Lymm LEAF Project

LOW CARBON LYMM

Project Objectives

- to identify the potential for domestic energy savings in the different ‘character’ areas of Lymm;
- to identify potential energy savings in typical small businesses and community buildings;
- to produce an energy savings plan for the village;
- to increase the uptake of energy efficiency measures.

LCL Steering Group

Assess Current and Potential Performance

- promote EPCs
  - survey properties
    - report and advise
- recruit / train survey volunteers
  - walkround survey
    - link with HEED data

create area maps

Engage Community

- face to face
- group to group
- website
- media promotion

Engage Green Deal Providers

Hold Community Event

Produce Project Report and Share Experience

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Project Partners

LOW CARBON LYMM

ENERGY PROJECTS PLUS
towards a sustainable future

cb3 design
architects

Warrington
Borough Council

Property Inspection Ltd
RICS
the mark of property professionalism worldwide

LOW CARBON LYMM

Lymm Facts & Figures

- Population:11,900;
- Households: 5,360;
- Gas use: 90,819 MWh/year;
- Electricity use: 23,383 MWh/year;
- Domestic gas and electricity bill: c.£7million/year;
- Higher average energy consumption than Warrington:
  - 19% higher gas consumption,
  - 12% higher electricity consumption.

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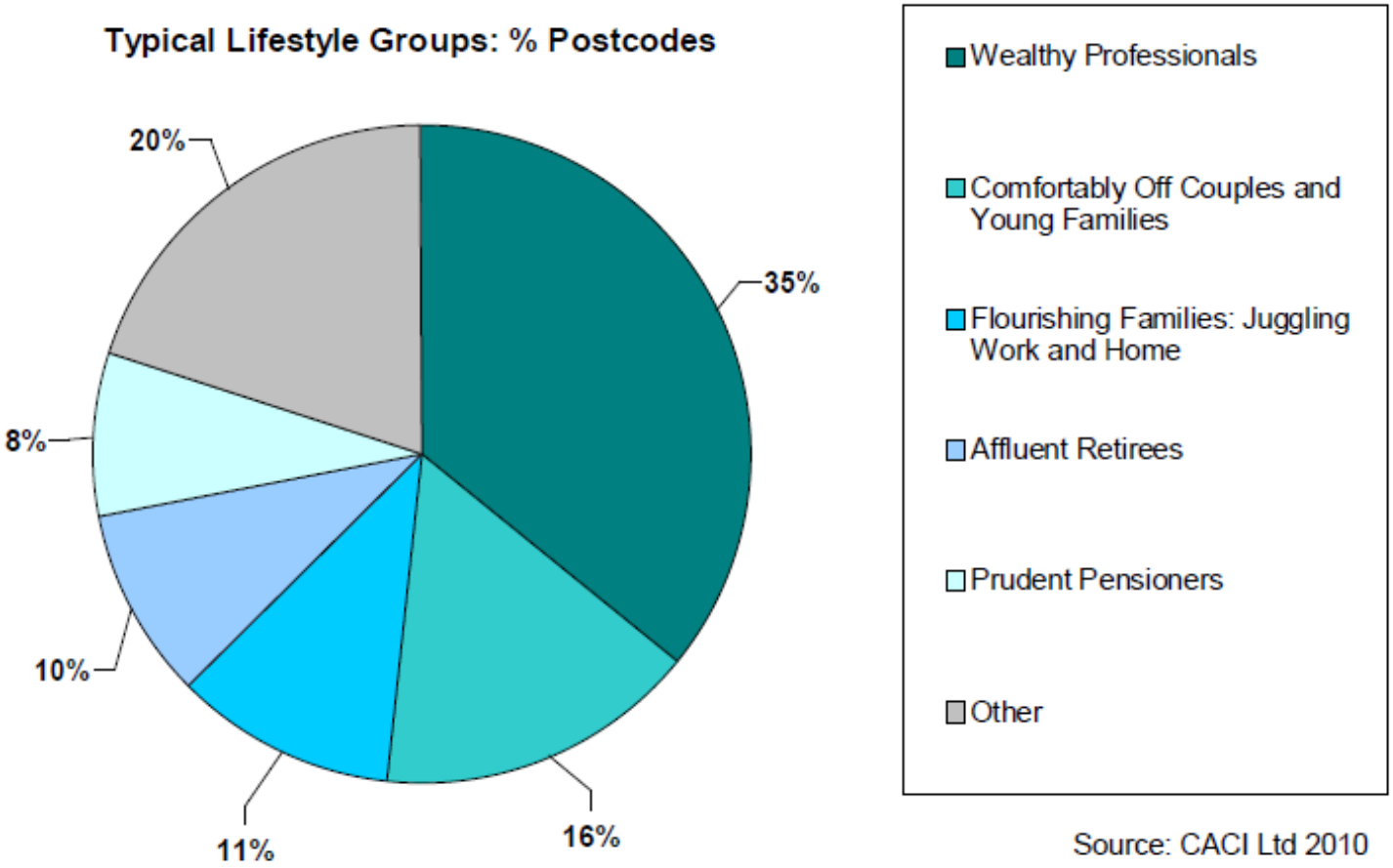
Lymm Demographics



Source: CACI Ltd 2010

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Walking Survey

- Walk round survey of all houses in Lymm;
- Undertaken by Low Carbon Lymm volunteers;
- Characteristics of each house observed;
- Results analysed to produce data for the maps.

Walking Survey Key

Built Form		Age		Storeys		Roof Room		Wall Type		Wall Finish		Extended?		Roof Type		Renewable Technologies	
U	Unsure	**U**	Unsure	**U**	Unsure	**U**	Unsure	**U**	Unsure	**U**	Unsure	**U**	Unsure	**U**	Unsure	**U**	Unsure
O	Other (please describe)	**O**	Other	**O**	Other	**O**	Other	**O**	Other	**O**	Other	**O**	Other	**O**	Other	**O**	Other
1	Semi Detached House	**1**	Before 1900	**1**	1	**1**	Yes	**1**	Stone	**1**	Rendered	**1**	Yes	**1**	Thatched	**1**	Solar Electric
2	Detached House	**2**	1900-29	**2**	2	**2**	No	**2**	Solid Brick	**2**	Pebbledash	**2**	No	**2**	Pitched Tiles	**2**	Solar Water
3	Mid Terrace House	**3**	1930-49	**3**	3			**3**	Cavity Wall	**3**	Ornate			**3**	Flat Roof	**3**	Micro Wind Turbine
4	End Terrace House	**4**	1950-66	**4**	4					**4**	Brick						
5	Semi Detached Bungalow	**5**	1967-75	**5**	5												
6	Detached Bungalow	**6**	1976-82														
7	Mid Terrace Bungalow	**7**	1983-90														
8	End Terrace Bungalow	**8**	1991-95														
9	Ground Floor Flat	**9**	1996-02														
10	Mid Floor Flat	**10**	2003-06														
11	Top Floor Flat	**11**	After 2006														
Notes		**Notes**		**Notes**		**Notes**		**Notes**		**Notes**		**Notes**		**Notes**		**Notes**	
This helps to further understand the nature of properties in Lymm.		Please use your best judgement, and use local knowledge where appropriate		Count each floor below the roof space, including the ground floor		A skylight might indicate a loft having been converted into a bedroom		Solid Brick was the typical wall type until the 1930s		This helps to identify which properties might be considered for external wall insulation		Has the property been extensively extended and/or altered from its orginal design?		This helps to identify which properties might benefit from either loft insulation or solar panels		We are interested to know who is already taking advantage of renewable technologies	

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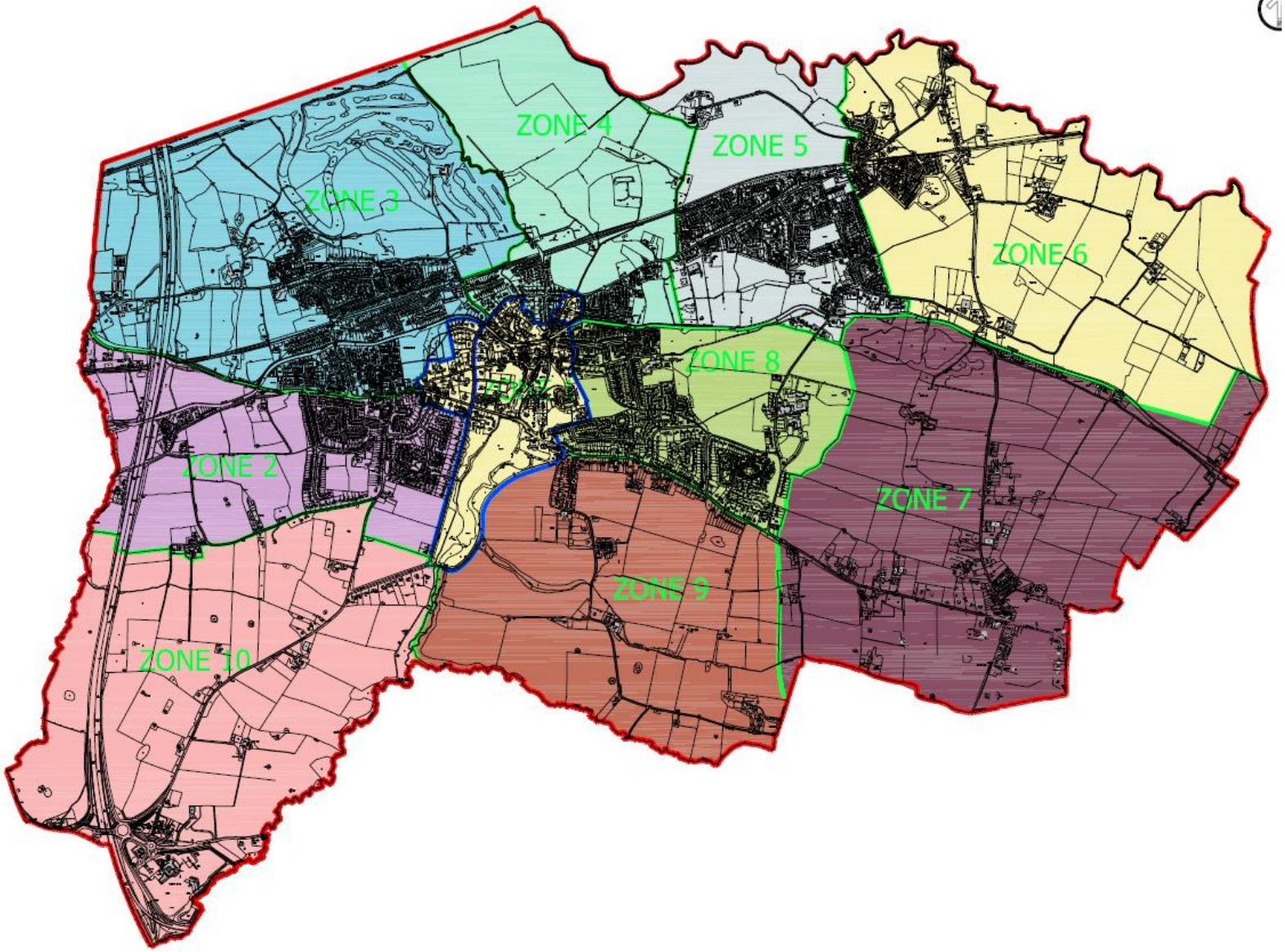
Walking Survey Sheet

ZONE 2 — Low Carbon Lymm Community Energy Survey February 2012 — Volunteer Initials RW

ID	joined address	Street	Built Form	Age	Strys	Roof Room	Wall Type	Wall Finish	Exte-nded?	Roof Type	Micro-gen	Notes
2073	2	BOOTHS LANE	6	3	1	2	3	4/1	2	2	X	
2045	4	BOOTHS LANE	6	6	1	2	3	4	2	2	X	
2043	8	BOOTHS LANE	1	1	2	1	1	1	1	2	X	
2063	10	BOOTHS LANE	"	"	"	"	"	"	"	"	"	
2037	12	BOOTHS LANE	2	7	2	1	3	4	2	2	X	
2038	14	BOOTHS LANE	"	"	"	"	"	"	"	"	"	
2039	16	BOOTHS LANE	2	6	2	2	3	4	2	2	X	BRIDLEWOODS
2040	18	BOOTHS LANE	2	3	2	2	3	4	2	2	X	FM SAT
2041	20	BOOTHS LANE	2	6	2	2	3	4	1	2	X	
2042	22	BOOTHS LANE	2	3	2	1	3	4/1	2	2	X	
2054	24	BOOTHS LANE	2	6	2	2	3	4	1	2	X	
2044	28	BOOTHS LANE	2	3	2	2	3	4	1	2	X	
2035	30	BOOTHS LANE	2	3	1	1	4	1	1	2	X	
2004	31	BOOTHS LANE	2	1	2	2	4	1	1	2	X	
2046	32	BOOTHS LANE	2	3	1	2	4	2	2	2	X	
2047	CHERITON FARM 38	BOOTHS LANE	1	1	2	2	2	4	1	2	X	
2048	48	BOOTHS LANE	1	2	2	2	3	4	1	2	X	
2049	50	BOOTHS LANE	1	2	2	2	3	4	2	2	X	
2050	52	BOOTHS LANE	1	2	2	1	3	4	1	2	X	
2051	54	BOOTHS LANE	1	2	2	2	3	4	1	2	X	
2052	70	BOOTHS LANE	? COULDN'T FIND IT?									
2053	71	BOOTHS LANE	2	1	2	2	4	1	1	2	X	
1977	73	BOOTHS LANE	1	2	2	2	3	4	1	2	X	
		BOOTHS HILL FARM	2	1	2	2	4	1	1	2	X	

?? NEXT TO CHERITON FARM

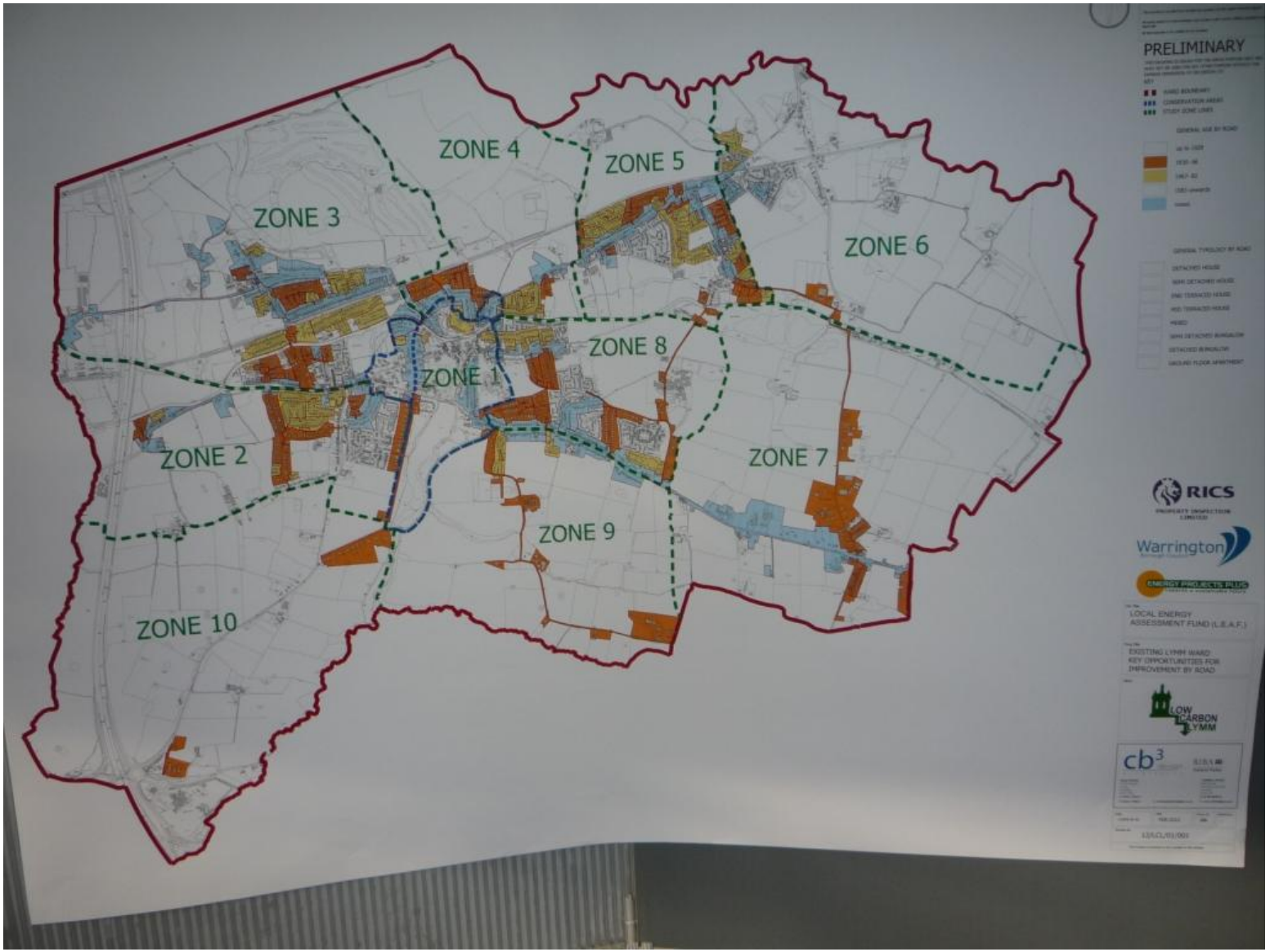
Zone Map



Mapping


ZONE 5
Rushgreen
Link Detached House
Energy Efficiency
Mid Terrace
Energy Efficiency

Mapping

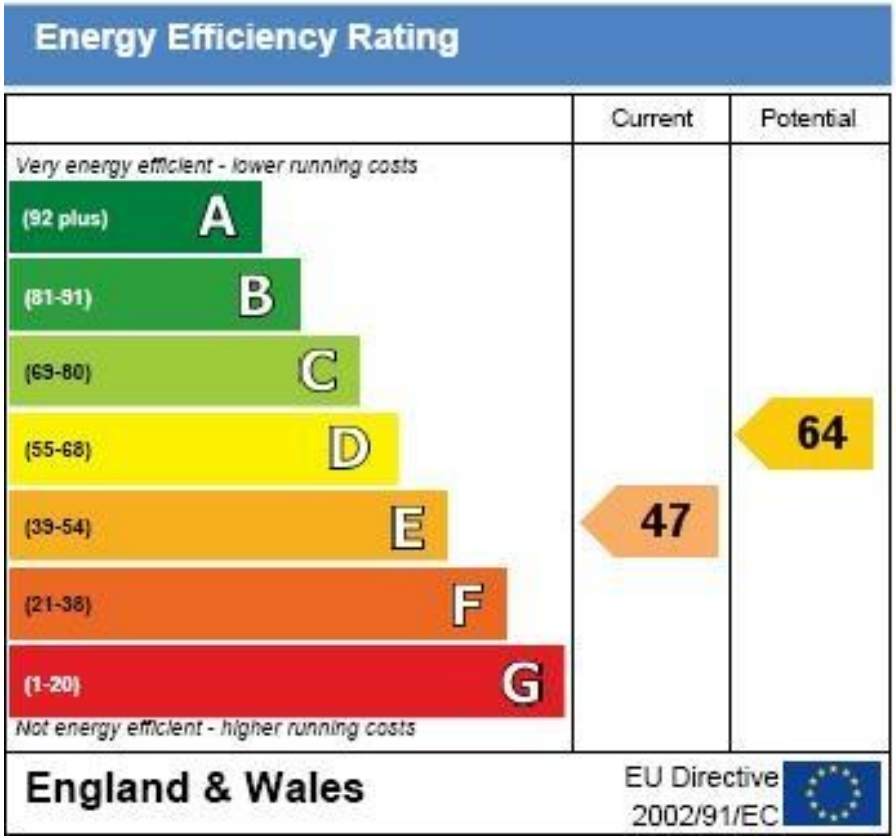

PRELIMINARY
ZONE 1
ZONE 2
ZONE 3
ZONE 4
ZONE 5
ZONE 6
ZONE 7
ZONE 8
ZONE 9
ZONE 10
RICS
Warrington
LOCAL ENERGY ASSESSMENT FUND (L.E.A.F.)
EXISTING LYMM WARD KEY OPPORTUNITIES FOR IMPROVEMENT BY ROAD
LOW CARBON LYMM
cb3

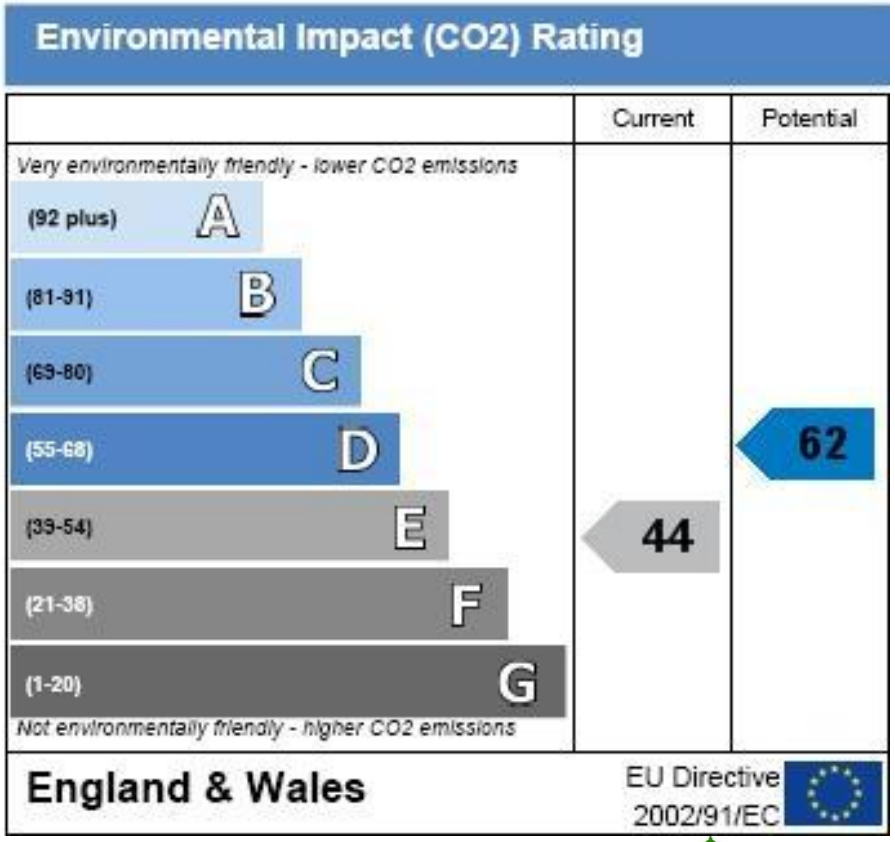
Energy Surveys

- Undertaken by qualified energy assessors;
- Based on SAP methodology;
- 160 homes;
- 18 small businesses;
- 7 community buildings;
- Energy performance certificate produced;
- Information & advice.

Energy Performance Certificate

Address: 25, Adey Road, , LYMM, WA13 9QX
RRN: 0428-2030-6212-6382-5900





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EPC Analysis

- 160 EPCs represent 80% of property types;
- highest saving of £1,739 /year (large detached house)- potential 65% saving on current estimated heating, hot water and lighting costs;
- To achieve savings would require investment of £12,000 (payback of 7 years);
- of 31 solid wall homes surveyed only 7 had a payback period of less than 25 years for solid wall insulation alone (and only 14 when bundled into a package);
-

EPC Analysis

- 57% of homes have potential savings less than £50 per year (mostly through improved lighting);
- average home energy savings calculated as £229/year;
- this would be equivalent of over £1.2m for the whole of Lymm;
- note that this does not include behaviour change savings and energy efficient appliances.

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Key Measures

- cavity wall insulation;
- topping-up loft insulation to 270mm;
- boiler replacement;
- heating controls;
- low energy lighting;
- solid wall insulation? (780 properties in Lymm).

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Community Event

- Invited audience to preview of the LEAF project;
- Opened by David Mowat, MP;
- Open to the public in the afternoon;
- LEAF methodology and maps in display;
- Energy efficiency advice;
- Prize draw.

Event Feedback

- ‘Very informative, friendly and helpful’; ‘Amazing amount of work had gone into survey... very impressive’ ;‘Inspiring’;
- 74% found everything they were looking for from the event and a further 21% said that they had found most of what they were looking for;
- 90% said that they found something for all ages;
- 83% said that today's event had inspired them to make changes in the use of energy in their homes.

Summary of Green Deal Discussions

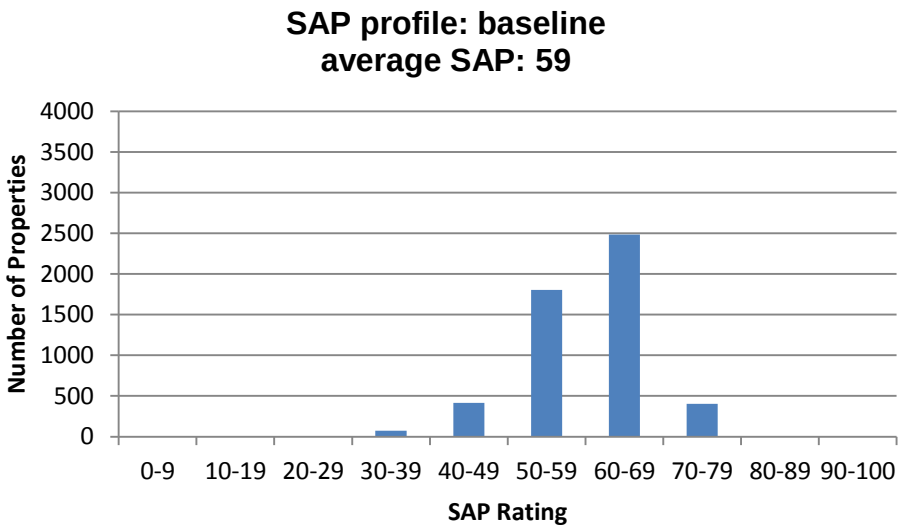
- Interest from 4 of the big energy suppliers and B&Q in working with LCL on Green Deal (GD);
- Potential for delivering community benefits based on energy efficiency measures installed;
- More detailed discussions on a pilot scheme in advance of GD with one of the energy suppliers;
- BUT still a lot of uncertainty about how GD will work in practice!

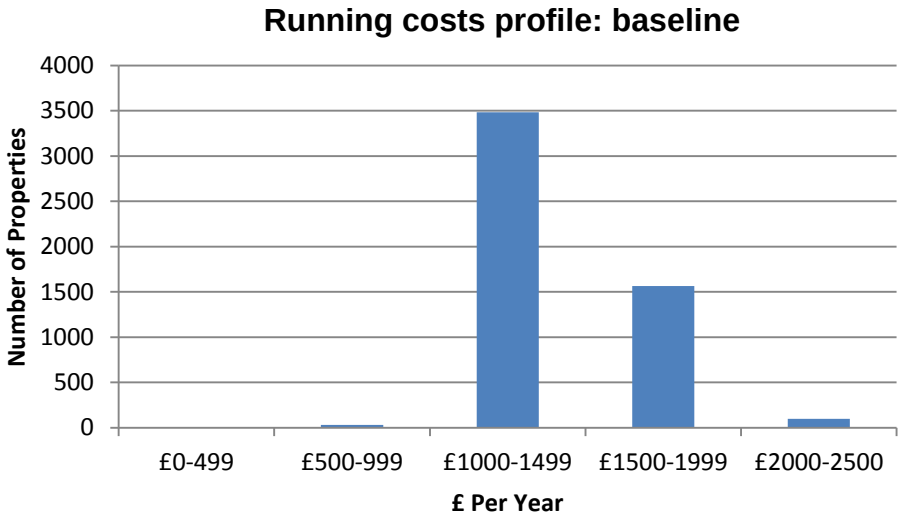
Analysis and Results

Baseline Data

- Walkround data used to create property types
- Property types linked with HEED data:
  - *Over 90% properties have gas central heating*
  - *75% properties have majority double glazing*
  - *65% relevant properties have cavity wall insulation*
  - *9% relevant properties have solid wall insulation*
  - *23% properties have 200mm loft insulation*
  - *12% properties have 50mm loft insulation*
- Total fuel bill of £7.5m/year;
- Total CO2 emissions of 24,750 tonnes/year

SAP Diagram

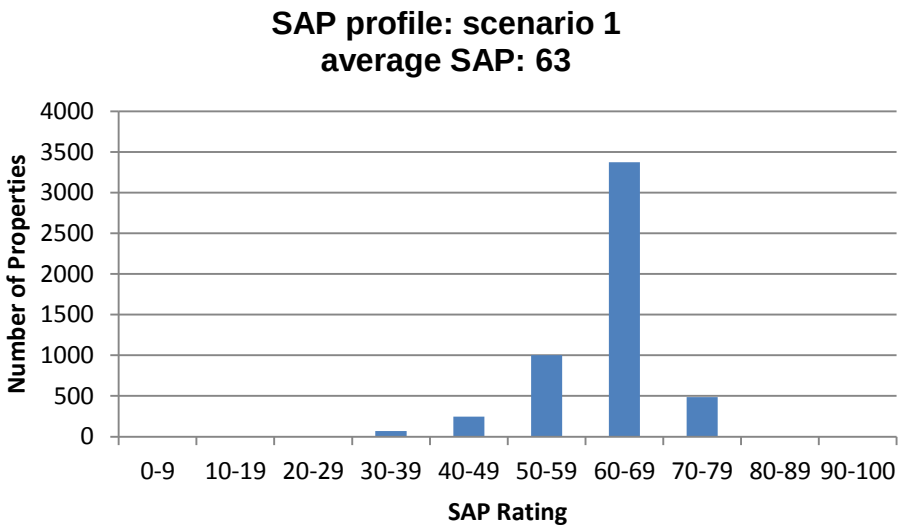




Scenario 1

- Install cavity wall insulation where required;
- Install loft insulation to 270mm where required;
- Fuel cost savings from baseline of £428K per year;
- CO2 emissions reduced by 2,370 tonnes/year.

SAP Diagram

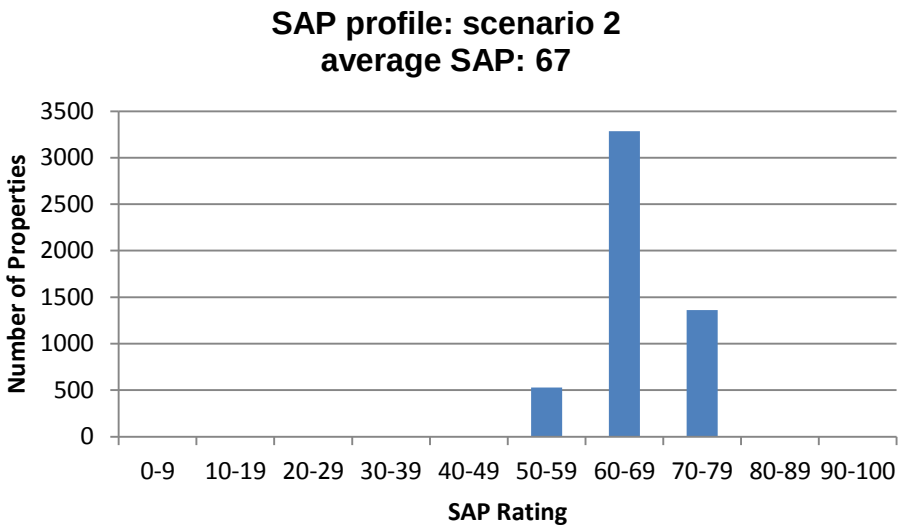


Scenario 2

- Renew existing boilers with condensing type where not present
- Improve heating and hot water controls:
  - programmer, room thermostat, TRVs (where required)
  - cylinder thermostat (if required)
- Fuel cost savings* from baseline of £950K /year;
- CO2 emissions reduced* by 5,850 tonnes/year.

* *Cumulative including scenario 1*

SAP Diagram

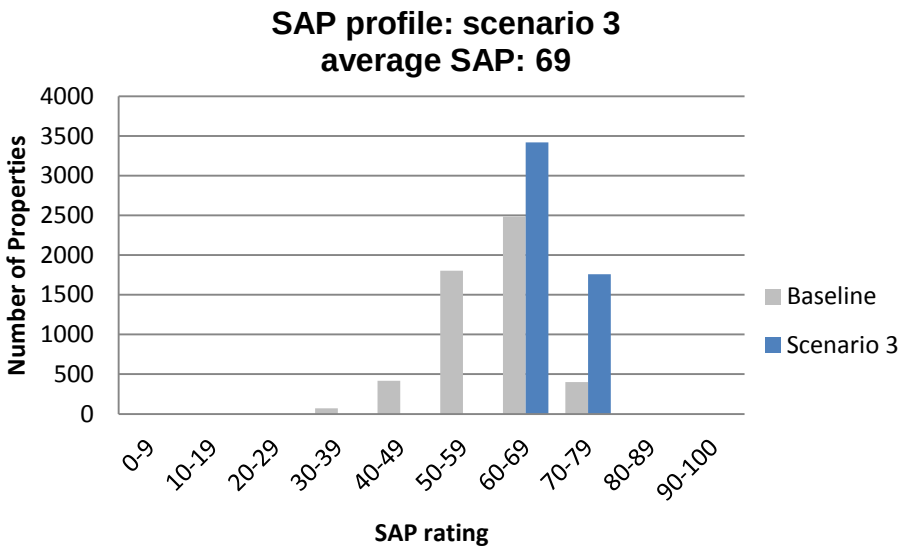


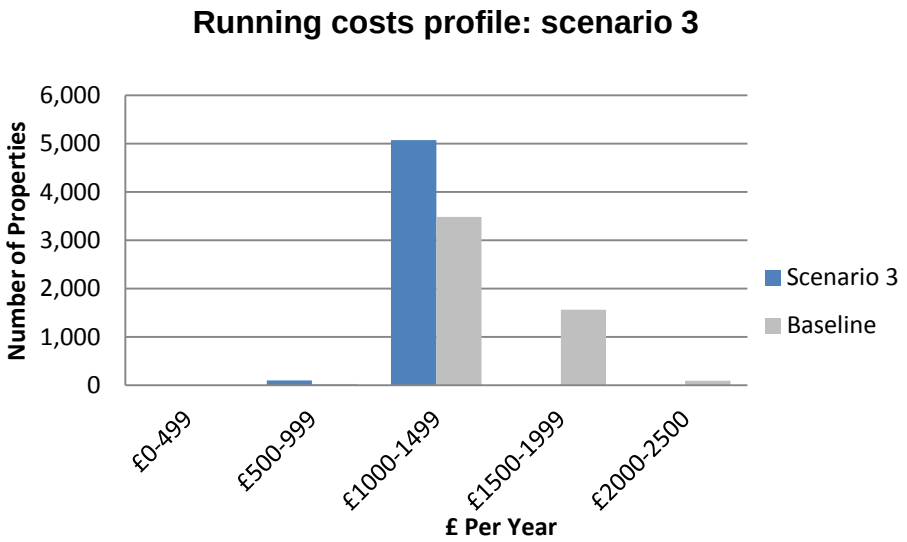
Scenario 3

- Insulate solid wall properties where required;
- Improve glazing to 100% double glazing;
- Fuel cost savings* from baseline of £1.23m /year;
- CO2 emissions reduced* by 6,830 tonnes/year.

* *Cumulative including scenarios 1 & 2.*

SAP Diagram





Action Plan

- Provide advice and support to households and businesses that have had EPCs;
- Develop targeted campaigns for the priority measures;
- Create Lymm property type information and advice sheets with supporting improvement options;
- Explore and develop relationship(s) with potential Green Deal Provider(s);

Action Plan
(continued)

- Assess the potential for bulk purchasing discounts e.g. for lighting and small insulation jobs;
- Progress community centre projects.