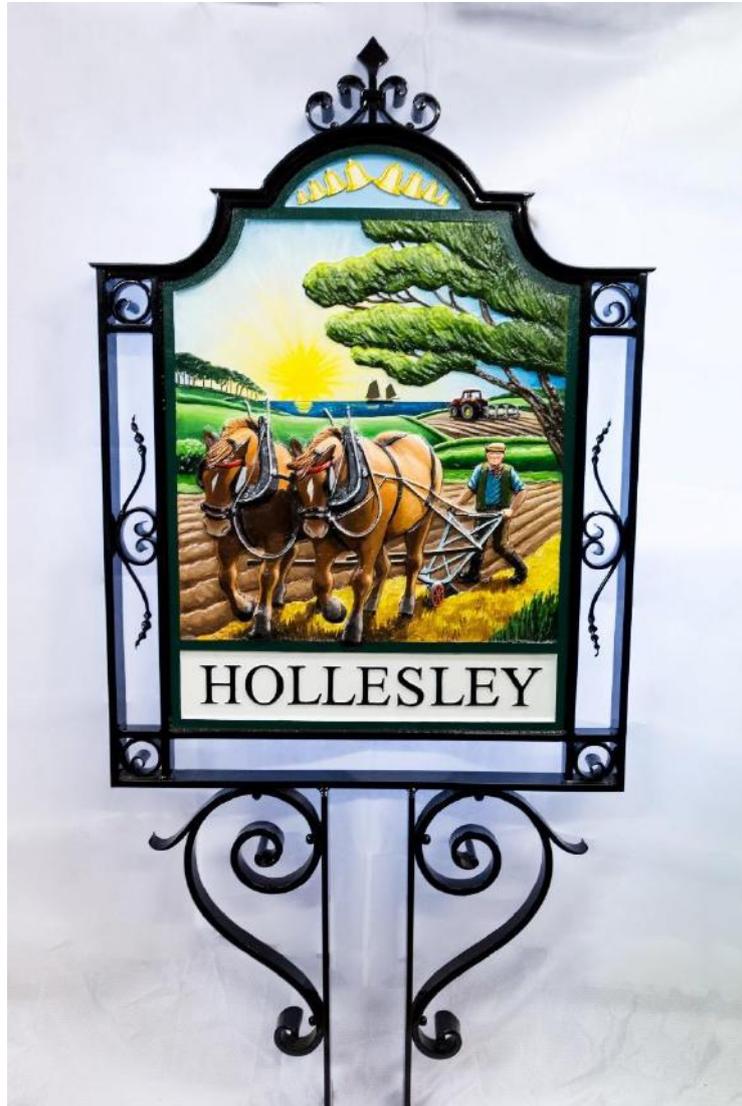


Net Zero Hollesley: An Action Plan



18 June 2021

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on behalf of Suffolk Climate Change Partnership

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Executive Summary

To help communities in Suffolk become cleaner, greener and healthier places to live, work, and study, the Suffolk Climate Change Partnership is looking at ways in which it can support this. Following a survey undertaken in June 2020, Hollesley was identified as the ideal place to pilot such a service. This Action Plan is the outcome of this pilot and will help Hollesley to work towards becoming a community that is healthier and more resilient.

Hollesley's carbon footprint has been estimated to be **9,372 tonnes of carbon dioxide equivalent (tCO₂e)**.

This report considers emissions from domestic properties and non-domestic organisations considered community assets including Hollesley Village Hall, Hollesley Primary School, McColl's, Glebe House Care Home, All Saints Church, and Shepherd and Dog Inn. Emissions from HMP Hollesley Bay, HMP Warren Hill are also considered although at a lesser extent.

The actions identified in this report cover the whole community. It is recognised that Hollesley Parish Council will not be able to achieve net zero emissions on its own, and that it will require the efforts of individuals, organisations, and community-wide initiatives to effect change. A summary of actions identified is in Table 1.

Table 1 – Summary of actions recommended for further investigation and associated emissions reductions.

	Section	Action	Annual Carbon Saving (tCO ₂ e)	Annual Carbon Saving (as percentage of 2020 carbon footprint)
Domestic	3.1	Behaviour Change	293	3%
		Improve Building Fabric	476	5%
		Install Solar Panels and Heat Pumps	1,106	12%
		Switch to a Green Electricity Tariff	868	9%
	3.2	Swap Local Car Journeys with Active Travel	31	<1%
		Air Travel	141	2%
	3.3	Reduce Waste	11	<1%
Non-domestic	4	Hollesley Village Hall	4.8	<1%
		Hollesley Primary School	19.9	<1%
		Glebe House Care Home, All Saints Church, Shepherd and Dog Inn, McColl's	51	1%
		Switch to a Green Electricity Tariff	19	<1%
		HMPPS Improvements	902	10%
Community	5.1	Community Action Group	937	10%
	5.2	Community Energy	562	6%
	5.3	Local Car Share	625	7%
		Community e-Bikes	31	<1%
		Community Car Club	11	<1%

Hollesley Parish Council	6	Support community initiatives	937	10%
Offsetting	7	Carbon Offsetting	2,343	25%

1.0 Introduction

1.1 What is this document?

This Action Plan identifies the ways in which Hollesley Parish can achieve net zero carbon. In its creation, individuals and organisations from across the community were able to feed in their perspectives.

It is a roadmap detailing the key actions Hollesley will likely need to take in order to reach net zero status. While Hollesley Parish Council have not set a timeframe to achieve this, East Suffolk Council and Suffolk County Council share the ambition to achieve net zero by 2030¹.

The Action Plan is based on what we know today, however, it is likely that other actions will emerge over time and the community is encouraged to come up with its own ideas.

It is recognised that no individual or organisation will be able to deliver this net zero commitment alone, it will require collective action from everyone living and working in Hollesley.

1.2 Suffolk's Climate Emergency

In 2019, Suffolk County Council and East Suffolk Council both declared a climate emergency. This declaration confirms their commitment to the aim that Suffolk will be carbon neutral by 2030.

Why was a climate emergency declared?

Human activity has already caused irreversible climate change and the impacts of this are being felt globally, nationally, and locally.

Since pre-industrial times, human activities have already cause approximately 1°C of warming. Current predictions suggest we are on track to reach 1.5°C between 2030 and 2052.

Under the Paris Climate Agreement, the UK is committed to restricting the increase in global temperature to well below 2°C and, preferably, below 1.5°C. We are currently off track to meet these limits.

1.3 Hollesley's Net Zero Vision

Delivering Net Zero will bring about many benefits for Hollesley's residents and organisations, including:

- Health and wellbeing are improved as a result of increased activity from people walking or cycling more, as well as through reduced fuel poverty from more energy efficient homes.
- Action on climate change can improve equity and social cohesion through focusing on the most vulnerable in society, such as action to alleviate fuel poverty.

¹ <https://www.eastsuffolk.gov.uk/environment/climate-change/our-climate-commitment/>

- Action to reduce carbon emissions can also increase the resilience of communities to future changes in energy prices and energy systems, as well as potentially increasing resilience of communities and infrastructure to the impacts of climate change.

The vision is to see Hollesley contribute net zero emissions to climate change. This means balancing the community-wide emissions with carbon reduction and removal activities.

In achieving this, the carbon management hierarchy of emission management, Figure 1, will be implemented. The hierarchy prioritises the actions which will have the greatest impact:

1. Avoid activities that are carbon intensive;
2. Reduce carbon intensive activities by more efficient resource use, and reducing demand;
3. Switch to low carbon energy sources;
4. Offset emissions that cannot be avoided or reduced.

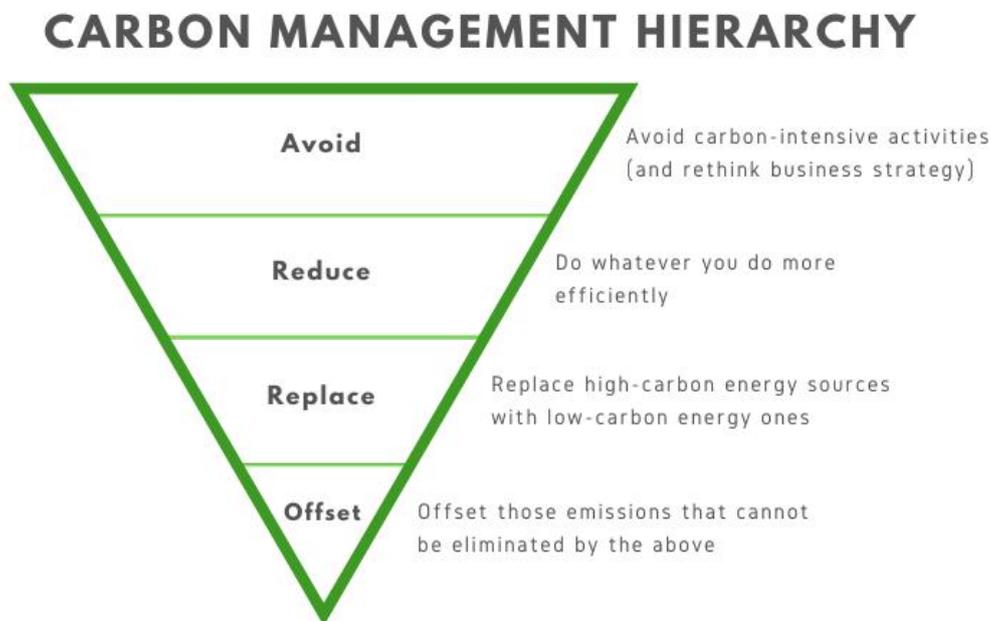


Figure 1 – Carbon management hierarchy of emission management.

The primary focus is on carbon dioxide, CO₂, emissions, but there are other greenhouse gases (GHGs) that are also contributing to climate change. In order to capture the impact of all GHGs, carbon dioxide equivalent (CO₂e) is used. This is a universal unit of measurement. In all cases, the UK Government’s GHG conversion factors has been used to determine the applicable CO₂e figure. These conversion factors are reviewed and updated annually.

Some of the actions identified will not achieve large reductions but it is important to remember that they are still necessary in order to facilitate the wider societal changes that are required by every individual and organisation.

2.0 Developing the Plan

2.1 An Action Plan Produced with the Community

In preparing this Action Plan, engagement and collaboration with residents, and organisations was sought.

Residents Surveys:

In December 2020, surveys were delivered to every household in Hollesley. The survey was split into two parts. The first part asked residents to provide their annual energy and water consumption, estimates for how much waste they produce, and their travel habits.

The second part of the survey asked residents what energy efficiency measures they currently have installed at home, what they would like, and what the barriers to installation are.

Business Surveys:

In November and December 2020, businesses were also asked to provide their energy and water consumption, along with travel habits.

A small number of organisations in Hollesley were keen to engage further, and more detailed discussions took place with them to find out what they are currently doing to reduce their emissions, and what their future plans are. These discussions were held with both prisons and a small business, Hyrst.

Community asset audits:

Two community assets (Hollesley Village Hall and Primary School) were provided with in-depth energy audits, to determine what actions they could take that were specific to them.

Energy audits were also offered to the Shepherd and Dog Inn, Glebe House Care Home, All Saints Church, and McColl's but a lack of engagement and data from these organisations meant audits could not be undertaken. Instead energy benchmark data was used to estimate each organisations' carbon footprint and make general recommendations based on their sector.

2.2 Hollesley's Carbon Footprint

In order to deliver targeted climate change mitigation actions at the scale and speed required, it is necessary to first understand the nature and sources of emissions in Hollesley.

The results of the resident's survey were used to calculate the average householder carbon footprint and extrapolate this to the whole community (569 households). In calculating Hollesley's carbon footprint, official UK government conversion factors for 2020² were used.

An emissions factor is a representative value that attempts to relate the quantity of an emission factor pollutant emitted with an activity level associated with the emission of that pollutant. The emission factor gives a conversion factor to a standardised unit – kg CO₂(e) per unit of activity.

² <https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2020>

Hollesley’s carbon footprint is calculated using direct energy consumption e.g. energy, waste, water, and transport. Emissions arising from the goods we purchase e.g. food, and clothes, have been excluded due to lack of reliable data.

	Emission Source	Consumption		Annual Emissions (tCO ₂ e/year)			Total Emissions (tCO ₂ e/year)
				Scope 1	Scope 2	Scope 3	
Domestic	Burning oil (heating)_litres	474,584	Litres	1,206		251	1,456
	LPG	97,819	Litres	152		19	171
	Wood	37	Tonnes	0.2		509	512
	Electricity	2,758,026	kWh		643	152	795
	Water	48,754	m ³			51	51
	Waste	999	Tonnes	-	-	21	21
	Private transport	6,926,475	Miles	1,911	-	492	2,403
	Air Travel	3,152,260	Miles			706	706
	Public transport	226,568	Miles			27	27
	Domestic Total				3,269	643	2,228
Non-Domestic Total*				1,845	700	67	3,230
Hollesley Total				5,114	1,343	2,295	9,372

For 2020, Hollesley’s total carbon footprint is estimated to be **9,372 tCO₂e**, Table 2, Figure 2.

Table 2 – Hollesley’s carbon footprint for 2020 (January to December).

*Non-domestic includes Hollesley Village Hall, HMP Hollesley Bay, HMP Warren Hill, Hollesley Primary School, McColl’s, Glebe House Care Home, All Saints Church, and Shepherd and Dog Inn.

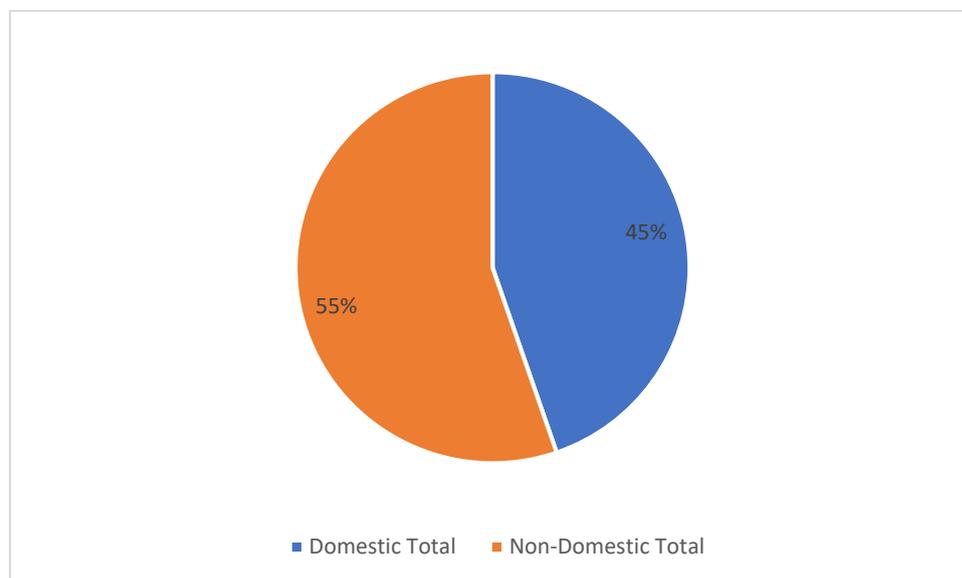


Figure 2 – Proportion of Hollesley’s carbon footprint attributable to domestic and non-domestic sources.

It is important to also note the impact of CV-19 on these results. The survey was carried out at the end of a difficult year, with travel restrictions and ‘stay at home’ orders in place for most of the year. As a result, estimated emissions may not be a true reflection of travel habits and emissions arising from transport could well be higher than estimated. Some survey respondents

used their travel habits from a 'normal' year and so averages were taken from those responses and extrapolated.

In addition, it is worth noting the considerable impact that both Her Majesty's Prison and Probation Service (HMPPS) facilities have on Hollesley's carbon footprint. It is estimated that both prisons are responsible for over 90% of the non-domestic total.

2.3 Funding the Transition to Net Zero

This action plan is aspirational and wide-ranging, but it is recognised that the actions Hollesley Parish Council will be able to undertake will be determined by funding available, Government support, and how innovative and creative Hollesley are in responding to the challenge. Where suitable funds are available, at the time of writing this report, these have been included alongside the relevant action.

3.0 Domestic Priority Actions

Results from the residents’ survey carried out in December 2020 have been used to calculate the emissions arising from the domestic sector in Hollesley, Table 3. Hollesley is off the gas grid and so heating is predominately provided by oil boilers and electric heaters. Energy use in the home (oil, LPG, wood, electricity) accounts for 48% of the total domestic footprint, followed by private transport at 39%, air travel at 12%, water consumption at 1%, and emissions arising from waste disposal and public transport use each account for <1%, Figure 3.

Table 3 – Breakdown of Hollesley’s emissions arising from the domestic sector.

Emission Source	Consumption		Annual Emissions (tCO ₂ e/year)			Total Emissions (tCO ₂ e/year)
			Scope 1	Scope 2	Scope 3	
Burning oil (heating)_litres	474,584	Litres	1,206		251	1,456
LPG	97,819	Litres	152		19	171
Wood	37	Tonnes	0.2		509	512
Electricity	2,758,026	kWh		643	152	795
Water	48,754	m ³			51	51
Waste	999	Tonnes			21	21
Private transport	6,926,475	Miles	1,911		493	2,403
Air Travel	3,152,260	Miles			706	706
Public transport	226,568	Miles			27	27
Domestic Total			3,269	643	2,228	6,142

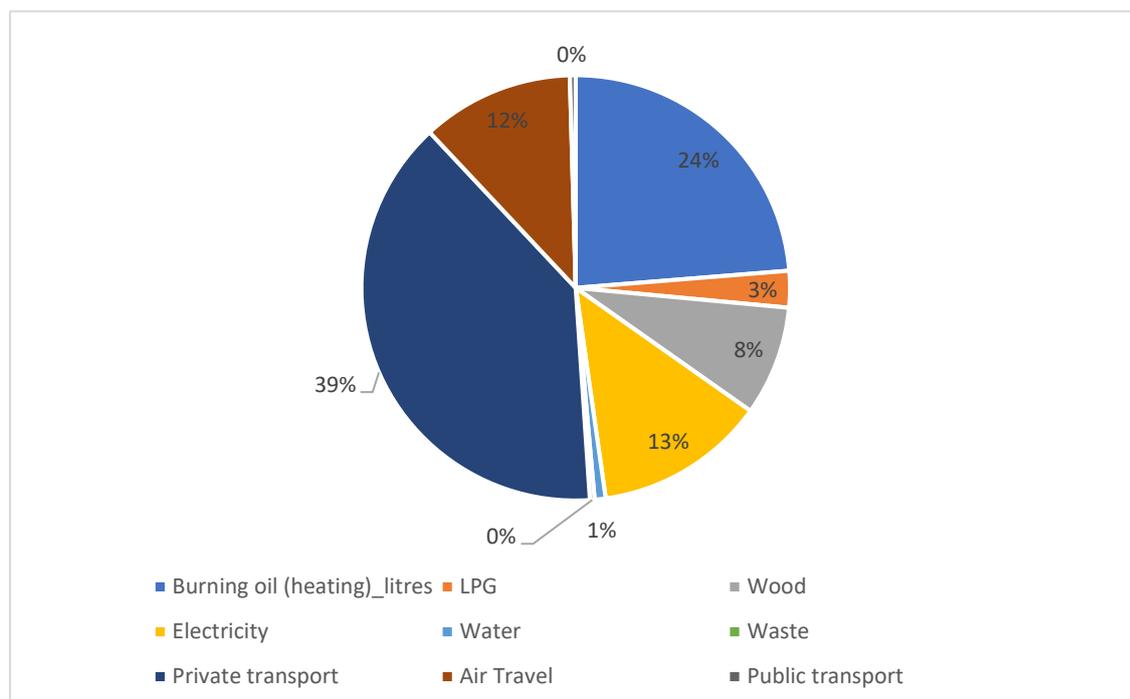


Figure 3 – Breakdown of Hollesley’s domestic carbon footprint according to emission source.

3.1 Energy

Action 1: Behaviour Change

The cheapest and simplest way to reduce carbon emissions at home is to simply reduce the amount of energy needed by changing the way residents use and live in their homes. The following actions are things that everyone can do to reduce their personal carbon footprints and they don't cost a penny, all they require is a change in our habits. It is estimated that these simple changes can save 10% (293tCO₂e) per year.

Turn appliances off

Turning appliances off at the plug will save an average of **£30 per year per household**.

Use plug sockets that can be turned on and off via your phone to make sure unused appliances are switched off.

You can also buy timer plugs which can be schedule when an appliance turns off.



Wash clothes at 30°C

When washing clothes, try to wash at 30°C wherever possible. It is estimated that this uses 40% less electricity than higher temperatures which could save the average household around **£13 per year**.

You could save even more money when you air dry your clothes rather than use a tumble dryer.



Energy efficient appliances

When a household appliance breaks, always try to repair it before you replace it. This will keep the item in use for longer and save on emissions arising from disposal.

Where your appliance can't be repaired, you should replace it with an energy efficient version. Appliances come with an energy rating and opting to buy an A+++ washing machine, dishwasher and fridge freezer could save around **£34 per year**.



Action 2: Improved Energy Efficiency

Alongside behaviour change, energy efficiency measures are required to further reduce the energy demand of a property. A property that is well insulated will require less energy to heat and maintain a comfortable living temperature. The key elements where heat is lost are external walls (35%), roof (25%), floor (15%), draughts (15%), and windows (10%), as shown below in Figure 4.

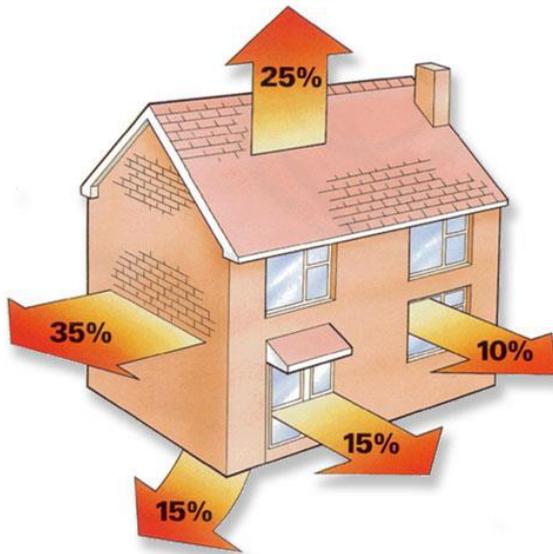


Figure 4 - Typical heat loss in the average house.

An overview of how to insulate the key elements of a property in order to minimise heat loss are given below. Cost and energy savings estimates are based on the average detached house with no insulation³. It is estimated that 37% of properties in Suffolk are uninsulated, if this figure is extrapolated across Hollesley, the community's carbon footprint could reduce by a further 428tCO₂e.

Floor

Properties built before 1960 are unlikely to have insulated floors but is the most disruptive and costly part of a house to insulate. It requires renewal of the entire floor, or adding insulation on top of floorboards but this will require additional adjustments to doors and skirting boards etc.



³ <https://energysavingtrust.org.uk/energy-at-home/reducing-home-heat-loss/#:~:text=Roof%20and%20loft%20insulation,to%20lower%20your%20heating%20bills.>

Roof

If your property has a pitched roof, adding loft insulation is one of the simplest and most economical solutions to improve thermal efficiency. Insulating flat roofed properties or those with rooms in the roof are more complicated and costlier, unless undertaken during a wider property refurbishment.

If you already have loft insulation, check the depth of it. Current building regulations state a property should have a minimum of 270mm insulation. The average home can save up to **£140 per year**.



External walls

If your property is detached or semi-detached, your external walls can be insulated. The least disruptive and most cost-effective solution is to fill the cavity with insulation.

However, not all properties are suited to cavity wall insulation, in which case, external insulation cladding or internal insulation are the only alternatives. These methods are more complex and costlier, and may change the external appearance of your property.



Insulate pipes, tanks and radiators

Insulating your water tank, pipes and radiators is a quick and easy way to save money on your bills.

Lagging water tanks and pipes and insulating behind radiators reduces the amount of heat lost, so you spend less money heating water up, and hot water stays hotter for longer.

Insulating jackets and pipe lagging can be fitted on a DIY basis and is a cheap and effective way of increasing energy efficiency. The average property can save **£85 per year**.



Doors, windows and draughts

Ill fitting doors and windows can have draught stripping applied which is relatively low cost and can be fitted on a DIY basis.

Single glazed windows should also be replaced with double glazed windows, and where the window is northerly facing, triple glazing works particularly well. Double glazing is the minimum standard prescribed by building regulations. If the property is listed, secondary glazing can be installed which adds a fully independent internal window and forms double glazing with the existing window pane. Older sash windows can also be retro fitted with draught exclusion.



Action 3: Renewable Technologies, including Low Carbon Heat

Across Suffolk, 5-8% of domestic properties have solar panels, with the average capacity just under 4kW. It is anticipated that there is the potential for three times as many properties to have solar installed. In Hollesley, this represents a further 120 homes installing solar panels, which would save **48tCO₂e**.

Decarbonising the supply of heat to domestic properties though is essential if Hollesley, and indeed Suffolk, is to achieve carbon neutrality. Homes in Hollesley are off-gas grid meaning a vast number of properties use oil or LPG for heat. This represents a great potential for homes to decarbonise.

Using the results from the community survey in Hollesley, it is estimated that 57% of properties have an oil-fired boiler, and 20% use LPG for heating. It is assumed that where heat pumps replace LPG and oil systems, a 65% saving of CO₂ can be achieved, taking into account an increase in electricity consumption. Assuming all 77% of fossil fuel heated properties in Hollesley switch to heat pumps, there will be savings of **1,058tCO₂e**.

The heat pump market is still relatively new and there remains a number of barriers associated with their installation including:

- High upfront costs
- Consumer confidence and awareness
- Unsuitability of current housing stock

The householder survey results highlighted a few properties that already have heat pumps installed. To encourage uptake, and remove barriers, Hollesley Parish Council could ask early adopters of heat pump systems to open their homes for prospective buyers to see the system in action.

Action 4: Encourage Uptake of Green Electricity Tariffs

Once householders have reduced their energy demand, and installed renewable and low carbon heat technologies, encouraging residents to switch to a green electricity tariff will further reduce Hollesley's net emissions. It has been assumed that electricity consumption will increase by 35% to account for the running of heat pumps, and that all households make the switch. This is obviously offset by the reduction in oil and LPG consumption.

As a result, overall net emissions in Hollesley would reduce by **868tCO₂e**.

Table 4 – Estimated carbon savings associated with residents switching to a green electricity tariff.

Emission Source	Consumption		Annual Emissions (tCO ₂ e/year)			Total Gross Emissions (tCO ₂ e/year)	Purchased green tariff	Total Net Emissions (tCO ₂ e/year)
			Scope 1	Scope 2	Scope 3			
Electricity	3,723,336	kWh	n/a	868	205	1,073	(868)	205

Table 5 – Summary of actions for individual households and estimated carbon savings.

	Carbon emissions saved (tCO ₂ e/year)	Percentage of total carbon footprint
Action 1: Behaviour Change	293	3%
Action 2: Improve building fabric	476	5%
Action 3: Install solar panels and heat pumps	1,106	12%
Action 4: Green Electricity Tariff	868	9%

3.2 Transport

Due to Hollesley's rural nature, emissions arising from private transport makes up a considerable proportion (39%) of Hollesley's carbon footprint, figure 3.

Action 1: Swap local car journeys for active travel

Perhaps the simplest way to reduce emissions, is to reduce the number of journeys we make. This is particularly true for services within Hollesley. Hollesley is fortunate in that there is a local shop, a church, a doctor's surgery, village hall, all within a 30 minute walk of the vast majority of homes, Figure 5.

There are of course, other services and amenities, like larger supermarkets and railway stations, that are further away, and it is recognised that active forms of travel will not be suitable for every single journey, but wherever possible, local journeys should be walked or cycled.

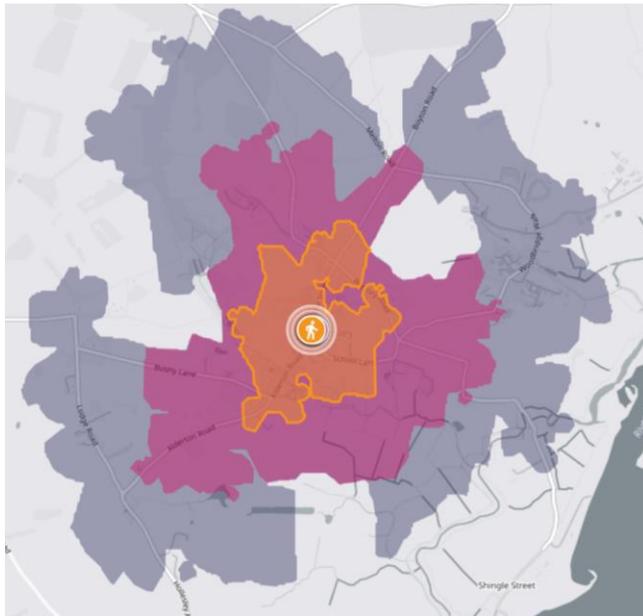


Figure 5 - Walking distance isochrone map⁴. The area in orange represents areas within a 5 minute walk of the centre of Hollesley. The area in pink is within a 15 minute walk, and grey is within a 30 minute walk.

The average percentage of journeys of less than one mile taken by car is 15%, Figure 6. choosing to replace a one-mile car journey with walking or cycling, once a week, will see fuel savings of £16 and 27kg in CO₂e annually⁵. If 2 adults from every household did this, an annual saving of **31tCO₂e** would be achieved. These savings could be enhanced if the community purchased electric bikes for hire, see section 5.3.

⁴ <https://travelttime.com/>

⁵ <https://energysavingtrust.org.uk/advice/active-travel/>

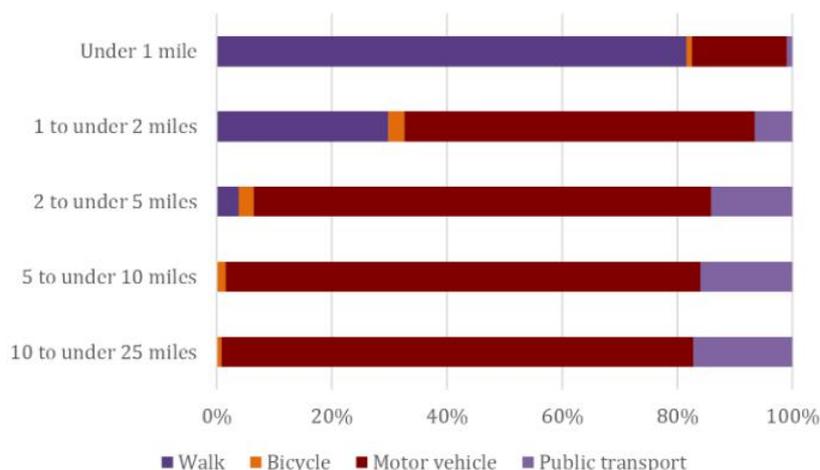


Figure 6 – Percentage of journeys by trip length and main mode, England 2017⁶.

Action 2: Air Travel

Approximately 12% of Hollesley’s carbon footprint is attributable to air travel. Reducing the amount we fly can seem daunting, especially when we have to travel regularly for business, to see family, or if we enjoy holidays abroad. But there are ways each of us can lessen the impact of our travel, and when we do fly, keep the emissions to a minimum. For example, have you considered if you can make the journey by train or coach? Even driving is less carbon intensive than flying, particularly if the journey is shared with other people.

Ground transport can also often be cheaper and faster than air travel for shorter distances once you consider the time taken getting to the airport, checking in, queuing at security and waiting for baggage. Sites like [The Man in Seat Sixty-One](#) can help with planning long-distance routes by bus, train and ferry by the cheapest route.

Of course, there are instances where flying is necessary, so to minimise emissions when you need to fly:

1. Choose to fly with an airline that uses the newest aircraft possible for your route. These typically tend to be more efficient than older models and so produce less emissions. German non-profit [Atmosfair](#) has an index which allows people to check which airlines produce the least CO₂ emissions for certain routes.
2. Book an economy ticket rather than business or first class. A first class ticket on a long-haul flight emits, on average, four times as much as an economy seat on the same plane. This is because more expensive seats take up more space and weight on the plane. First and business class also tend to end up with more empty seats.
3. Reducing the amount you take away with you will also have some impact on emissions. The more you pack, the heavier your bags will be, and this adds to the amount of fuel being burned.
4. Avoid flying on either very small or very large planes. Very small regional planes or very large aircrafts with four engines are less fuel efficient than your typical single aisle or small twin-aisle aircraft.

⁶ <https://publications.parliament.uk/pa/cm201719/cmselect/cmtrans/1487/148705.htm>

- Choose direct flights without layovers. This is because when a plane takes-off and lands, it consumes more fuel than when cruising.

It is estimated that these tips will generally reduce CO₂e emissions from flights by around 20% to 45%, depending on the route. Applying a 20% saving in Hollesley would result in a reduction of **141.3tCO₂e**.

Individuals could also consider compensating the emissions from your flight by buying a carbon offset. However, it is hard to ever be sure an offset will permanently “absorb” the emissions a flight gives out. Trees, for example, need years to grow enough to reabsorb the carbon from the flight, and it is hard to guarantee they will be left standing long enough to counteract the emissions from the flight. It is also often tricky to ensure offsets such as renewable energy projects are “additional” – that they support projects that would not otherwise have happened. Offsetting is discussed in more detail in section 7.

Table 6 – Estimated carbon savings associated with no-cost travel changes.

	Carbon emissions saved (tCO ₂ e/year)	Percentage of total carbon footprint
Action 1: Encourage Active Travel	31	0.3%
Action 2: Minimise air travel emissions	141	2%

3.3 Reduce Waste

From the survey, it has been estimated that the average household in Hollesley produces nearly 2 tonnes of waste per year which is approximately double the average in England⁷. Although the quantities of each waste type are unknown e.g. food, electrical, plastic, there are some simple ways in which we can reduce the amount of waste we produce:

- Choose good quality products which will last a long time when you can. Clothing made from cotton tends to be better quality and is easier to recycle.
- If possible, repair old or broken items. Borrow items from friends and neighbours or consider buying second hand, rather than buying new, particularly if it’s an item you won’t get much use out of like small kitchen appliances, or gardening equipment.
- Use your local library. Hollesley has a mobile library that visits every Tuesday and you can borrow books, DVDs, games, and more. It’s free to use the service, you just need to join either online or by visiting with ID.
- Replace disposable, single-use items such as coffee cups, baby wipes, razors, cling film and nappies with reusable and waste-free alternatives.
- Take unwanted, good quality furniture, clothes and electrical items to charity shops. There is a clothes recycling bank at Hollesley Primary School for residents to use.
- Check the recycling information printed on many products and recycle as much as you can.

If household waste was reduced to 1 tonne per year, Hollesley would achieve a saving of **11tCO₂e**. These are the savings directly associated with waste disposal. Waste prevention and

⁷ https://lginform.local.gov.uk/reports/lgastandard?mod-metric=45&mod-area=E92000001&mod-group=AllRegions_England&mod-type=namedComparisonGroup

recycling also achieves indirect carbon savings by decreasing the need to extract "virgin" resources from forests, oil reserves and mines, to make products and packaging.

Table 7 – Estimated carbon savings associated with reducing waste.

	Carbon emissions saved (tCO ₂ e/year)	Percentage of total carbon footprint
Reduce Waste	11	0.1%

4.0 Non-Domestic Actions

Within the scope of this project, it was agreed to undertake in-depth energy audits for four community assets. A community asset is defined as a building which is used for the well-being or social interest of the local community. Hollesley Parish Council determined the four community assets to receive an audit were:

- Hollesley Village Hall
- Hollesley Primary School
- McColl's
- The Shepherd and Dog Inn

Due to CV-19 restrictions in place, physical audits were unable to take place, however, remote audits of the Village Hall and Primary School were carried out.

The store manager at McColl's did express some interest however, as discussions progressed, it became increasingly clear that the data required could not be provided as it was held at head office level. Furthermore, the store manager has very little influence over building improvements at store level, any upgrades and refurbishment projects are determined by head office.

The lack of engagement from many community assets is disappointing as these organisations do have a role to play in encouraging wider community engagement while also offering opportunities for collaboration to deliver projects.

Other non-domestic buildings included within the scope of this report are Glebe House Care Home and All Saints Church. Both buildings were offered an audit but no interest was received.

As a result, all non-audited buildings have had their carbon footprints estimated using accepted energy benchmark data. Energy benchmarks are expressed in terms of delivered energy used per unit of floor area (kWh/m²), for both electrical and fossil fuel energy use, which is taken to be natural gas. Hollesley is not on the gas grid and so actual emissions will vary from these estimates but they are a useful starting point. Useful floor area for each building has been estimated from Google Earth aerial images. Estimated carbon footprints are given in Table 8.

Table 8 – Estimated carbon footprints for Hollesley's community assets.

	Data Source	Annual Emissions (tCO ₂ e/year)			Total Emissions (tCO ₂ e/year)
		Scope 1	Scope 2	Scope 3	
Hollesley Village Hall	Actual		6.0	1.5	7.4
Primary School	Actual	33.4	6.9	6.3	46.5
Shepherd and Dog Inn	Benchmark	18.2	8.6	4.4	31.2
McColl's	Benchmark	-	17.8	4.2	22.0
Glebe House Care Home	Benchmark	76.4	18.3	14.3	109.0
All Saints Church	CoE Audit		6.0	1.4	7.4
Total		127.9	63.5	32.0	223.4

Following the audits of Hollesley Village Hall and Hollesley Primary School, each were provided with a report detailing the recommendations made. A summary of these recommendations and the anticipated carbon savings are given in Tables 9 and 10.

Table 9 - Summary of recommended measures for Hollesley Primary School.

No.	Recommended Measure	Energy Saving	Cost Saving	CO ₂ e Saving
		(kWh /year)	(£ /year)	(tCO ₂ e /year)
1	Improve energy monitoring	9,125	£419	2.3
2a	Upgrade building fabric – wall insulation	4,944	£148	1.2
2b	Upgrade building fabric – roof insulation	11,642	£349	2.8
3	Upgrade heating system	52,084	£456	11.8
4	Install solar thermal	7,416	£222	1.8
Totals		85,212	£1,595	19.9

Table 10 - Summary of recommended measures for Hollesley Village Hall.

No.	Recommended Measure	Energy Saving	Cost Saving	CO ₂ e Saving
		(kWh /year)	(£ /year)	(tCO ₂ e /year)
1a	Insulate the roof	3,003	£405	0.9
1b	Insulate the walls	1,214	£164	0.3
2	Install solar PV	3,085	£416	0.9
3	Upgrade lighting	552	£74	0.2
4	Consider Air Source Heat Pumps after insulation	7,646	£1,030	2.4
Totals		15,500	£2,089	4.8

It is estimated that those buildings not audited have the potential to achieve a 30% reduction on their emissions by considering measures in line with recommendations for the Primary School and Village Hall e.g. improve building fabric, ensure lighting is LED, and low carbon and renewable heating solutions. This would achieve carbon savings of approximately **51tCO₂e**. Further savings of approximately **19tCO₂e** would be achieved if these buildings also switched to a green electricity tariff as detailed in section 3.4.

Conversations were held with both HMPPS in Hollesley (Warren Hill and Hollesley Bay) which were positive and both are actively looking at ways to reduce their carbon footprints. As the prisons form part of the Ministry of Justice estate, the prisons themselves have little control over more significant carbon reduction measures, but have considered solar and recently submitted a bid to create a low carbon heat network. The Prisons receive monthly energy reports and so are able to directly measure their consumption and progress towards targets.

It has also been estimated that both HMPPS have the opportunity to reduce emissions by 30% which would achieve additional savings of **902tCO₂e**.

Table 11 – Estimated carbon savings associated with improvements to non-domestic organisations.

	Carbon emissions saved (tCO ₂ e/year)	Percentage of total carbon footprint
Hollesley Primary School Improvements	20	0.1%
Hollesley Village Hall Improvements	5	0.2%
Improvements to other community assets	51	0.5%
All community assets to switch to a green tariff	19	0.2%
Improvements to HMPPS	902	10%

4.1 The Agricultural Sector

The rural nature of Hollesley, and indeed much of Suffolk, means agriculture is an important industry to consider. A number of businesses exist outside Hollesley’s main village boundary that operate within the agricultural sector were difficult to engage with and although reducing emissions from the sector is challenging, it is not impossible. Improved crop and grazing land management e.g. improved agronomic practices, nutrient use, tillage, and residue management are just some of the opportunities available to mitigate emissions.

Changing land use from agriculture to grassland and/or woodland is also an opportunity that can help sequester emissions and is the primary method for achieving net zero emissions. This is an option for Hollesley to consider and is discussed further in section 7.2.

5.0 Community Actions

5.1 Community Action Group

Community action groups develop community-led projects that reduce greenhouse gas emissions, where joint efforts are more effective than the actions of individuals or the Hollesley Parish Council alone. They support and foster community-led action by encouraging positive networks of people from all parts of the Parish, and all walks of life, whose combined resources, skills and expertise can successfully develop and implement projects which reduce greenhouse gas emissions. Having an active climate group in Hollesley may also help address the lack of engagement with community assets.

Hollesley does not currently have an active group working to address climate or environmental issues and while the success of any group is down to its members, it is recommended that Hollesley Parish Council consider encouraging the development of one. A group can be formed even with just a few people interested in making a difference. The actions featured in this section are ambitious for community groups just starting out but there are many other opportunities for action which are discussed in the next section.

Cookpole Energy Action

Cookpole Energy Action was established in July 2009, following a talk to local residents about what they could all do to save energy, energy costs and carbon emissions. A group of residents felt they should be able to do more, as a community, alongside the actions of individuals and households.

From this starting point, the group, comprised of seven members, have taken on a range of 'green' projects in the parishes of Cookley and Walpole, in North East Suffolk. Projects include:

- Walpole Winter Craft Barn – Our annual fundraising fair
- Community electric bike scheme
- Allotments and community orchard
- Community willow project
- Installing solar PV on Walpole Pavilion
- Litter picks
- Flower and produce show

It has been estimated that community climate action groups can reduce emissions by 10% through direct carbon saving projects and indirect savings through education and awareness raising. In Hollesley, this would represent a saving of **937tCO₂e**.

5.2 Energy

Community energy refers to the delivery of community led renewable energy, energy demand reduction and energy supply projects, whether wholly owned and/or controlled by communities or through partnership with commercial or public sector partners.

By placing democratic control, shared benefits and active participation at the centre of project delivery, community energy can create a foundation for the significant infrastructural and cultural change needed to reduce the impact of climate change and increase our energy security.

There is a variety of approaches to take with community energy, although typically it is used for solar installations.

One approach is to set up a power purchase agreement. Community groups can use their local knowledge to identify a suitable site for hosting solar, for example community buildings and local businesses. The community group then raises the finance to fund the scheme. Once the solar array has been installed, the host site purchases the generated electricity from the community group at a subsidised rate, through a contract known as a Power Purchase Agreement. The community group then uses this income to pay back their investors, usually at about 5% per year. There is typically a surplus fund produced that can then fund other environmental projects within the local area.

There is funding available through the Rural Community Energy Fund to support rural communities in England to develop renewable energy projects⁸.

If all other actions in this report were carried out, Hollesley would require a 2,188kWp size solar system, approximately 7,679 solar panels which could be achieved with a suitable area the size of around 3 acres. This would achieve savings of **568tCO₂e** per year.

5.3 Transport

Action 1: Set up a local car share

Car-sharing (also called lift-sharing, ride-sharing and car-pooling) is when two or more people share a car and travel together.

Perhaps the simplest way of promoting car sharing is to encourage residents, whether looking for a lift or offering one, to register for free on Liftshare⁹.

All members' details are stored securely in the database and only the members' travel information can be viewed by other members. Drivers offering a lift can ask for reasonable expenses to be covered, or can offer it for free. Drivers shouldn't make a profit from lift-sharing or it could invalidate their insurance or tax.

Car sharing schemes are suitable for journeys which are made to the same destination at the same time, such as:

- Work commutes
- School runs
- Weekly shopping trips

Hollesley Parish Council may wish to consider facilitating the set up a car-sharing group specifically for the community, in which case they can make use of Liftshare for Work¹⁰. In this situation, Hollesley Parish Council would have access to a dedicated portal to keep track of journeys made and emissions saved.

⁸ <https://www.energyhub.org.uk/rural-community-energy-fund/introduction/>

⁹ <https://liftshare.com/uk>

¹⁰ <https://business.liftshare.com/>

Hampshire has set up its own car share platform using Liftshare¹¹ for those living, working and studying in the county, and could be a model easily replicated by Hollesley.

Online car share platform BlaBlaCar estimate that car sharing reduces direct carbon emissions by 26%¹². For Hollesley, this represents a saving of **625tCO₂e** per year.

Action 2: Community Bikes

To enhance the savings associated with promoting active travel for local journeys, community e-bikes could be purchased and hired out to residents. This would allow residents who may not be physically able to use pedal bikes the opportunity to reduce their carbon footprint. Cookpole Energy Action operate a similar scheme in the villages of Cookley and Walpole, East Suffolk and Streatham, London operate an e-cargo bike. Hollesley could combine the two ideas to offer residents an opportunity to use the bike for leisure, but also to help volunteers make deliveries to vulnerable residents. The impact of a scheme similar could reduce emissions by **31tCO₂e**.

Cookpole Energy Action (CEA) Electric Bikes

In 2015 CEA secured grant funding to buy two electric bikes and a metal storage shed. When they are 'at home' the batteries are recharged using solar power. The bikes offer residents a chance to reduce their carbon footprint, and are used for a variety of reasons including:

- To use instead of their cars, for a period, to reduce their carbon footprint
- To try out, with a view to buying one of their own
- As part of a rehabilitation programme, following major accidents or surgery
- To get about while their car is off the road
- For pleasure and gentle exercise



¹¹ <https://www.hants.gov.uk/transport/transportoperators/community-transport-kit/setting-up/liftshare>

¹² <https://drive.google.com/file/d/1exHoqIVa3NROt8B92Rulv-BtXbcZaebp/view>

Streatham E-Cargo Bike

In 2020 Streatham, London secured funding to purchase four electric cargo bikes. Initially, the bikes were designed to help local businesses operate local deliveries but CV-19 lockdowns saw volunteers from the community hire the bike to collect medical prescriptions and food shopping for vulnerable residents shielding.



Action 3: Set up a Community Car Club

A community car club is a local, member-based initiative that provides access to self-service, pay as you drive, low-carbon vehicles. Often community car clubs are run by local groups to support their communities.

A car club is a member-based organisation that provides access to pay-as-you-drive vehicles. These are available for hire for as little as 30 minutes up to several days at a time, 24 hours a day, 7 days a week. Car club vehicles tend to be parked in dedicated and clearly marked parking spaces close to homes and workplaces.

Being a member of a car club is like owning a part-time car but without the expense of owning a vehicle. By putting their motor 'at arms' length', car club members find it easier to make more sustainable transport options for everyday journeys.

Members can join and book the use of the vehicles online, over the phone or using a mobile app. They pick up their booked vehicle via phone app or smartcard, in some car clubs, by using keys stored in a key safe. The club covers all the costs of owning and operating the vehicles, including insurance, tax, fuel, parking permits, cleaning and maintenance. Members usually pay a small annual fee, an hourly/daily rate and a mileage rate and are billed for their use at end of each month.

Car clubs can offer significant savings compared to car ownership, where a driver only requires use of a vehicle occasionally. They are enablers of behaviour change, allowing members the freedom to give up their personal car or, in some cases, replace the second family car. Figure 7 shows the different reasons why members might join and it is estimated that for every car club vehicle, 6.1 private vehicles are displaced¹³. From the resident's survey, the average annual mileage of a private vehicle is 7,423. It is therefore estimated that 1 car club vehicle would displace 45,278 miles travelled in a private vehicle, replacing these miles with an electric vehicle would directly save **10.6tCO₂e**.

¹³ <https://como.org.uk/wp-content/uploads/2019/06/EW-report-v4.0.pdf>

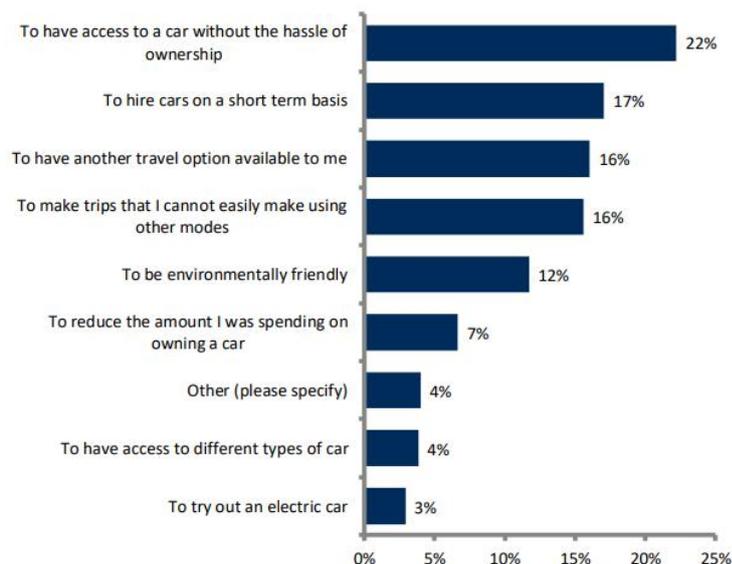


Figure 7 – Reasons for members to join a car club.

More information on setting up a community car club can be found [here](#).

Derwent Valley Car Club

Derwent Valley Car Club, based in Blackhall Mill approximately 13 miles from Newcastle upon Tyne, was set up in June 2013 following a grant worth £47,500 from the National Lottery’s Village SOS Programme.

The grant has enabled the development of the Car Club and the purchase of an electric Nissan Leaf. The car is based at the Blackhall Mill Community Centre, which hosts an electric charge point for the car and a public charge point.

The grant also provided of an array of solar panels, which offsets the electrical charging needed to run the vehicle making the car club emission free.

The Club is currently operated under the Blackhall Mill Community Association and will be developed into a member led Social Enterprise scheme made up of interested local people and will link in with other car clubs in the region.

The Club is open to anyone in the local area and costs as little as £3 to use the car for an hour with no additional mileage fees. As part of the Car Club a Volunteer Driver Scheme has been developed for people who cannot drive themselves.

Table 12 - Estimated carbon savings associated with improvements to non-domestic organisations.

	Carbon emissions saved (tCO ₂ e/year)	Percentage of total carbon footprint
Community Climate Action Group	937	10%
Community Energy Project	562	6%
Local Car-Share	625	7%
Community e-Bikes	31	0.3%
Community Car Club	11	0.1%

6.0 Hollesley Parish Council Actions

Parish Councils do not have the same level of resource as local authorities but there are still actions and policies that Hollesley Parish Council can commit to in order to reduce its own carbon footprint and to support initiatives in the wider community to help mitigate and adapt to the impact of Climate Change in the Parish.

Hollesley Parish Council has already recognised their role with notable projects already completed/underway including:

- Full upgrade of all Parish Council owned street lighting with timers.
- Uncut area of grass in the cemetery, and a 3m wide strip along of uncut grass along the eastern side of the recreation ground.
- Periodical information is distributed to residents to increase recycling and promote other initiatives.
- Actively investigating provisions for a community cardboard/paper recycling facility.
- A community fridge has been set-up outside All Saints church with the help of a resident.

Hollesley Parish Council should consider the following short-term goals:

1. Declare a Climate Emergency. By declaring a Climate Emergency* you acknowledge that your Council needs to act on the causes and impacts of climate change.
2. Form a Climate Action Group with councillors and representatives of the community to focus on addressing the emergency, explore ideas and prioritise actions, feeding back regularly to council meetings.

Hollesley Parish Council has an important role to play if it is to achieve net zero emissions and must consider embedding climate action into its own policies and actively supporting initiatives designed to address climate change.

Some of the actions listed below will be outside the direct remit of Hollesley Parish Council, instead they would likely fall under the remit of a climate action group for which Hollesley Parish Council would have a role in promoting and supporting the activities of.

Martlesham Parish Council

In October 2020, Martlesham Parish Council, East Suffolk declared a climate emergency and have set up 'Martlesham Climate Action' and a Martlesham Parish Council 'Climate Emergency Working Group' to act as a catalyst to help promote, support and extend existing initiatives and drive new ones with a focus on reducing carbon footprints and protecting and enhancing biodiversity.

6.1 Engaging and Enabling the Community

- Combine resources with other parishes and stakeholders for larger cross community events and projects
- Promote initiatives in Village Voices, Hollesley Grapevine and notice boards
- Creating an impartial local guide that provides information on local businesses can be invaluable and help keep money in the local economy. The guide could include

information on local accredited energy assessors and renewable energy installers for solar panels, batteries, EV charging points and heat pumps, eco-friendly retailers, green builders and landscape companies, etc. It can also encourage sustainable transport options like car sharing.

- Encourage as many people as possible to calculate their carbon footprint and use this information to review progress against reducing Hollesley's baseline carbon footprint, as set out in this report.
- Support the actions of the Climate Action group.

6.2 Reducing Consumption and Waste

- Support the work of the Climate Action group in community led initiatives, for example:
 - Increasing household recycling rates.
 - Community composting schemes.
 - Identify possible sites for additional allotments or community orchards and encourage landowners to donate their land for this.
 - Advice sessions -recycling, composting, food growing.
 - Repair/upcycling/reusing projects or advice sessions. If there's anyone in the village who is particularly handy at mending things, consider running a repair café where people can bring along broken items and be shown how to fix them.
 - Community beach cleans and litter picking.
 - Link with Anglian Water and promote water saving.

6.3 Reduce Energy Demand and Produce Clean Energy

- Help identify suitable sites for community led renewable energy projects
- Explore options with potential suppliers for a community rate for renewable power
- Support the work of the Carbon Action Network in community led initiatives. For example:
 - Encouraging households to check the energy efficiency of their homes
 - Promote grants available to improve energy performance of buildings and provide assistance with applications for those that need it. E.g. pop up surgeries
 - Develop a programme to facilitate transition to low carbon heating for homes and businesses (eliminate LPG and oil dependency in the parish)
 - Run DIY demonstration sessions in typically constructed homes to show how they can be made more energy efficient and reduce the cost of fuel bills. For example, draughtproofing windows and doors.
 - Encourage people to switch to a 100% renewable supplier for electricity and gas if appropriate

6.4 Transforming Green Spaces

- Undertake a green space audit to formulate a plan to manage green spaces, verges and pathways to maximise carbon sequestration and promote biodiversity.
- Identify potential sites for tree planting, and bird and insect boxes.
- Monitor, preserve and protect existing natural wildlife habitats, including marine life
- Support the work of the Climate Action Group in community led initiatives. For example:
 - Community tree planting scheme
 - Encouraging households to eliminate the use of weed killers and pesticides
 - Educational workshops to encourage rewilding of gardens, food growing and planting for biodiversity

- Community growing projects
- Keep streams and waterways free flowing and clear of rubbish
- Establish corridors for wildlife and space for nature, for example pocket parks or hedgehog highways
- Engaging with businesses to encourage them to transform their outdoor spaces.

6.5 Changing How We Move Around

- Promote the reduction of car use. Encourage car sharing. Explore the possibility of facilitating a commercial car club.
- Explore the possibility of community cargo bikes or e-bikes.
- Promote cycling and walking (including walk to school initiatives with Hollesley primary School)
- Encourage the use of electric cars by identifying suitable sites for communal charging points for homes without off road parking, and for visitors. Hollesley Parish Council could make use of the Workplace Charging Scheme¹⁴ to subsidise the cost of EV charging points.

By embedding climate change into Council decisions and activities, and also supporting the work of a community climate group, Hollesley Parish Council could contribute a further 10% saving on emissions, approximately **937tCO₂e**.

Table 13 – Estimated carbon savings associated actions and support by Hollesley Parish Council.

	Carbon emissions saved (tCO ₂ e/year)	Percentage of total carbon footprint
Support to community initiatives	937	10%

¹⁴ <https://www.gov.uk/government/publications/workplace-charging-scheme-guidance-for-applicants-installers-and-manufacturers>

7.0 Offsetting

A net zero ambition will not be achieved through the measures highlighted in this report alone. It is recognised off-site carbon abatement is likely to be required through carbon offset schemes.

Carbon offsetting involves paying projects or providers to reduce or offset emissions when you are not able to reduce your own carbon footprint any further. Projects need to be additional to what would have happened without the funding (termed additionality), and are required to evidence other key characteristics to ensure the integrity and credibility of an offset.

It should be emphasised that the most effective and environmentally sound way to reduce an organisation's carbon emissions is to:

1. Focus on reducing internal direct emissions of burning fossil fuel and use of electricity from the grid
2. Reduce indirect emissions from your supply chain both up and downstream, and to influence others to reduce emissions

Hollesley Parish Council should therefore only use carbon offsets after exhausting these avenues. Key to this is developing an offsetting strategy, with targets for offsetting which can be reduced over time as other carbon reduction actions are implemented, and by ensuring that only high-quality offsets are purchased from verified projects that genuinely create credible emissions reductions.

The Carbon Trust have developed a three-stage approach to developing an offsetting strategy and this is available at www.sustainabilityexchange.ac.uk/files/ct_offset_strategies.pdf.

Third party offset schemes vary widely in terms of the cost, though a fairly typical fee would be between £10-20 for each tonne of CO₂ offset through an offsetting or carbon balancing scheme. This cost per tonne is likely to come down with the offsetting of larger volumes of emissions. For example, this would mean that to offset 25% of total GHG emissions for the year 2020 would cost in the region of £35,145 (2,343tCO₂e x £15 = £35,145). This is a significant cost and is largely due to the carbon footprint of the prisons, so Hollesley may wish to explore financial contributions from the prisons, or using prison land for a local solution, see section 7.2.

7.1 Carbon Offsetting Projects and Verification

Although tree planting is often what springs to mind, carbon offsetting can take many forms including renewable energy projects, agriculture, energy efficiency, afforestation, and rainforest protection.

The 2019 UK Climate Change Committee 'Net Zero Report' highlights how the way we farm and use our land in the UK has the potential to provide carbon sequestration which will help zero carbon targets to be achieved¹⁵. Natural England also outlines how different types of land use can sequester carbon at differing rates in its report 'Carbon Storage by Habitat'¹⁶.

¹⁵ <https://www.theccc.org.uk/publication/net-zero-the-uks-contribution-to-stopping-global-warming/>

¹⁶ <http://publications.naturalengland.org.uk/publication/1412347>

Several standards exist to verify the efficacy of offsets which take into account the additionality, permanence (will it still be there in 50 years' time?) as well as any 'leakage' in the form of detrimental effects outside of the project area attributable to project activities.

Woodland Carbon Units (WCU) quantify carbon sequestration attributed to the creation of woodland within the UK. A Woodland Carbon Unit is a tonne of CO₂ which has been sequestered in a Woodland Carbon Code verified woodland. It has been independently verified, is guaranteed to be there, and can be used by UK companies to report against emissions or use in claims of carbon neutrality as soon as it is purchased.

Although these are certified to the Woodland Carbon Code, they are not termed offsets or carbon credits because they do not meet all aspects of 'additionality' requirements, in common with all domestic emissions reduction projects. However, this does not mean that it is inappropriate to finance UK domestic projects, as doing so helps the UK to meet its targets efficiently and it is felt that these could legitimately be used as part of Hollesley Parish Council's strategy to become carbon neutral.

An alternative certification scheme is the [UN's Gold Standard](#).

7.2 Hollesley Parish Council's Opportunities for Offsetting

Whilst offsetting is generally moving away from simple tree-planting towards clean energy projects, in a rural area such as Hollesley, there is potential to develop or invest in projects to offset carbon emissions through the implementation of improved agricultural practices, or conservation of natural environments. Friends of the Earth recommends that councils use their land to drawdown carbon (e.g. through tree planting)¹⁷. This land could be managed to offset carbon through tree planting and soil carbon management by partnering with other organisations. The Woodland Trust can provide free trees for schools and communities¹⁸.

Maple Farm Kelsale is a 138-hectare organic farm near Saxmundham, Suffolk which has been working with the Woodland Trust over several years to implement an ongoing agroforestry scheme through which trees are planted in 'alleys' across what were previously large fields. The alley planting aims to improve soil structure and prevent soil erosion, improve biodiversity and sequester carbon - whilst still allowing farm machinery access to work the land.

A recent report from the Intergovernmental Panel on Climate Change¹⁹ also suggests measures to mitigate climate change including replanting forests and using more trees as part of 'agroforestry' schemes on farms.

¹⁷ Friends of the Earth's *33 Actions Local Authorities Can Take to Tackle Climate Change* is available at: policy.friendsoftheearth.uk/insight/33-actions-local-authorities-can-take-climate-change

¹⁸ <https://www.woodlandtrust.org.uk/plant-trees/schools-and-communities/>

¹⁹ <https://www.ipcc.ch/srccl/>

The key to any offsetting plans would be to ensure that any project, which was supported in order to offset emissions, should be able to demonstrate additionality (i.e. the project needs to be additional to what would have happened without the Council's intervention), whilst also evidencing ways in which it can help meet other Sustainable Development Goals²⁰ and benefit local stakeholders.

Larger organisations working within the Hollesley Parish area, such as Suffolk Coast and Heaths Area of Outstanding Natural Beauty, National Trust, RSPB, HMP Hollesley Bay and HMP Warren Hill could also provide opportunities for partnership working on carbon offsetting.

Table 14 – Estimated carbon savings associated carbon offsetting.

	Carbon emissions saved (tCO ₂ e/year)	Percentage of total carbon footprint
Offsetting	2,343	25%

²⁰ sustainabledevelopment.un.org/?menu=1300

8.0 Tools and Resources for Hollesley

[Green Suffolk](#) is a one-stop shop containing information, advice, and resources to help individuals, communities, schools, and businesses reduce their environmental impact.

[Community Energy England](#) work is intended to help clear obstacles, create connections between practitioners and stakeholders, and facilitate the work of community energy organisations.

[Centre for Sustainable Energy](#) provide advice to householders across a range of energy efficiency topics.

[MyCommunity](#) provides a central hub for information and support for individuals and communities and covers a variety of topics including governance, business, and financial support.

[Suffolk ProHelp](#) is a countywide network of businesses providing professional and strategic support free of charge to voluntary and community groups.

The National Association of Local Councils has produced [this booklet](#) with case studies from Parish and Town Councils who have undertaken carbon saving projects.

[Action with Communities in Rural England](#) (ACRE) have produced [this guide](#) on developing community renewable energy projects.

Sustainable energy charity Ashden has produced a '[Climate Action Co-Benefits Toolkit](#)' specifically designed for councils which outlines how engaging people and connecting climate policy to the needs of everyone, can demonstrate that the consequences of climate action can improve lives, not diminish them.

Data Assumptions

Groundwork East has adopted guidance provided by the UK Government²¹. An emissions statement is a means of expressing the environmental impact of resource consumption, and is presented as tonnes of carbon dioxide equivalent (tCO₂e) to account for the impacts of all six Kyoto Protocol gases. Emissions calculations use Defra's most recently published Greenhouse Gas Conversion Factors²² including direct, imported and indirect emissions, as per the World Resources Institute (WRI) Greenhouse Gas Protocol methodology²³ (p.25), and is based on the data provided by the community.

Groundwork East is committed to providing accurate information, however where information has not been made available, or is insufficient, assumptions have been made based on data and information provided by external sources. Any assumptions have been detailed within the report. Groundwork East cannot take responsibility for the accuracy of information provided by external parties. Furthermore, the report does not provide advice in connection with any legal responsibilities under environmental or other law, or any other statutory/regulatory provision that might apply to the contents of the report.

²¹

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/850130/Env-reporting-guidance_inc_SECR_31March.pdf

²² <https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2020>

²³ <https://ghgprotocol.org/sites/default/files/ghgp/standards/ghg-protocol-revised.pdf>

Appendix 1

Table 1 has been expanded to include further detail on the carbon savings identified in each section of the report.

	Section	Action		Annual Carbon Saving (tCO ₂ e)	Total Annual Carbon Saving (tCO ₂ e)	Annual Carbon Saving (as percentage of 2020 carbon footprint)	
Domestic	3.1	Behaviour Change			293	3%	
		Improve Building Fabric	Roof Insulation		161	476	5%
			Wall Insulation		168		
			Floor Insulation		45		
			Tank and Pipework Insulation		102		
		Install Solar Panels and Heat Pumps			1,106	12%	
	Switch to a Green Electricity Tariff			868	9%		
	3.2	Swap Local Car Journeys with Active Travel			31	<1%	
		Air Travel			141	2%	
3.3	Reduce Waste			11	<1%		
Non-domestic	4	Hollesley Village Hall			4.8	<1%	
		Hollesley Primary School			19.9	<1%	
		Glebe House Care Home, All Saints Church, Shepherd and Dog Inn, McColl's			51	1%	
		Switch to a Green Electricity Tariff			19	<1%	
		HMPPS Improvements			902	10%	
Community	5.1	Community Action Group			937	10%	
	5.2	Community Energy			562	6%	
	5.3	Local Car Share			625	7%	
		Community e-Bikes			31	<1%	
		Community Car Club			11	<1%	
Hollesley Parish Council	6	Support community initiatives			937	10%	
Offsetting	7	Carbon Offsetting			2,343	25%	