

Zero Carbon Ashwell - Energy Options Appraisal

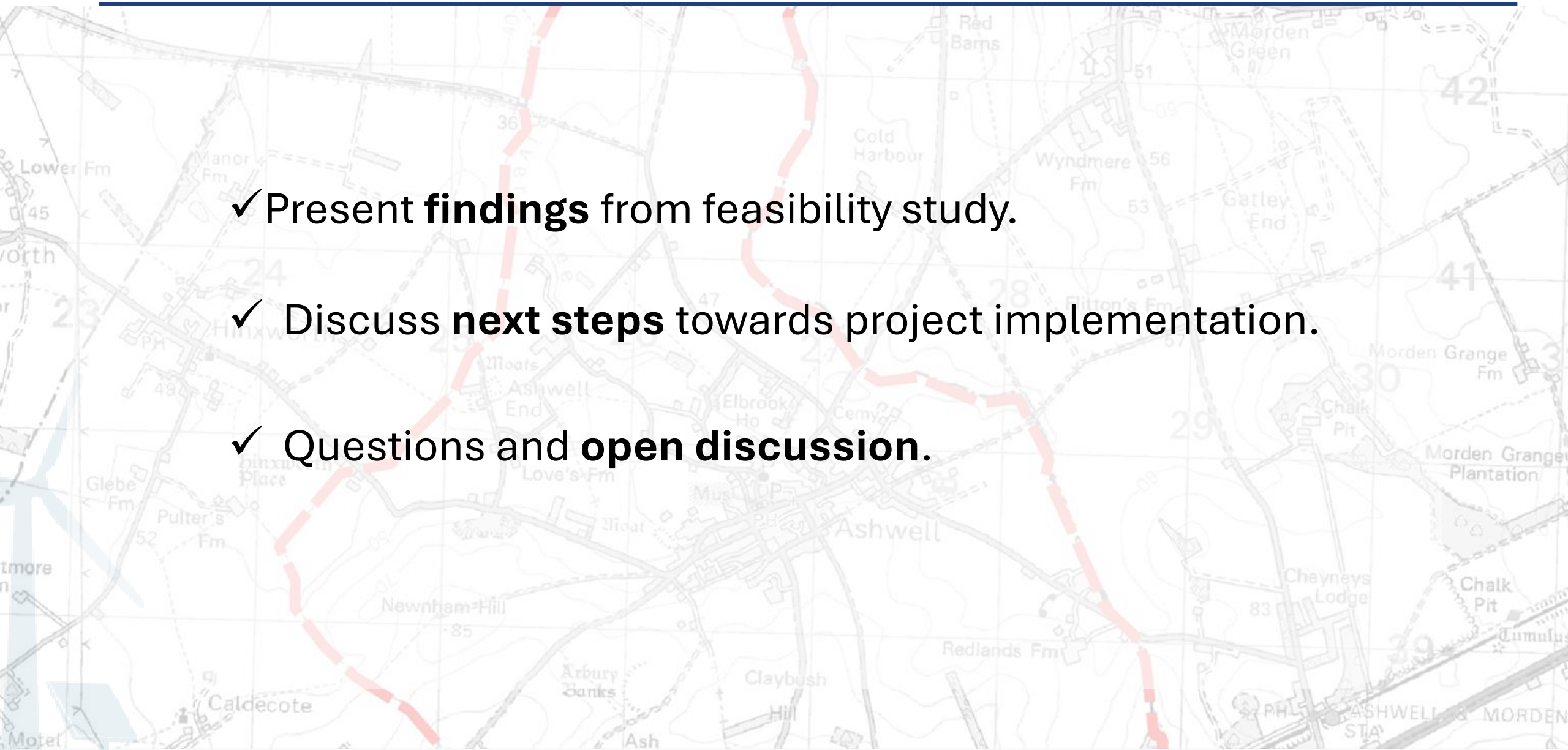
Final Event Presentation

SCENE





Local Energy with Local Ownership

- 
- ✓ Present **findings** from feasibility study.
 - ✓ Discuss **next steps** towards project implementation.
 - ✓ Questions and **open discussion**.



Funders



Community Project Lead



SCENE

Technical Consultants

Objective:

To Identify opportunities for local and sustainable energy across Ashwell.

Specific Aims:

- ✓ Work with community to reduce greenhouse gases.
- ✓ Reduce energy use and costs for homeowners and businesses.
- ✓ Provide accessible and cost effective low carbon energy.

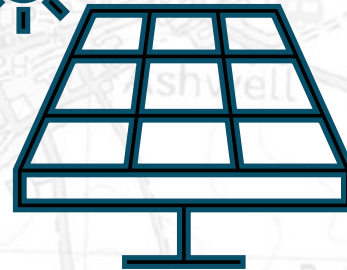
Total usage
17,710 MWh



**12,727
MWh**



**3,926
MWh**



414 MWh

£2.3m

3,534 tCO₂e



Solar PV (rooftop)



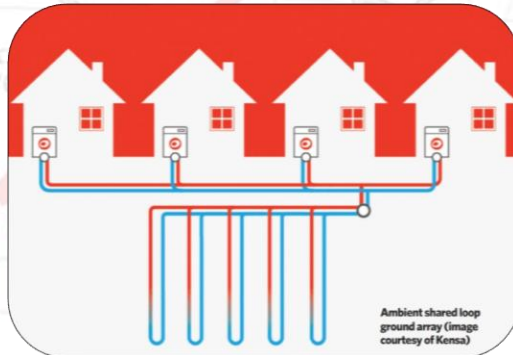
Solar PV (ground)



Wind Turbines



Micro-hydro



Heat Network



Air-Source Heat Pumps



Domestic Energy Efficiency Measures

Recommended Opportunities

Technically and financially viable energy projects and initiatives



Rooftop Solar PV



Domestic Air-
Source Heat Pumps



Domestic Energy
Efficiency Measures



Number of Panels
123

Rated Capacity
60 kW

Electricity Generation
60,500 kWh per year

Carbon Emissions Reduction
10.7 tonnes per year

Community Benefit
£108,105 (over 25 years)

Breakeven Year
15



Rated Capacity

8.06 MW

Electricity Generation

~7.7m kWh per year

Carbon Emissions Reduction

~1,106 tonnes per year

Complex Scenario:

- ✓ Community support
- ✓ Surveys
- ✓ Conservation area limitations
- ✓ Administration & finance

A programme of **community-led home energy decarbonisation activities** throughout Ashwell.

Home energy events:

- *Increases understanding and uptake of energy-saving measures.*

Energy cafés:

- *Provides direct, informal support specific to residents' needs.*

Thermal imaging camera service:

- *Low cost, tangible results for homeowners.*

Home energy assessment scheme:

- *Guidance and assessment of benefits and costs for householders.*

Activities	Timings (est)
Visits to / talks and write ups of case studies in Ashwell and beyond	Late 2026
Events with local providers	Early 2027
Thermal imaging home visits by trained technicians	From mid 2027
Home energy assessments by specialist suppliers	End 2027

A community programme can also support **ASHP uptake** across Ashwell...

By 2035



- 72 additional ASHPs
- Saving 160 tCO₂e per year
- Saving £25,000 per year

By 2050



- 179 additional ASHPs
- Saving 400 tCO₂e per year
- Saving £64,000 per year

Recommended Opportunities: Combined Impact



Generate **£5,400 p/a** from
energy sales



Community
Benefit Fund (?)



~410 tCO₂e reduction
p/a by 2050



12% reduction on
parish emissions
(from 2025/26)



Provide **£64,000 in energy
bill savings p/a** by 2050



Energy security &
improved housing stock

Opportunities Not Recommended

Energy projects which are not currently viable



Solar PV

2.2 MW ground-mounted PV



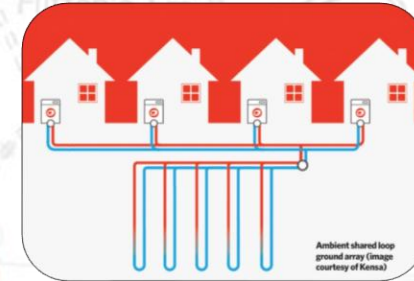
Wind Turbines

1 MW & 100-kW



Micro-hydro

River Cam



Heat Network

Ground-Source heat network serving 90 properties

How to Overcome Grid Issues?

Constrained grid network is the biggest barrier to larger scales of development in the region.

- Future network upgrades will ‘free-up’ space for new, larger connections.
- Currently unviable opportunities may then become realistic.

Future scenario:

	2026	Future Grid Upgrade
0.1 MW Turbine	>25 years	>25 years*
1 MW Turbine	>25 years	17 years
0.2 MW Solar	>25 years	20 years*
2.2 MW Solar	>25 years	16 years



**Size of development still not financially viable*

Who to approach?

- ✓ Engage with **UKPN**.
 - ✓ *Track upcoming developments (i.e., Great Grid Upgrade)*
- ✓ Engage with **policy makers**.
 - ✓ *Local or national.*
 - ✓ *They will be able to project your voice and concerns to wider audiences.*
- ✓ GB Energy's **Local Power Plan**.
 - ✓ Plans to simplify grid connection.
 - ✓ 'Local Partnership' approaches.



What Next?

What's needed to make recommended opportunities a reality?

- ZCA to assess feedback and levels of support from wider community.



Awareness Raising



Engage and Inform



Build Connections

Short term...

- ✓ Progress **solar generation opportunity**.
- ✓ Commence internal **energy efficiency upskilling**.
- ✓ Explore **bulk purchase discount opportunities** for heat pumps, solar panels, and efficiency measures (*e.g. insulation, lighting, glazing etc*).

Longer term...

- ✓ Monitor sector and regional developments to **unlock larger scales of development.**



Wind
Turbines



Solar PV
(large scale)

Questions & Open Discussion

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<https://www.zerocarbonashwell.org/>



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