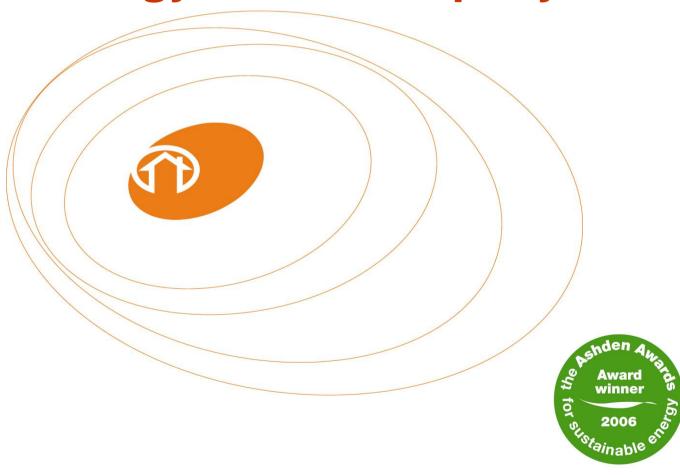
Bill Wilkinson Energy Audit Company



Energy Audit Company

- Local authority and RSL, incl fuel poverty (Beacon Councils)
- Research projects
- Energy databases
- Affordable warmth strategies
- Code and Ecohomes consultancy
- Energy plans since 1995
- EPCs on stock transfer 17,000!
- RDSAP training

www.energyaudit.co.uk

www.unoenergy.co.uk



Funding changes and challenges

- Green Deal
- ECO
- Area based schemes
- Rural aspects
- Reduced funding for fuel poor
- DECC competition
- Green Deal Cashback



LA involvement essential

- Trusted brand
- Data on housing stock
- Local knowledge
- Affordable warmth
- Area schemes for ECO/Affordable warmth
- Health agenda
 - how can UNO help?

Local authorities are extremely important to funders – There is no regional or local direction of ECO, so that areas which can attract funding will benefit more than others

UNO Energy database

- Every address in LA
- Record of individual energy characteristics (insulation, heating, property age, size etc)
- Uses data from primary to RDSAP+
- 100 reference fields
- Filter by any data item and result
- Hold data on areas as well as addresses
- Used to target, plan and report on progress
- Model housing stock for 2020 emissions
- HECA reporting



UNO to date

- Over 40 local authorities, 17% of national stock
- Data from EPCs, 900,000 addresses in UNO
- Used in Warm Zones
- Fuel poverty assessments for gas connections (Warm Wales, CES, National Grid Affordable Warmth
- Warm Front 2,500,000 properties



Housing stock modelling

- Compare areas LSOA, postcode
- With UNO measures calculated by address
- No archetypes needed
- Vary measure costs, interest rates, etc
- Estimates ECO points and costs
- Summarises totals for area

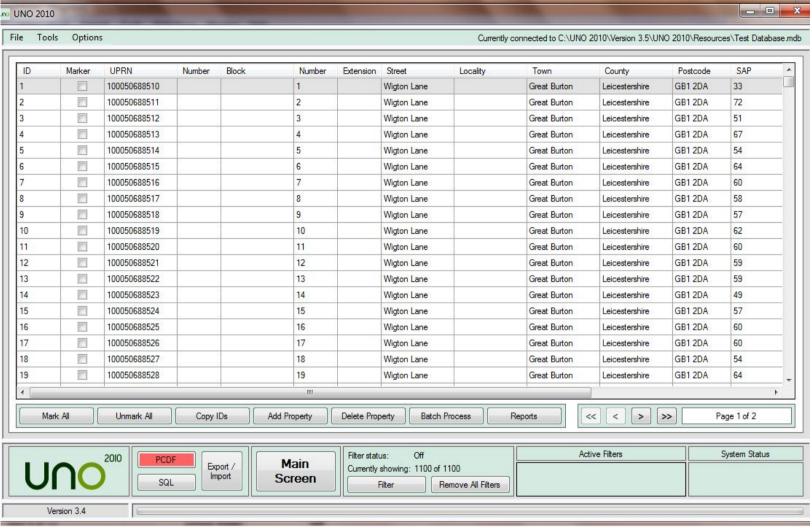
Unlike some modelling tools UNO aims to have a large sample of real data (not probabilities) by property address. This makes it essential for updating and reporting on progress.

EPC data

- Huge increase in coverage of private stock
- Sample sizes large enough at LSOA
- Not RDSAP but better than other data
- Use for ELASH reporting (average SAP, weighting by tenure)
- Can be updated by LA

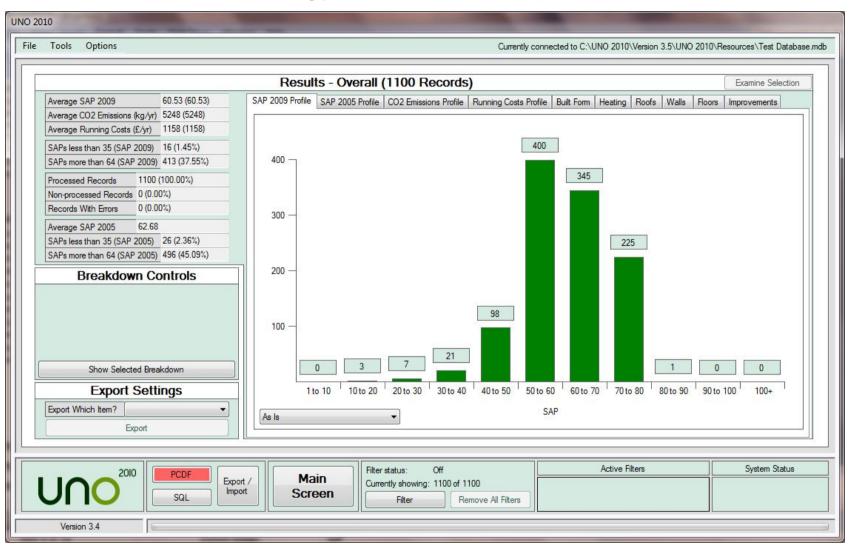
The availability of information from Energy Performance Certificates has transformed our knowledge of the private sector stock with over 8 million certificates issued

Energy database – main screen



The UNO Energy Database main screen shows all the addresses in the local authority (or in any of the filters) together with an approximate SAP rating (or accurate rating from RDSAP data) for those where there is enough information

Energy database - reports



Standard reports show overall averages and profiles for SAP, CO2, total running costs, and energy attributes such as heating and boiler types, wall construction and insulation, and roof type and insulation.

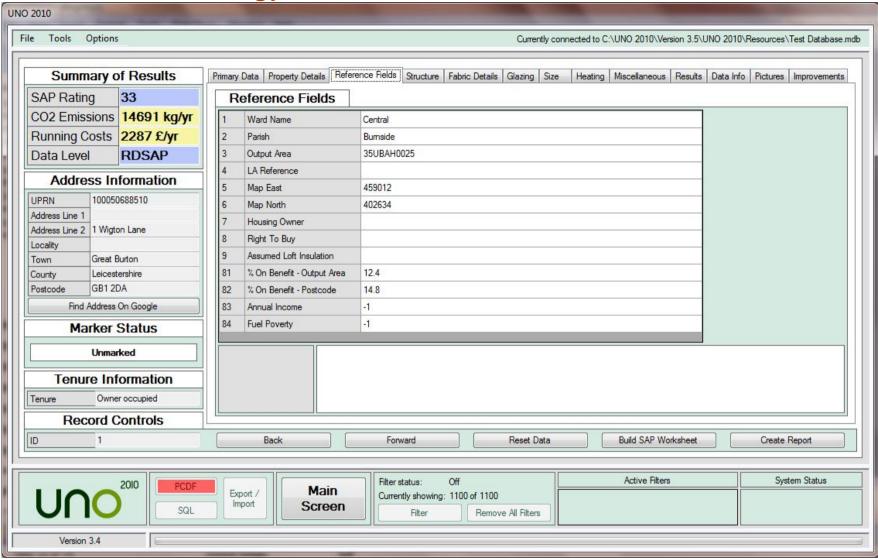
Energy database - record view



Each address has an individual record summary with further data accessible from the tabs along the top. Reference fields (100) allow the user to define whatever additional information needs to be stored to locate groups of properties or individual households. For fuel poverty purposes we normally populate with small area information such as percentage of people on benefits in the postcode or DECC modelled fuel poverty percentages by LSOA or COA.

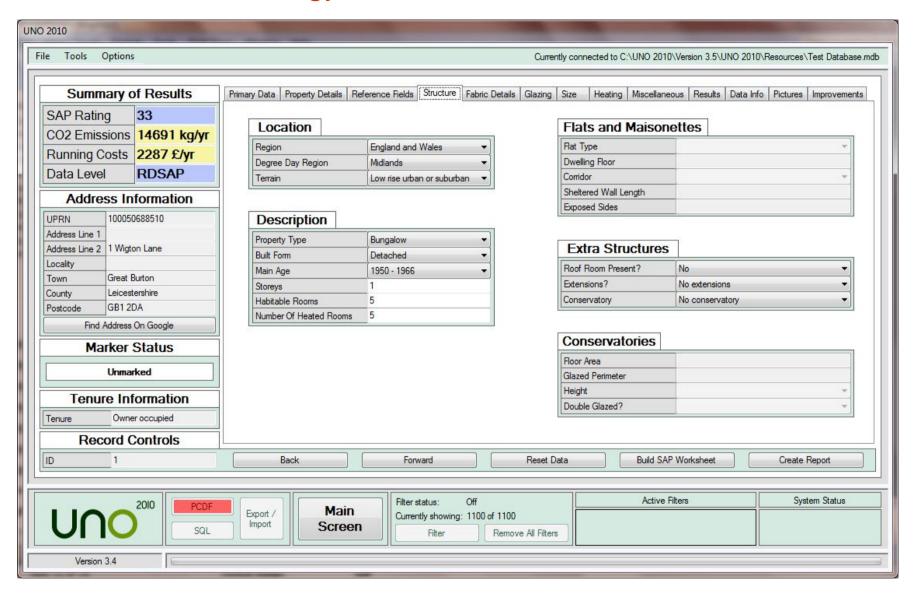
Energy data can be a minimum data set similar to the EST DIYHEC or higher than RDSAP

Energy database – reference fields

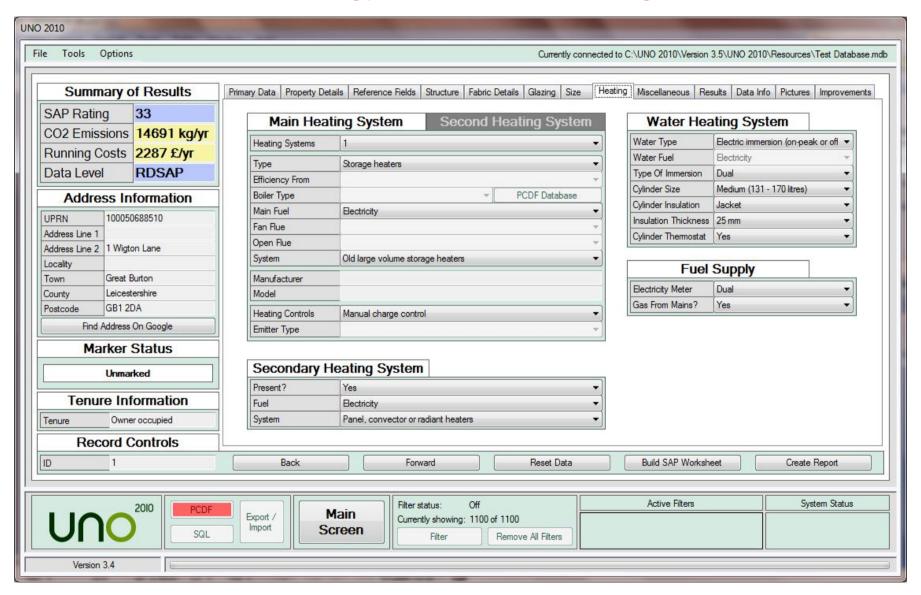


The next tabs display information in the extra data levels – selection of Reference fields here

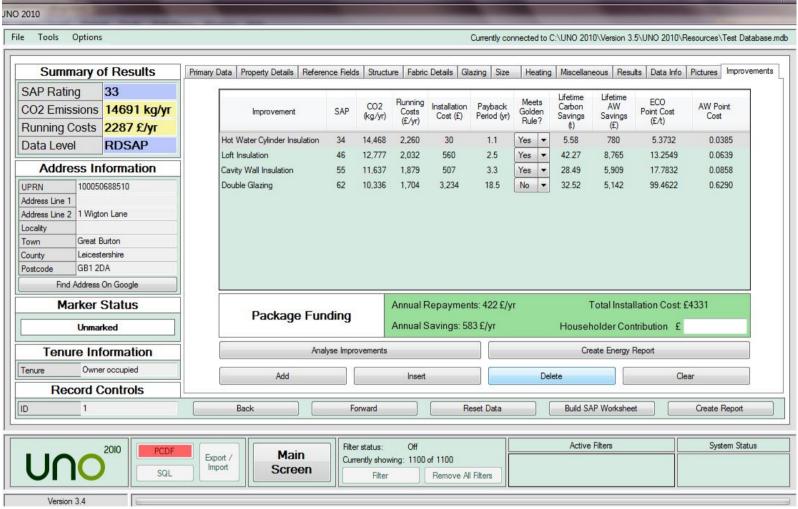
Energy database - structure



Energy database - heating



Green Deal Package



The improvement tab to the top far right, displays the applicable improvements in order of cost effectiveness, and whether the annual savings would be enough to pay off the loan (meets Golden Rule). The software (automatically in Green Deal mode) adds measures to create an optimum package.

As this example is a detached bungalow with an expensive fuel and little insulation, the savings from the very cost effective hot water cylinder jacket, loft and cavity wall insulation will pay for double glazing and while still leaving the householder £161 a year better off.

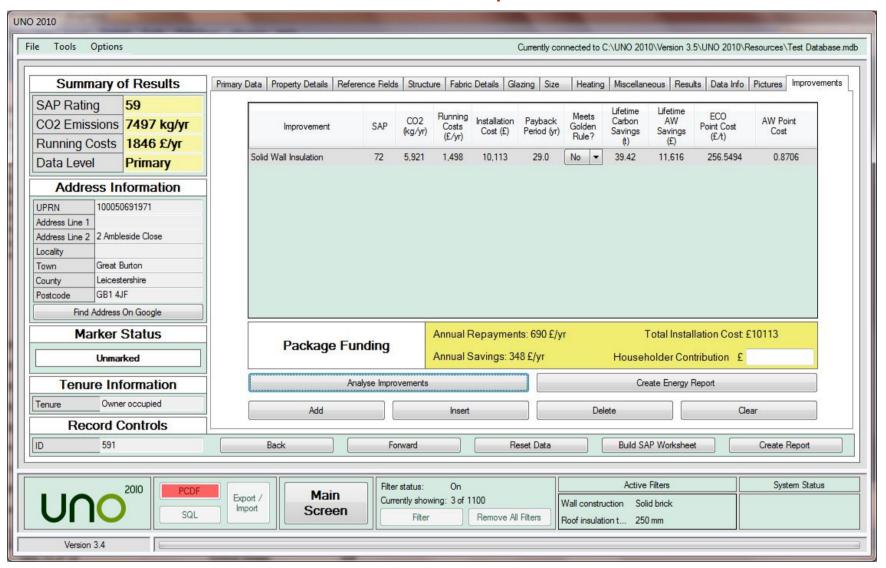
ECO example



ECO is intended to subsidise energy improvements such as solid wall insulation which are desirable from the national perspective – energy security, climate change, but are not yet cost effective for the individual householder.

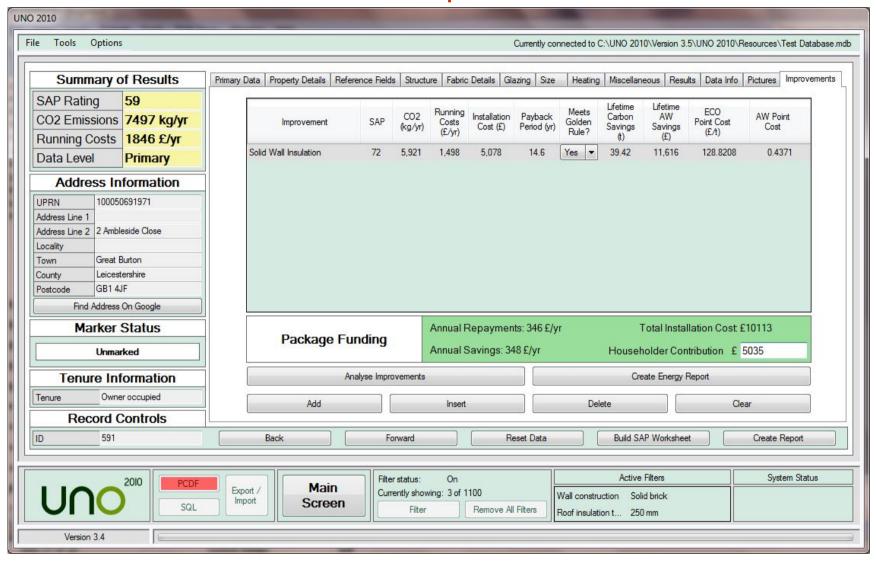
This older solid walled house has had all of the obvious simple work carried out - double glazing, loft insulation, and a new heating system.

ECO example



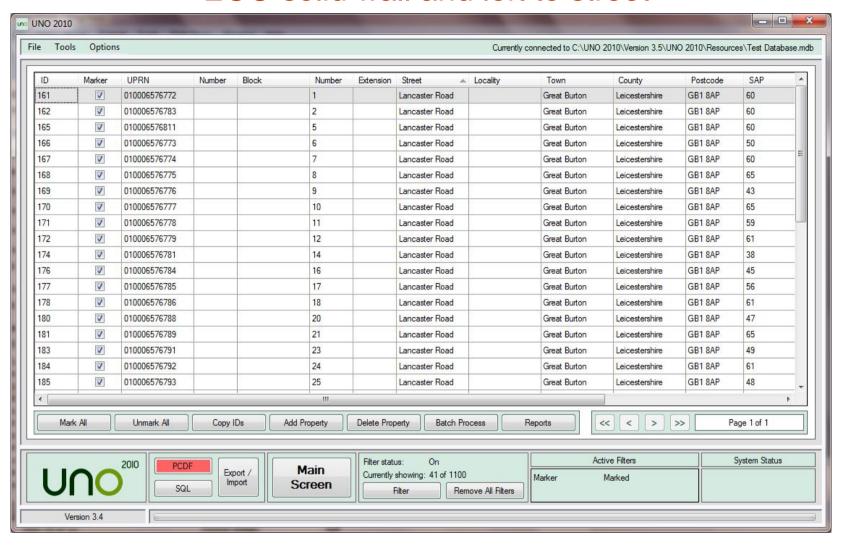
Adding solid wall insulation cuts fuel bills by £248 a year, but repayments are much more than the savings.

ECO example



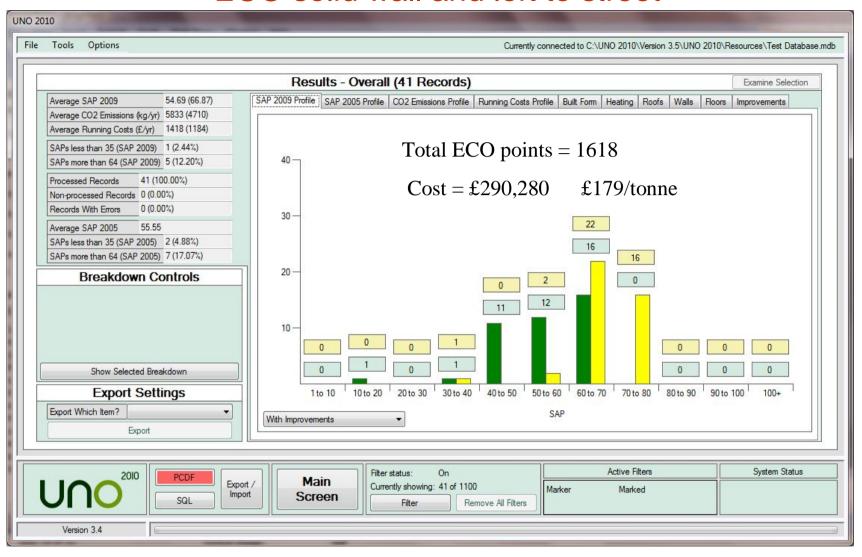
A subsidy (ECO or other) of around 50% will equalize repayments and savings, although whether a fuel utility chooses to invest is a commercial decision based on the cost of carbon saved.

ECO solid wall and loft to street



UNO is a stock analysis tool that applies calculations automatically to all of the housing stock or a selection such as a Lower Super Output Area or street. In this example a street of house with solid walls has been selected, and the software measures restricted to the ECO measures of solid walls (and loft insulation where needed). The housing stock is a mix of semis and terraces, with heating mainly gas, but with a small number having room heaters or storage heaters (lower SAP ratings in the profile).

ECO solid wall and loft to street



The average SAP increases by over 12 points, and running costs reduced by £234 a year on average. The software estimates the cost of carrying out the work (using a price per m2 set by the user) and the savings to give an indication of the cost of saving a tonne of CO2 over the lifetime of the measure (36 years for solid wall insulation).

Preparation for Green Deal and ECO

- Existing data into UNO (we do this)
- LAs have access to more data
- Include EPC data around 30% of stock
- Analyse areas for CSCO and rural
- Look at measures packages
- Bargain from a strong position



UNO further info

- Websites with rolling demo
- Options for both individual LAs and partnerships
- Ring Office 01665 605010
- Email marionhart@energyaudit.co.uk
 www.energyaudit.co.uk
 www.unoenergy.co.uk

