs time to get going
- Cheaper to run than oil or electric storage heaters
- Repairs can be expensive and repairers difficult to find



...any questions?



**Adrian Jolliffe**  
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