



Working Conference

**EMPOWERING NEIGHBOURHOODS  
FOR CLIMATE ACTION**

ARNHEM 10 & 11 APRIL 2019

# Optivo's Retrofits in the Ore Valley- Presentation

Optivo

11 April 2019, [Karen King & Diana Lock]



# CAN Properties Ore valley Hastings



# CAN Project

## Climate Active Neighbourhoods



- Optivo is working with residents located in Ore Valley, Hastings
- The aim is to test methods to reduce fuel poverty and improve energy efficiency
- Programme includes investments in retrofit
- Behaviour change programme to address fuel poverty





# Progress so far



## Optivo

- 130 Properties completed with a final SAP score of 69 and above
- 18 properties completed with a final SAP score of below 69



# Cavity Wall & Loft Insulation

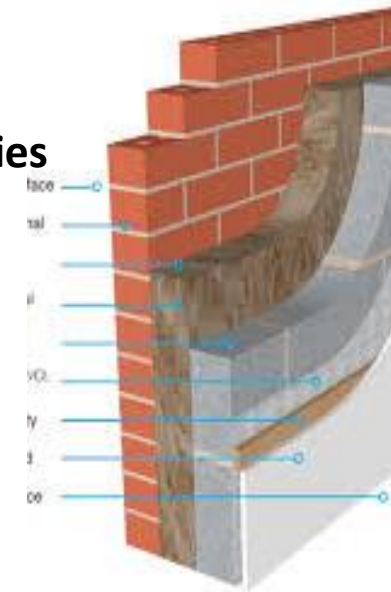


## Loft Insulation-

All lofts have been fitted with 300mm of insulation- 46 properties

## Cavity Wall insulation-

14 properties





# Solar PV With batteries

**1 Pilot property**

**Large SAP benefit**

**Much lower energy bills**

**Small amount of energy used  
from the national grid**

**FiT not claimed**



# High Heat Electric Heating



4 properties

Energy saving method  
where gas is not  
available

Better value for money

Less energy used



Section of a SIM  
Storage Heater

- 1 Vermin-bat insulation
- 2 Automatic damper control
- 3 Backdraft regulator
- 4 Charging thermostat
- 5 Charging sensor plate
- 6 External insulation of ecological fibre
- 7 Front air chamber
- 8 Rear 30 mm Microfibre G insulation
- 9 Heating Elements
- 10 Lower vermin-bat insulation
- 11 High density magnetic refractory
- 12 Safety flame-pipe
- 13 Front 30 mm Microfibre G insulation
- 14 Front air chamber
- 15 Side air chamber

# Roof replacement with insulation and cladding



## New Roofs



11 April 2019



# Q Bot under floor insulation



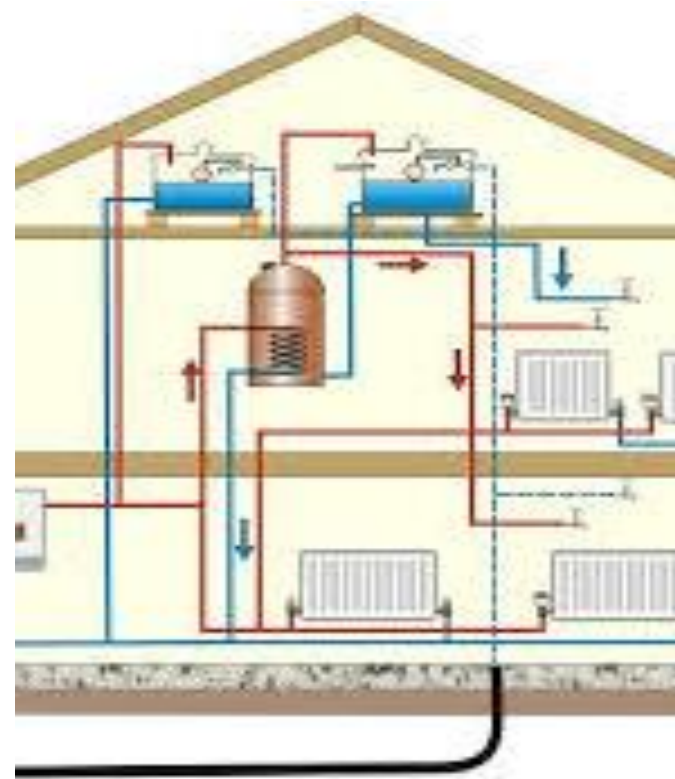
**5 Properties**  
**Robot device**  
**which maps**  
**the floor area**  
**and sprays**  
**insulation**  
**under**  
**floorboards**



# Gas Central Heating



**20 Properties**  
**Replacement for**  
**outdated expensive**  
**electric storage**  
**heaters**  
**Cheaper to run**  
**More energy**  
**efficient**  
**Less likelihood of**  
**damp and mould in**  
**homes**



# Energy Performance Certificates before and after Retrofits



**Energy Performance Certificate**

**2, Beverley Walk, HASTINGS, TN34 2TH**

**Dwelling type:** Semi-detached bungalow **Reference number:** 8586-6122-7649-2000-6926  
**Date of assessment:** 20 December 2016 **Type of assessment:** RdSAP, existing dwelling  
**Date of certificate:** 12 February 2017 **Total floor area:** 49 m<sup>2</sup>

**Use this document to:**

- Compare current ratings of properties to see which properties are more energy efficient
- Find out how you can save energy and money by installing improvement measures

<b>Estimated energy costs of dwelling for 3 years:</b>	<b>£ 2,535</b>
<b>Over 3 years you could save</b>	<b>£ 1,086</b>

**Estimated energy costs of this home**

	Current costs	Potential costs	Potential future savings
Lighting	£ 195 over 3 years	£ 117 over 3 years	
Heating	£ 1,878 over 3 years	£ 1,107 over 3 years	
Hot Water	£ 462 over 3 years	£ 225 over 3 years	
<b>Totals</b>	<b>£ 2,535</b>	<b>£ 1,449</b>	

These figures show how much the average household would spend in this property for heating, lighting and hot water and is not based on energy used by individual households. This excludes energy use for running appliances like TVs, computers and cookers, and electricity generated by microgeneration.

**Energy Efficiency Rating**

The graph shows the current energy efficiency of your home.

The higher the rating the lower your fuel bills are likely to be.

The potential rating shows the effect of undertaking the recommendations on page 3.

The average energy efficiency rating for a dwelling in England and Wales is band D (rating 60).

The EPC rating shown here is based on standard assumptions about occupancy and energy use and may not reflect how energy is consumed by individual occupants.

**Very energy efficient - lower running costs**  
 (85 plus) A  
 (81-84) B  
 (69-80) C  
 (55-68) D  
 (39-54) E  
 (21-38) F  
 (1-40) G  
**Not energy efficient - higher running costs**

**Current** 84 **Potential** 88

**Top actions you can take to save money and make your home more efficient**

Recommended measures	Indicative cost	Typical savings over 3 years	Available with Green Deal
1 Increase loft insulation to 270 mm	£100 - £350	£ 108	<input checked="" type="checkbox"/>
2 Floor insulation (solid floor)	£4,000 - £8,000	£ 291	<input checked="" type="checkbox"/>
3 Add additional 80 mm jacket to hot water cylinder	£15 - £30	£ 33	<input checked="" type="checkbox"/>

See page 3 for a full list of recommendations for this property.

To find out more about the recommended measures and other actions you could take today to save money, visit [www.gov.uk/energy-grants-calculator](http://www.gov.uk/energy-grants-calculator) or call 0300 123 1234 (standard national rate). The Green Deal may enable you to make your home warmer and cheaper to run.

**Energy Performance Certificate**

**2, Beverley Walk, HASTINGS, TN34 2TH**

**Dwelling type:** Semi-detached bungalow **Reference number:** 8602-5177-4029-3626-8383  
**Date of assessment:** 23 July 2018 **Type of assessment:** RdSAP, existing dwelling  
**Date of certificate:** 24 July 2018 **Total floor area:** 48 m<sup>2</sup>

**Use this document to:**

- Compare current ratings of properties to see which properties are more energy efficient
- Find out how you can save energy and money by installing improvement measures

<b>Estimated energy costs of dwelling for 3 years:</b>	<b>£ 1,425</b>
<b>Over 3 years you could save</b>	<b>£ 186</b>

**Estimated energy costs of this home**

	Current costs	Potential costs	Potential future savings
Lighting	£ 123 over 3 years	£ 123 over 3 years	
Heating	£ 1,074 over 3 years	£ 983 over 3 years	
Hot Water	£ 228 over 3 years	£ 153 over 3 years	
<b>Totals</b>	<b>£ 1,425</b>	<b>£ 1,239</b>	

These figures show how much the average household would spend in this property for heating, lighting and hot water and is not based on energy used by individual households. This excludes energy use for running appliances like TVs, computers and cookers, and electricity generated by microgeneration.

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**Not energy efficient - higher running costs**

**Current** 70 **Potential** 80

**Top actions you can take to save money and make your home more efficient**

Recommended measures	Indicative cost	Typical savings over 3 years
1 Floor insulation (solid floor)	£4,000 - £8,000	£ 111
2 Solar water heating	£4,000 - £8,000	£ 75
3 Solar photovoltaic panels, 2.5 kWp	£5,000 - £8,000	£ 1,032

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# Findings

- Final Budget spent
- We have completed 130 properties with the higher SAP rating, and approximately 20 which are higher but under 69.
- 547 Measures carried out on the programme
- 148 Properties completed in all



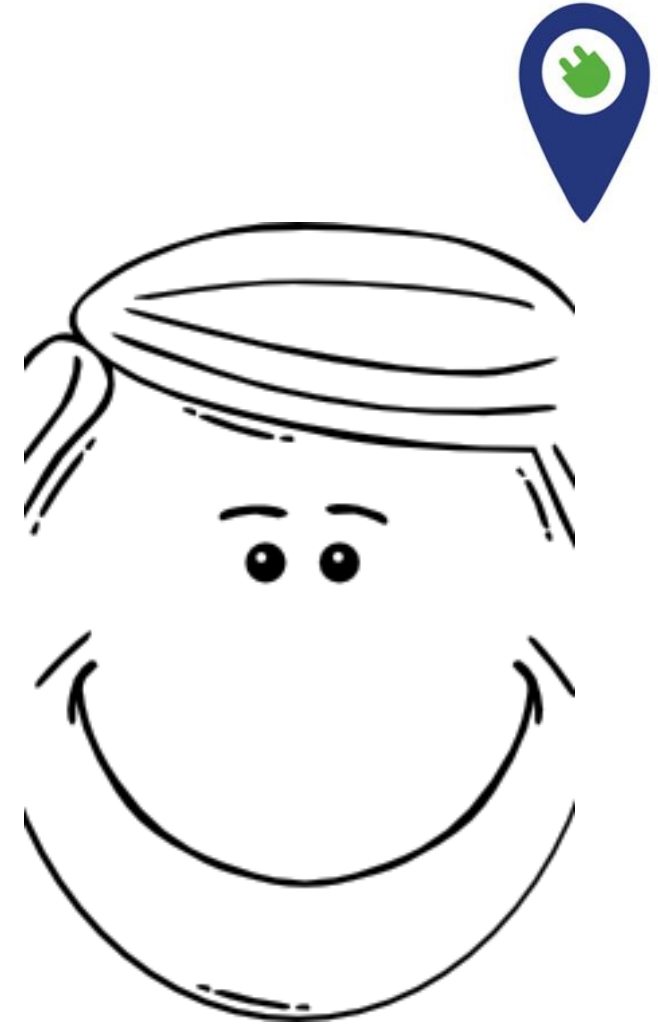


# Customer Comments

## Happy Tenants

## Cheaper Energy Bills

- The Cavity Wall insulation has saved me a lot of money on my energy bills, My gas and electric costs are now half what they were.
- When asked what I would rate the score for the works to my property I gave 20 out of 10!
- I'm now saving at least £20 a month on my energy bills
- I love my new gas central heating, it's much more user friendly



# Conclusions

- Gov't target for SAP 69 by 2030 gives us a methodology but is open to inaccuracies
- Residents in social housing do not always see the need for improvements to their homes and therefore access and completion of multiple measures has sometimes been problematic
- Requires a high level of manpower support to deliver multiple measures
- Approach can help to improve internal data management system for total housing stock
- Improves resident comfort, can reduce bills to prevent fuel poverty, and reduces carbon emissions.





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**Interreg**   
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Climate Active  
Neighbourhoods  
European Regional Development Fund



Climate Alliance

GEMEENTE  
**Arnhem** 