



## Acknowledgements

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# 1 Executive Summary

The Drombane/Upperchurch Energy project was initiated in 2011 by Drombane Village Group. The project emerged from a community initiative which sought to stimulate economic activity within the parish. Following a number of community planning sessions facilitated by North Tipperary LEADER Partnership, energy was identified as a key theme to be considered. Discussions were held with Limerick Institute of Technology (LIT) Tipperary, the Tipperary Energy Agency, which examined a number of options including energy generation, the development of wood heating projects, district heating opportunities, and energy efficiency upgrades.

With the advice of Tipperary Energy Agency, the group decided initially to concentrate on energy conservation and efficiency. The first phase of work involved the completing a local community energy survey. The survey would give accurate information on amount of energy used, and levels of insulation. It would create awareness of the benefits of energy conservation, the government grants available, with the aim of saving householders money and spurring economic activity in the community.

The completion of the survey involved a number of steps including:

- Setting up Energy Team with members from Drombane Village Group and Upperchurch/Drombane Development Association.
- Securing resources from LIT Tipperary in the form of a student to complete survey work during the summer period of 2011.
- Development of a pilot survey form for consideration by the Energy Team
- Hosting an information evening to give general information on SEAI Grants to members of the community and to announce the survey
- Finalisation of survey form
- Completion of survey (house to house) by community members
- Data analysis and reporting.

The Final Survey commenced from mid-June onwards. The large majority of the population in the Drombane/Upperchurch area took part and completed the survey forms fully, indicating a general interest in improving the community's energy profile.

Approximately 16 volunteers distributed 400 survey forms amongst the Drombane/Upperchurch community. A total of 353 survey forms were returned, fully completed, giving an excellent response rate of 87%. It was found that only 4 out of the total amount of forms handed out were not completed sufficiently to retrieve data. Therefore these forms were not included in the final analysis of the results.

**The key conclusions from the analysis are:**

- An estimated €1,000,000 is spent per annum on energy within the residential sector in the community. This equates to €1,000 per person or €2,500 per household per annum. A reduction in energy usage of 25% could result in €250,000 being saved, money which could be spent locally.
- Over 200 of the respondents stated that financial savings were the most important reason for them. An initiative like this energy project is fundamental in assisting these people to move to ways of reducing their fuel bills whilst increasing their energy efficiency.
- Oil is the dominant fuel in the region with 59% of the population survey claimed that the most used fuel within their households is oil, used mainly in oil boilers or ranges.
- Wood has a significant presence in the community as a fuel, as a primary and secondary fuel, and as self owned resource. There is a strong interest in using locally produced wood fuel.
- 55% of energy expenditure is on heating fuels, 33% of electricity and the remainder on secondary fuels.
- The response rate to the survey (87%) shows a keen interest in the community in the energy project.
- The general community interest in energy efficiency schemes is high, with 63% of respondents expressing interest in availing in energy efficiency schemes. A further 18% would like to receive more information before proceeding with such schemes.
- The analysis has determined that 82% (281) of houses could avail of the Better Energy Scheme and 13% (46) could avail of the Warmer Homes Scheme grants.
- It was found that nearly 10% of the population have already availed of existing energy efficiency schemes.
- The house profile demonstrates that majority of houses are detached dwellings (approximately 80%) which could be expected in a rural community. A significant portion of the houses were built before 1920. 50% were built before 1981 when insulation began to be introduced into the building stock. 40 houses were built every 10 years from 1971 onwards.
- The large majority of those surveyed have some type of insulation present in their households. The age profile of housing stock however, suggests that there is likely to be considerable scope for thermal upgrades throughout the parish. 30 households in the Drombane Upperchurch area do not have any insulation within their homes.
- When compared to population age profiles nationally, and of other regions, the age profile of the community is similar, indicating that there is unlikely to be a need for age specific interventions in the region.

The analysis has clearly highlighted an opportunity to invest in energy efficiency in the community to reduce the community spend on energy. There is significant interest in getting more information on what can be done and also working within the community to develop local solutions.

**The following recommendations are made based on the initial analysis:**

1. Further analysis is required to allow for dedicated actions to be taken in relation to energy upgrades. This could include clustering of house by type, age, required upgrades etc.
  - a. Compare houses by type, age, heating system and primary fuel to determine a clearer picture on what fuels are being used in what house type
  - b. Compare insulation levels with house age and type
  - c. Compare insulation levels with eligibility for grants
2. A short summary document should be produced which can be presented to the community.
3. The full report should be printed and made available to key stakeholders within the community and also presented to relevant Agencies and bodies e.g. Local Authorities, SEAI etc.
4. An event should be organised which allows the results to be presented to the community and also for people to access further details on grants, technical information etc. This should include stands from relevant contractors who can complete work and other scheme providers e.g. ESB Halo etc.
5. Efforts should be made to cluster potential houses into relevant groups based on the analysis indicated under Recommendation 1. This will allow for economies of scale to be identified in terms of procuring energy upgrades.
6. Discussions should be held with SEAI with regard to how the homes within the region who are eligible under the Warmer Homes Scheme can avail of the scheme. Currently there is now Warmer Homes Scheme provider and no potential to establish one in the County.
7. The Energy Team should engage with the Tipperary Energy Agency who can provide some support to home owners. This can include home owners setting up an on-line Energy Savings Account where energy use can be tracked and the impact of investments measures.
8. The volunteerism of the village group needs to be allied to commercial interests in order to reap the potential of a community wide energy conservation programme. The Team should engage with local entrepreneurs and co-operatives to see how this initiative might be developed.
9. The Energy Team should engage with landowners, and with Coillte with a view to encouraging the harvesting and planting of suitable trees for firewood. Any increase in indigenous renewable sources will in time lead to reduced reliance on imported fuels and reduce energy costs



## 2 Introduction

The Drombane/Upperchurch Energy project was initiated in 2011. The project emerged from a community development initiative by Drombane Village Group which sought to stimulate activity within the community. Energy was identified as a key theme to be considered. Discussions were held with Limerick Institute of Technology (LIT) Tipperary, the Tipperary Energy Agency, Drombane Village Group and North Tipperary LEADER Partnership. Options which were discussed included the development of wood heating projects, district heating opportunities, energy efficiency upgrades and others.

Following these discussions it was agreed that the first focus area should be on energy efficiency, with the objective of: reducing the overall amount spent on energy, encouraging community members to support locally sourced fuels, and stimulating work opportunities within the community.

It was decided that a survey of the community should be completed to get a picture of what **specific** opportunities existed for energy efficiency actions in the region. The survey would aim to:

- Create a current energy profile of the area and **find out what work** could be done to reduce dependency on such fossil fuels e.g. oil
- Establish whether those living in the Drombane/Upperchurch area are eligible for the grants that are available through the Sustainable Energy Authority Ireland (SEAI).

The completion of the survey involved a number of steps including:

- Setting up Energy Team with members from Drombane Village Group and Upperchurch Drombane Development Association.
- Securing resources from LIT Tipperary in the form of a student to complete survey work during the summer period of 2011.
- Development of a pilot survey form for consideration by the Energy Team
- Hosting an information evening to give general information on SEAI Grants to members of the community and to announce the survey
- Finalisation of survey form
- Completion of survey (house to house) by community members
- Data analysis and reporting.

The information evening outlined the different SEAI grants available. The well attended event served to communicate to the community how objectives of the survey both for individual households and the wider community. Three schemes were outlined throughout the information evening, including the Warmer Homes Scheme, Home Energy Saving Scheme and the Greener Homes Scheme. Since late May 2011, the Greener Homes Scheme has been terminated. The Home Energy Saving Scheme has been renamed the Better Energy Scheme. The requirements for eligibility remain the same, although there has been some reduction in funding available under these schemes.

The pilot survey was reviewed and assessed by the group. The purpose of the pilot survey was to test a representative sample size of the overall population and to test how well the survey worked. The Pilot survey made it possible to review the questions being asked, and ensured that the survey would provide the results being sought.

The Final Survey commenced from mid-June onwards. The large majority of the population in the Drombane/Upperchurch area completed the survey forms fully, indicating a general interest in improving the community's energy profile.

Approximately 400 survey forms were distributed amongst the Drombane/Upperchurch community. A total of 353 survey forms were returned fully completed. It was found that only 4 out of the total amount of forms handed out were not completed sufficiently to retrieve data. Therefore these forms were not included in the final analysis of the results.

## 2.1 Community Engagement

As this project is led and managed by members of the local community of Drombane as well as members from LIT, TEA and NTLP, the amount of voluntary hours worked by all is quite significant. An assessment was made to determine the extent of voluntary engagement in the process to date. It has been shown that this is equivalent to the hours worked by a full time Community Worker employed for 8 months.

The basis for this calculation is as follows:

- 30 community meetings; average of 12 people attending each meeting; average length of meetings approximately 2 hours. This is equal to 720 man hours.
- Survey House calls - 10 teams; 2 people per team; 5 nights; 4 hours per night. This is equal to 400 voluntary hours.
- Event organising, Postage, Brochure Design = 40 hours.
- Work completed by Student on Work Placement = 300 hours.
- Total Voluntary Hours worked = 1460 hours.

### 3 Survey Results

The following sections provide the results of the survey. The majority of the results are presented in graphical format with associated data provided where necessary.

#### 3.1 Age Profile

The survey asked members to outline the age of the occupants of each house. The age profile can provide helpful information. Certain age groups, eg. pensioners, are entitled to an Electricity and Gas allowance.

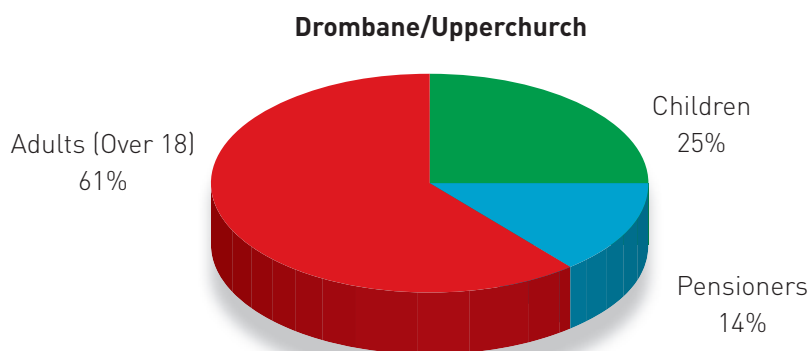


Figure 3-1: Age Profile Drombane/Upperchurch

The chart above shows that the large majority of the population surveyed are adults (anyone aged over 18 and under pension age). One quarter of the population surveyed are children, aged under 18. 14% of the population surveyed are pensioners.

The age profile can be compared to age profiles from other parts of the country as well as nationally. This provides us with the opportunity to recognise any significant differences. The age profile of Thurles, the nearest town to Drombane, as well as Clonakilty, Co. Cork and the national age profile are shown below (Figure 3-2: Thurles and Clonakilty Age Profiles Figure 3-3: Age Profile - Ireland). Clonakilty has been selected as it is currently implementing a sustainable energy action plan.

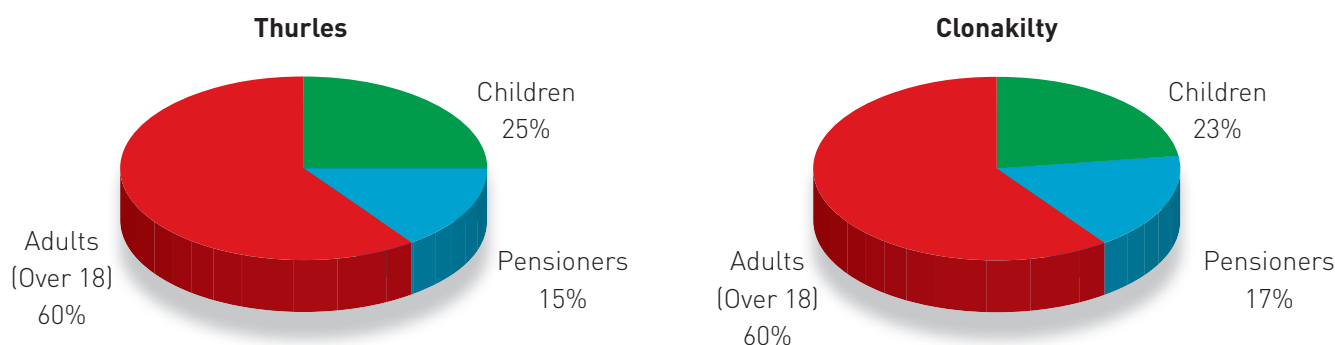
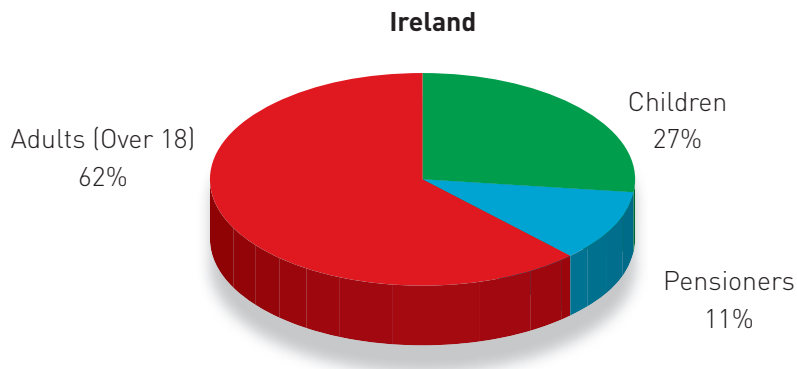


Figure 3-2: Thurles and Clonakilty Age Profiles  
 (Source: CSO, 2006)



**Figure 3-3: Age Profile – Ireland**

[Source: CSO, 2006]

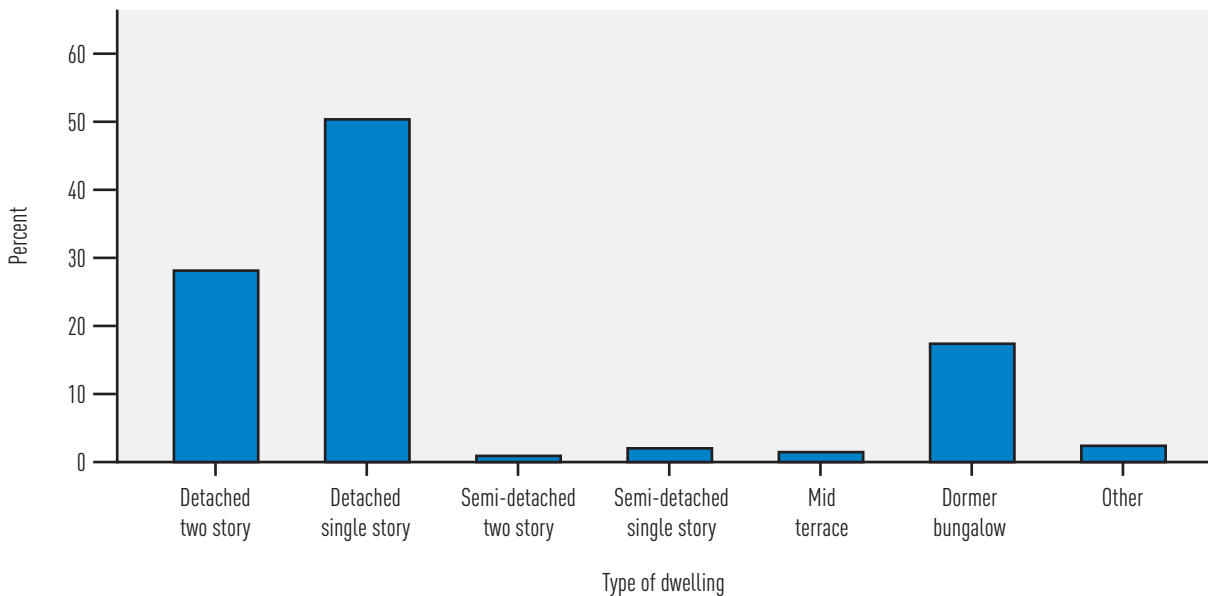
The data used to create the charts of the age profile’s of Thurles, Clonakilty and the national age profile were all sourced from the CSO website from the 2006 census records. It is clear to see that the age profile of Drombane/Upperchurch is similar to the other age profiles outlined.

### 3.2 House Profile

This section of the survey reviews what types of houses are in the Drombane/Upperchurch area.

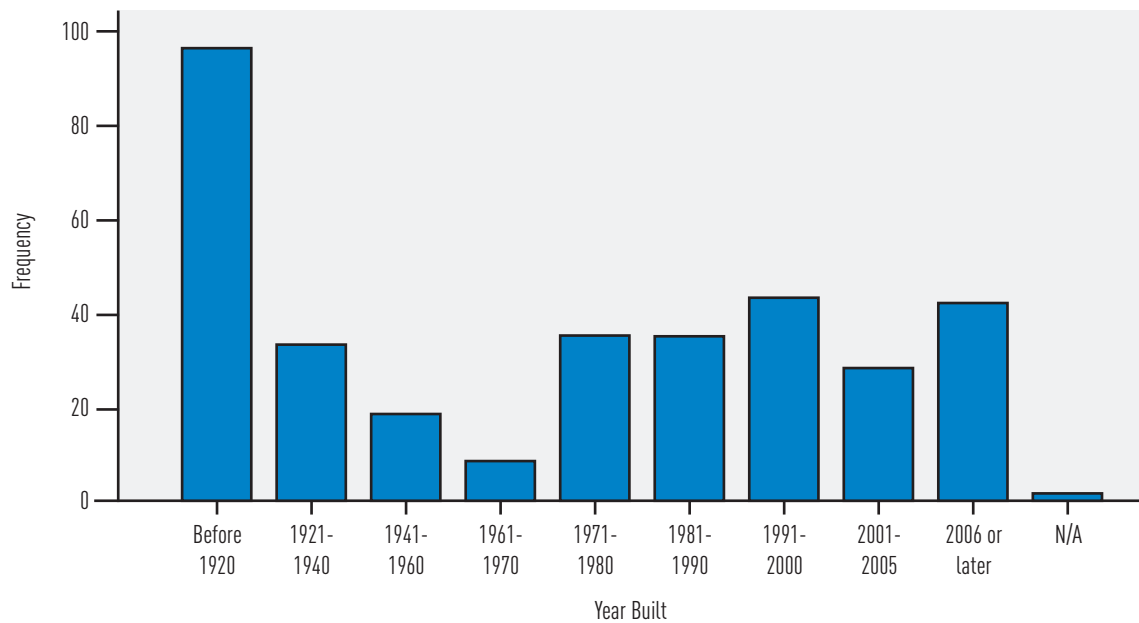
#### 3.2.1 House Type

The predominant type of dwelling in the area is a Detached Single Story (or a Bungalow), 176 out of 349 houses surveyed; 98 of the houses are Detached Two Story; 59 of the houses are Dormer Bungalows.



**Figure 3-4: Type of Dwelling**

### 3.2.2 House Age



**Figure 3-4: Type of Dwelling**

The vast majority of houses within the Drombane/Upperchurch area were built before the 1920's. Between the years of 1971 to 2006 on average around 40 houses were built every 9 to 10 years. Between 1961 and 1970 only 9 houses were built.

The number of houses built before 1920 will present a significant challenge in terms of energy efficiency from a technical implementation point of view.

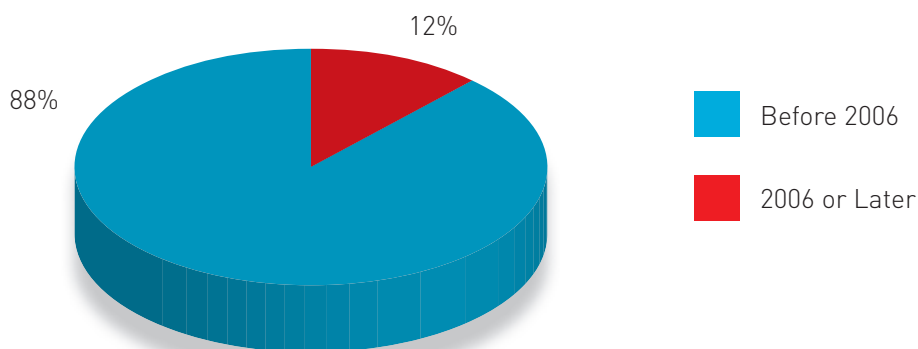
### 3.3 Eligibility for schemes

#### 3.3.1 Better Energy Scheme

Firstly it is important to note what are the main qualifying criteria for those who can avail of the Better Energy Scheme (BES). *“It is a national scheme and therefore all homeowners of dwellings built be-fore 2006<sup>1</sup> qualify. (SEAI, 2011)*

A requirement of this scheme is that a BER (Building Energy Rating) assessment be carried out on the dwelling after all upgraded works have been completed. Provided that a BER assessment has not been previously applied for, a home owner may be entitled to a grant of €80 towards the BER assessment. The grant is also only available to the home owner i.e. the grant cannot be applied for by someone who is renting a property.

Based on the above, the survey data was reviewed to determine the numbers of owner-occupied houses built prior to 2006.

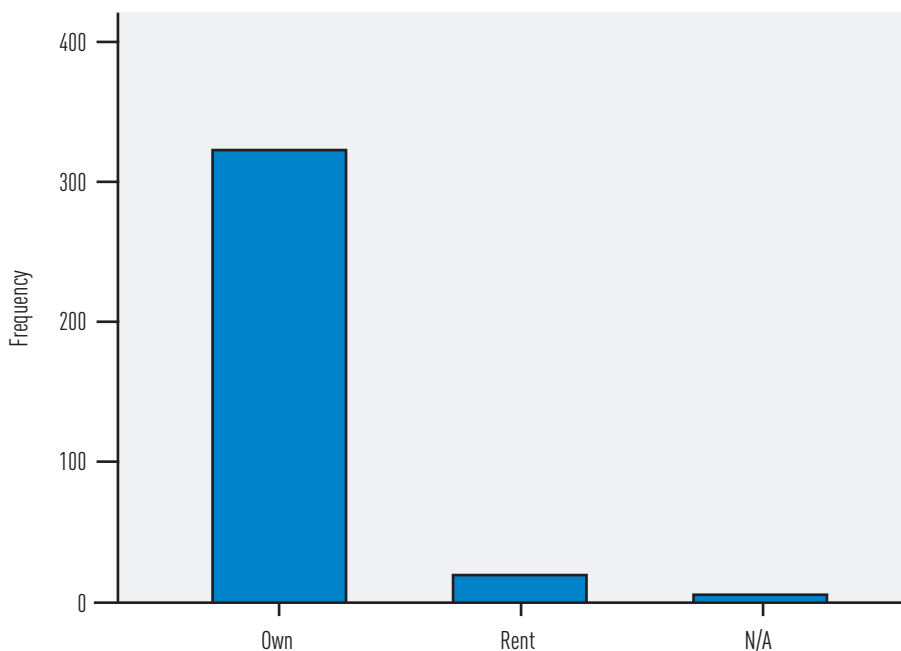


**Figure 3-6: Houses built before 2006**

A total of 304 houses were built before 2006 (or 87.6% of all houses accounted for in the survey). On house ownership, out of the 349 surveyed, two of the entries were considered invalid and were not included in this analysis. 324 out of the 347 included owned their properties. See Figure 3-7: House ownership status.

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<sup>1</sup> Homes built from 2006 onwards should have been constructed to the 2003 Building Regulations and so should not require significant insulation or heating system upgrades may apply.



**Figure 3-7: House ownership status**

OWNERSHIP CATEGORY				
Age Category	Own	Rent	N/A	Total
Total Houses	324	19	4	347
2006 or Later	43	0	0	43
Pre 2006	281	19	4	304

**Table 3-1: Cross tabulation of Age of House vs Ownership Status**

From analysis of the results above, 324 of the dwellings surveyed are owned by the occupiers. Of these, 43 would not be eligible for the grant as their houses are built in 2006 or later with a further 19 of the 347 being rented properties. 81% of the total houses surveyed would qualify for a BES Grant.

### 3.3.2 Warmer Homes Scheme

The general rules of this scheme from SEAI are as follows *“The requirements of this scheme are that the occupants of the dwellings are the owners and are also in receipt of the Free Fuel Allowance. In addition to this their houses must be built before 2002.”*

Again, based on the above the survey data was analysed to identify houses:

- Where the occupant was in receipt of a Fuel Allowance
- That were built prior to 2002 and
- were owner occupied

Category	Number of Houses
Total Houses	347
Fuel Allowance	59
Owner Occupied	54
Built Pre 2002	46

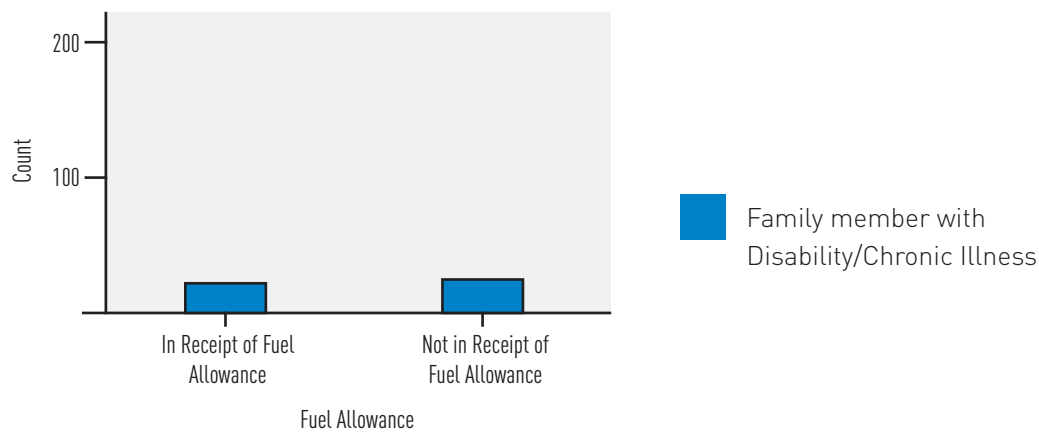
**Table 3-2: Houses Eligible under Warmer Homes Scheme**

To conclude approximately 13% of those surveyed would qualify for this scheme.

### 3.3.3 Chronic Illness Sufferers

Many people may not be aware that if an occupier of a dwelling suffers from a chronic illness, they may be entitled to the Free Fuel Allowance. From the results of the survey, 283 out of the total 347 included reported that they do not receive any Fuel Allowance payments, however 24 out of the 283 (8%) claimed that they or a member living in their home do suffer from a chronic illness.

An opportunity exists to follow up with this cohort to see if they can avail of fuel allowance and also engage in the Warmer Homes Scheme.



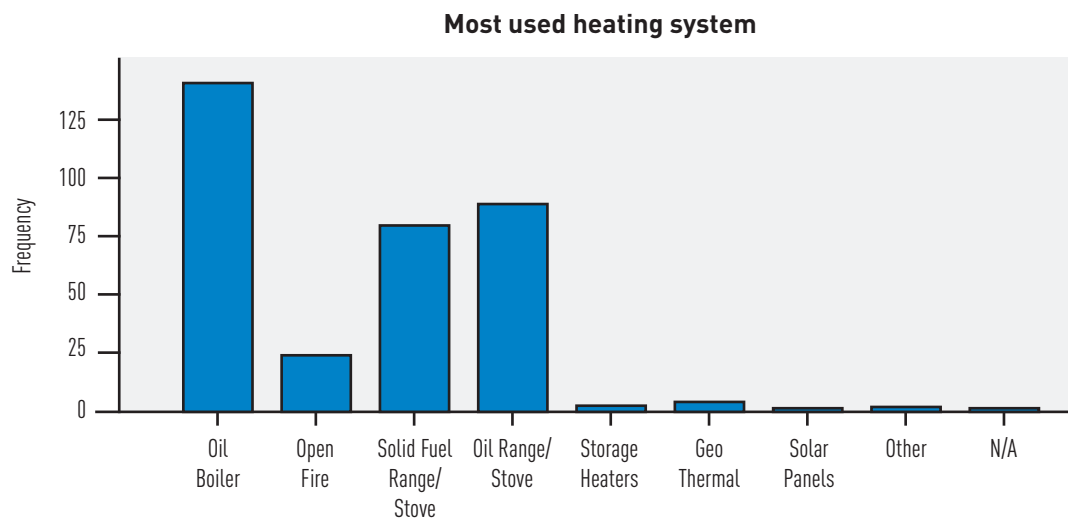
**Figure 3-8: Fuel Allowance and Chronic Illness/Disability**

### 3.4 Energy Profile

The energy profile provides members of the community in Drombane/Upperchurch with the opportunity to review their energy usage, expenditure and dependency. This can then be used to quantify the energy savings that can be achieved within the community.

#### 3.4.1 Primary Heating System

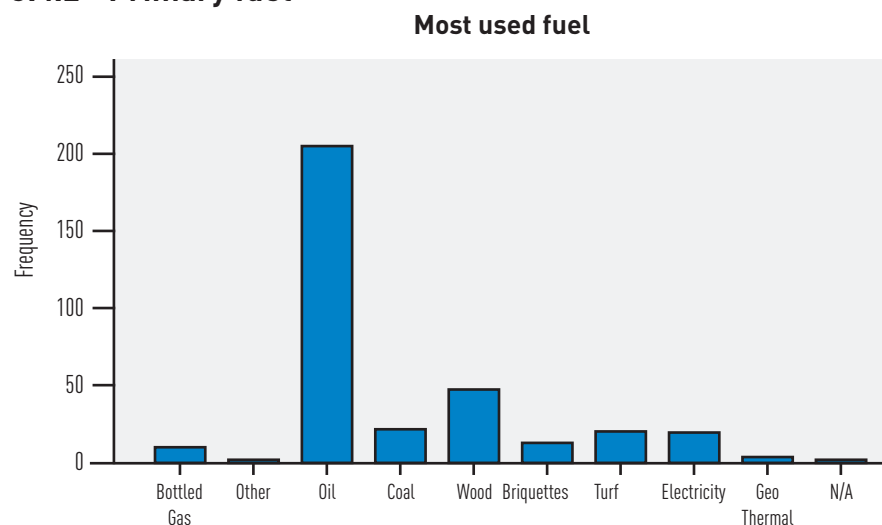
The survey asked people to outline the types of heating systems and heating fuels they used most frequently in their homes. The results are shown below.



**Figure 3-9: Primary Heating System**

It is clear that the type of heating system most frequently used in homes in the Drombane/Upperchurch area is an Oil Boiler, with 140 out of 347 (40%). 6 (2%) out of the 347 included have invested in Geothermal and Solar Panel heating systems.

#### 3.4.2 Primary fuel



**Figure 3-10: Primary Fuel Used**

207 out of the 347 houses indicated that oil was their primary fuel. This is in line with the primary heating systems data in the section above.

### 3.4.3 Energy Spend

The survey asked people to indicate on average how much they spent on energy for the home. This question was divided into three sections.

- Amount Spent on ESB (Bi-Monthly Bill)
- Amount Spent on Main Heating Fuel (per month)
- Amount Spent on Other Heating Fuel (per month)

#### 3.4.3.1 ESB Allowance for Pensioners

It is important to mention before analysing the energy results that pensioners and anyone aged over 70 are eligible for benefits. These benefits include the Household Benefits Package. This Package consists of Electricity Allowances, Natural Gas Allowance, Group Account Allowance, Bottled Gas Refill Allowance, Free TV Licence and Telephone Allowance. In particular the Electricity allowance covers “up to 2,400 units of electricity each year. This is equal to 400 units of electricity in each two-monthly billing period throughout the year”. (Reference: <http://www.welfare.ie>). This will apply to some (or perhaps all) of the 14% of the population who were classified as pensioners under the Age Profile section.

Further analysis will be required at a later date to determine the impact of these allowances on total energy spend.

### 3.4.4 Electricity Expenditure

	Number	Average	Maximum	Total
Amount Spent on Electricity (bi monthly)	318	139	€800	€44,101

**Table 3-3: Electricity Expenditure**

Out of the total 349 surveyed, only 318 completed this section of the survey. The maximum amount spent on ESB in a household was €800.00 (per two months)<sup>2</sup>. Taking an average expenditure of €140 per household every two months the annual electricity bill per house hold is approximately €840. At an average cost of €0.19 per kWh<sup>3</sup> (unit of electricity) this equates to 4,421 kWh per annum. National data indicates that the average household in Ireland used 5,591 kWh (SEAI, 2006). The difference to the National data may be due to under reporting within the community or because of the house types within the region.

Taking an average bill of €139 every two months for all houses (349) surveyed the total amount spent on ESB throughout the Drombane/Upperchurch area is €48,511 (per two months) which equates to an annual expenditure of €291,000.

<sup>2</sup> Some of the households will include farms where the total electricity cost may have been provided and could account for some of the larger electricity expenditure.

<sup>3</sup> SEAI 2011 – Residential Fuel Cost Comparison Sheet, June 2011

### 3.4.5 Amount spent on Main Heating Fuel

	Number	Average	Maximum	Total
Amount Spent on Main Heating	307	€115	€400	€35,287

**Table 3-4: Main Heating Fuel Expenditure**

307 out of the total 347 surveyed completed this part of the survey. The Main Heating Fuel refers to purchasing mainly Oil and Wood. The maximum amount spent on the main heating fuel in a household was €400.00 (per month) with the average being €115.

To calculate the total energy consumed the following assumptions were made:

- All houses were using oil/kerosene
- An average cost of €0.0793/kWh<sup>4</sup>

Therefore this equates to 1,450 kWh per month or 17,400 per annum. National data indicates average heating consumption of 19,713 kWh per annum (SEAI, 2008). The difference can be accounted for by under reporting and also that other fuels are not included (see following section).

The total amount spent on the main heating fuel throughout the Drombane/Upperchurch area (349 houses) is €40,135 (per month). The average amount spent on the main heating fuel for the year was calculated as €481,620 (per year).

### 3.4.6 Amount spent on Other Heating Fuels

	Number	Average	Maximum	Total
Amount Spent on Other Heating Fuels	175	€52	€416	€9,139

**Table 3-5: Secondary Heating Fuel Expenditure**

Only 175 of the houses surveyed completed this section. The Other Heating Fuel refers to purchasing Coal, Briquettes and Turf etc. Many respondents indicated that they did not use a secondary heating fuel. The maximum amount spent on secondary heating fuel was €416 (per month) with the average amount spend being €52.

Further analysis is required to determine which houses with oil systems as their main heating systems also used secondary fuels. The total amount spent on secondary heating fuel in the Drombane/Upperchurch area was €9,140 (per month). The amount spent on secondary heating fuel for the year was calculated as €109,680 (per year).

<sup>4</sup> SEAI 2011 – Residential Fuel Cost Comparison Sheet, June 2011

### 3.4.7 Total amount spent on Energy per year

	Average per Household	Total Annual	% of Total
Amount Spent on Electricity (bi monthly	€139	€291,000	33
Amount Spent on Main Heating	€115	€481,600	55
Amount Spent on Other Heating Fuels		€109,680	12
<b>Total</b>		€882,280	100

**Table 3-6: Summary Energy Expenditure Data**

Based on the above data the total energy consumption within those houses surveyed is approximately €882,280. Given that not all houses were surveyed and that there is likely to be a certain level of under reporting in relation to energy spend it can be anticipated that the total energy spend within the residential sector in Drombane/Upperchurch is close to €1,000,000 per annum. This equates to €1,000 for every person or €2,500 per household in the community.

SEAI reported that in 2006 average annual spend on energy by households was €1,767, an increase of 4% on 2005 and 70% on 1990 (3.4% per annum on average).

Based on this data it can be seen that significant savings can be achieved through the implementation of energy efficiency actions. A reduction in energy usage of 25% could result in €250,000 being saved across the community. This €250,000 is likely to be spent locally (as opposed to being spent on imported fossil fuels).

### 3.4.8 Use of Wood Fuel in the Community

There is a particular interest in the region in identifying the use of wood as a fuel, and potential for increasing the use of wood use. This is based on the fact that there are considerable resources in the region which can be exploited and it is a local, renewable fuel.

Analysis of the results of the survey showed that wood is the second highest used type of fuel in the Drombane/Upperchurch area, with nearly 50 participants choosing wood as their **primary fuel**. It is likely that the majority of this is being used in open fires or solid fuel ranges (further analysis is required to confirm this).

It was calculated that a total of €2,394 is spent on wood as a primary fuel per month for those who do not supply their own wood. This equates to an annual spend of €28,728 on wood fuel in the region.

The 42 people who **buy** wood as their primary fuel spend a total of €2,394 per month. This equates to an annual spend of €28,728 on wood as a primary fuel.

A large number of the community also use secondary fuels (these include wood, and other solid fuel, e.g. coal, briquettes and turf.) The amount spent on wood as a secondary fuel per month is €1,090 (€13,080 annually).

In conclusion, the survey found that the total amount spent on buying wood in the community is €41,808 per year.

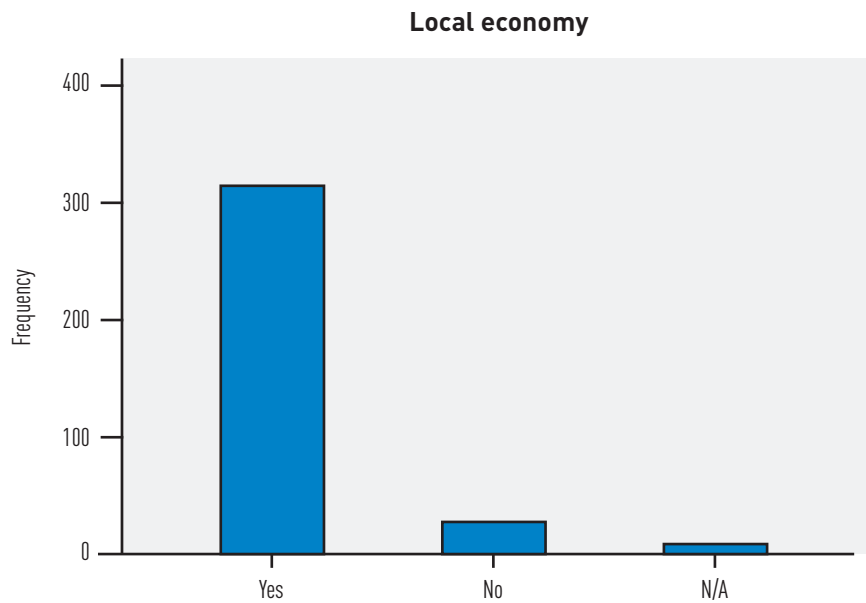
### 3.4.9 Market for Locally Sourced Fuels

#### Interest in locally sourced fuel – among current wood users

Current users of wood fuel, were asked if they would support locally sourced fuel, eg local timber. Out of those who use wood as a primary fuel, 42 stated that they would. 3 people responded that they were already supporting locally sourced fuel. 1 member did not support locally sourced fuel.

Out of those who use wood as a secondary fuel, 42 support locally sourced fuel, with only 2 respondents choosing not to support or invest in locally sourced fuel.

### Interest in Locally Sourced Fuels – among all householders



**Figure 3-13: Interest in locally sourced fuel**

The survey found that the vast majority of respondents would support and invest in locally sourced fuel if it were available to them. A total of 314 selected Yes. 26 of those surveyed selected No.

There is clearly an opportunity to develop a local wood fuel supply system to supply the existing market, with further opportunity available through converting existing houses to wood fuel. This would support local jobs and create investment in the community.

### 3.5 Community Interest

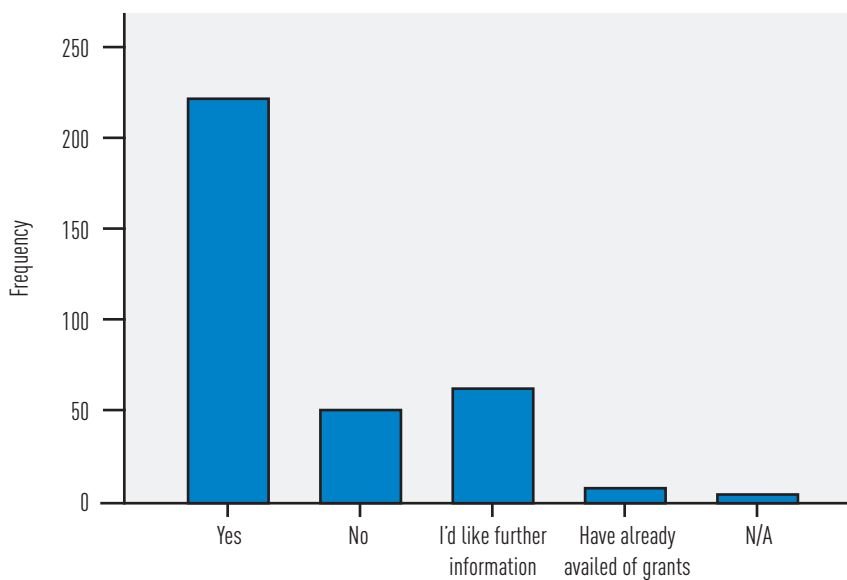
In general the community seemed very interested in the objectives of the survey and anxious to see what type of results the survey would provide. Overall there was a significant response rate to the survey (87%).

A section of the survey was dedicated to discovering the general interest within the community towards the schemes that the Energy Team had proposed as well as the interest in supporting the local economy and local sourced fuels for heating in the home (see above). In addition to this people were asked to share if they had already availed of energy efficiency schemes before, as this would impact on their chances of benefitting from further energy efficiency schemes.

<sup>5</sup> Many respondents indicated both 'Yes' and 'I'd like further Information', when this occurred the data was analysed as a 'Yes' response.

### 3.5.1 Interest in Grants

Respondents were asked to express their interest in availing of grants provided to upgrade their homes.



**Figure 3-11: Interest in available of energy grants**

The graph shows that the large majority of respondents expressed an interest in availing of government grants, with 220 out of 347. 63 respondents claimed that they would like more information<sup>5</sup>.

### 3.5.2 Those who have already availed of existing energy schemes

The survey indicated that 30 out of the 347 included have already availed of energy efficiency schemes. These people are examples of energy upgrades can potentially share their experiences with other members of the community.

The grants that have already been availed of include (mainly through SEAI):

- Home Energy Saving Scheme
- Warmer Homes Scheme
- Solar Panel Grants
- Zoned Heating Grant
- Attic and Boiler Upgrades
- Cavity Wall and Attic Insulation
- Wood pellet boiler grant
- Home Insulation Grant

### 3.5.3 Most important reason for investing in energy efficiency schemes

Respondents were then asked what they considered to be the main reason for investing in energy efficiency for their homes. This was important to determine to allow the Energy Group determine the most appropriate schemes to establish in the region.

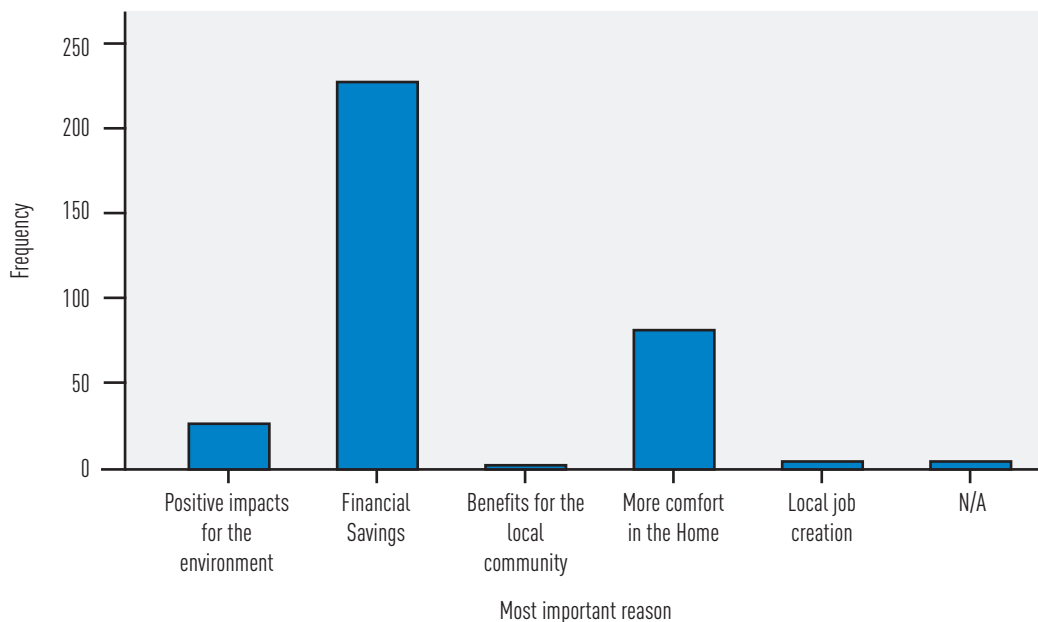


Figure 3-12: Reason for investing in upgrades

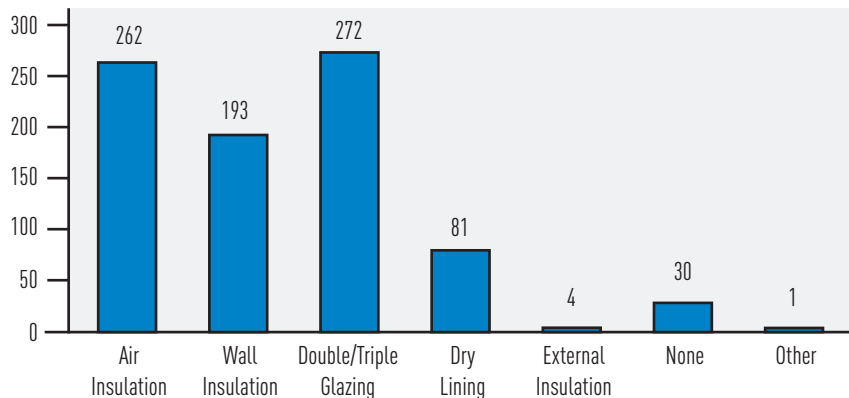
It is clear that amongst the majority of respondents that Financial Savings are the major reason for investing in energy efficiency. This suggests that incentives for energy efficiency in Drombane/Upperchurch, whilst being focussed on reducing the dependency on fossil fuels (e.g. Oil), should concentrate on economic efficiency. There will be a need to demonstrate to home owners the value of investing in energy efficiency and renewable energy.

### 3.6 Insulation Levels and Types

Those who were surveyed were provided with a list of many types of Insulation and asked to outline what types of insulation were installed into their homes, including:

- Attic Insulation
- Wall Insulation (Cavity Wall)
- Double/Triple Glazing
- Dry Lining
- External Insulation

Note: The survey did not gather specific data on the level of insulation installed. Evidence from other projects e.g. SERVE project, indicates that the levels of insulation are below those required to make a house energy efficient.

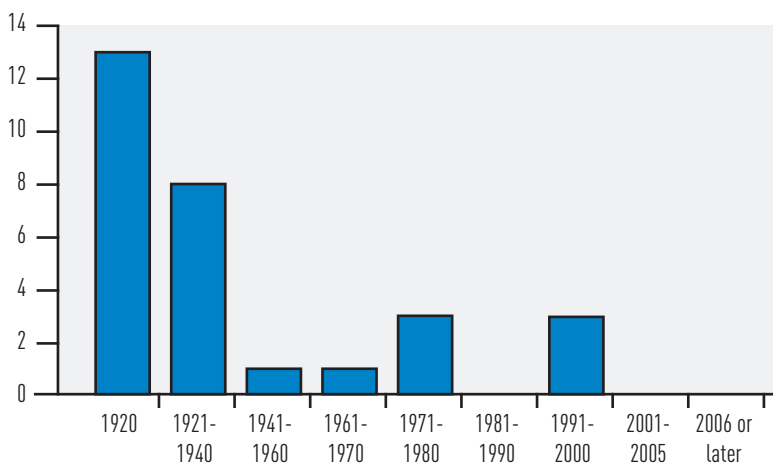


**Figure 3-14: Adequacy of Current Insulation**

The chart above shows that the large majority of those surveyed have some form of insulation (Attic Insulation, Wall Insulation) and Double/Triple Glazing in their homes. 81 of those surveyed have invested in Dry Lining, and 4 have invested in External Insulation. However it is interesting to note that 30 of the households in the area indicated that they do not have any of the listed types of insulation within their homes.

Of the 30 homes without insulation, 13 of the homes were built before 1920. This suggests that the homes are of a construction where installing insulation can be difficult and expensive i.e. solid stone walls. The other houses, however, should be of a construction type that would allow insulation upgrades to be achieved. More detailed analysis will need to be completed to link the insulation levels and types to the various house age cohorts to further refine the opportunities that exist.

Overall, the data indicates that significant opportunities exist for energy efficiency upgrades which will reduce energy spend and increase comfort levels in homes.



**Figure 3-15: Houses without insulation by age cohort**

## 4 Conclusion

This report demonstrates the results collected from the survey carried out in Drombane/Upperchurch in June and July of 2011. The survey was carried out by members of the local community with support from North Tipperary LEADER Partnership, LIT Tipperary, and Tipperary Energy Agency.

Using this report, people in Drombane/Upperchurch can assess the energy profile of their community, and determine what work starting with insulation/energy conservation work, could be done to improve both this profile and the quality of life of the area's inhabitants.

### **The key conclusions from the analysis are:**

- An estimated €1,000,000 is spent per annum on energy within the residential sector in the community. This equates to €1,000 per person or €2,500 per household per annum. A reduction in energy usage of 25% could result in €250,000 being saved, money which could be spent locally.
- Over 200 of the respondents stated that financial savings were the most important reason for them. An initiative like this energy project is fundamental in assisting these people to move to ways of reducing their fuel bills whilst increasing their energy efficiency.
- Oil is the dominant fuel in the region with 59% of the population survey claimed that the most used fuel within their households is oil, used mainly in oil boilers or ranges.
- Wood has a significant presence in the community as a fuel, as a primary and secondary fuel, and as self owned resource. There is a strong interest in using locally produced wood fuel.
- 55% of energy expenditure is on heating fuels, 33% of electricity and the remainder on secondary fuels.
- The response rate to the survey (87%) shows a keen interest in the community in the energy project.
- The general community interest in energy efficiency schemes is high, with 63% of respondents expressing interest in availing in energy efficiency schemes. A further 18% would like to receive more information before proceeding with such schemes.
- The analysis has determined that 82% (281) of houses could avail of the Better Energy Scheme and 13% (46) could avail of the Warmer Homes Scheme grants.

- It was found that nearly 10% of the population have already availed of existing energy efficiency schemes.
- The house profile demonstrates that majority of houses are detached dwellings (approximately 80%) which could be expected in a rural community. A significant portion of the houses were built before 1920. 50% were built before 1981 when insulation began to be introduced into the building stock. 40 houses were built every 10 years from 1971 onwards.
- The large majority of those surveyed have some type of insulation present in their households. The age profile of housing stock however, suggests that there is likely to be considerable scope for thermal upgrades throughout the parish. 30 households in the Drombane Upperchurch area do not have any insulation within their homes.
- When compared to population age profiles nationally, and of other regions, the age profile of the community is similar, indicating that there is unlikely to be a need for age specific interventions in the region.

The analysis has clearly highlighted an opportunity to invest in energy efficiency in the community to reduce the community spend on energy. There is significant interest in getting more information on what can be done and also working within the community to develop local solutions.

## 5 Recommendations

### The following recommendations are made based on the initial analysis

1. Further analysis is required to allow for dedicated actions to be taken in relation to energy upgrades. This could include clustering of house by type, age, required upgrades etc.
  - a. Compare houses by type, age, heating system and primary fuel to determine a clearer picture on what fuels are being used in what house type
  - b. Compare insulation levels with house age and type
  - c. Compare insulation levels with eligibility for grants
2. A short summary document should be produced which can be presented to the community.
3. The full report should be printed and made available to key stakeholders within the community and also presented to relevant Agencies and bodies e.g. Local Authorities, SEAI etc.
4. An event should be organised which allows the results to be presented to the community and also for people to access further details on grants, technical information etc. This should include stands from relevant contractors who can complete work and other scheme providers e.g. ESB Halo etc.
5. Efforts should be made to cluster potential houses into relevant groups based on the analysis indicated under Recommendation 1. This will allow for economies of scale to be identified in terms of procuring energy upgrades.
6. Discussions should be held with SEAI with regard to how the homes within the region who are eligible under the Warmer Homes Scheme can avail of the scheme. Currently there is now Warmer Homes Scheme provider and no potential to establish one in the County.
7. The Energy Team should engage with the Tipperary Energy Agency who can provide some support to home owners. This can include home owners setting up an on-line Energy Savings Account where energy use can be tracked and the impact of investments measures.
8. The volunteerism of the village group needs to be allied to commercial interests in order to reap the potential of a community wide energy conservation programme. The Group should engage with local entrepreneurs and co-operatives to see how this initiative might be developed.
9. The Energy Team should engage with landowners, and with Coillte with a view to encouraging the harvesting and planting of suitable trees for firewood. Any increase in indigenous renewable sources will in time lead to reduced reliance on imported fuels and reduce energy costs.

## References

CSO (2006): Census Results 2006. [on-line] Accessed 16th August 2011. [www.cso.ie](http://www.cso.ie)

SEAI, (2008): • Energy in the Residential Sector, 2008 Report. Energy Policy Statistical Support Unit, Sustainable Energy Authority of Ireland. Dublin, Ireland.

## Appendix 1 – Energy Survey Form

Reference No: .....

DROMBANE/UPPERCHURCH ENERGY SURVEY

1. In what year was this house built?

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*If you are not aware of the specific year, please choose from one of the choices below*

Before 1920	
1921 - 1940	
1941 - 1960	
1961 - 1970	
1971 - 1980	
1981 - 1990	
1991 - 2000	
2001 - 2006	
2006 or Later	

2. How many people are living in this house?

*Please indicate the number in each box*

Pensioners	
Adults (Over 18)	
Children	

3. Are you the owner of this dwelling or are you renting the property?

*Please tick one of the boxes*

Own	
Rent	

4. What type of dwelling do you live in?

*Please tick one of the boxes below*

Detached Two Story	
Detached Single Story	
Semi-Detached Two Story	
Semi-Detached Single Story	
Mid Terrace	
Flat/Apartment	
Dormer Bungalow	
Other	

*If Other, Please specify below*

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5. What is the approximate floor area of the dwelling? **(In Square Feet)**

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6. People on Fuel Allowance may be entitled to a higher level of grant aid, are you in receipt of Fuel Allowance

*Please tick one of the boxes*

Yes	
No	

7. Are any of the occupants of this dwelling disabled or suffering from a specific chronic illness?

*Please tick one of the boxes*

Yes	
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No	
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8. What type of heating systems do you have?

Please enter the number in the boxes below in order of preference. 1 = Most Used, 5 = Least Used (E.g. Oil Boiler = 1, Storage Heaters = 5)

System Usage	
Oil Boiler	
Open Fire	
Solid Fuel Range/Stove	
Oil Range/Stove	
Storage Heaters	
GeoThermal	
Solar Panels	
Other	

If Other, Please specify in the space below

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9. Please indicate below the types of fuels you use in your house?

Please enter the number in the boxes below in order of preference. 1 = Most Used, 5 = Least Used (E.g. Oil = 1, Turf = 5)

Types of Fuel	
Bottled Gas	
Oil	
Coal	
Wood	
Briquettes	
Turf	
Electricity	
GeoThermal	
Solar Panels	
Other	

If Other, Please specify in the space below

--

10. Approximately how much would you spend on energy each month?

Average Monthly Fuel Bill	
ESB (Bi-Monthly Bill)	€
Main Heating Fuel	€
Other Heating Fuel	€

11. Insulation is a cost effective way of reducing your energy bills. Select which insulation you have and rate the level installed?

Please tick one or more of the boxes below, including the year installed and the type and/or amount of insulation

Type	<input checked="" type="checkbox"/>	Year In- stalled	Type and amount of Insulation
Attic Insulation	<input type="checkbox"/>		
Wall Insulation (Cavity Wall)	<input type="checkbox"/>		

Double/Triple Glazing for Windows			
Dry Lining			
External Insulation			
None of the above			

12. Have you already availed of an existing energy efficiency scheme?

*Please tick one of the boxes*

Yes	
No	

*If Yes, Please indicate the name of the scheme below*

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13. There are a number of government grants to support increasing energy efficiency in homes. Would you be interested in availing of these grants?

*Please tick one of the boxes below*

Yes	
No	
I'd like further information	
Have already availed of grants	

14. What do you consider to be the most important reason for investing in energy efficiency in your home?

*Please tick the boxes below in terms of preference. 1 = Highest, 5 = Lowest*

Positive impacts for the Environment	
Financial Savings	
Benefits for the Local Community	
More Comfort in the home	
Local Job Creation	
Other	

*If Other, Please indicate your reason below*


15. One of the reasons for this survey is to encourage more money to be spent in the local economy. Would you be willing to use locally sourced fuel if it was available to you? (E.g. Local Forestry)

Yes	
No	

**Thank You for your time and cooperation in this survey. We will use the information gathered here to assess whether the houses surveyed are eligible for energy efficiency grants. Your personal information will not be used for any other purposes.**

<b>Any Other Comments:</b>