

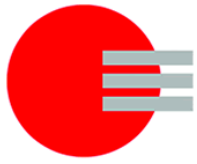
NATIONAL
ENERGY
FOUNDATION

*Improving the use of energy
in buildings*

Making good use of your Data - *workshop*



**Home Energy
Conservation Act
(HECA) Seminar
2014**



NATIONAL
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*improving the use of energy
in buildings*

Making good use of your Data Case Studies

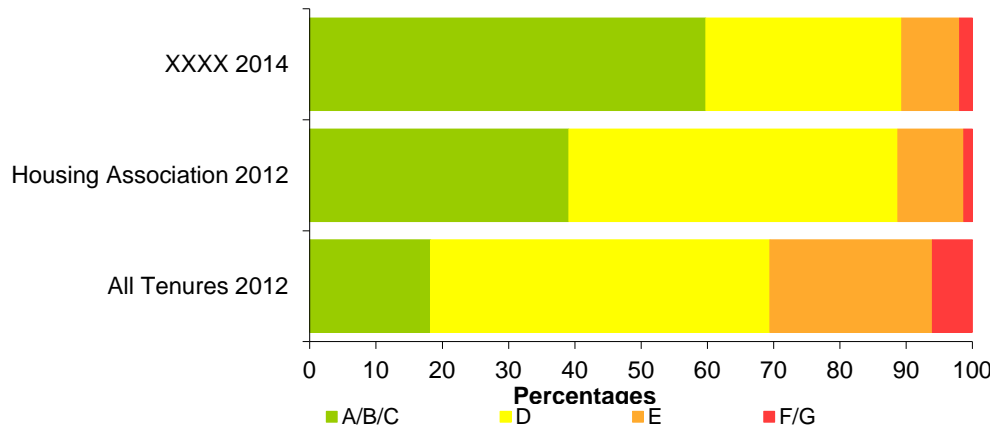
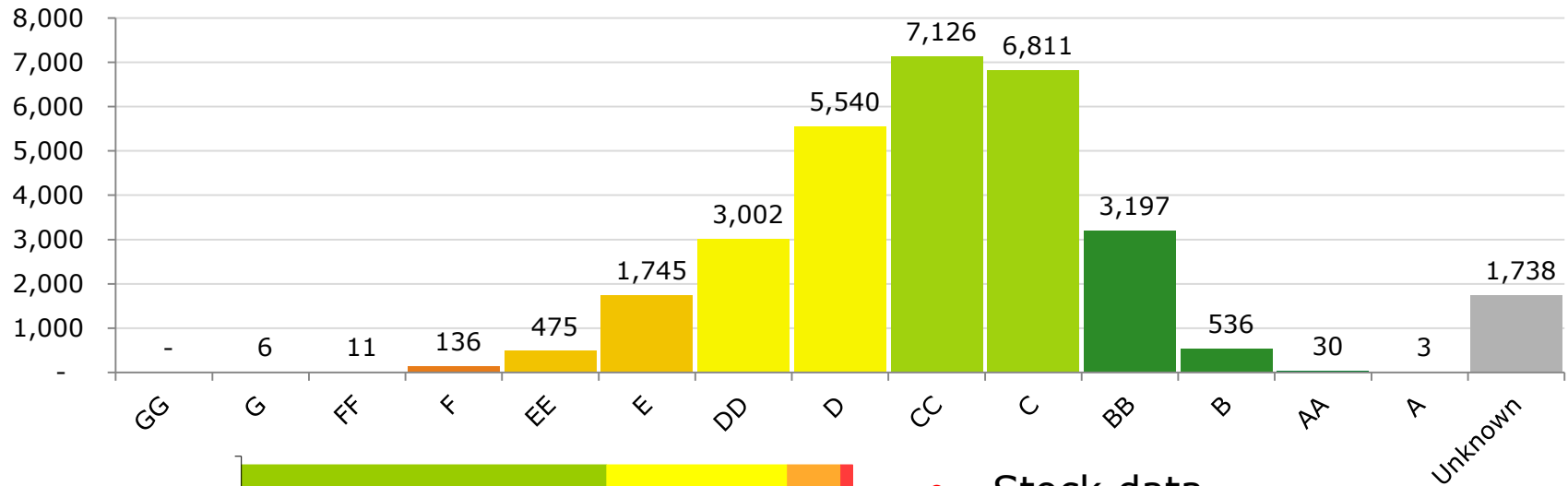
Luke Smith
Senior Energy Specialist

Why collect data?

- Policy & Strategy Development
- Asset Management
- Demographic profiling/engagement
- Targeting of resources & funding
- Mapping & Reporting

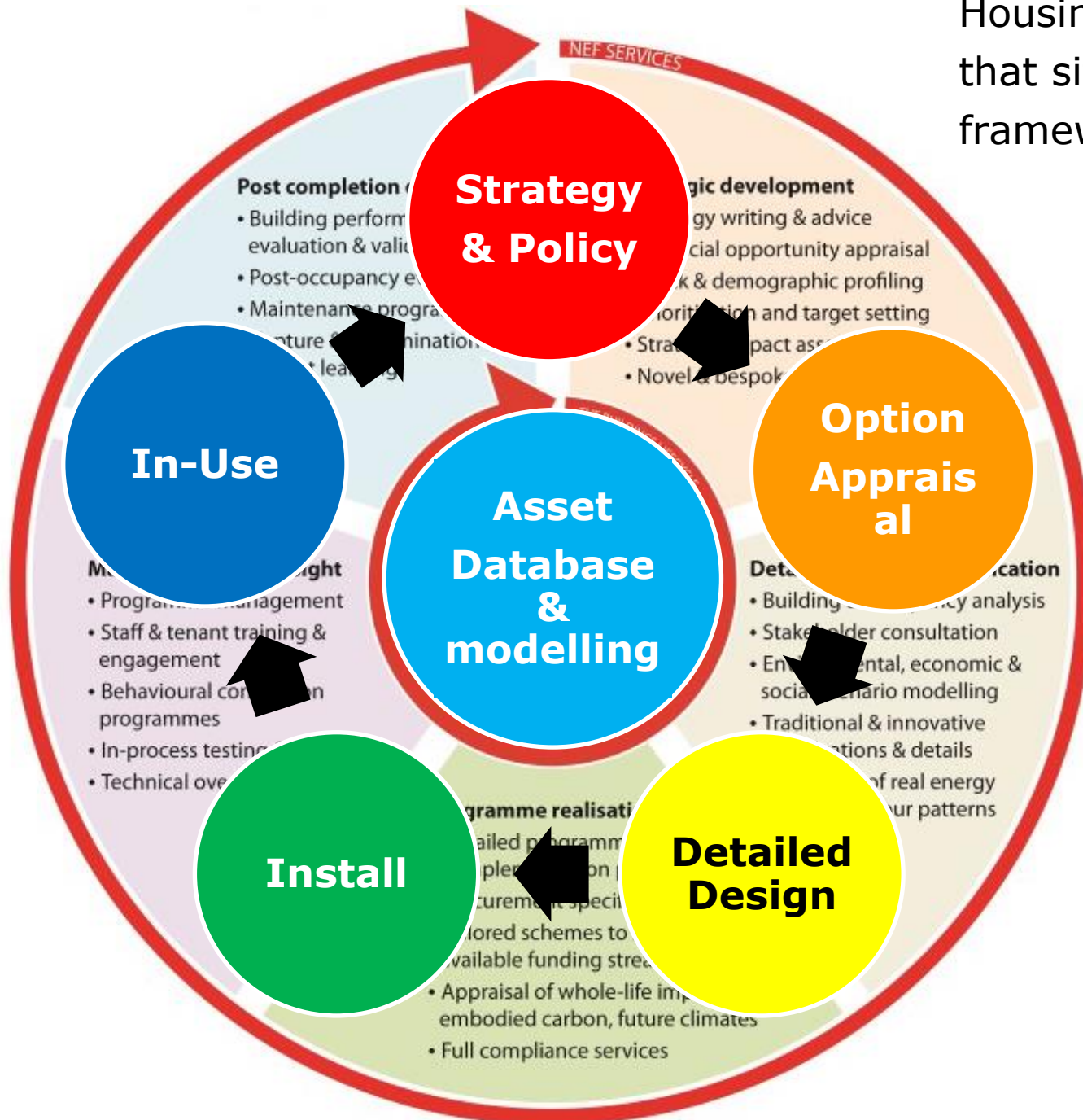
Policy & Strategy Development

- Existing Housing Stock Modelling
- EPC Band C (74) or better by 2020



- Stock data
- Building typologies/ benchmarks

Housing stock modelling
that sits within a
framework of use...



Asset Management – whole house long term investment strategies

ARCHETYPE 1: OG1_HS_3049_E (House_Semi-detached_1930-1949_OFF GAS)

Asset ID:	55956
Address:	Millers Close, Welford on Avon
Dwelling Type:	OG1_HS_3049_E
SAP Age Band:	1930 - 1949
TFA (m ²):	85.6



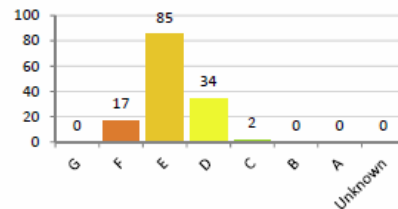
This archetype is considered representative of 370 properties. To improve the average energy performance rating of this property, the following parameters have been assumed;

- Standard SAP occupancy patterns and living room set point temp of 21°C
- Suspended timber floor, as built (0.65 W/m²k)
- uPVC Double glazing units assumed to be installed throughout (installed post 2002)
- Total glazing area of 16.6 m² (10x units)
- East/West orientation for all glazing
- Filled cavity walls, as built (0.65 W/m²k)
- 250mm loft insulation
- East/West roof orientation
- Electric storage heaters for space heating on Economy 7 tariff
- Single immersion heating 120L hot water cylinder for DHW (38mm ins)
- 2x Intermittent extractor fans
- 2x Through the wall passive vents
- 1x Chimney
- 75% draught stripping present
- 75% of fixed lighting are low energy fittings



UNIMPROVED DWELLING PERFORMANCE

SAP Energy Rating:	47
SAP Energy Band:	E
Energy Rate (kWh/m ² /yr):	192
CO ₂ Rate (kgCO ₂ /m ² /yr):	86
Total Energy Cost (£/year):	1,438

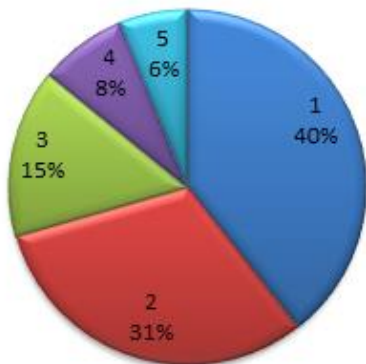


End Use	Energy (kWh/yr)	Fuel Cost (£/yr)	CO ₂ (kg/yr)
Space Heating – Main	11,369	726	5,878
Space Heating – Secondary	0	0	0
Water Heating	2,413	251	1,248
Cooking	510	61	263
Lighting	459	55	237
Electrical Appliances	2,635	317	1,363
Pumps and fans	0	0	0
Standing Charges	-	27	-
Totals	17,386	1,438	8,989

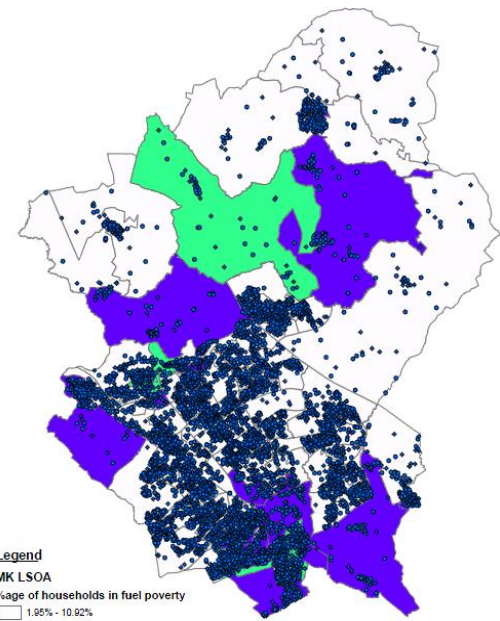
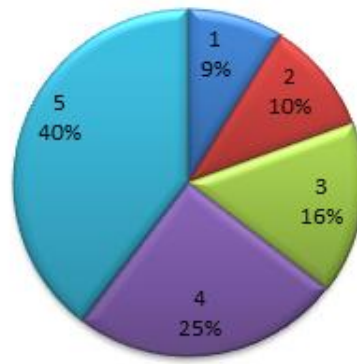
Demographic profiling/Resident engagement

- Non-disclosive...
- IMD & Fuel Poverty by OA, LSOA, LA or Region
- Experian householder characteristics e.g. Happy families, blue collar enterprise, grey perspectives, welfare borderline etc.

Fuel Poverty South East

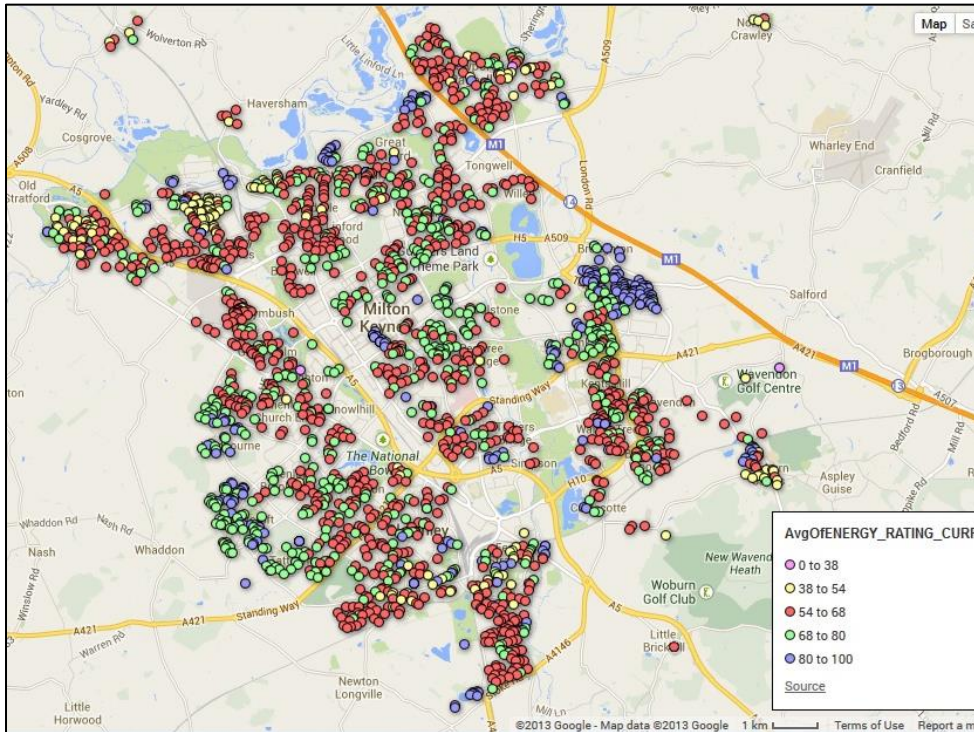


Fuel Poverty West Midlands

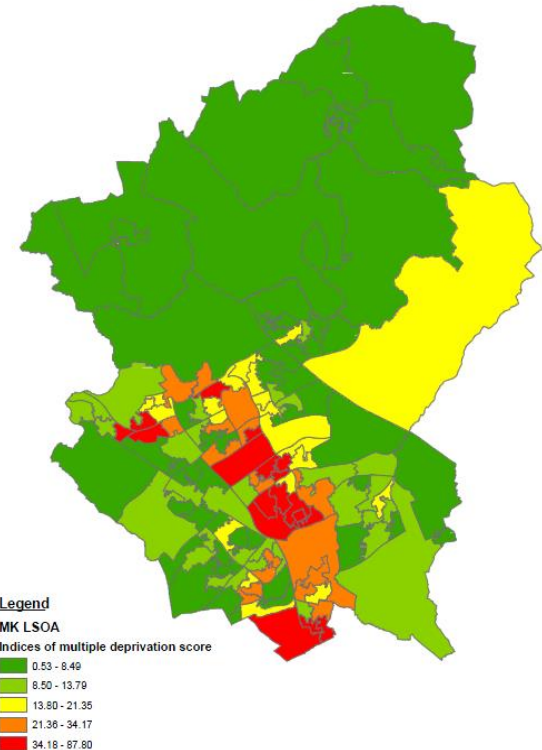


Targeting of resources/funding

- Proactive rather than reactive
- Target certain property types – solid brick walls, storage heaters, worst performing etc.



Indices of Multiple Deprivation
Milton Keynes



Reporting levels

- Individual household level based on UPRN e.g. EPCs
- Street level based on USRN
- Output Area (OA) 50 – 200 properties
- Lower Super Output Area (LSOA) 1000 – 3000 properties
- Middle Super Output Area (MSOA) 5000 – 15000 properties
- Ward Level
- Parish Level
- LA/Region e.g. NEED, EHS

Thank you for listening Questions?

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