

Report of Director of Resources and Housing

Report to Executive Board

Date: 7th January 2020

Subject: Climate Emergency Update

Are specific electoral wards affected? If yes, name(s) of ward(s):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Has consultation been carried out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are there implications for equality and diversity and cohesion and integration?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Will the decision be open for call-in?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Does the report contain confidential or exempt information? If relevant, access to information procedure rule number: Appendix number:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Summary

1. Main issues

- Full Council declared a climate emergency in March 2019, with the stated ambition of working towards a net zero carbon city by 2030. The council has accepted that very urgent action is required to make our contribution to containing global temperature rises within 1.5C. Beyond this limit, there is a strong scientific consensus that there will be catastrophic consequences for both humanity and the natural world. Since the declaration the council has adopted a new way of working, changing its own structures and governance processes to incorporate the new climate emergency priority.
- A subsequent report was taken to the Executive Board in April which launched a Climate Conversation in the city and committed to develop an action plan for Leeds by the end of the year. The reports sets out the results of the consultation and the actions that the council is planning to take. The report identifies a number of significant practical commitments which the council can make now, as well as indicating where further work is required. The work is informed by the Leeds Climate Change Commission, formed three years ago in conjunction with the University of Leeds, which has world leading academics in the field of climate science.

- The council has received nearly 8000 responses to the consultation. The consultation involved both an online questionnaire and attendance at over 80 events through which a wide cross section of people were engaged. In tandem with the consultation, a citizens' jury was established by the Leeds Climate Change Commission to bring forward recommendations. The jury, comprised of 25 people drawn from backgrounds and perspectives which were representative of the public of Leeds as a whole, came forward with 12 recommendations, ranked by priority. The consultation provides support for radical measures to tackle climate change. It is accepted that responses are not necessarily representative of attitudes across the whole of the population but both public engagement at events and the involvement of the citizens' jury have demonstrated that once people have exposure to the facts of climate change, the vast majority of people become supportive of action.

A zero carbon council

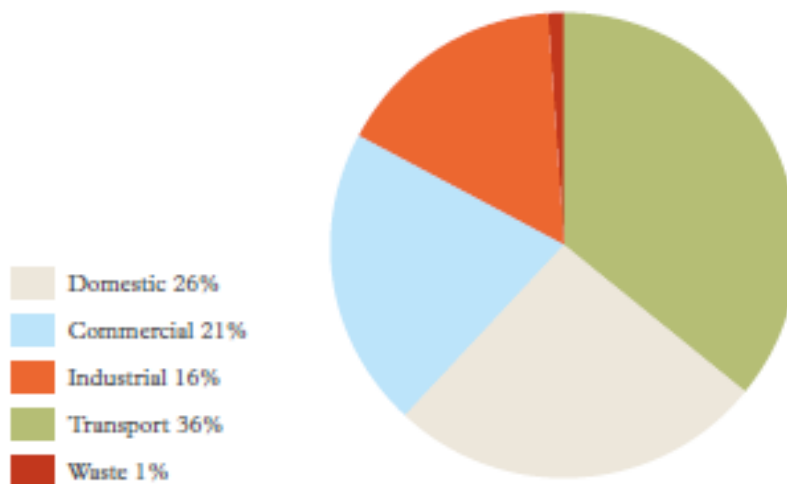
- To ensure that Leeds City Council plays its own part as an organisation and has credibility when engaging with others, the reports begins by setting out its own commitment to becoming carbon-neutral in its operations. The council's key sources of emissions are street lighting, its buildings and fleet. The council has already acquired the largest local government electric vehicle fleet in the UK, committed to halve the energy required for street lighting by transferring to LED and to replace gas in our city centre buildings with district heating. A series of further recommendations are made to the Executive Board, which include the following:
 - Commit to a rationalisation and energy efficiency programme which reduces emissions from council buildings by a further 40% by 2025;
 - Purchase 100% of our electricity from green sources, supporting new renewable capacity;
 - Purchase only low emission vehicles by 2025;
 - Remove payment for the use of staff petrol and diesel cars by 2025.
- The predicted results of these actions are set out in the table below:

	Tonnes CO₂e 2018	Tonnes CO₂e 2025
Streetlighting	13,821	0
Buildings (gas)	28,618	20,600
Buildings (electricity)	18,107	1,405
Fleet	10,274	9,000
Total	70,820	31,005

- The council is committed to working on further measures to achieve net zero by 2030, including an extensive tree planting on its own land to offset any emissions which remain.
- By setting this example, the council intends to demonstrate to other organisations what can be achieved. We will work with the major public and private bodies within the city and encourage smaller businesses to play their part in reducing their carbon use.

A zero carbon city

- The remainder of the report focuses upon the actions the council proposes to take which impact upon the city as a whole. The actions that the council can take within the powers and resources currently at its disposal, however, will not be sufficient to move the city to a net zero position. The report, therefore, also identifies areas where government policy changes are required and funding is needed. Importantly too, the actions and choices of individuals will make a significant difference, influencing the speed at which society switches to zero carbon both through consumer choice and support for political action. The council cannot impose this change but can help to provide people with better information through which to make their choices.
- The city wide proposals are broken down into the following areas: transport; housing; industry; consumption and food; waste energy; biodiversity and landscape. The first two areas are the ones on which direct council policy can have the greatest impact, with the latter areas subject more to the council's role as an influencer. Separately the report considers the promotion of biodiversity as a key contributor to mitigation and the quality of life. The chart below indicates the relative contributions of emissions of different sectors:



Transport

- Whilst carbon emissions in the energy sector have fallen due to the rise in renewables and reduction in the use of coal, transport emissions have remained broadly similar, with any fuel efficiencies offset by increased journeys.
- The city is making a £270m low carbon intervention through the Leeds Public Transport Investment Programme which will be completed by 2021, delivering bus priority corridors, segregated cycle facilities, city centre gateways, expansion of existing bus and rail park & ride sites, alongside complementary investment in bus services and low emission vehicles from the bus operators. The introduction of a Clean Air Zone from the summer of 2020, will also help to accelerate the reduction in carbon emissions as well as reduce air pollution.
- The council is committed through the West Yorkshire Transport Plan to a series of initiatives which are designed to cut carbon emissions by a quarter over the next decade. It is the council's aim to be city where you don't need to use a car. The measures include:
 - Doubling bus patronage
 - A 75% increase in rail

- A 10% increase in walking
- A 300% increase in cycling
- A 15% decrease in car usage
- Cutting emissions further will depend upon the speed at which vehicle transport itself can be decarbonised, with a rapid shift to electric or hydrogen vehicles, the availability of better public transport, and an environment which encourages active travel. In particular, the city is focussing on the role and place for a new mass transit system to complement the present bus and rail networks. The council will come forward with a proposal in the summer of 2020. The council will also consider a workplace levy on car parking alongside other measures which may encourage a shift from the private car and generate investment in alternatives.
- The council has several key asks of government in relation to transport
 - Commitment to deliver an Urban Mass Transit Network in Leeds City Region;
 - Significantly increased long term funding for active travel and public transport in the city region;
 - Full commitment to deliver Leeds Integrated Station Masterplan;
 - Greater control and influence on public transport services at a local level;
 - Use of national taxation and incentive schemes for behavioural change and increase in low carbon vehicle uptake;
 - A review of the Department of Transport (DfT) assessment framework to provide sufficient weight for new transport projects that reduce carbon emissions by encouraging mode shift and constraining car use;
 - Greater local influence over Highways England to ensure the investments and operation of the Strategic Road Network aligns with local policy.
- With respect to aviation, the council accepts that aviation growth and meeting zero carbon targets are fundamentally incompatible until such time as new technologies are developed. The council believes that aviation targets need to be set at a national and international level rather than locally, reflecting the fact that more people from Leeds fly from other airports than Leeds Bradford Airport (LBA), and that any isolated actions could lead to displacement. The council will participate in national talks to come forward with targets which address the climate emergency and the economic rebalancing of the country. The council has listened to the consultation and has changed its road proposals for surface access to the airport. It will seek to enhance public transport access to the airport through the building of a rail halt but will not support the road link facilitating greater car access. The council will encourage other mitigating actions, including offset measures and encouraging more sustainable travel arrangements.

Housing

- The council is committed to investment in its own housing stock, which represents 18% of the city's total stock. Council housing is currently rated at C for energy efficiency, compared to D for housing as a whole following extensive investment over the last fifteen years. Through heating replacement programmes utilising district heating and heat pumps, we aim to provide low carbon heating to over half of our multi storey buildings. The council has also secured funding of £10.5m to install external wall insulation on much of its own back to back stock and a further

£5.4m to roll out domestic solar, with the ability to store energy. Both projects will provide lessons for the future. The council has engaged University of Leeds to make recommendations on the use of the Housing Revenue Account (HRA) capital programme to maximise energy efficiency.

- The more significant challenges are in the private rented and owner occupied sector, where the current influence of the council is small. The council has demonstrated through the Cross Green and Holbeck schemes that dramatic improvements to energy efficiency can be accomplished by enveloping pre 1919 stock, shifting energy ratings from F/G to B/C. The council has and will continue to support charities such as LATCH and Canopy who bring older properties back into use after extensive energy efficiency works. The council, however, has neither the resources nor powers to make a widespread impact. It is estimated that £800m will need to be invested to reach a minimum of a C rating across all stock by 2030. The council calls for a series of measures to enable the city to move forward:
 - Require all privately rented property to meet a C rating as a condition by 2030;
 - Transfer all energy levy funding to the council from the energy providers to target grants to those in need, who cannot afford repayments to improve their homes;
 - For the government to incentivise private home owners to undertake the necessary retrofitting.
- Even with these actions, the city is unlikely to achieve a net zero position in regard to the existing housing stock without the full decarbonisation of heat. The council is actively working with the LEPs of West Yorkshire, Tees Valley and Humber, alongside academic institutions to promote the shift to hydrogen as a viable replacement of natural gas. The country will need to take a decision on the future of gas in the very near future if it is to meet its zero carbon objective. The city wishes to be at the forefront of that change.
- With regard to new build, the council is setting high standards in regards to its own council housing build programme and will commit to a minimum standard of a B rating. The Leeds Standard is resulting in an over 80% reduction in carbon, compared to the average home, with a £500 saving in energy costs. The council's own planning policies encourage high levels of energy efficiency and broader sustainability. The council's position, however, is undermined by national policies. The council therefore asks for the restitution of the Code for Sustainable Homes which would require all new homes to be built to level 6 in future.
- The council's main area of housing growth is the city centre. The council is committed to bringing forward 20,000 new homes within an expanded city centre which minimise heating requirements and car usage, creating an exemplar urban community. The CITU development is a first example of what is possible, enabled through council lending via the regional revolving investment fund.

Industry

- Leeds is fortunate to have a well-balanced economy which is not disproportionately dependent on high carbon industries for employment. The city is already very strong in the digital and health sectors which provide great opportunities for growth. Nevertheless the transition to a zero carbon economy presents enormous challenges, both in providing the quantities of skilled labour to undertake the transition, such as the decommissioning of gas boilers and housing retrofits, but also finding alternative energy sources or other forms of employment for those currently engaged in high carbon industries. The council is committed to the

concept of a “Just Transition” which does not result in people being penalised by the shift to the zero carbon economy and in particular protects those on low incomes from adverse effects. The council’s Inclusive Growth Strategy acknowledges the significance of the climate emergency and this will be a key focus of the annual report on Inclusive Growth in 2020.

Consumerism, Food and Waste

- The amount and type of goods that people buy and the food they choose to eat is a matter of personal choice. Government, local and national, together with industry, can however better inform people of the impact of those choices. There is also a role in making more sustainable choices easily available and attractive, as seen increasingly in restaurants with the broadening range of vegetarian and vegan options.
- The council can also work with others to provide better opportunities to share and reuse goods. The emphasis on reduction and re-use is at the heart of the new Council Waste Strategy, which prioritises the prevention of waste arisings.
- The government’s waste and resources strategy (published in Dec 2018) is under consultation with council’s with clarity on its findings expected from the Department for Environment, Food & Rural Affairs (DEFRA) during 2020. Government expectations are to see changes implemented by councils from 2023, but in the meantime some key asks from Leeds that we would like to see implemented are:
 - Tighter legislation on producer responsibility so retailers/ manufacturers bear the costs of dealing with their packaging and for the reliability of their products with increased warranty periods;
 - Funding to support the roll out of food collections;
 - Support for the introduction of deposit return schemes on plastic and glass bottles.

Landscape and biodiversity

- Biodiversity is being critically affected by a combination of climate change and changes in land use. These changes both impact upon the quality of our lives and those of generations to come but also upon the stability of the ecosystem. Addressing the issues of landscape and biodiversity presents the opportunity to offset some of the remaining carbon in production but also to enhance wildlife and improve the public experience. A combination of developing woodland on our own holdings, together with work with other land owners are set to bring forward millions of trees in the next thirty years. A further report will be brought to the Executive Board in the summer regarding the council’s contribution to the Northern Forest. The council also has a specific programme to develop green spaces in the city centre as it becomes a major residential centre, shifting its emphasis towards encouraging biodiversity.
- The council will also seek to ensure through Planning that all new housing developments support biodiversity.

Education, awareness and behavioural change

- The changes required to rapidly achieve carbon neutrality will have a profound impact upon all of us. In the medium term it is possible that technological innovation may adequately substitute for some carbon intensive activity, as we have seen the cost of off-shore wind production rapidly decrease to replace coal. Nevertheless it is unlikely in the next ten years that cost effective alternatives will be in place in many areas of activity. It is unlikely that all gas boilers will have been replaced with hydrogen or electric by 2030 or all diesel and petrol cars removed from our roads, replaced by electric vehicles and zero carbon public transport. In the meantime much will depend on the attitude of the public to take the actions that are within its grasp, such as choosing active travel or consuming less, and supporting government actions which prioritise investment and which more accurately price the impact of carbon into goods and services.
- There are many people who are passionate about climate change and this is particularly true among younger people who have regularly demonstrated on the streets of Leeds. The latest election saw climate change have a much higher profile. Nevertheless, those who are actively involved continue to be in a small minority. The citizen's jury did demonstrate that given exposure to the evidence in an intensive environment, the majority of people became engaged and recognised the role they can play. This will be hard to replicate for the population as a whole but an essential part of the city's strategy must be a determined and on-going programme of awareness raising in order to influence personal behaviour change.

Resources

- The council has invested, and continues to invest, significant sums of money in delivering the required schemes to support the delivery of the climate emergency, including adaptation. The council also has a good track record of securing external funding to support delivery of additional schemes to speed up the pace of change across the city.
- Across the current 2019/20 to 2022/23 capital programme we have c£200m of schemes ranging from flood alleviation £84m (including the funding for the natural flood management scheme), air quality zone related implementation and help with business to upgrade vehicles £47m, £16m of Council Housing Stock energy efficiency schemes, the Housing Leeds District heating scheme £36m, Street Lighting LED and other lighting replacement schemes £31m. The Council has provided £7.5m for the upgrade of its van fleet to electric. This Executive Board is considering approvals for Climate Emergency Woodland creation, £1.4m, and £800k for the retrofitting of Council buildings. This excludes the transport investment in Connecting Leeds and the Council's new council house building programme, both of which have low carbon at their heart.
- Despite this, much more is needed. The Council will continue to prioritise the strategy to carbon-neutral in its capital strategy. The city, however, also needs other sources of finance. Government will need to finance major transport infrastructure and provide additional resources to upgrade the housing stock across all tenures. Private individuals and businesses will need to invest in their own buildings and transportation. The Council will seek to assist this through supporting crowd funding, green bonds and offsetting schemes, which make those investments simpler and more effective.

Conclusion

- Responding to climate change is arguably the greatest challenge of this generation. The council has acknowledged the urgency with which the city needs to change by declaring an emergency. The actions contained within the report demonstrate a step change in the council's level of activity to make itself carbon-neutral and to lead the city in that direction, building on examples of good practice which have already been put in place. There is considerably more work to be done to provide further detail to the commitments and yet more to deliver on them. Challenging as it is, the future also holds out the prospect of a better city with good housing, improved transport, healthier lifestyles and a greener, more attractive environment. The vision can only be achieved with the active support of the citizens of Leeds, public and private sector institutions, the third sector and national government.

Recommendations

- a) Approve £800,000 injection of capital to retrofit seven council buildings;
- b) Approve the target to move to 100% electricity provided by green sources immediately through entering into a power purchase agreement with the ambition to continually move to more locally produced renewables over the next ten years;
- c) Approve the aim to remove payment for the use of staff petrol and diesel cars by 2025;
- d) Approve the target to buy only low emission fleet vehicles by 2025;
- e) Endorse the vision, principles, targets and investment plan for the emerging Connecting Leeds Transport Strategy;
- f) Endorse the asks to national government (summarised in Annex 1) to support the action required by the government to achieve net zero;
- g) Agree to receive a report on the proposed White Rose Forest strategy for Leeds in June 2020.

We had a Big Leeds Climate Conversation...

That's why Leeds City Council are going to...



Switch to **100%** green electricity



Connect another **1,000** homes to low carbon district heating



Make our biggest fleet of electric vehicles even **BIGGER**



Increase tree canopy across Leeds



Trial tasty, **reduced-carbon** school meals



Enable businesses to trial electric vans for **free**



Transform transport and travel to reduce emissions from travel by **25%**



Deep retrofit **1000** homes



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Main Report

1. Purpose of this report

1.1 To provide details on:

- 1.1.1 the progress that has been made since the climate emergency declaration in March 2019;
- 1.1.2 the proposed targets that the council will adopt to achieve net zero as a council and a city;
- 1.1.3 the results from the Big Leeds Climate Conversation and next steps;
- 1.1.4 the proposed future action plan;
- 1.1.5 areas where support is required from national government.

1.2 The causes and impacts of climate change are broad and complex, affecting every aspect of the way we live. This report takes a holistic approach and attempts to address many of these aspects. To simplify for the reader, this report is organised into the following sections:

- A zero carbon council
- A zero carbon city
- Transport
- Buildings, including schools and homes
- Industry
- Consumerism, food and waste
- Landscape and biodiversity

1.2.1 Throughout all sections, this report will reference the national and international context, the science, and crucially the local engagement we have done. Likewise, this paper is written in the context of the city's key health and wellbeing and inclusive growth strategies—which are intrinsically linked.

2. Background information

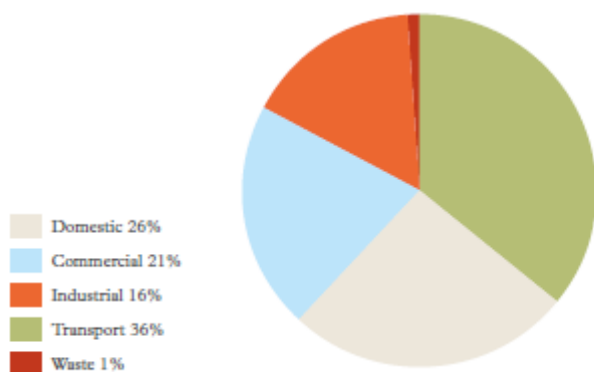
2.1 A landmark report by the United Nations Intergovernmental Panel on Climate Change (IPCC) last year warned that the window to limit world temperatures to under 1.5 °C and avoid the worst climate change impacts will close in the next decade. The Committee on Climate Change (CCC) recommended that the UK should aim to be net zero emissions by 2050. Based on this recommendation, in June 2019, the UK government updated the Climate Change Act, committing to, by law, reduce greenhouse gas emissions by at least 100% of 1990 levels (net zero) by 2050. To reach this target the government has set legally-binding 'carbon budgets' in five-year periods. The carbon budget will be the amount of greenhouse gases the UK is permitted to emit for each five-year period. A recent CCC report found that the government's policies and plans are currently insufficient to meet its carbon budgets and that the policy gap has widened in the last year.

2.2 This year has seen numerous devastating and unprecedented climate-related events that are expected to increase in frequency and intensity in the coming years. For example: wildfires and bushfires this year like those in the Amazon, California and

Australia are projected to become increasingly regular. By April this year, the UK had already seen more wildfires than any other year on record, which is unheard of for so early in the year. In Leeds, the flooding of 2015 caused by Storm Eva gave an insight into the major disruption that can be caused by severe weather events. The major flooding in South Yorkshire again this November served as a reminder flooding will become a regular climate change impact for our area.

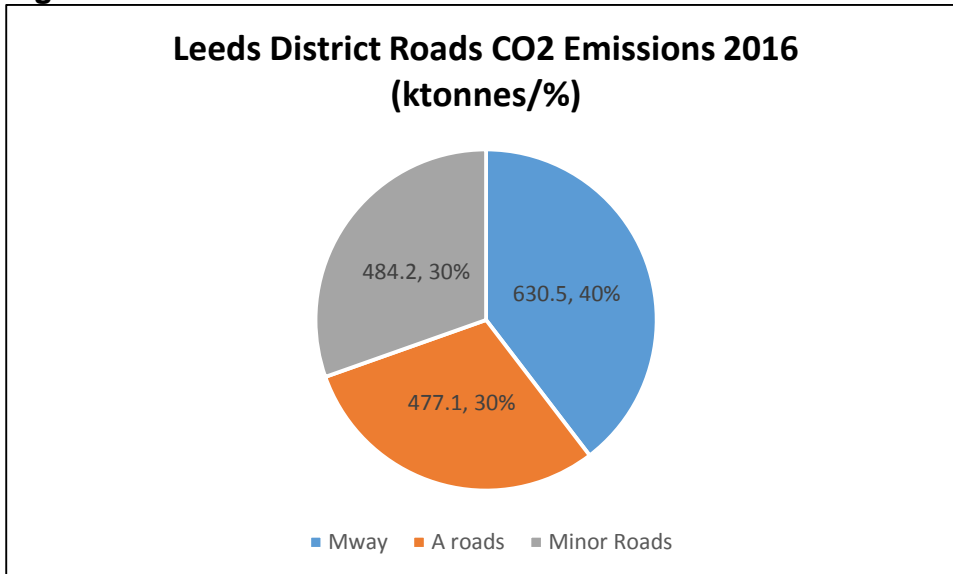
- 2.3 In parallel to considering the climate emergency, the council has also focused on the ecological crisis that is being faced, with a loss of 70% of insects over the last thirty years across Europe.
- 2.4 Since 1990, UK carbon dioxide emissions have decreased by 39 per cent. The decrease in carbon dioxide emissions was driven by the continuing downward trend in emissions from power stations, with a 9.9 per cent decrease between 2017 and 2018. This decrease has resulted mainly from changes in the mix of fuels being used for electricity generation, with a shift away from coal and growth in the use of renewable energy sources. In 2018 coal made up only 7 per cent of fuel used for electricity generation, down from 65 per cent in 1990. Nuclear and renewables, which are low carbon energy sources, accounted for 47 per cent of fuel used for electricity generation in 2018, up from 22 per cent in 1990. This was combined with lower electricity demand, owing to greater efficiency resulting from improvements in technology and a decline in the relative importance of energy intensive industries.
- 2.5 The government department for Business, Energy & Industrial Strategy (BEIS) published its Energy and Emissions Projection in January 2018 showing the projected Grid Carbon Factor falling dramatically from 212 grams in 2017 to just 41 grams in 2035. The Grid Carbon Factor is measured in grams of CO₂ equivalent emitted for each kWh of electricity generated on the National Grid: (grams CO₂e/kWh). BEIS is now predicting that the Grid Carbon Factor will be as low as 41 grams CO₂e/kWh by 2035, less than a quarter of what it is today. This reflects increased electricity generation from renewables and the switch away from burning coal in power stations.
- 2.6 The current sources of emissions by sector of the district are shown in the pie chart below. As it can be seen transport is the largest source of emissions at 36%.

Figure 1: Source of emissions in Leeds in 2017 by sector



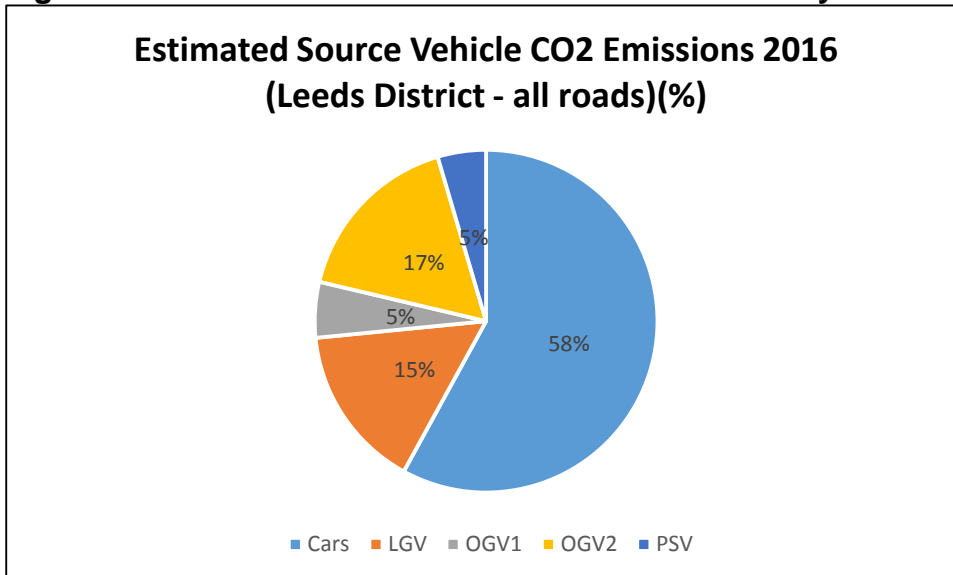
2.7 Figures 2 and 3 further split the transport emissions by road type and by vehicle type and show that the motorways and private cars are the biggest contributors to CO2 emissions within the transport sector.

Figure 2: Leeds Annual Roads CO2 Emissions 2016



Source: UK local authority and regional carbon dioxide emissions national statistics: 2005-2016

Figure 3: Leeds Annual Roads CO2 Emissions 2016 by Vehicle Type (%)



Source: LCC estimates based on application of webtag calculation to traffic data (LGV = Light Goods Vehicles eg Vans, OGV1&2 =Heavy Goods Vehicles, PSV= Buses & Coaches)

3. Main issues

3.1 Big Leeds Climate Conversation (BLCC)

- 3.1.1 The full report on the results of the Big Leeds Climate Conversation can be found at Annex 2.
- 3.1.2 The Big Leeds Climate Conversation (BLCC) saw council officers and volunteers engage with residents about the climate emergency and promote the consultation at more than 80 meetings and events across the city including community committees, Carnival, Breeze Events, Pride and Child Friendly Leeds Live. A mixed-method approach was taken that included online questionnaires, in-person conversations, focus groups and social media.

Who responded?

- 3.1.3 In total, 7,835 individuals from every community in Leeds participated in one of the two official questionnaires. Every effort was taken to ensure that every community in Leeds had the opportunity to share their views as part of the Big Leeds Climate Conversation however, as with any voluntary consultation, there is always a risk of self-selection biasing the findings. Whilst respondents to the long questionnaire were older and more likely to identify as English/Welsh/Scottish/Northern Irish/British ethnicity compared to the Leeds population as a whole, the opposite was true for those who responded to the short questionnaire. Men and young people of both primary and secondary school age were underrepresented in both samples. Respondents to the long questionnaire were also slightly more likely to be homeowners than the Leeds population as a whole.

Views on the climate emergency

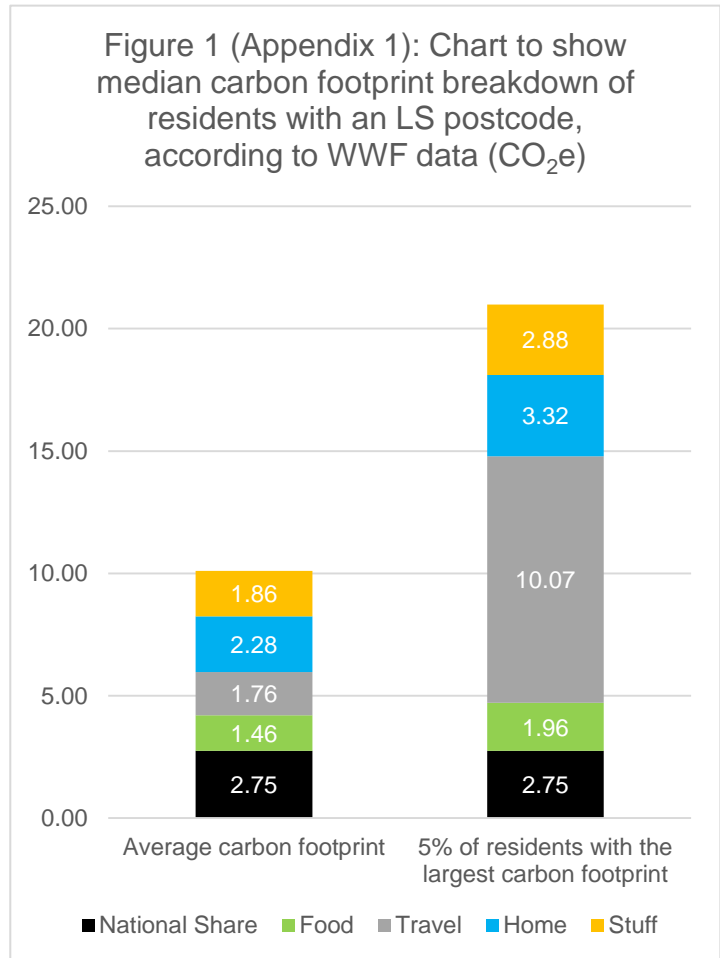
- 3.1.4 Almost all residents (97.1%) agreed with the scientific consensus that the climate is changing and that the earth's warming is due to human activity (93.4%). Five out of six residents (84.9%) also agreed that they have a good knowledge about the causes and effects of climate change, however only two out of six (36.2%) would 'strongly agree' with the statement.
- 3.1.5 There is considerable worry about the effects of climate change. More than nine out of ten residents agreeing they are worried about wildlife loss (97.3%), biodiversity loss (96.3%), and the frequency of extreme weather events in the future (93.3%). In particular, four out of five respondents strongly agree that they are worried about the effects of climate change on future generations (82.7%).

Estimated carbon footprint of residents

3.1.6 Leeds City Council partnered with the World Wide Fund for Nature (WWF) to better understand the average carbon footprint of residents.

3.1.7 Based on data from 2100+ residents, it is estimated that the median carbon footprint of Leeds residents is approximately 10.1 tonnes of carbon dioxide equivalent (CO₂e) every year whilst the mean is 11.38 tonnes. Both figures are significantly lower than the WWF's estimated 13.56 tonnes CO₂e average.

3.1.8 Notably, one twentieth of Leeds' residents have a median annual carbon footprint double that of the average resident. More than 80% of this difference is related to emissions from travel. More information can be found in Annex 2, Appendix B.



Views on individual action

3.1.9 On an individual level, approximately nine out of ten respondents agreed that their actions can help tackle climate change (89.5%) and believe that reducing their own impact on the environment is a personal priority (89.4%).

3.1.10 Most respondents (93%) to the long questionnaire said that they are willing to take one or more actions to reduce their own impact including: planting trees (53.4%), picking up online orders from a convenient location rather than choosing home delivery (33.2%), creating habitats for wildlife in their garden (33.2%), choosing energy efficient appliances (32%), considering switching to an electric or hybrid car (26.5%), eating less dairy (24.9%) and using a green/renewable energy tariff (23.9%). Respondents would like to do even more, but many say that barriers currently prevent them from doing so, including: installing solar panels (57.7%), considering switching to an electric vehicle or hybrid (44.9%), composting food waste and kitchen scraps (38.5%), working from home more often (35.2%), growing food (34%), car sharing (31.1%) and avoiding buying non-recyclable packaging (30.3%).

3.1.11 Almost half (48.2%) of respondents to our short questionnaire agreed that they would like to reduce their own impact on the environment but don't know where to start. Taken overall, the responses have provided a useful basis for future campaigns which can help the public make their personal contribution to combatting climate change.

Views on citywide action

- 3.1.12 More than nine out of ten respondents to the long questionnaire agreed or strongly agreed that tackling climate change (94%) and reversing the decline of bees and other pollinating insects (91.4%) should be a priority. This view was also reflected in the short questionnaire, where respondents agreed that tackling climate change (94.3%), becoming a carbon-neutral city (91.6%), and protecting the diversity of wildlife (95.5%) should be a priority for the city.
- 3.1.13 Additionally, almost all respondents believe that public sector organisations (96.8%) and businesses (96.7%) have a responsibility to reduce their own carbon footprint and make it easier for individuals to make more environmentally-friendly choices.
- 3.1.14 The council proposed 11 'big ideas' to reduce the city's carbon emissions and support biodiversity as part of the long questionnaire. Significantly, every proposal was supported by at least 84% of respondents (see chart below). Beyond these, the most frequently suggested proposals were those related to transport and waste/recycling, especially suggestions for a mass transit system and household collections for food waste and glass recycling. Many residents also suggested that Leeds should do more to require developers to build 'greener' developments, e.g. requiring stricter energy efficiency standards, the installation of renewables, and making it harder to develop on green field sites.

Public support of proposed big ideas:

Chart key:

TOOL: Introducing tool libraries across the city.

HYHO: Using hydrogen gas to heat our homes.

HYVE: Using hydrogen gas to power larger vehicles.

INCE: Incentivising homeowners and businesses to improve the energy efficiency of their properties.

MEALS: Reducing the carbon footprint of school meals.

CAZD: Expanding the Clean Air Charging Zone to include high polluting cars and vans by 2030.

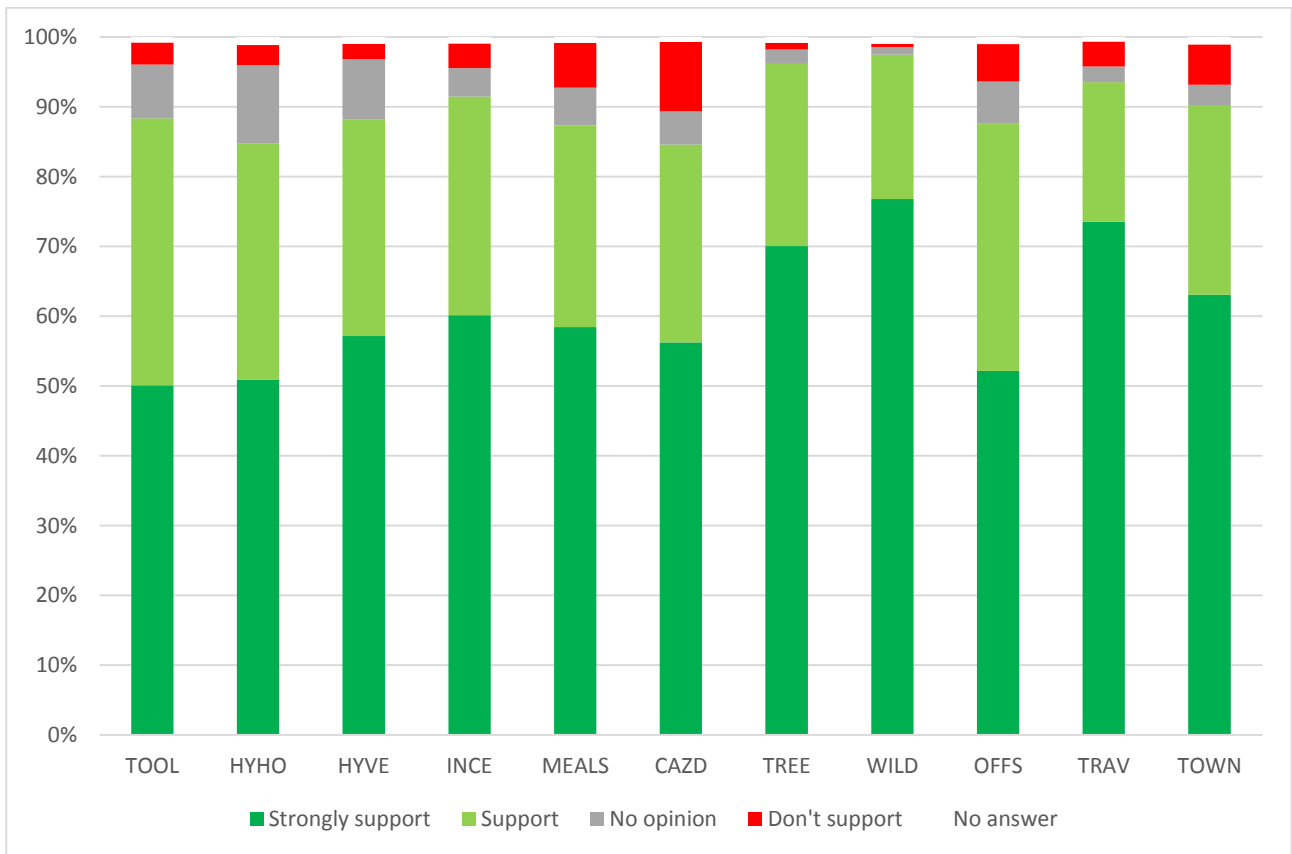
TREE: A council-backed volunteering scheme to plant millions of new trees by 2030.

WILD: Planting more wildlife-friendly species in our parks, verges and flower beds.

OFFS: A new Leeds-based carbon offsetting fund that would benefit the city.

TRAV: Investment in sustainable travel infrastructure.

TOWN: Transforming our town centres to support public transport and active travel



We had a Big Leeds Climate Conversation...

Residents said they would...



Plant trees
53.4%



Pick up online orders
from a convenient
central location
33.2%



Create habitats
for wildlife
32.2%



Use a green or
renewable tariff
23.9%



Take the bus or
train more often
13.2%



Choose energy
efficient appliances
32%



Consider switching to
an electric or hybrid car
26.5%



Eat less dairy
24.9%



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3.2 Leeds Climate Change Citizens' Jury

- 3.2.1 On 25th November the citizen's jury, comprised of a representative sample of Leeds citizens, shared their statement and recommendations in response to the question "What should Leeds do about the emergency of climate change?"
- 3.2.2 The Leeds Climate Change Citizens' Jury was put together by [Leeds Climate Commission](#) working with professional facilitators Shared Future Community Interest Company as part of its response to the Big Leeds Climate Conversation following Leeds City Council's declaration of a climate emergency in March 2019.
- 3.2.3 The citizens' jury process ran from 12 September to 3 November with 25 jurors, selected by stratified random selection to represent a "mini public" of Leeds. Jurors spent nine sessions across nearly 30 hours of deliberation, listening to and questioning 22 commentators on topics from climate science to housing and from transport to finance.
- 3.2.4 Their final list of [12 recommendations](#) reflect the jury's priorities for the city of Leeds, and emphasise the need for climate action at all levels. The recommendations, which are accompanied by a request for three-monthly progress reports, will be presented formally to Leeds City Council's Climate Emergency Advisory Committee in January and will guide the work of the Leeds Climate Commission.
- 3.2.5 The recommendations and the full report can be found here <https://www.leedsclimate.org.uk/leeds-climate-change-citizens-jury>.

3.3 Making the council an exemplar carbon-neutral organisation

- 3.3.1 Table 1 below shows the breakdown of the council's emissions and our five year aims. These are the emissions that are produced as a result of our estate and the fleet that we operate.

Table 1

	2018 Tonnes CO ₂ e	Proportion of emissions	2025 Tonnes CO ₂ e
Street lighting	13,821	20%	0
Buildings (gas)	28,618	40%	20,600
Buildings (electricity)	18,107	26%	1,405
Fleet	10,274	15%	9,000
Total	70,820		31,005

Our buildings and street lighting

- 3.3.2 Since 2013 the council's estate has been reduced by over a million ft² of office space and the ambition is that over the next five years that this rationalisation will continue to deliver at least a further 20% reduction in the size of our office accommodation. This equates to just over 200,000 ft².
- 3.3.3 This is estimated to reduce our emissions from gas by circa 6,000 tonnes and from electricity by circa 4,000 tonnes.

3.3.4 For the buildings that remain we will need to undertake further works to improve the energy efficiency of the estate. As the first phase of this work, a detailed energy audit is underway on the following buildings:

- City Museum
- Civic Hall
- John Charles Centre for Sport
- Killingbeck Court
- Town Hall
- Tribeca House
- Waterside

3.3.5 The initial findings show that an energy reduction of 20% is achievable with an investment of circa £800,000. The payback is estimated to be 8 years. Further detailed work will be completed in January 2020.

3.3.6 The second phase of the district heating network is also under construction, which will initially see the Town Hall, Civic Hall, Museum, Central Library and Art Gallery, and St George's House connect to the network in late 2020. Once connected, these buildings alone will save over 550 tonnes of CO₂ per year.

3.3.7 The reduction in estate size and the energy retrofitting of our estate is forecast to reduce our emissions by circa 40%. However, there is still a key decision to be made at a national level about how heat will be decarbonised and this means that in the interim there will be a number of our buildings that will continue to be heated by gas.

3.3.8 There is also a four year £25 million investment programme to improve the energy efficiency of street lighting, saving 7,050 tonnes of CO₂e per annum.

Green electricity

3.3.9 There is also the potential for the council to enter into a 'corporate power purchase agreement' in order to reduce the impact of emissions associated with its own electricity consumption. Through such an agreement the council's energy supply contractor could effectively purchase energy from renewable generation facilities on the council's behalf. Initial discussions suggest that the council's requirements could be met with renewable supply in this way, and potentially even exceeded, in which case there could be opportunities for 'greening' other areas of electricity consumption in the city such as domestic, business and electric vehicle charging. The council would also look to enable electricity generated from its own renewable assets to feed into this agreement.

3.3.10 The council would need to ensure that this arrangement was transferrable in the event of a change in energy supplier, and would also need to consider how the financial impact of potentially being tied into a fixed agreement could be minimised should there be a fall in market energy prices. Conversely, there could be significant value in having fixed prices in the event of market price increases in what can be a volatile sector. Any agreement would also need to ensure contributions only to new renewable energy generation facilities, such that carbon savings, were genuinely additional.

Council's fleet – progress and ambitions

3.3.11 The council has by far the largest local government electric fleet in the UK. By 31st March 2020 the council's fleet will be comprised of 232 electric vehicles, leaving

1041 vehicles to transition to ultra low emission vehicles. The electric vehicles will primarily be charged at council sites, ensuring that they are powered by green electricity secured through the proposed power purchase agreement.

3.3.12 The larger fleet is more challenging to replace as the technology is still under development.

3.3.13 However, the council will seek to buy no further fossil fuelled vehicles post 2025 and will work with partners around the city to identify what alternative fuelling infrastructure is required to support the larger vehicles.

Council's grey fleet – the move to zero emissions

3.3.14 The council is also taking action to reduce the travel that is undertaken by staff in their own vehicles to deliver council services ("grey fleet"). This contributes a further 1,262 tonnes of CO₂e per annum. A range of schemes and measures have been introduced in support of this, and continue to be expanded, including:

- Corporate introduction of Skype along with audio/video conferencing facilities;
- Rationalisation and consolidation of council offices;
- E-bikes at major council office locations;
- Extension of 'cycle to work' scheme;
- Availability of corporate Metrocards;
- 'Car Club' pool car scheme;
- Identification of nominated Travel Plan Co-ordinators for key sites to promote sustainable travel options.

3.3.15 Increasing the availability, profile and promotion of these sustainable travel options, and using technology and changing processes in support of this, will be critical. The council is developing a web-based 'travel hierarchy' tool to bring together into one place all of the available resources, and enabling staff to readily work through and access a hierarchy of options for their travel in order of sustainability, with use of their own car being a last resort. The council is also developing a business case for the introduction of a pool of electric vehicles for use by staff for work related travel.

3.3.16 The council will strive to undertake no grey fleet mileage in pure petrol or diesel cars by 2025, and increasing this target to no mileage in private cars unless in zero emission vehicles by 2030. These dates recognise the growing availability of a second hand market in hybrid vehicles by 2025 and allow further time for cost reduction and the development of infrastructure in relation to electric vehicles. In taking this forward, the council will be mindful that vital services cannot be impacted and that staff should not be penalised. The council will work closely with the trade unions to find a way forward which meets all objectives.

Embedding the climate emergency into the council

3.3.17 Since the climate emergency was declared in March 2019 there has been a lot of work undertaken to embed climate emergency into both the culture and decision making of the council. The climate emergency section has been added to all Executive Board reports to ensure that it is always taken into consideration. Accompanying guidance has been developed to help report writers to ensure that all potential impacts are considered. There have been a series of staff and member briefings about the climate emergency to improve understanding and awareness.

3.3.18 However, there is more work to do to further embed the climate emergency into the organisation and the following actions are being progressed to support this:

- To embed the climate emergency within the culture of the council and ensure that every service understands the causes, impacts and urgency of the climate emergency, Leeds is working in partnership with the Carbon Literacy Trust (an independent, registered charity) to develop 'carbon literacy' training aimed at heads of council services as part of the Trust's 'Carbon Literacy Project'.
- The council has identified the Carbon Literacy Project as the most suitable independent training available. The Project has been recognised by the United Nations as one of 100 worldwide Transformative Action Programs and has recently been awarded funding by the Department for Business, Energy and Industrial Strategy to develop materials for the public sector. More than 11,000 citizens across 800+ organisations have already been certified as carbon literate by the Trust.
- In partnership with the Trust, the council is developing an accredited, Leeds-based Carbon Literacy Project course to deliver to senior council officers. This course shall use local examples of impacts, causes, and solutions to the climate emergency. As an organisation, it is our ambition to lead by example and to have more accredited 'carbon literate' staff than any other local authority.
- Staff climate forum – this is being set up to allow interested members of staff to meet regularly and make their own suggestions on how the council can deliver their response to the climate emergency and to build further momentum in the organisation.
- Procurement – in 2017-2018, the council spent in excess of £800 million on the procurement of its goods, works and services. That level of spending each year can have a massive influence on the big issues that the city face, including how we deal with the climate emergency and biodiversity loss. It is therefore essential that every pound spent fully considers and minimises the implications for these issues.
- Guidance is being developed to ensure that the climate emergency is embedded in every stage of the procurement process, including adding text into the contract procedural rules and updating text in the specification guidance, tender documents and contract management plan. We will also ensure that the climate emergency is fully considered in the Social Value Guidance that is currently being developed. We will also be working directly with a set of 'priority' procurements, which have high expenditure, large environmental impacts and/or are due for renewal soon to reduce their climate impact.
- In a separate paper on this Agenda, the Parks and Countryside Service have brought forward an extensive tree planting proposal.

3.3.19 As a further example of how a service can revise its practise, the Events team has looked at how it can mitigate its impact. For example:

- Looking to reduce the contribution of emissions by people travelling to cultural events;

- Building efficiencies;
- Developing a 'Sustainability in Events' standard for council events with a desired outcome to have a set of guidelines for events organisers;
- Taking action such as extending the opening times of the park and rides for Light Night;
- Leeds2023 is discussing how climate emergency can be incorporated directly into its programming;
- Active Leeds is also leading on engagement work around Physical Activity ('Get Set Leeds') and developing a whole systems approach to include, for instance, travel planning to encourage people to walk and cycle more.

Moving the city to net zero

Important as actions within the council are, our emissions only represent some 3% of the totality for the city. It is the wider impact of the council's policies upon the future of the city which are the most important. This part of the report considers a number of key strands of activity which will have the greatest effect.

3.4 Transport – progress to date

- 3.4.1 In the past few years we have delivered schemes which contribute to the reduction in carbon emissions by encouraging a shift to more efficient, lower carbon and healthier modes. For example our highly successful new park & ride facilities at Elland Road and Temple Green, offer a real alternative to bringing the car into the city centre reducing congestion, carbon emissions and improving air quality.
- 3.4.2 The opening of Leeds Southern Station Entrance and Kirkstall Forge railway station has supported the growth in rail use and regeneration of communities. As of Autumn 2018 timetable changes the number of seats on trains arriving at Leeds during the morning peak period had increased by 19% since 2011 which exceeds the growth in passengers over the same period.
- 3.4.3 The city now has 172km (over 107miles) of cycle network including the city connect superhighway between East Leeds and Bradford. The council's educational work encourages safe and sustainable active travel, across the city. Last year, 22,000 pupils benefitted from pedestrian skills and bike ability training.
- 3.4.4 Leeds triathlete and double Olympic champion Alistair Brownlee MBE, has been named as the city's first Active Travel ambassador. In his new role, Alistair will add his support to initiatives, projects and infrastructure projects being undertaken through the city's Active Travel campaign, which key aim is to encourage more people to incorporate walking and cycling as part of their day-to-day journeys.
- 3.4.5 The £270m Leeds Public Transport Investment Programme (LPTIP), comprised of funding from the Department for Transport (£174m), LCC, the West Yorkshire Combined Authority, bus operators and developers will deliver significant investment in public transport by 2021 including; bus priority corridors incorporating segregated cycle facilities, city centre gateways, expansion of existing bus and rail park & ride sites, alongside complementary investment in bus services and low emission vehicles from the bus operators.

- 3.4.6 A further 2,650 park & ride spaces are to be delivered with work already started on expanding Elland Road and construction of the Stourton site to take further private cars off roads into the city centre.
- 3.4.7 There are funded proposals for a further 6kms of new cycle superhighways as part of the City Connect programme. In addition, the council will soon start to build phase one (4.8kms) of the orbital cycle highway, which will run on the outer ring road from Red Hall to King Lane.
- 3.4.8 Work has already begun to improve the Electric Vehicle (EV) charging facilities and there will be at least 30 new rapid charging sites installed across Leeds. Further public charging infrastructure is due to be procured through appointment of a delivery and operational partner in 2020, whilst planning conditions are now mandating the inclusion of charging infrastructure in all new developments.
- 3.4.9** The installation of the charging infrastructure will complement the Electric Vehicles (EV) trial scheme. The EV trial scheme will launch in the 2020, offering free trials of electric vans and e-bikes to organisations in West Yorkshire and free trials of electric cars to private hire drivers. This project is funded by a £1.9 million clean air grant from Highways England and £900,000 from Clean Air Zone (CAZ) early measures. A launch event will take place on 23rd January at Headingley stadium. Attendees will be able to test drive vehicles available on the scheme, speak to exhibitors and find out more about operating electric vehicles in commercial fleets

3.5 Transport – future vision

- 3.5.1 Our Connecting Leeds vision is to be ‘a city where you don’t need to use a car’.
- 3.5.2 Achieving this vision of moving our transport system away from personal car ownership, towards more efficient, low carbon, shared, active and public transport based system will:
- Allow individuals to choose the most suitable transport option for each journey;
 - Dramatically reduce the number of vehicles needed;
 - This efficiency will translate into reduced cost of travel for all;
 - Reduce congestion by making more efficient use of the road space available;
 - Reduce carbon emissions and improve air quality;
 - Allow more efficient use of land, with less space needed for parking.
- 3.5.3 The extent to which we are able to deliver this vision will be influenced by the action we take to transform transport in the city, the region and wider north of England. Providing real alternatives to car ownership for everyday journeys is essential in delivering our vision to be a city where you don’t need to use a car.
- 3.5.4 Motorised traffic makes a significant contribution to environmental challenges we face as a city. We are clear that we need to invest in a world class integrated public transport network for a net zero carbon future and work together to support the city’s transition to low carbon forms of public transport. As well as delivering the council’s ambitions for tackling climate change, the transport system must also deliver our other priorities of inclusive growth and health and wellbeing. To meet these aspirations, Leeds must become a city where walking, cycling and low carbon public transport become the most appealing and practical choices for many more journeys.

3.5.5 This will require an investment plan delivered in partnership with DfT, Transport for the North, West Yorkshire Combined Authority and other partners including the following:

Rail:	<ul style="list-style-type: none"> • Work with the investment needed to deliver transformational improvements to the rail network. Including Northern Powerhouse Rail, HS2, an upgraded Trans-Pennine line, more local stations and transforming Leeds Station into a world-class transport hub.
Light Rail:	<ul style="list-style-type: none"> • A new modern Mass transit network for the Leeds city region to complement and integrate with rail and bus services.
Bus:	<ul style="list-style-type: none"> • A core network of high frequency bus services supported by additional bus priority measures. • City Centre Gateways to transform the public transport experience across the city. • Expanded park & ride on key radial routes. • Demand responsive transport services to offer flexibility and connectivity across the city.
Road:	<ul style="list-style-type: none"> • A modernised Urban Traffic Management and Control system to prioritise the efficient movement of people. • Explore traffic reduction strategies through parking or user charging mechanisms. • A programme of road safety measures supported with education, training and publicity campaigns. • Continued programme of resurfacing and footway maintenance
Active Travel:	<ul style="list-style-type: none"> • Comprehensive, safe, segregated cycle network across the city. • New and enhanced key walking routes between communities linking residents and district centres. • A programme of 20mph zones for residential streets across the district. • Enhanced streets and pedestrianisation schemes creating a vibrant city centre.
Innovation and Technology:	<ul style="list-style-type: none"> • Introduction of the Clean Air Zone to improve air quality. • Introduction of an affordable integrated ticketing solution which embraces new technology options, takes account of new flexible working patterns and reflects our travel to work geography. • Refuelling and charging infrastructure for low emission vehicles

3.5.6 To help address the climate emergency we need to deliver a modern mass transit network across West Yorkshire where bus and rail doesn't do the trick - providing the right blend of technology, priority and capacity to move high volumes of people in the parts of our transport network where demand is greatest. We will also ensure that the benefits of innovation are available to all, by championing affordable integrated ticketing which embraces new technology options, takes account of new flexible working patterns and reflects our travel to work geography.

- 3.5.7 Using the West Yorkshire Transport Strategy as a starting point the following 10 year mode share targets are proposed for Leeds:
- Bus Increase 100%
 - Rail Increase 75%
 - Walking Increase 10%
 - Cycling Increase 300%
 - Car Decrease 15%
- 3.5.8 These are ambitious targets and when combined with the expected population growth and technology change would reduce the transport carbon emissions by 27%.
- 3.5.9 The strategy will see a significant decrease in the importance of the car but lower emission private vehicles will still have a role to play. Refuelling and charging infrastructure are an essential element in decarbonising the fleet and therefore it is critical that we develop a robust alternative fuel infrastructure.
- 3.5.10 Further technical work is taking place to develop a robust and deliverable transport strategy. A draft strategy will be prepared for consideration by Executive Board in summer 2020. This will be followed by a period of public engagement through our Connecting Leeds transport conversation with adoption of the final strategy in autumn 2020.
- 3.5.11 As part of this the council will also consider a workplace levy on car parking alongside other measures which may encourage a shift from the private car, maximise environmental benefits and generate investment in alternatives. We will explicitly need to consider the impact on both people who have no access to a reliable alternative to their car and those on lower incomes.
- 3.5.12 Strategy development work is currently focussed on responding to the Leeds Climate Commission report, BLCC and articulating the scale of the challenge in meeting the carbon reduction targets, alongside the potential policy options and infrastructure investment, including mass transit, needed to meet these targets and our wider transport strategy objectives.
- 3.5.13 The BLCC showed support for transforming our town centres to support public transport and active travel. This is fundamental to our Connecting Leeds vision, by creating neighbourhoods which are attractive, safe and vibrant more people will chose to walk and cycle improving health, quality of life and local economies as well as helping address the climate emergency.
- 3.5.14 The BLCC also showed strong support for investment in sustainable infrastructure. Section 2.11 highlights the positive investments we have made in recent years and are continuing to deliver through Connecting Leeds. However to reach the targets we have set for carbon reduction we will need to significantly increase the level of infrastructure investment, focussed on active and public transport. We will also continue to work in partnership with the West Yorkshire Combined Authority to improve public transport services and develop a business case for mass transit that reflects our Connecting Leeds transport strategy and wider best city ambitions.

3.5.15 Asks of Government

The following are the asks of government required to support the delivery of a net zero transport system:

- Significantly increased, long term funding for active travel and public transport, including:
- Commitment to deliver an Urban Mass Transit Network in Leeds City Region;
- Full commitment to deliver Leeds Integrated Station Masterplan;
- Greater control and influence on public transport services at a local level;
- Use of national taxation and incentive schemes for behavioural change and increase in low carbon vehicle uptake;
- A review of the DfT assessment framework for to provide sufficient weight for new transport projects that provides sufficient weight reduce carbon emissions by encouraging mode shift and constraining car use;
- Greater local influence over Highways England to ensure the investments and operation of the Strategic Road Network aligns with local policy.

3.6 Aviation

- 3.6.1 The council recognises that the global emissions arising from aviation are significant, damaging to the environment and must be addressed in the strategy to combat global warming. Furthermore, it recognises that the planned increases to aviation in the national strategy over the next ten years will see a rise in emissions that will not be addressed by improvements to fuel efficiency or technology. The council also accepts given the scale of the global challenge that offsetting to compensate for the rise in emissions will not be sufficient.
- 3.6.2 Aviation growth and meeting zero carbon targets are fundamentally incompatible until such time as new technologies are developed. It is only at the point at which emissions from aircrafts have been adequately resolved that national and international aviation growth can be supported.
- 3.6.3 The council also recognises the contribution that the local airport makes to the local economy and the thousands of jobs, directly and indirectly, dependent on it. Any future strategy needs to take into account the impact changes to the aviation industry may have on employment and find credible alternative growth sectors. It also recognises the benefits that international travel brings, both for business and the individual. It is imperative to secure public support for any changes which limit choice or increase costs.
- 3.6.4 Leeds Bradford Airport represents only 1.4% of air travel and is therefore marginal in the totality of the challenge. Importantly, most people from Leeds fly from elsewhere, so other airport growth must be taken into account. In the absence of a national strategy, limiting Leeds Bradford is only likely to damage the local economy, leading to further trips to neighbouring airports, with a consequent rise in emissions. Leeds cannot therefore commit to a strategy in isolation to others. It is not appropriate for the council, by default, to export aviation to other areas.
- 3.6.5 Leeds does, however, accept that aviation emissions need to be contained. It will therefore participate in national and international discussions to revise growth projections, with the aim of distributing aviation share across the country in a way which minimises carbon emissions and promotes an economic rebalancing of the regions.

- 3.6.6 If we are asking people to stop taking internal flights, or flights to nearby European cities, there need to be reliable alternatives for people to use. Currently these alternatives are lacking both in terms of choice, capacity and reliability.
- 3.6.7 Leeds station is already the third busiest outside of London – and the fourth worst in the country for overcrowding at peak times. The capacity of our existing station and rail lines are already past breaking point and we need schemes like HS2 to enable people to travel longer distances more sustainably.
- 3.6.8 In the meantime, the council will work on a number of mitigating actions. It has already withdrawn its previous proposals for surface access, reducing the direct impact on green belt. Its revised surface access plans will concentrate on links which improve rail access. Full details of the revised proposals can be found in the Executive Board paper entitled “Surface Access to Leeds Bradford Airport, the North West Leeds Employment Hub and Proposed Airport Parkway Station” that is also on today’s agenda.
- 3.6.9 The council will advise people about the impact of flying and encourage people to make more sustainable travel choices. The council will also promote an offsetting scheme through which passengers can fund projects which save or sequester carbon within their own locality. Finally, the council will support the Airport to be a centre for innovation, working with the local universities, with the aim of developing low and zero carbon aviation which will provide the industry with a long term sustainable future.
- 3.6.10 **Asks of Government**
- An ambitious national aviation strategy that integrates aviation into the national carbon roadmap, creating a level playing field for all national and regional airports;
 - Introduction of a frequent flyer levy to reduce demand;
 - Investment in rail to provide a realistic alternative to flying for domestic and European flights.

3.7 Emissions from buildings and the key challenges

- 3.7.1 Residential emissions account for 63% of buildings emissions, with commercial and public sector emissions accounting for 27% and 10% respectively. Direct emissions, resulting from use of fossil fuels (primarily gas) for heating, make up almost half of buildings emissions. The other half is electricity-related, resulting from lighting and the use of appliances, as well as some electric heating (especially in the commercial sector).
- 3.7.2 Low-carbon heat provides one of the biggest challenges for carbon targets. Heating and hot water for UK buildings make up 40% of total UK energy consumption and 20% of UK greenhouse gas emissions. The national Committee on Climate Change argues that it will be necessary to eliminate these emissions in order to meet the targets in the Climate Change Act. The Committee on Climate Change has also reported on the potential of hydrogen in a decarbonised future energy system for the UK.
- 3.7.3 The existing policy direction is to reduce carbon emissions from heating by replacing natural gas heating with heating fuelled by increasingly decarbonised electricity. However UK peak gas demand is currently seven times peak electricity demand so pursuing an all-electric approach, notwithstanding improvements to

energy efficiency, will inevitably prove challenging in terms of the ability of the existing electricity grid infrastructure to cope with such a large increase in demand. Replacing natural gas heating with hydrogen fuelled heating is an alternative approach, but both options (converting to an all-electric or hydrogen option) are unproven at a national scale.

- 3.7.4 The H21 (Hydrogen) Leeds City Gate project is an innovative new proposal by Northern Gas Networks (NGN) who are pioneering plans to transform the Leeds gas network to use 100% hydrogen rather than natural gas for commercial, industrial and domestic use. Leeds would be one of the first UK cities to be converted from natural gas to hydrogen in what would essentially be a vision for the country, requiring government support (similar to the transition from Town Gas to natural gas in the 1960s/70s) with all major cities being converted by 2050. This requires a national policy decision to be taken in the early 2020s.
- 3.7.5 The H21 Leeds City Gate project is now concerned with demonstrating the safety case for a 100% hydrogen gas infrastructure, while the recently launched H21 North of England project looks to roll out the conversion of the gas grid to hydrogen across the major urban centres of the North. Leeds would act in a central role in this work and would also be one of the first cities to convert.
- 3.7.6 The BLCC included a question on using hydrogen gas to heat our homes, asking respondents how strongly they would support this proposal. Over 85% said that they strongly supported or supported this proposal.
- 3.7.7 However, the first rule of any system of energy management is to consume less energy in the first place. Space heating of homes and other buildings is a significant component of current energy consumption. Insulation of existing buildings and construction of new build to high standards is the most effective way of reducing space heating energy requirements. This also has the added social and economic benefits of improving the comfort of homes and reducing fuel bills.
- 3.7.8 Through the BLCC, a proposal to incentivise building owners to improve the energy efficiency of properties through council tax or business rates was widely supported (91.4%) by respondents. Following a successful grant application, BEIS has provided grant funding to Leeds City Council, working in collaboration with Barnsley Council and Hull City Council, to undertake a feasibility study into incentivising council tax and business rates as a means of improving energy efficiency in homes and businesses through retrofit measures. The study will test the viability of incentive schemes and the opportunities and issues associated with a potential pilot. The findings of the study will inform whether proposals for policy in this area should be pursued, with the final report due in March 2020.

3.8 Housing

- 3.8.1 There are approximately 345,000 households in Leeds. Although there is a strong focus nationally on the decarbonisation of the gas and electricity grids, achieving a reduction in energy usage through improved insulation and more efficient appliances is also critical, with heating of domestic properties a major source of energy use and carbon emissions.
- 3.8.2 Energy efficiency of domestic households is assessed using the government's Standard Assessment Procedure (SAP) methodology, which is based on the energy costs for heating, hot water, ventilation and lighting, minus savings from any

installed renewable energy systems like solar photo-voltaic (PV). The SAP value is on a scale of 1 to 100, where 1 is poor and 100 is energy 'neutral' (i.e. generating as much energy as is consumed). SAP ratings, which take into account:

- Construction materials used;
- Level of thermal insulation;
- Air leakage/ventilation characteristics of the building;
- Efficiency and control of any heating systems;
- Solar gains from windows and doors;
- Type of fuel used and its relative cost to alternative fuels;
- Energy for space cooling (if applicable);
- Renewable energy technologies.

3.8.3 SAP ratings are documented within Energy Performance Certificates (EPCs) for dwellings, which provide a summary of the energy efficiency of buildings, including a banding between A (very efficient) and G (inefficient).

3.8.4 Table 2 below shows the breakdown of housing by tenure and city-wide average SAP ratings based on the most recentLY published figures:

Table 2 (2016 Government data)

Tenure	Households	%	Average SAP rating
Owner occupied	202,408	61%	63.2
Private rented	64,109	19%	60.2
Council owned	54,317	16%	69.9
Registered social landlord	13,328	4%	68.0
Total	334,638	100%	63.9

3.8.5 As can be seen from the figures above, council owned housing in Leeds has the highest SAP rating of almost 70, compared to the private rented sector at just over 60.

3.8.6 In terms of households in fuel poverty, a household is classed as such if their fuel costs are above average, and their disposable income (after housing and fuel costs) is below the poverty line. Fuel poverty in Leeds (11.15%) is slightly higher than the national average (10.9%), although there are a number of specific wards in the city where the percentage is much higher, most notably Gipton and Harehills (23.8%) and Headingley and Hyde Park (27.6%).

3.8.7 The Affordable Warmth Strategy in 2011 for Leeds set aspirational targets to increase the average SAP rating of housing in Leeds to band C (minimum SAP 69) by 2020 as a whole, and to ensure that no properties are below band E (minimum SAP 39) by 2030. This would represent a carbon saving of circa 240,000 tonnes of CO₂e.

3.8.8 However, to achieve these aspirations requires significant investment and funding support from government, and yet in recent years the level of support has dramatically fallen, with the result that this 2020 target will not be met.

3.8.9 The following sections summarise recent achievements and progress across the housing sector in Leeds to address energy efficiency, tackle fuel poverty and reduce carbon emissions.

Social housing

3.8.10 The council has recently successfully secured funding for, or delivered on, a range of major low carbon projects for its social housing:

- **Transformational Insulation in Back-to-Backs (TIBB)** – this is a £10.5m project, with £5.28m from the European Regional Development Fund (ERDF) to fit innovative external wall insulation (EWI) to 750 solid wall back-to-back properties in selective licensing and other priority neighbourhoods, providing significant enhancements in energy efficiency and reductions in fuel bills, and so contributing to addressing fuel poverty in the city. The project is also intended to drive down the cost of off-site manufactured EWI and stimulate take-up, which will allow future retrofit programmes to become quicker and cheaper.
- **Fitting the Future (FTF)** - this project will develop and demonstrate a business case for domestic solar photovoltaic (PV) energy generation utilising energy storage, which enables a greater proportion of the renewable energy generated to be used directly by domestic properties. FTF will also explore the effects on the local electricity grid of concentrated, large-scale domestic solar PV with battery storage installation, and a large commercial installation with vehicle to grid technology, to provide evidence to support the case for Northern Powergrid to increase the level of renewables they approve. The project will use £2.7m of ERDF funding, £1.5m from LCC, and £1.2m private funding to insulate and fit energy systems to 250 homes, and solar PV and vehicle chargers to a commercial depot.
- **Air source heat pumps** - the council is working on a project to install air source heat pumps in 100 electrically heated council properties which are not on the gas network. The intention is to secure grant funding that will be matched with Renewable Heat Incentive and LCC funding, and will deliver carbon reductions of c60% with tenants' running costs equivalent to using a gas boiler.
- **District heating network** - the council has now delivered the first phase of a city-wide district heating network, with approximately 8km of pipework installed linking the Recycling and Energy Recovery Facility at Cross Green to the city centre. The network is already supplying commercial customers and council multi-storey flats in the Lincoln Green, Ebor Gardens, Stoney Rock and Saxton Gardens areas, with the network expected to supply around 1,000 properties by the end of 2019, and with a further 1,000 to be connected by September 2020. It is estimated that this will reduce fuel bills to potentially vulnerable residents by around 10-15%, and will provide carbon savings of over 3,800 tonnes per annum from these flats alone. As noted earlier, work is now in progress for a significant further expansion of the network into the city centre.
- **LED lighting** - £30,000 has been made available from White Rose Energy's social responsibility fund for Housing Leeds to convert lighting in up to 1000 council houses to LED bulbs, thus providing savings to incoming tenants. The

scheme is expected to provide an annual carbon reduction of 50 tonnes per annum, and annual savings to residents of around £35 in electricity bills. Work is expected to start in early 2020.

- 3.8.11 The council has an ongoing annual c£80m capital programme to maintain and improve the council's housing stock. The council is in the process of commissioning the University of Leeds to carry out data analysis of the council housing stock for a year. The University will map household energy use, energy/carbon saving opportunities and socio-demographic data across the city. The outcome will be a targeted and costed plan as to where and when to invest to deliver the best cost and carbon savings, whilst also maximising social benefits in terms of health and fuel poverty.

Private rented sector housing

- 3.8.12 The private rented sector continues to have the highest proportion of poor quality housing as defined by the Decent Homes standard, and the lowest SAP rating as shown in Table 2 above.
- 3.8.13 Although tenants benefit from a reduction in energy bills, the timescales for a tenancy are generally shorter than the payback period for an investment in home energy efficiency improvements. Most landlords will not directly benefit from bill reductions, especially in more deprived areas where rent levels are primarily determined by the maximum housing benefit payment.
- 3.8.14 Landlords cannot grant a new tenancy for a home with an Energy Performance Certificate (EPC) banding of F or G, and from 2020 they cannot be rented even if no change of tenancy is involved. The government are consulting on proposals to reach Band C for all dwellings by 2030 wherever practically possible. However, there is an exemption that can be applied for if the required measure costs more than £3,500 to install and cannot be fully funded by third party funding. In practice this therefore means that only standard, low-cost measures are covered by the regulations.
- 3.8.15 In Leeds the private rented sector has increased significantly in the inner city, and over 50% of the private rented sector is pre-1919 stock, most of which are solid walled, back-to-back or through terrace properties which are difficult and expensive to insulate. Most now have double glazed windows and there may be some roof insulation, although many are lived-in roof spaces, meaning very little by way of energy efficiency measures will have been installed.
- 3.8.16 The Housing Act 2004 does include a duty to address hazards in the sector, one being excess cold. However, most work to address excess cold will be provision of gas central heating rather than provision of insulation so this is likely to increase carbon rather than reduce carbon emissions.
- 3.8.17 Almost 70% of the private rented sector has an EPC rating of D or E, with over 15% with a rating of F and below (2017 stock condition survey).
- 3.8.18 In terms of recent actions taken to address these issues, the 2019 Landlord Conference for the City was dedicated to climate change action. The Leeds Rental Standard has also been developed and used to educate landlords, providing

information and guidance on improving management of the stock and on carbon reduction measures which can be installed when undertaking improvements.

- 3.8.19 A number of capital improvement schemes, such as in Cross Green and Holbeck, have been delivered by the council in private rented areas. These are expensive but have secured significant benefits. In Holbeck, a £4m scheme has been delivered in the Receptions to improve over 150 homes, lifting them from an average EPC banding of F/G to B/C, making substantial carbon savings, and winning the 'Large Energy Project of the Year' in the Yorkshire and Humberside Energy Efficiency Awards 2019. A separate report providing fuller details on investment in Holbeck will be considered at the January 2020 Executive Board meeting
- 3.8.20 As regards work to renovate empty properties, the council encourages improvements to energy efficiency through provision of equity loans if the relevant criteria are met.
- 3.8.21 The council continues to lobby government to strengthen regulations and measures which will deliver improvements in this sector, building on the exemplar schemes already delivered by the council in Leeds, and to work with landlord associations and landlords to this end. In particular, the council is exploring the opportunities that selective licensing may offer in Beeston and Harehills, two of the areas of poorest housing conditions in the city.

Owner occupied housing

- 3.8.22 Owner occupied properties represent over 60% of all housing in Leeds, and are less within the direct influence of the council than other sectors of housing. Many properties have been fitted with loft and cavity wall insulation, with these measures offered for free under the 'Wrap Up Leeds' scheme back in 2011/12. Although the availability of government subsidies for householders for installing these measures has diminished, they remain relatively inexpensive, with the cost being recovered quickly through reduced energy bills. However, national data still shows that an estimated 20-27% of cavity walls in the UK are uninsulated, and 26-33% of lofts inadequately insulated, with the costs of dealing with these in Leeds estimated at £31m (cavity walls) and £27m (lofts). However, a large proportion of owner occupied housing is Victorian or back-to-back, with solid walls (around 75k properties), original attic rooms and poor ventilation, and therefore more expensive and challenging to insulate. It is estimated that 91-95% of solid wall properties are uninsulated, with the cost of installing EWI to this number at over £700m.
- 3.8.23 The government's Energy Company Obligation (ECO) scheme was launched in 2013 to help make energy saving measures such as heating and insulation affordable for householders, and requires every major energy company in the UK to provide funding for installations that cut carbon emissions and fuel bills. However, there is limited influence at local level over which properties or schemes receive funding, with the energy companies determining how this is allocated. This can mean that schemes which are easier for the companies are targeted rather than those which, from a local perspective, should receive a higher priority.

- 3.8.24 In spite of these challenges, a range of strategies are being used by the council to support improvements in this sector. This includes: lobbying government to support greater freedoms for local authorities to determine where ECO funding is targeted; enhancing promotion of energy efficiency measures, good practice and funding opportunities to residents (e.g. via the #LeedsByExample website), and; using funded projects for social housing (e.g. TIBB project referred to above) to achieve economies of scale in the market and as demonstrators to encourage private homeowners to take up energy efficiency measures such as EWI.
- 3.8.25 The council could also submit a devolution style proposal to government for 'green new deal' type funding to bring economic investment into the city in support of Leeds meeting its carbon targets. In relation to private housing this could include retrofitting homes with energy saving features and potential renewable energy generation and supply infrastructure. This could also allow financial incentives to be provided to homeowners for the most energy efficient homes, or interest free loans for installing energy efficiency measures. The initiative would be linked into developing the local supply chain, and creating new jobs and training opportunities within Leeds.

New build

- 3.8.26 The Site Allocations Plan for Leeds (2012-2028) provides for over 50,000 additional homes. This presents a challenge to achieving net zero, since any new development is expected to have some level of additional carbon footprint. However, a range of measures have been implemented or are being developed to minimise this impact.
- 3.8.27 In terms of new build social housing, the council has developed the 'Leeds Standard' and specification, which sets out its requirements in respect of all new homes in Leeds, significantly exceeding current Building Regulations requirements. The standard focusses primarily on reducing carbon, improving air quality and tackling fuel poverty. Specific elements include high performance insulation and glazing to minimise heat loss and maximise natural light, energy efficient hot water and heating systems, installation of solar panels and water saving measures and devices.
- 3.8.28 Modelling of energy costs for homes built to the new 'Leeds Standard' showed that they were over £500 a year lower when compared to averages in England and Wales. Also, the average household in England and Wales produces an estimated 6 tonnes of carbon per annum, with 'Leeds Standard' homes assessed at 1 tonne.
- 3.8.29 Further work is in progress to explore renewables and other measures to support the decarbonisation of both the electricity and gas grid in relation to social housing, and also sustainable transport and access to services. The council is currently committed to a council house building programme of 300 new homes per year, with an initial target to deliver 1,500 homes by the end of 2024, and with the development of 800 homes already in progress.
- 3.8.30 In terms of influencing private housing development, the land use planning system clearly plays a critical role in mitigating and adapting to climate change. The National Planning Policy Framework stresses that the planning system should

support the transition to a low carbon future in a changing climate, and all development plans produced in Leeds as part of the Local Plan have sought to future-proof the city from the consequences of climate change and reduce carbon emissions. In this way, planning for climate change is embedded within Leeds, although it will be essential to implement, plan, monitor and continue to strengthen policies to ensure they are effective and responsive to new pressures and opportunities to help future-proof the city.

- 3.8.31 In particular, the Core Strategy for Leeds (adopted in 2014) focuses the majority of development in the most accessible places, sustainable locations and on previously developed land, and residential developments of more than ten dwellings are to be built to energy efficiency standards which exceed Building Regulations. Although legally LPAs still have discretion to set their own higher energy efficiency standards, a recent government consultation on the 'Future Homes Standard', proposes amending legislation to remove this ability.
- 3.8.32 Leeds City Council is therefore planning to lobby government strongly to make clear that these proposals will prevent the city from meeting net zero for housing by 2030, and indeed government's own 2050 target. Leeds will also be recommending the adoption of a single standard by government, to be set at this highest standard for sustainability and which applies to all local authorities such that it encourages fundamental change at an industry level. Moreover, now that the council has an up-to-date Plan in place and a five year land supply, it can strengthen quality place-making through planning decisions and resist non-compliant, speculative developments. As well as lobbying government, the council is engaging with Core Cities and the sub-region in learning and sharing good practice.
- 3.8.33 The council is also working closely with developers in order to understand barriers, showcase best practice, facilitate innovation and communicate the city's ambitions for sustainable development and climate change action to the market. The council's Climate Emergency Advisory Committee (CEAC) has also established a dedicated cross-party Elected Member working group to focus on planning, buildings and energy in support of this agenda.

3.8.34 Asks of Government

- Deliver a 'national infrastructure' approach to home and building retrofitting to drive action and achieve economies of scale, with funding for households in fuel poverty and incentives for the 'able to pay';
- Enable greater local influence over the targeting of ECO funding;
- Revise Minimum Energy Efficiency Regulations (MEES) for private landlords, including changing the definition of the current £3,500 cap on investment required of landlords regardless of whether they have secured grant funding;
- Provide 'green new deal' type funding to the council to bring economic investment into the city in support of Leeds meeting its carbon targets;
- Adopt a single standard for new developments in planning policy to be set at the highest standard for sustainability.

3.9 Economy

- 3.9.1 Moving to a zero-carbon energy system will mean that, by 2030, there will likely to be many fewer jobs in carbon-based energy industries. This will disproportionately impact the north of England, which, along with Nottinghamshire, is home to the majority of coal and gas power stations. This transition could result in a potential 28,000 jobs being lost in the north of England according to Institute Public Policy Research (IPPR) analysis. These jobs figures not only account for direct work in these carbon-based energy industries, but the indirect and wider impact on the regional economies in the north of England.
- 3.9.2 Around 10% of workers have skills which could be in more demand, while 10% are more likely to need reskilling. Importantly, this does not mean these jobs will be lost; rather that this is where particular attention will be needed. Construction (30%), transport (26%) and manufacturing (17%) are the sectors that could require greatest reskilling. Yorkshire and Humber is one of three regions nationally with the highest proportion of jobs that could be exposed to the transition.
- 3.9.3** Leeds is fortunate to have a well-balanced economy which is not disproportionately dependent on high carbon industries for employment. The city is already very strong in the digital and health sectors which provide great opportunities for growth. Nevertheless the transition to a zero carbon economy presents enormous challenges, both in providing the quantities of skilled labour to undertake the transition, such as the decommissioning of gas boilers and housing retrofits, but also finding alternative energy sources or other forms of employment for those currently engaged in high carbon industries. The council is committed to the concept of a “Just Transition” which does not result in people being penalised by the shift to the zero carbon economy and in particular to protect those on low incomes from adverse effects. The council’s Inclusive Growth Strategy acknowledges the significance of the climate emergency and this will be a key focus of the annual report on Inclusive Growth in 2020.
- 3.9.4 Engagement will continue on an ongoing basis through our Inclusive Growth Delivery Partnership and our other regular contact with businesses across the city.

3.10 Schools

- 3.10.1 Schools are seen as a key target audience for a multitude of reasons. They have the opportunity to influence children as future agents of change, in addition to being able to implement behaviour change in a controlled environment. Their reach stretches beyond the classroom, to parents and local communities.
- 3.10.2 The council promoted the Big Leeds Climate Conversation at a variety of events aimed at younger people and/or families including 8 Breeze events, 2 careers networking sessions in schools, 8 university fairs and Child Friendly Live. Additionally, three workshops were held with young people, including one with the city’s Youth Council. Letters promoting the conversation were also shared with schools via Leeds for Learning and presentations were delivered directly to primary and secondary school head teachers as part of scheduled meetings. Finally, a promoted post was seen by more than 35,000 residents aged 13-24 on Facebook and Instagram.
- 3.10.3 At the workshops with young people, attendees made a number of suggestions for what schools could do to respond to the climate emergency. Suggestions from young people included:

- Reducing the carbon footprint of food served and sold;
- Cooking classes to teach people how to cook lower carbon meals;
- Solar panels on school roofs;
- More promotion of sports as a zero carbon activity and more outdoor gyms;
- Not using single-use plastic cutlery;
- Fencing off areas of land to let trees and plants grow wild;

3.10.4 The key target areas in schools are:

- **Energy efficiency and management in schools**

A scheme for schools to replacement of conventional lighting with the more energy efficient LED lighting, started as a programme supported by Salix in 2014. Through Salix, we are able to offer schools interest free loans for a period of 8 years, with payback calculated through predicted savings made as a result of implementing the energy saving measure. Schools take up of the scheme is voluntary and is only eligible for maintained schools (Academies fall under a different and more competitive funding stream). As of 2014 we have had approximately 40 schools participate in the scheme, spending £1,367,385, which would ultimately see 690t CO2 saved per annum. We continue to promote the scheme through word of mouth, Leeds for Learning Website and via school focused events and therefore maintain a steady stream of interest.

We are also working to see how SALIX can be used more effectively alongside the planned maintenance programme to support other energy efficiency measures such as insulation, heating controls, new boilers etc.

There is an opportunity to engage the University to undertake an audit of school kitchens to determine their holistic carbon output, considering various issues such as food preparation methods, food waste, energy consumption, appliances, deliveries, etc. The objective of the assessment is geared towards identifying the potential for interventions to reduce carbon emissions. This project is anticipated to commence in 2020.

The Energy Unit within the Sustainable Energy and Air Quality Team communicate regularly with schools through Head Teacher briefing events, Business Manager finance events, through Leeds Learning Net and the issuing of updates through established communication channels. The Unit offer advice to the schools in ways that they can reduce their energy consumption, check their billing and consumption, opportunities available through the utilisation of the SALIX finance scheme and the provision of interest free loans to install technologies that will reduce energy consumption.

There has also been work to promote improved energy management within schools, highlighting the requirement to switch off during holiday periods to reduce energy wastage. This is an on-going campaign.

- **Travel to schools**

Passenger Transport and Facilities Management have had a review of how their vehicles are utilised of the SEN Schools transport area of operations. At the start of the new September term our 150 strong in house fleet is doing 100 miles a day less

and we have approx. 90 less private hire vehicles running meaning 1400 less private hire miles a day. This has been delivered through better routing, the use of routing software and increasing occupancy on our in house buses. As a result these operations have seen a reduction of 235,366 g/km of CO₂e and 37,658 g/km of NO_x.

Leeds City Council engage with all schools across the city to help develop and implement school travel plans to encourage safe and sustainable travel to school. Council policy has been adopted through the Supplementary Planning Document on Travel Plans to ensure that all new build and expansion schools have a travel plan in place and through the Sustainable Education Travel Strategy to promote safe and sustainable travel to school. 137 school travel plans are subject to a planning condition in Leeds with 46 schools currently being monitored to ensure the travel plan is being delivered.

The council offer support to all schools by developing and delivering a range of initiatives to promote safe and sustainable travel including, cycle training, pedestrian and scooter training alongside promoting national campaigns such as Walk to School Week, the Big Pedal and Bike Week. The Schools Yorkshire Tour cycle relay will start in Leeds in June 2020 and will run alongside a programme of school street closures under the play Street scheme. Leeds promote 'Modeshift STARS' (sustainable travel accreditation recognition for schools) national accreditation funded by DfT and free to all Leeds schools. There are over 120 schools working towards accreditation in Leeds with 7 schools receiving Gold award, 6 silver and 32 bronze in 2019.

188 anti-idling banners and signs have also been distributed to schools and nurseries to highlight the damage that can be done by leaving your engine running unnecessarily.

- **Food choices**

More detail is provided on this in paragraph 3.27 below.

- **Tree planting and biodiversity**

More detail is provided on this in paragraph 3.29 below.

- **Education**

A schools checklist has been prepared by the council to highlight areas that pupils might want to consider when identifying opportunities to improve schools sustainability under eight key areas

- Buildings and grounds;
- Energy and water;
- Purchasing and waste;
- Travel and traffic;
- Food and drink;
- Inclusion and participation;
- Local wellbeing;
- Global dimensions.

Schools are being encouraged to participate in a Keep Britain Tidy initiative – Eco Schools. The primary objectives being that Eco-Schools empowers pupils, raises

environmental awareness, improves the school environment and also creates financial savings for schools. It engages the wider local community, links to the curriculum and can help deliver Ofsted requirements.

- **Communication and engagement**

There was focused engagement with young people during the BLCC. However, this was just the start of the engagement and there are a number of key events and activities already planned for 2020:

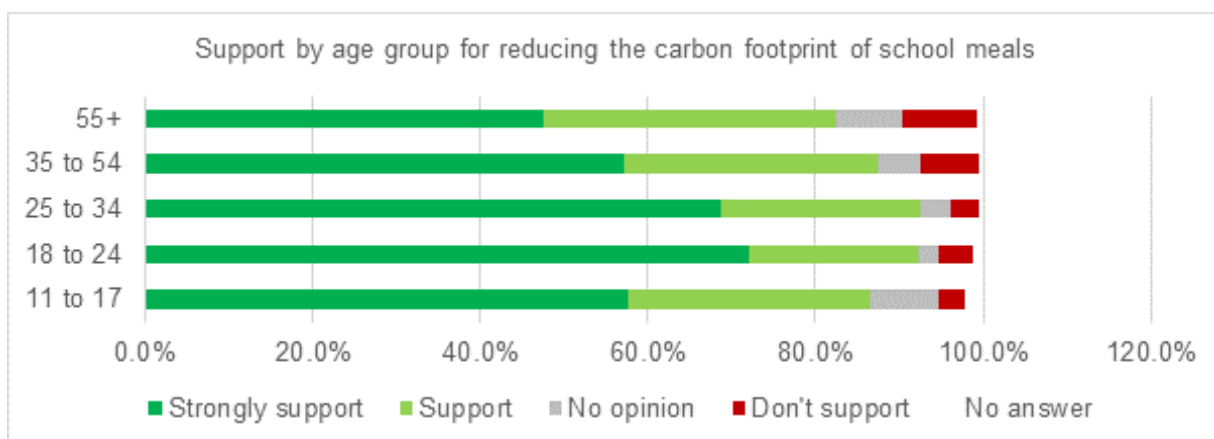
- Publication of a guide for schools
- Young people survey undertaken on climate emergency
- Youth Summit, February 2020 – focused on climate change
- Climate Emergency Advisory Committee Meeting focused on schools
- Child Friendly Leeds Ambassador event, June 2020

3.11 Food

3.11.1 Emissions from food are being targeted through a range of interventions starting at the supply chain. Existing council procurement processes take into consideration the sustainability of supply, however previous approaches have weighted other criteria such as price more favourably. In response to the climate emergency, the council is reviewing and developing its procurement guidance, to ensure council officers with purchasing responsibility are aware of considerations that must be taken into account when procuring new good and services contracts. The new guidelines will be available early 2020.

3.11.2 Beyond the supply chain, behaviour change interventions are being developed in areas where the council has direct control over the consumption of food. For example, we have embarked on a 'Planet Friendly Menus' project. This initiative is exploring the potential to display information about the carbon intensity of food products on sale in our outlets, with the aim of encouraging carbon positive consumer choices. The Leeds City Museum café has been identified as the pilot site for the project. Should the pilot prove to be successful the project will be rolled out to other sites. This initiative will complement other initiatives taking place in the city, such as the Healthy café criteria being led by Leeds Food Partnership / Public Health where considerations such as portion sizes will have a direct effect on emissions, through less waste avoidance.

3.11.3 As part of the BLCC, reducing the carbon footprint of school meals was widely supported by residents (88% agree or strongly agree). School age residents were less likely to object to the proposal than older adults or focus group participants. Some older focus group participants felt that the council should instead focus on educating young people about healthy and sustainable food choices rather than restricting food choices. However, when we asked young people as part of a workshop whether they would object to their school having a "meat free" day to reduce their carbon footprint, 84 out of 88 young people said that they would not object.



3.11.4 Further behaviour change activity is proposed to take place in schools. Leeds pupils are taste-testing new environmentally friendly school dinner menus in a project led by Catering Leeds. The aim is to reduce the city's carbon footprint, and ensure that pupils enjoy even healthier meals with extra vegetable content. This will be offered to all 182 primary schools provided catering by Catering Leeds Children.

3.11.5 The proposed menu includes one non meat day and one vegetarian day each week plus vegan dishes, with more vegetables included in main dishes and even desserts.

3.11.6 Pupils have a rainbow of salad, vegetables and raw veg sticks to choose from, and often prefer raw vegetables to cooked. Serving raw vegetables helps to reduce energy consumption, while helping children to enjoy their '5 a day'.

3.11.7 The menus are being finalised in consultation with schools and are already receiving a thumbs-up from pupils during trials. They have been developed by a forum including operational staff and in-house nutritionists, together the Leeds Council Health and Wellbeing Service team and the food awareness organisation Pro-Veg.

3.11.8 The new menus are part of a bigger plan tackling areas such as food waste, packaging and recycling within the service.

3.11.9 Further opportunities exist in relation to food, for example, cookery classes, targeted communication activity, and food waste collections.

3.12 Consumption and waste

3.12.1 The aim of the Waste Strategy for Leeds is to reduce the amount of waste we produce as a city and also, to support the ambition for Leeds to become carbon-neutral by 2030.

3.12.2 Our interim Waste Strategy takes us to 2021. This is when we expect to know more from government in terms of national policy on how local authorities will be expected to collect household waste in future. The strategy focuses on three key themes: reducing excess, getting the most out of our resources, and all doing our part. Following a summer consultation with the public, with businesses, education and third sectors on 'Agree Your 3'; we have devised 3 strategic themes for the city that are driven by the level of carbon savings that can be achieved:

- Reducing excess (a focus on waste / resource carbon footprint and nudging people up the waste hierarchy – this is to focus on reduced use and reduced refuse produced, and re-use as well as recycling.)
- Getting the most out of our resources (such as the promotion of existing infrastructure like recycling bins/ bring sites, charities and household waste recycling centres as well as generating energy from waste).
- All doing our part (wider engagement programmes to encourage us all to buy less and re-use more as well as education on the impact of waste crime i.e. fly-tipping)

3.12.3 We have also worked with partners to develop the city as an exemplar in re-use, recycling and reducing waste. The 'LeedsByExample' project is a 12 month project with environmental charity Hubbub that ran between October 2018 to September 2019 that introduced 186 recycling 'on-the-go' points in retailers, workplaces and on-street resulting in 1.2 million coffee cups, 140k cans and 160k plastic bottles being recycled.

3.12.4 Recycling has tripled from the first 6 months from 17% to 49%. However, contamination was high at 39% (although national average is 51%).

3.12.5 The success of the project has led to it being extended for the next 12 months with plans to roll-out further recycling on the go to district centres in the next year. Leeds is being used for best practice to roll out the scheme to Swansea and Edinburgh, meeting our aim to be an exemplar.

3.12.6 LeedsByExample has been adopted to symbolise the city's brand for environmental sustainability with the launch of the www.leedsbyexample.co.uk website.

3.12.7 Waste to Wealth Commitment: Leeds has signed up to the commitment to eliminate avoidable waste by 2030 and we will be publishing further information on how to support this on the Leedsbyexample website in the New Year.

3.12.8 The Refuse Service Review begins with new garden waste routes in March 2020, this also includes specialist working areas for recycling with hot spots of transient populations, high-density housing and access issues, particularly, Harehills, Headingley, Hyde Park, Woodhouse and City Centre (Summer 2020).

3.12.9 The BLCC included a proposal to introduce tool libraries which was widely supported by residents (90% were in favour) and was seen as something that could encourage more people to use libraries and be a more secure and accessible alternatives to storing equipment domestically or in allotment sheds. However, when asked whether introducing tool libraries should be a priority, the opinion of focus group participants was divided: some believed that it was a 'quick win' for the city whilst others believed that they would rather see other proposals first. Development of a pilot scheme with Voluntary Action groups, or utilisation of existing community hubs or libraries is being planned so that the concept of tool libraries can be trialled. There is scope for this to form part of a delivery programme of carbon reduction projects that can be delivered through funding being sought

from the National Lottery, with the council supporting local groups with the submission of a bid.

3.12.10 Local work to re-use items can also be found, with the council aiming to support these projects being developed to support more areas and with wider scope. An example of this is a school uniform bank, based at the Little Angels Playzone in Beeston, which has provided uniform for hundreds of school children in the LS11 area of Leeds that parents can't afford to buy. Using clothes that have been donated when children have either grown out of them or left that school, they are then repaired if needed, washed and ironed ready for re-use.

3.12.11 The system is run on donations with the idea developed on the back of a football boot swap scheme that was being run by a local team manager, also in Beeston, after he realised lots of children were unable to take part in sport because they didn't have the right footwear. These schemes demonstrate how reduction in consumption and re-use can also support objectives in areas of social deprivation.

3.12.12 Work is also being delivered across council directorates and service areas to reduce consumption of resources, with successes already realised. Since March 2019 the Electoral Services team have invested in 90 tablets to use for doorstep canvassing instead of paper forms. This has:

- Removed the need for printing 70,000 registration forms;
- Halved the number of people needed for doorstep canvassing

3.12.13 Corporately all staff and members are being supported to use digital technology wherever possible and reduce printing, particularly colour printing to better manage resources and service specific messages to reduce carbon footprint when at work as well as reduce costs. As well as reducing paper use, reductions in the number of printers, energy consumption and costs will also support reduction in carbon use.

3.28.14 Asks of government

3.28.14.1 The government's waste and resources strategy (published in Dec 2018) is under consultation with local authorities with clarity on its findings expected from DEFRA during 2020. Government expectations are to see changes implemented by local authorities from 2023 but in the meantime some key asks from Leeds that we would like to see implemented are:

- Tighter legislation on producer responsibility so retailers/ manufacturers bear the costs of dealing with their packaging and for the reliability of their products with increased warranty periods.
- Funding to support the roll out of food collections.
- Support for the introduction of deposit return schemes on plastic and glass bottles.

3.13 Landscape and biodiversity

3.13.1 As part of a plan to achieve net carbon neutrality and also to mitigate the existing effects of climate change, the city must also have a strategy for different land use which promotes tree planting and biodiversity.

3.14 White Rose Forest

- 3.14.1 By the end of 2020 a White Rose Forest (WRF) plan will be created for Leeds City Region that shows how we will support the Northern Forest ambition of planting 50 million trees in 25 years. To support this process Leeds must develop our own vision for the district in support of the two key programmes contained within the WRF plan– Green Streets and Landscapes for Water. This strategy will bring together the work that is being done across a number of council departments to increase both canopy cover and biodiversity but will also identify where else in the city we need to take action. A detailed report will be brought back to Executive board in June 2020 that sets out the key targets and principles for the district.
- 3.14.2 As part of the natural flood management scheme, two million trees are being planted in the upper catchment area by 2025, with Leeds City Council providing £4 million of funding.

3.15 Council Land

- 3.15.1 The council owns in the region of 9,000ha of land and is also undertaking a comprehensive review of both its operational and investment assets, which may lead to additional land being made available for alternative uses. The council's agricultural land portfolio will be reviewed to identify opportunities for additional areas of tree planting as lease events occur. However, this must be balanced with the demand for good quality agricultural land to support food production. Equally, as buildings become surplus to the council's requirements and sites become available for new uses, the suitability of sites, in part or as a whole, for tree planting will be considered, whilst also considering wider inclusive growth opportunities through the delivery of housing and employment opportunities.
- 3.15.2 To date two sites have been identified that could be used for new woodland creation in 2020:
- 3.15.2.1 Middleton – 3 HA
- 3.15.2.2 Beeston Royd– 7 HA
- 3.15.3 As per the BLCC 53.4% of people said that they would plant trees as part of a council backed volunteering scheme and the new ambition to create woodland will provide an opportunity for the council to consider how we can harness the support of the city to be directly involved in delivering our city's target.
- 3.15.4 A report has been brought to Executive Board today entitled "Proposal for Woodland Creation" that focuses primarily on council land within the council's parks and green spaces with an ambition to plant a minimum of 25 ha of woodland per year.
- 3.15.5 The "Our Spaces Strategy" has been very positively received with the following themes being consistently highlighted:
- People see Leeds as green – but feel the city centre is lacking in greenery
 - Better signage and walking routes through the city centre – make the most of our great assets
 - The city centre could be made more friendly for families and people who are not students on a Thursday/Fri/Saturday night.
 - Public transport needs to be better to allow people to enjoy the city for longer and also make it easier to get in
 - Some areas of the city still do not feel safe and therefore people choose not to spend time there

- People keen for us to be innovative and showcase our own assets and shout about 'Leeds' rather than copying or trying to be someone else.

3.15.6 Since the start of the engagement good progress has been made regarding the delivery of new and improvement of existing spaces. Two new spaces have been delivered including Clay Pit Lane (0.3 hectares of new green space, grass and shrub planting with 12 new trees) and Playhouse Gardens – the improvement of 0.5 ha of existing green space, incorporating 25 new trees including winter flowering cherry and Japanese elm, seating, shrub planting, grassed areas. There are further schemes already planned at the Headrow and Corn Exchange to further increase green space. A scheme is also currently underway to distribute 14,000 trees to schools throughout Leeds in a drive to increase green space and biodiversity across the schools estate.

4 Corporate considerations

4.1 Consultation and engagement

- 4.1.1 After declaring a climate emergency and a target to become carbon-neutral by 2030, Leeds City Council and Leeds Climate Commission launched a major consultation on how the city should respond to the climate emergency at a packed launch event in July.
- 4.1.2 The Big Leeds Climate Conversation aimed to raise awareness of the need to tackle climate change, find out what actions individuals would be willing to take, and explore what residents thought about a number of bold ideas to cut the city's greenhouse gas emissions.
- 4.1.3 Over the consultation period, the council encouraged participation in the conversation using a range of owned, earned and paid-for communications channels (including outdoor billboards, radio advertising, and social media); engaged with residents face to face at more than 80 public events in every corner of the city.
- 4.1.4 Approximately 8,000 residents participated in one of the two official questionnaires—and even more have shared their views across a multitude of channels.
- 4.1.5 The Leeds Transport Strategy is a unique opportunity to change the way our city works for the better - but to do this we need the support of the citizens of Leeds. In 2016, we started a transport conversation because we wanted to hear how transport is personal to you and what you think our priorities for improving transport in Leeds should be. You made it clear that congestion is a real issue, making you late for work and appointments as well as impacting on the movements of goods. Unreliable public transport also impacts your travel choice with a reliable journey essential for quality of life, access to employment, education and opportunities; as well as your health and wellbeing.
- 4.1.6 Key stakeholder engagement is planned for early 2020 and will focus on our ambition to be a city where you don't need to own a car to benefit from our thriving economy with the aim of getting feedback on the key pillars of the emerging strategy. This behavioural insight and research will inform the development of the transport strategy. Research with key audiences will look at capability, opportunities and motivations for behavioural change. Examples could include: travel behaviour and mode choice;

congestion, parking and work-place charging; and active travel/public transport awareness. Undertaking focus groups and key face to face interventions with the right mix of audiences will allow us to better understand this area.

4.1.7 Following the publication of the draft transport strategy in summer 2020, we will continue our engagement through the Connecting Leeds transport conversation to explore individual’s motivation and barriers to changing their travel behaviour as well as explore what residents, communities, businesses, and key stakeholders think about our future transport proposals for Leeds.

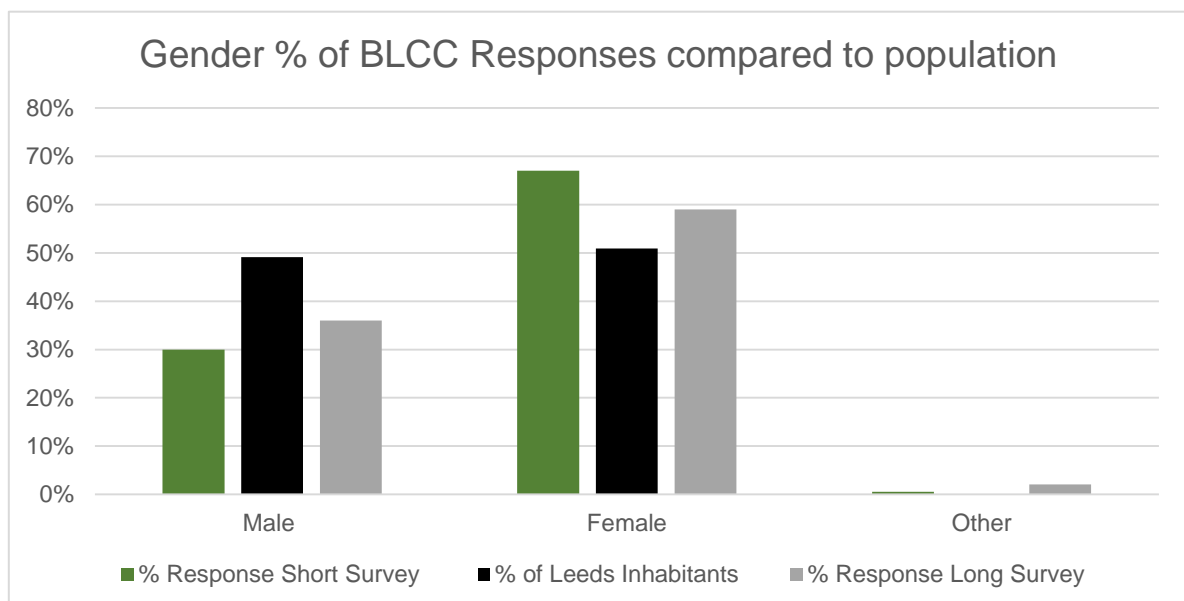
4.1.8 Discussions are underway with the trade unions to review travel policies and any other employment policies which may affect staff.

4.2 Equality and diversity / cohesion and integration

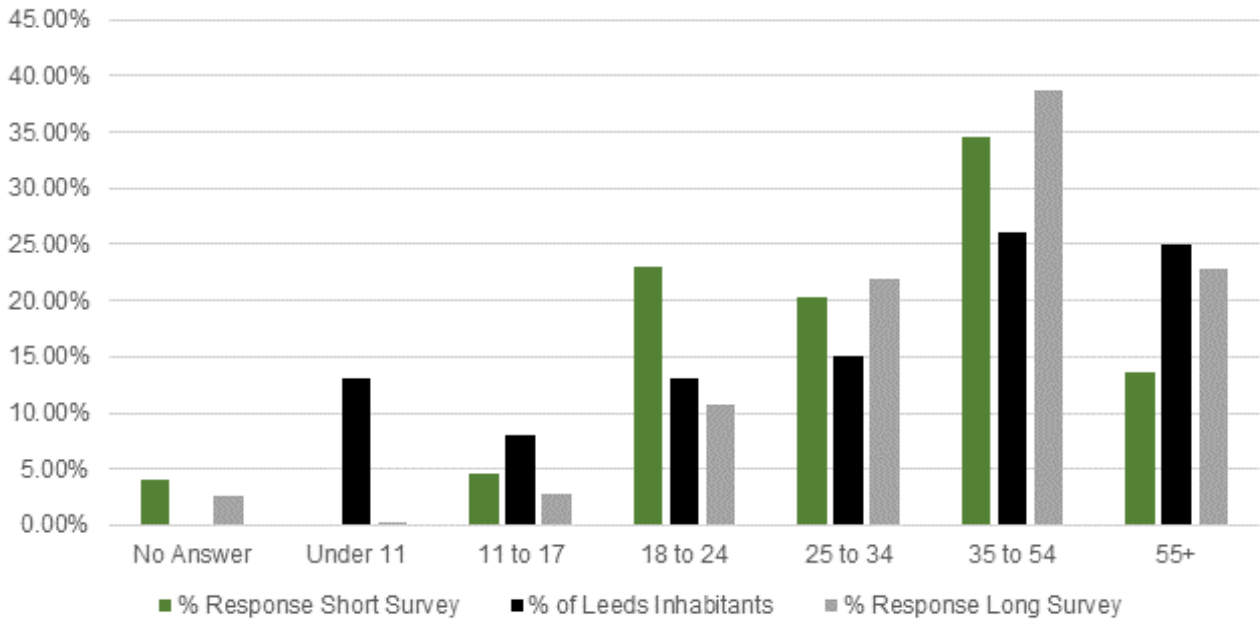
4.2.1 Broadly speaking, three approaches were used to ensure that every community in Leeds had the opportunity to engage with the council and have their say as part of the Big Leeds Climate Conversation. Findings from all three of these approaches have been incorporated within the relevant sections of the annex 2.

4.2.2 One of these approaches—speaking to residents within communities—was identified as an effective way to encourage individuals who for a range of reasons may not have otherwise actively engaged with the consultation. Council officers and volunteers conversed with a wide range of residents and promoted the consultation at more than 80 meetings and events across the city including Leeds West Indian Carnival, Light Night, Breeze events and Child Friendly Leeds Live. Residents at events were encouraged to take part in a shortened, 2 minute version of the longer questionnaire which included questions to capture equalities and diversity data.

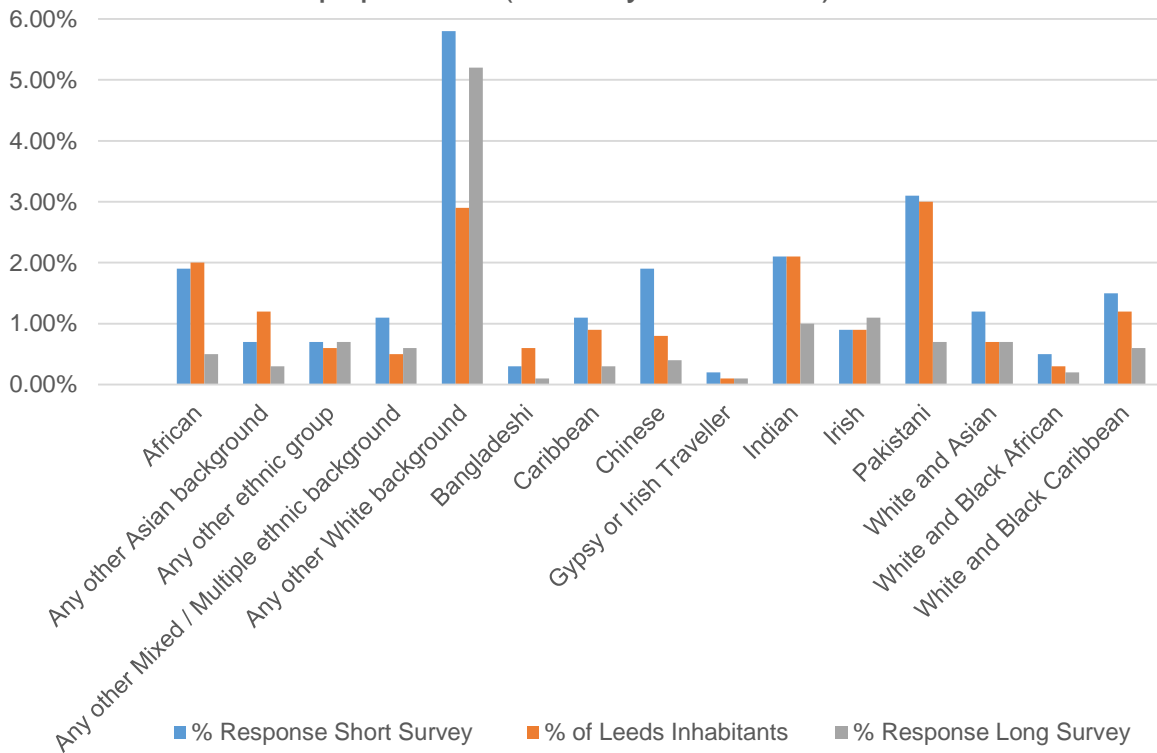
4.2.3 The following charts compare the gender, age, ethnicity and geographic distribution of long and short version of the survey with the Leeds population as a whole. Notably, the profile of respondents to the two surveys differ significantly with respondents to the short survey being younger and more ethnically diverse than respondents to the long survey. Full analysis on equality can be found in the “Who responded?” section of annex 2.

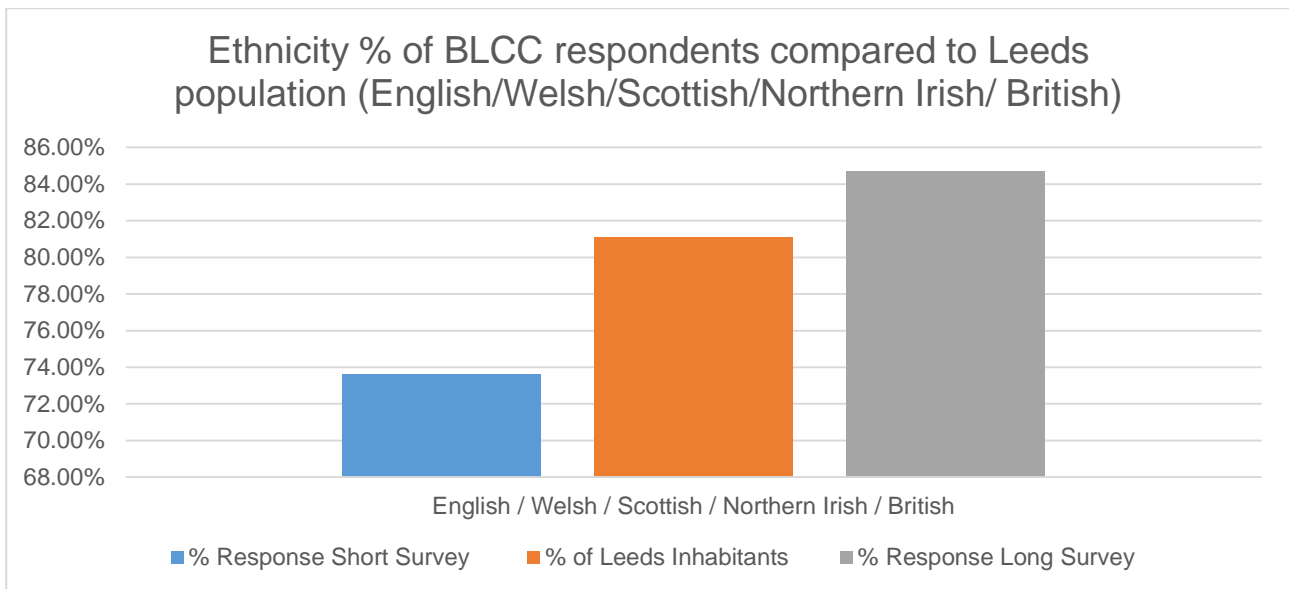


Age % of BLCC responses compared to population



Ethnicity % of BLCC respondents compared to Leeds population (minority ethnicities)





With regard to the impact of the plan upon different communities, there are two key issues to be borne in mind. Firstly, high carbon usage is firmly associated with more affluent people, who generally travel more, consume more and live in larger properties. Areas of greatest deprivation have lower car ownership and use less energy. Despite this, however, any changes which increase the price of transport or energy will affect lower income groups more due to the inability to absorb the costs. Any proposals brought forward by the council in relation to its own staff and more broadly the city of Leeds will fully take into account any adverse impacts.

4.3 Council policies and the Best Council Plan

4.3.1 There are three Best City and one Best Council key performance indicators of direct relevance to this report. Performance information is reported regularly via the council’s performance reporting framework and is used to inform project development and progress.

- Reduced carbon emissions across the city;
- Number of households in fuel poverty;
- Improved energy and thermal efficiency performance of houses;
- Lower CO2 emissions from council buildings and operations.

4.3.2 The Best Council Plan 2018/19 – 2020/21 maintains the council’s long-term ‘Best City’ strategic focus on tackling poverty and inequalities through a combination of strengthening the economy and doing this in a way that is compassionate and caring, allowing us to support our most vulnerable children and adults. The projects described in this report contribute directly to the following Best City priorities:-

- Housing: The Domestic Energy Efficiency & Fuel Poverty Initiatives in the council’s portfolio of cutting carbon projects improve housing quality and tackle fuel poverty in the city;

- Safe, strong communities: The Domestic Energy Efficiency & Fuel Poverty Initiatives in the council's portfolio of cutting carbon projects tackle fuel poverty in the city and help people out of financial poverty;
- Inclusive growth: The work of the Leeds Climate Commission in unlocking investment in the low carbon economy supports growth and investment, helping everyone benefit from the economy to their full potential and supports businesses and residents to improve skills,
- Health and wellbeing: The Domestic Energy Efficiency & Fuel Poverty Initiatives in the council's portfolio of cutting carbon projects reduce the likelihood of residents experiencing cold-related illnesses and the focus on active transport and ambition to reduce car usage both bring health benefits through both the physical activity and the improved air quality;
- 21st Century infrastructure: The District Heating and Corporate Energy Projects in the council's portfolio of cutting carbon projects promote the low carbon economy in the city.

4.3.3 Climate Emergency

As the climate emergency is at the heart of the whole report, there is nothing further to add here.

4.4. Resources, procurement and value for money

- 4.4.1 Climate emergency is one of four key priorities that is considered when allocating the capital budget and is a theme throughout many of the projects delivered.
- 4.4.2 The council has invested, and continues to invest, significant sums of money in delivering the required schemes to support the delivery of the climate emergency. The council also has a good track record of securing external funding to support delivery of additional schemes to speed up the pace of change across the city.
- 4.4.3 Across the current 2019/20 to 2022/23 capital programme we have c£200m of schemes ranging from Flood Alleviation £84m (Including the funding for the natural flood management scheme), CAZ related implementation including, electric charging infrastructure, help for businesses to upgrade vehicles and CAZ infrastructure itself £47m, Council Housing Stock energy efficiency schemes including the Housing Leeds District heating scheme £32m, District Heating main spine £4m remaining, Street Lighting LED and other lighting replacement schemes £31m, Climate Emergency Woodland creation £1.4m (£350k year on year) and various other climate emergency related schemes £2m. This excludes transport funding, much of which in turn will contribute to carbon reduction.
- 4.4.4 The council has also upgraded about 25% of its fleet to electric, investing £5 million over the last two years with a further £2.5 million to be invested up to 2023. Although electric vehicles have a higher upfront cost than their diesel equivalents, when assessed from a whole life cost perspective the lower fuel and maintenance costs balance out the higher initial investment.

- 4.4.5 The Council has invested significant resource to allow the Sustainable Energy and Air Quality team to grow to support the delivery of many of the schemes named above and to ensure that the Climate Emergency is given the priority required.
- 4.4.6 Leeds City Council received £40k from the Department of Culture, Media and Sport Financing for Society grant fund (administered by University of Leeds) to work with Abundance (who have previous experience of a part crowd-funded-financed solar farm with Swindon Council) and Public Power Solutions to explore the use of crowd-funding as a means of financing solar PV systems on Council buildings. The use of green bonds and crowdfunding was one of the recommendations from the recent Leeds Climate Change Citizens Jury. Further work has been completed to confirm that there are no significant outstanding legal and treasury management issues. Potential projects for deployment of solar have been identified. Subject to final due diligence, a Leeds pilot project will be prepared during 2020.
- 4.4.7 The potential to raise investment to support increased local tree planting is also being explored via a council backed offsetting scheme for local residents and businesses.
- 4.4.8 This is just one of a number of funding sources that will be further developed in 2020 to enable the delivery of the schemes that are required.
- 4.4.9 Typically, strike prices for renewable based PPAs have reduced markedly in recent years and it's now generally accepted that the cost of producing power from renewables has parity with that of fossil fuels based generation.
- 4.4.10 Energy markets are extremely volatile by their very nature, where prices can be affected by anything from unexpected shutdowns in nuclear power stations to geopolitical tensions. The price fluctuations create serious challenges in terms of budgeting effectively for energy bills in an organisation as large as LCC. Therefore, the benefits of having price certainty under a CPPA model cannot be underestimated.
- 4.4.11 Early indications suggest that the retrofit work will offer an 8 year payback. The preferred funding route will be SALIX funding as this will provide access to interest free investment. However, if this is not available due to restrictions on paybacks or technology, prudential borrowing will be explored.
- 4.4.12 The route to procurement for the retrofitting work has yet to be determined as the feasibility work is still being finalised. However, advice will be sought from the Procurement and Commercial Service to ensure that the most appropriate route is chosen.

4.5 Legal implications, access to information, and call-in

- 4.5.1 The council's Climate Change Emergency Declaration in March 2019 and identified steps to tackle climate change are supplementary to the legally binding UK climate change target set by the Climate Change Act 2008. The actions identified in this report aim to both meet and exceed the targets set by the climate change act 2008 through the various work streams with partners/stakeholders identified in the report

and alongside asking the government to make further changes to meeting the climate change objectives.

4.5.2 There are no issues concerning Access to Information Procedure Rules.

4.5.3 As a report to Executive Board, the report is eligible for Call In.

4.5.4 The matter has been placed upon the List of Forthcoming Key Decisions for the required notification period in advance of the Board meeting.

4.6 Risk management

4.6.1 To achieve net zero for the city is dependent on a number of key policy areas outside of the council's control, for example, the decarbonisation of heat and investment in transport.

4.6.2 To achieve the vision and targets set out in this report will require significant investment beyond current programmes and we will continue to work with WYCA and call on national government for the support, powers and funding to deliver the Connecting Leeds Strategy.

5 Conclusions

5.1 Responding to climate change is arguably the greatest challenge of this generation. The council has acknowledged the urgency with which the city needs to change by declaring an emergency. The actions contained within the report demonstrate a step change in the council's level of activity to make itself carbon-neutral and to lead the city in that direction, building on examples of good practice which have already been put in place. There is considerably more work to be done to provide further detail to the commitments and yet more to deliver on them. Challenging as it is, the future also holds out the prospect of a better city with good housing, improved transport, healthier lifestyles and a greener, more attractive environment. The vision can only be achieved with the active support of the citizens of Leeds.

6 Recommendations

- a) Approve £800,000 injection of capital to retrofit 7 council buildings;
- b) Approve the target to move to 100% electricity provided by green sources immediately through entering into a power purchase agreement with the ambition to continually move to more locally produced renewables over the next ten years
- c) Approve the aim to remove payment for the use of staff petrol and diesel cars by 2025
- d) Approve the target to buy only low emission fleet vehicles by 2025
- e) Endorse the vision, principles, targets and investment plan for the emerging Connecting Leeds Transport Strategy
- f) Endorse the asks to national government to support the action required by the government (summarised in Annex 1) to achieve net zero

- g) Agree to receive a report on the proposed White Rose Forest strategy for Leeds in June 2020

6 7 Background documents¹

- a. None

¹ The background documents listed in this section are available to download from the council's website, unless they contain confidential or exempt information. The list of background documents does not include published works.