

Crawley Borough Council

Report to Overview and Scrutiny Commission 1 February 2021

Report to Cabinet 3 February 2021

Climate Change Scrutiny Panel Final Report

Report of the Chair of the Climate Change Scrutiny Panel,
Councillor K L Jaggard **OSC/292**

1. Purpose

- 1.1. In July 2019, Full Council declared a Climate Emergency with Councillors pledging to take local action to aim to reduce carbon emissions generated by Crawley Borough Council's workings and activities by at least 45% by 2030 and to zero by 2050.
- 1.2. The motion to Full Council also asked the Overview and Scrutiny Committee (OSC) to convene a Scrutiny Panel to look into and make recommendations focusing upon the workings and activities of Crawley Borough Council relating to carbon emissions and to report to Council as soon as is practicable. It further requested that OSC co-opt a member or members of the Youth Council to the Scrutiny Panel. However despite repeated requests, unfortunately a co-optee was not forthcoming from the Youth Council.
- 1.3. A Scrutiny Panel was subsequently setup by the OSC in September 2019 to take the work forward with the first Panel meeting commencing in November 2019.

2. Recommendations

- 2.1. To the Overview and Scrutiny Commission:

That the Commission consider the report and decide what comments, if any, it wishes to submit to the Cabinet.

- 2.2. To the Cabinet

The Cabinet is recommended to agree the recommendations as set out in Section 6.

- 2.3. Following the Notice of Motion submitted in July 2019, Cabinet requests Full Council to:

- a) Endorse the Scrutiny Panel's findings and recommendations contained within report OSC/292
- b) Request that any necessary revisions to the Council's Constitution relating to paperless committee meetings be made.

3. Reasons for the Recommendations

- 3.1. These reflect the motion agreed by Full Council and outline proposals to help the Council to achieve the ambition to reduce carbon emissions generated by Crawley Borough Council activities by at least 45% by 2030 and to zero by 2050.

4. Background

- 4.1. The 2018 Inter-governmental Panel on Climate Change (IPCC) Report is an alarming reminder of the consequences of climate change and the urgent need to ensure that global temperatures do not exceed 1.5 degrees Celsius above pre-industrial levels. The report demonstrates that there is an increasing likelihood of missing the global warming target, with the 1.5 degree Celsius temperature "guard rail" expected to be exceeded in just 11 years.
- 4.2. The report found that limiting warming to 1.5°C may still be possible with ambitious action at a local, national and international level. There is no single definition of the term 'climate emergency' and in many respects it can be seen primarily as "a novel framing... (that) amplifies the scientific and policy understandings on the causes and consequences we have known about for some time". (Chatterton, P (2019), Building the 1.5 degree, socially-just city, University of Leeds)
- 4.3. The 'climate emergency' movement is typically associated with the recognition for a need to implement urgent policies to deal with "the devastating impact that volatile and extreme weather will have on UK food production, water availability, public health and through flooding and wildfire damage" (Smith L, et al (2019). Climate change and the environment. House of Commons Library), and it is habitually aligned with carbon-neutral ambitions. Bristol became the first UK local authority to declare such an emergency in November 2018.
- 4.4. In May 2019, the UK Parliament also declared a climate emergency. This called for a change to the UK's climate change targets (from the Climate Change Act 2008) in order to achieve net zero emissions before 2050.
- 4.5. In the changing national context, much attention has focused on the role of local authorities and how they can tackle climate change at a local level.
- 4.6. The challenge ahead for councils such as Crawley Borough Council is twofold: firstly, to translate the current momentum into coordinated action across all areas for which the Council has a direct responsibility (with these actions being embedded into policies, strategies and action) and secondly to ensure that a long-term commitment is made to tackling climate change, using their influence with the wider community to ensure that a longer-term commitment is achieved.
- 4.7. Local authorities can influence the issue of climate change in a number of different areas. For district councils, the LGA (2019) recommends the focus of action be:
 - Energy efficient buildings and assets;
 - Changes to vehicle fleet and travel arrangements;
 - Changes to procurement and contract management;
 - Working practices i.e. home-working; embracing reduce/reuse/recycling;
 - Improved flood protection;
 - Planning and Regeneration;
 - Community development;
 - Educating/enabling communities to be more greenhouse gas emissions aware.

5. Description of Issue to be Resolved

- 5.1. A key consideration for local authorities will be the impact that climate change will have on the services they provide.
- 5.2. The Notice of Motion presented in July 2019 included many factors but it was very clear regarding the Scrutiny Panel's focus:
"upon the workings and activities of Crawley Borough Council relating to carbon emissions".
- 5.3. The Scrutiny Panel has utilised themes to complete its work as it was recognised that the climate change agenda encompassed a wide area:
- Baseline Audit
 - Transport
 - Business/commercial
 - Domestic/residential
 - Blue/green infrastructure
- 5.4. The Scrutiny Panel dedicated various meetings to these above themes, acknowledging that there may be overlaps between them. However it was also recognised where work had already been achieved.
- 5.5. The Centre for Governance and Scrutiny '10 questions to ask if you are scrutinising climate change' (2020) documents the overall need for local climate action. It asks the following:

How well does the council understand the need to take local action?

Has the council carried out research to understand what it can do and what it needs to do?	<ol style="list-style-type: none"> 1. Baseline audit completed 2. Notice of Motion 3. Scrutiny Panel 4. Officers Group 5. CfGS seminars 6. Desktop research 7. Action Plan
Has the council declared a climate emergency?	July 2019
How does the council propose to act immediately on the declaration of a climate emergency (if relevant)?	<ol style="list-style-type: none"> 1. Baseline audit completed, monitored and updated 2. Points within Notice of Motion actioned 3. Scrutiny Panel recommendations to be incorporated into Council's Climate Emergency Action Plan
What commitments is the council making by such a declaration?	<ol style="list-style-type: none"> 1. Pledge to aim to reduce carbon emissions generated by Crawley Borough Council activities by at least 45% by 2030 and to zero by 2050 as recommended by the Intergovernmental Panel on Climate Change (IPCC). 2. Call upon central government to provide the powers and resources to make these targets possible. 3. Work with other councils and partners to determine and implement

	<p>best practice methods to reduce carbon emissions and so limit Global Heating to less than 1.5 degrees Celsius</p> <ol style="list-style-type: none"> 4. Request that the Overview and Scrutiny Commission (OSC) urgently sets up a Scrutiny Panel to look into and make recommendations focusing upon the workings and activities of Crawley Borough Council relating to carbon emissions and to report to Council as soon as is practicable. Council further requests that OSC co-opts a member or members of the Youth Council to the Scrutiny Panel. 5. Request that the Head of Corporate Finance will undertake a review of the ethical investment policy in the Treasury Management Strategy with a view to incorporating the Council's climate change declaration. 6. Encourage all Crawley residents to commit to the West Sussex County Council Climate Pledge published in May 2019.
<p>How if at all, have these commitments been recast as a result of the Covid-19 pandemic?</p>	<p>Commitments not re-cast but in terms of (3) above, emission figures for venues / facilities and activities will have been affected by the pandemic (K2 Crawley, Hawth, community centres etc)</p>
<p>Does the council have a carbon neutral or zero carbon target?</p>	<p>Aim to reduce carbon emissions generated by Crawley Borough Council activities by at least 45% by 2030 and to zero by 2050 as recommended by the Inter-governmental Panel on Climate Change (IPCC).</p>
<p>Does a carbon neutral or zero carbon target cover council activities only or is it broader?</p>	<p>The submitted Notice of Motion covered various points:</p> <ol style="list-style-type: none"> 1. Pledge to aim to reduce carbon emissions generated by Crawley Borough Council activities by at least 45% by 2030 and to zero by 2050 as recommended by the Inter-governmental Panel on Climate Change (IPCC). 2. Call upon central government to provide the powers and resources to make these targets possible. 3. Work with other councils and partners to determine and implement best practice methods to reduce carbon emissions and so limit Global Heating to less than 1.5 degrees Celsius

	Consequently the council will look to influence where appropriate and seek to promote energy saving initiatives and projects to local residents, particularly when trying to influence the need for green tariffs and energy efficiency. The Council will look to encourage and engage with residents on various environmental projects.
Has there been a climate risk assessment in the local area?	Baseline audit completed, monitored and actioned
What is the council's structure of gathering and analysing the existing research and expertise?	Council's Sustainability Team work with officers across the council and stakeholders to obtain data. The Officers group will work to progress the Climate Emergency Action Plan, incorporating the Scrutiny Panel's views and recommendations, together with those sought through the Review.
How can the council establish a benchmark for this data so evaluation of the effectiveness of climate action is possible?	For some venues figures have been obtained over several years. The baseline audit does the following: <ul style="list-style-type: none"> • Provides evidence base to support the council in its response to the Climate Emergency • Outlines the current emissions profile of the council • Outlines the emissions profile of the borough • Assists in understanding the scale of change needed to meet our 2050 net zero carbon ambition. • Assists in understanding the proportion of emissions that can be influenced locally
How will information gathered (including public views and partners' opinions and priorities) pre-Covid be subjected to analysis to ensure its continued relevance?	Scrutiny Panel had community engagement sessions pre-Covid and also invited partners and stakeholders as witness both pre-Covid and to virtual meetings throughout the pandemic to obtain views.

5.6. The Centre for Governance and Scrutiny '*10 questions to ask if you are scrutinising climate change*' (2020) states that "both Covid-19 and the continuing threat of climate change demonstrates the needs for places and communities to become more resilient. They (local councils) have convening power in the local area – the ability to bring together a range of individuals and organisations and to work with them to develop a coherent and consistent approach to the issue".

6. Scrutiny Panel Recommendations

6.1. The Scrutiny Panel considered all the evidence relating to the workings and activities of the council and has drawn up the following recommendations:

Transport

- a) As part of the implementation of the New Directions for Crawley Transport Strategy, continue to improve and promote active and sustainable transport options, working for example through the Crawley Growth Programme and in partnership with Manor Royal Business District, public transport operators and other partners.
- b) Consider the introduction of community car, bike sharing and car clubs within the borough.
- c) Request officers investigate the extension of the Hazelwick Air Quality Management Zone (at Three Bridges to the boundary area of the existing Hazelwick Air Quality Management Area (AQMA)) and consider other low emission zones to improve air quality.
- d) Continue to work with partners to increase the number of electric vehicle charging points across the borough, in particular to benefit those residents without access to off-street parking, and consider incentives for electric vehicles along with any necessary infrastructure.

Commercial and Business

- e) Continue to invest in renewable energy technologies and/or energy efficiency measures on the council's own estate, including domestic buildings.
- f) With K2 Crawley being the biggest single contributor of CO₂ of Crawley Borough Council's estate in the town, consider lowering the pool temperature (taking into account the acceptable industry standard) to reduce energy consumption.
- g) Commit to consider the use of new technology fuel such as hydro-treated vegetable oil which could be used immediately in diesel engines (noting however there would be a cost implication of 10-12 pence per litre more than diesel).
- h) Commit that as part of any fleet replacement, consider an innovative approach (in terms of moving to low carbon technologies), including the option to work with other partners in other sectors (for example Metrobus and hydrogen fuel).

Blue and Green Infrastructure

- i) Commit to strengthening the protection of the borough's blue and green infrastructure within its neighbourhoods, in particular any replacement of trees if felled, as referenced in the Crawley Local Plan 2021-2037.
- j) Commit to increase the number of sites for Wildflower Verges across the town, and increase the use of sustainable planting, (particularly drought resistant planting).
- k) Seek to promote pedestrianisation where practicable including the establishment of trees and seating areas.
- l) Request that as part of the Climate Emergency Action Plan, officers explore opportunities for maximising the contribution that the borough's green and blue infrastructure can make to biodiversity net gain, air quality improvements, carbon sequestration and flood prevention/management.

Domestic Buildings

- m) Continue efforts to deliver new build housing to zero carbon standards that would ensure they would not need to be retrofitted by 2050 at great expense, including increasing the number of electric vehicle charging points across these developments.
- n) Agree to compile an efficiency plan following the analysis of Net Zero Collective data to progress further energy efficiency improvements within Crawley Homes.

General

- o) Agree that a Climate Change Impact Assessment Document be completed for all new services/projects/programmes (similar to an EIA). This will ensure all services approved by the council are shown to be considering the importance of the climate change agenda and their contribution towards the Council's carbon reduction targets. (See example of a local authority climate change impact assessment in Appendix A).
- p) Promote energy saving initiatives and projects to local residents, particularly when trying to influence the need for green tariffs and energy efficiency; to encourage and engage with residents on various environmental projects.
- q) Endorses the Cabinet Member for Resources previous decision that from May 2018, all newly elected members will be paperless for committee meetings and that with effect from the new municipal year May 2021 all members will be paperless for committee meetings, especially as all Councillors have devices to enable this to happen.
- r) Assert the Council's aspirations for improving air quality and tackling climate change in all relevant responses to Government and regional consultations.
- s) Agree that the Climate Emergency Officer Advisory Group creates a Climate Emergency Action Plan for Crawley, taking into account the Scrutiny Panel's views and recommendations. This action plan should identify resources, sources of funding and timescales required for completion in order to ensure the council remains on target to reduce carbon emissions generated by Crawley Borough Council activities by at least 45% by 2030 and to zero by 2050.

7. The Panel's Work - Information & Analysis Supporting Recommendation

Baseline Audit

- 7.1. The key challenge was undertaking a new 'baseline' audit. This body of work provided an evidence base to support Crawley Borough Council in their response to the Climate Emergency, by outlining the current emissions profile of the council and the borough and understanding the scale of change needed to meet their 2050 net zero carbon ambition. This evidence then allowed Crawley Borough Council to model different emission reduction pathways for each energy system.
- 7.2. Figure 1 illustrates the emissions within Crawley Borough as a whole. In 2017, these accounted for 594 ktCO₂ (excluding aviation). To meet the emissions reduction ambitions for the borough, reducing energy and transport demand needs to be prioritised, as these types of measure can be undertaken now, without the need for significant advances in technology. Transport emissions are on an upward trend, demonstrating the need for a shift towards lower carbon transport modes.

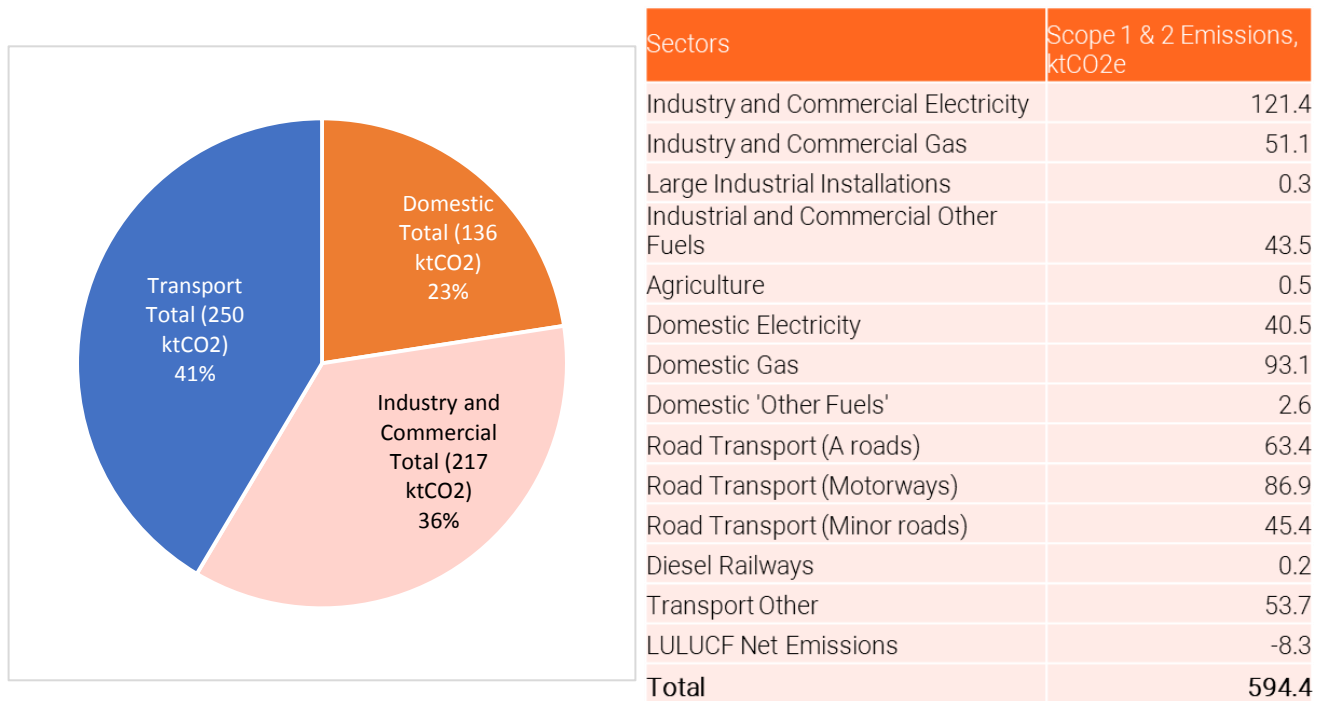


Fig 1: Crawley Borough Current Emission Profile - BEIS sector inventory for direct and indirect emissions within Crawley (excludes aviation), 2017

7.3. Overall Crawley Borough had higher emissions per capita compared to other areas of West Sussex due to its industrial strength, motorways adjoining urban areas, compact town, and lack of rural land (see figure 2). In contrast its domestic emissions were lower than other districts and boroughs. Transport emissions are on an upward trend across all of West Sussex, despite advances in low emissions vehicles. This can in part be attributed to the increased number of SUVs (with higher carbon emissions) on our roads. There would be a need to compare structurally similar areas in order to obtain a direct comparison.

	ktCO2	Industry and Commercial	Domestic	Transport	Grand Total	Per Capita Emissions (t)
Adur		47.4	87.0	100.8	231.6	3.6
Arun		145.4	239.0	215.3	573.2	3.6
Chichester		259.4	207.8	318.3	664.0	5.5
Crawley		216.9	136.2	249.6	594.4	5.3
Horsham		197.6	226.7	308.2	663.9	4.7
Mid Sussex		167.3	228.7	321.1	650.0	4.4
Worthing		97.5	152.3	93.6	340.4	3.1

Fig 2: Carbon Emissions across West Sussex (source BEIS, data for 2017)

7.4. In terms of the Council's own emissions they represented approximately 6% of the borough wide emissions (see figure 3). Emissions are divided into three categories referred to as Scope 1, 2 and 3 depending on whether they are direct or indirect

emissions associated with the Council's workings and activities as illustrated in figure 4. Baseline emissions were reported as carbon dioxide equivalents (CO₂e) taking into account emissions not just from carbon dioxide but all greenhouse gases.

Emission Source	FY1819				
	Activity Data	Unit	tCO ₂ e	% of total emissions	
Scope 1					
Buildings & Other Assets: Council Operated	Natural Gas	3,030	MWh	557	1.59%
	Total			557	1.59%
Buildings & Other Assets: Contractor Operated (K2 & The Hawth)	Natural Gas	7,478	MWh	1,375	3.92%
	Total			1,375	3.92%
Vehicle Fleet	HGV Rigid >3.5-7.5t	1,000	miles	0.79	0.00%
	HGV Rigid >7.5-17t	9,834	miles	10	0.03%
	HGV Rigid >17t	99,549	miles	153	0.44%
	Pool Cars	5,008	miles	1.46	0.00%
	Fuels (Diesel)	337,148	Litres	337	0.96%
	Fuels (Unleaded)	13,682	Litres	32	0.09%
	Total			534	1.52%
Total Scope 1 Emissions			2,466	7.04%	
Scope 2					
Buildings & Other Assets: Council Operated	Purchased Electricity	3,508	MWh	993	2.83%
	Total			993	2.83%
Buildings & Other Assets: Contractor Operated (K2 & The Hawth)	Purchased Electricity	2,464	MWh	630	1.80%
	Total			630	1.80%
Total Scope 2 Emissions			1,623	4.63%	
Scope 3					
Buildings & Other Assets: Council Operated	Natural Gas - WTT	3,030	MWh	77	0.22%
	UK Electricity - T&D	3,508	MWh	85	0.24%
	Water Supply	52,216	m ³	18	0.05%
	Water Treatment	52,216	m ³	37	0.11%
	Total			217	0.62%
Buildings & Other Assets: Contractor Operated (K2 & The Hawth)	Natural Gas - WTT	7,478	MWh	179	0.51%
	UK Electricity - T&D	2,464	MWh	53	0.15%
	Water Supply	49,264	m ³	17	0.05%
	Water Treatment	49,264	m ³	35	0.10%
	Total			284	0.81%
Contractor Vehicles	Vans (Class II)	52,577	miles	10	0.03%
	Vans (Class II)	23,199	Litres	62	0.18%
	Total			73	0.21%
Grey Fleet	Average Car: Petrol	59,867	Miles	27	0.08%
	Average Car: Diesel	89,801	Miles	17	0.05%
	Motorbikes	60	Miles	11	0.03%
	Total			55	0.16%
Employee Commute	Walk / Bicycle	980,169	Miles	-	0.00%
	Private On-Road Transport	3,690,966	Miles	1,063	3.03%
	Public On-Road Transport	357,957	Miles	64	0.18%
	Public Off-Road Transport	441,069	Miles	31	0.09%
	Total			1,158	3.30%
Procurement Spend	Input/Output	£64	million GBP	29,171	83.24%
	Total			29,171	83.24%
Total Scope 3 Emissions			30,957	88.33%	
Total Emissions			35,045		

Figure 3: Crawley Borough Council's own emissions (Scope 1, 2 and 3) for 2018/19

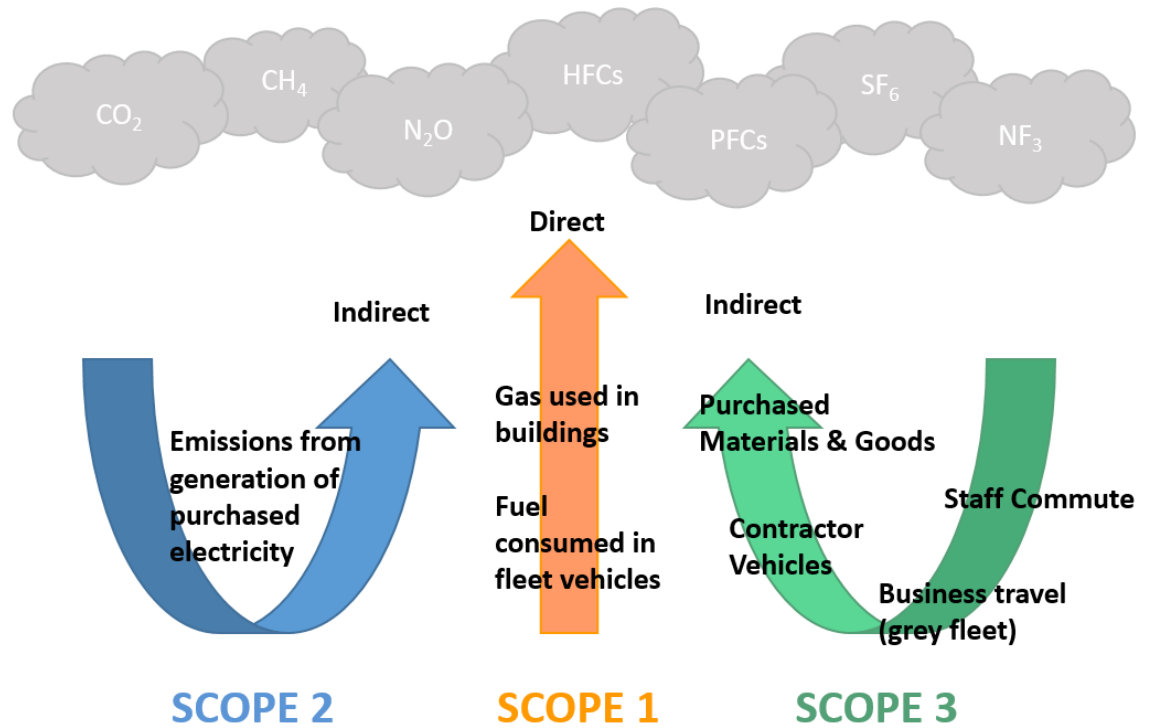


Figure 4: Illustration of the sources of direct and indirect emissions in Scope 1, 2 and 3

- 7.5. The largest single emissions source category from Indirect, Direct and Other emissions was from the Council's procurement spend, contributing to 83.2% of total emissions (see figure 3). Direct and Indirect impacts included Buildings & Other Assets – with K2 Crawley, the Town Hall and the Hawth the largest individual contributors to the Council's own emissions from energy use, together with other emissions including our Vehicle Fleet and the employee commute.
- 7.6. The baseline audit provided a platform to monitor and focus actions to support the Council in reducing its current emissions.
- 7.7. The approach needed - at a local and national level - can be summarised as follows: "If there was ever an idea that we could approach this as a 'sequential' transition – moving from power, to transport, to heat, to industry and agriculture – then that thought needs to be re- examined... We will need to shift from the current piecemeal approach, relying on departments and sectors to make incremental improvements, to something much more broad-based." (Stark, C (2019). Towards net-zero. Committee on Climate Change).

Transport

- 7.8. The Council developed its [New Directions for Crawley](#) Transport Strategy in March 2020. The New Directions plan is to undertake a technical transport study to create a framework for future decision-making, guided by a principle of planning for people and places. It aims to use a range of available economic, census, transport and employment data, the study will identify where people need to get to and from and model the impacts these trips have on traffic and space. This will provide evidence to enable us to develop an action plan with clear options and ambitious targets and timescales beyond currently planned activity. This action plan will need to align with the aims of the emerging Crawley Local Plan, West Sussex' planned revised Local Transport Plan, the final Transport for the South East (TfSE) strategy and the National Planning Policy Framework.

- 7.9. Within the New Directions for Crawley the vision suggests Crawley could be a town where:
- Popular walking and cycling routes are safe, direct and attractive. Buses are smart, with zero emissions, traffic signal priority and Wi-fi, using new bus shelters with live information and serving all the neighbourhoods. We are keen to be more active, more productive and healthy, so the first choice for going to work, particularly to Manor Royal, Gatwick or the town centre is to walk, cycle or take a bus.
 - Phone apps, dedicated online local information and other technologies tell us when and where buses and trains are available and provide ticketing, so we don't have to wait around.
 - The town centre has attractive, affordable and market apartments within a very short walk of the new smart, accessible Crawley rail and bus stations, along new leafy walkways and priority crossings. Many out-of-town commuting, college, shopping or business trips are easiest by train or bus.
 - The increase in town centre residents has created demand for independent food shops, bars and cafes within a short walk. Queens Square, Queensway, Broadway, the High Street and The Boulevard are lively in the evenings.
 - When you need to use a car, the Crawley car club electric cars are available at nearby dedicated parking spaces with a swipe of a card and car hire is on hand locally for use for longer periods. With the mix of transport services on the doorstep and car availability when it is needed, private car use has dropped.
 - Resident and visitor car parking in all Crawley neighbourhoods includes electric vehicle charge points, but lower car ownership has also freed up street parking space for a safer, more attractive environment.
 - Bike rental is available across town, including zippy electric bikes, alongside more secure cycle parking. Upgraded cycle routes in safer, traffic-calmed neighbourhoods mean that many more children and adults who were previously wary of cycling, are happy to nip around on two wheels.
 - The air is cleaner, Crawley residents are healthier and the town is a great place to be!
- 7.10. Furthermore, the government's 2017 Cycle and Walking Investment Strategy (CWIS), aims to double numbers of cycling trips and significantly increase walking by 2025. Having shown commitment to supporting cycling and walking as key transport elements, it is hoped that the Department for Transport (DfT) will develop its ambitions for the CWIS. It was proposed that Local Cycle and Walking Infrastructure Plans (LCWIP) should be introduced as a way of local authorities progressing the CWIS. As a result, the council developed its [LCWIP](#) in June 2020 ([PES/363](#)) which detailed a borough-wide cycle network and walking zones/routes to enable a significant increase in cycling and walking. It enabled clear discussions with developers on providing safe, accessible, connected, people-centred neighbourhoods for homes and business, ensuring full linkage with the wider town cycle network and formally evaluated walking routes.
- 7.11. In terms of the council's fleet, this consisted of mostly Light Commercial Vans. The current policy is to consider electric vehicles first for replacement vehicles where available. There are currently 4 electric vehicles on the CBC fleet (pest control, 2 x parking team, NHS Patch Leader, with 2 x Hybrid vehicles on order for Community Wardens). The Waste & Recycling fleet was made up of 16 front line vehicles. These were last replaced in 2014. All new Euro VI diesel were capable of using up to 7% bio diesel. The RCV's have electric bin lifts which were quieter and reduce fuel consumption.
- 7.12. The Council, along with the other districts and boroughs across West Sussex, had recently partnered with WSCC in an electric vehicle charging scheme to develop an

extensive county-wide network, by nominating sites in its ownership to be part of a [EV charging network](#).

Evidence

- 7.13. Patrick Warner, (Head of Innovation Strategy - Metrobus), Darryl Hemmings, (Planning and Transport Policy Manager - WSCC), Steve Sawyer, (Executive Director - MRBD), together with Councillor Peter Smith (Cabinet Member for Planning and Economic Development - CBC) provided information for the Transport meeting.
- Metrobus had an innovative approach to reducing emissions. The current ultra-low emission diesel buses were amongst the cleanest vehicles on the road, particularly compared to passenger cars.
 - Trials of pure electric buses have previously taken place in Crawley and Brighton however there were limitations with battery range and operating hours and consequently impractical for intensive commercial operation.
 - There was an ambitious target to full zero emissions bus operation fleet powered by clean hydrogen made from renewable wind energy and water by 2030. Crawley could see introduction by 2021, or much earlier for the high frequency services. Until this time, some areas were seeing a new generation of extended range of hybrid electric buses, with on-board Euro6 diesel generator and the ability to geo-fence an area of electric only mode.
 - The future brought challenges; cost and behaviour change. It will be important to make bus travel an attractive choice; making them easily accessible, include free wi-fi, promote the advantages and improve the waiting environments.
 - It was important to work with partners to maximise and enhance the potential, including working with the Road Haulage Association for example with refuse trucks.
 - It was recognised that Crawley had approximately 11% of bus use. This was compared with other West Sussex use of approximately 4%.
 - Currently there was a West Sussex Transport Plan (2011-2026) which was currently being reviewed to include reference to the Climate Change Strategy and provide equal weight to access to services and health.
 - There was a question as to what transport infrastructure needed to be in order to meet the future needs of climate change.
 - The current challenges were highlighted that presently within the annual capital scheme and Crawley Growth Programme (CGP) there was no prioritisation for climate change and there was no discretion as to how the money was spent. It was recognised that the funding had to be spent on specific schemes. Potentially in future the criteria may alter. The deliverability of the schemes was key in order for them to be successful but also change travel behaviour. Partnership working was paramount.
 - Manor Royal Business District covered over 600 businesses – 80% of people travel by car.
 - Gateway 1 in Manor Royal was the busiest entrance.
 - It was important to consider what kind of transport was necessary – there was a need to design a place for “People & Places”.
 - Irrespective of the environment it had to be accessible, comfortable, cost-effective and services had to be effective.
 - How people use a space was important; safe, welcoming, well maintained. In terms of buses this equated to the waiting environments or Superhubs within Manor Royal.
 - The place making in Manor Royal, along with the partnership working and pedestrianisation had benefited the economy

Future Developments

- 7.14. Attractive and effective public transport is essential in order to facilitate and encourage a shift to sustainable modes of transport.
- 7.15. In order to make effective use of land, the identification and delivery of improved public transport needs to be focused on optimal routes and this will help to provide a viable, dependable and sustainable transport alternative. Together with enabling active travel, cycling (including bike sharing), car clubs and walking, this will lead to reduced carbon emissions, improved air quality, and a reduction in traffic volumes and the borough's over-dependence and reliance on private vehicles for getting around. The council continues to work with public transport operators through the Quality Bus Partnership and Public Transport Forum to improve and promote travel by public transport.
- 7.16. One option may be the introduction of car clubs and bike sharing. Car clubs can help policy makers reduce congestion, reduce emissions, reduce parking pressure, improve air quality and increase the uptake of sustainable transport modes. Car clubs have a big role to play helping to deliver economic, social and environmental goals. The following have introduced car clubs: [Co-wheels car club](#) in Horsham and Chichester and [Enterprise car club](#) in association with Guildford Borough Council, with the following have introduced bike sharing: Bournemouth Borough Council, Norwich City Council and [Brighton and Hove City Council](#).
- 7.17. Issues regarding the air quality within the town, particularly between the Hazelwick 'flyover' and Three Bridges station have been raised at Licensing January 2020 and OSC previously, given the increased traffic in that area (pre-Covid). The Hazelwick Air Quality Management Area was agreed in July 2015 ([PES/186](#)). The Panel therefore recommends that it is investigated that the Air Quality Management Zone be extended between the Hazelwick flyover and Three Bridges (and Haslett Avenue East) as soon as possible.
- 7.18. The Council should continue efforts to deliver an increased number of electric vehicle charging points across the District borough at new homes, places of work, council car parks and on street. This is particularly necessary for those that do not have access to off street parking and/or if the infrastructure may need adapting as a result. The [Office for Low Emission Vehicles \(OLEV\)](#) announced the continuation of the [On-street Residential Chargepoint Scheme \(ORCS\)](#), to increase the availability of plug-in vehicle charging infrastructure for residents who do not have access to off-street parking. The On-street Residential Chargepoint Scheme provides grant funding for local authorities to install on-street chargepoints.
- 7.19. It is estimated that electric vehicles will add 6.8% to global electricity demand in 2040, and drive a growth in demand for Lithium-ion batteries from 151 GWh in 2019 to 1,748GWh by 2030. ([New Directions for Crawley – issues and options for Crawley Transport Strategy - March 2020](#)). Cambridge City Council has developed its Electric Vehicle and Infrastructure Strategy covering:
- Rapid chargers
 - On street lamp chargers (not technically feasible within West Sussex)
 - Commercial chargers
 - Fleet review
 - EV
 - Street charging for residents without parking
 - Home chargers
 - EV public transport
 - Sources of funding

Recommendations

- a) As part of the implementation of the New Directions for Crawley Transport Strategy, continue to improve and promote active and sustainable transport options, working for example through the Crawley Growth Programme and in partnership with Manor Royal Business District, public transport operators and other partners.
- b) Consider the introduction of community car, bike sharing and car clubs within the borough.
- c) Request officers investigate the extension of the Hazelwick Air Quality Management Zone (at Three Bridges to the boundary area of the existing Hazelwick Air Quality Management Area (AQMA) and consider other low emission zones to improve air quality.
- d) Continue to work with partners to increase the number of electric charging points across the borough, in particular to benefit those residents without access to off-street parking, and consider incentives for electric vehicles along with any necessary infrastructure.

Commercial and Business

- 7.20. The top emissions source within the council's buildings and other assets was from K2 Crawley, accounting for 1,920 tCO₂e (47%) of total emissions from purchased electricity, with the swimming pool operation using a high proportion of energy consumption (Climate Emergency Baseline Audit, January 2020).
- 7.21. In addition, poorly insulated homes waste energy, lead to high emissions and unnecessary high energy bills for residents. It is estimated that as few as 40% of homes in the borough are well insulated. Therefore, the Council should consider an ambitious programme working with partners to improve the insulation of homes and energy efficiency. Crawley Homes is committed to reducing our carbon emissions by 40% before 2030 with the aim of reaching zero carbon before 2050, by developing the correct solutions for each property dependant on its age and construction type.
- 7.22. Crawley Homes previous projects have included gas boiler upgrades, solar thermal panels for hot water, Photovoltaic (solar) panels, air source & water source heat pumps, loft, cavity and external wall insulation, LED Lighting, all of which produce better energy efficient homes for our tenants. Some of our newer homes are already fitted with energy monitoring devices, measuring temperature, humidity and electrical energy usage. This data can be difficult to use and to work out which heating systems are the most beneficial.
- 7.23. In terms of procurement, the council adopted the [Social Value Charter](#) in February 2020 ([FIN/488](#)) and this included "applying environmentally friendly and sustainable business practices" during any procurement.

Evidence

- 7.24. Steve Sawyer (Executive Director, MRBD), Nigel Sheehan (Head of Major Project and Commercial Services - CBC), Graham Rowe (Partnership Services Manager - CBC) together with Councillor Peter Smith (Cabinet Member for Planning and Economic

Development - CBC) and Councillor Mullins (Cabinet Member for Wellbeing – CBC) provided information for this meeting:

- It was acknowledged that during lockdown people had attached increasing value to their environment: People had been shopping local and enjoying green and open spaces. Arguably climate change had become more important.
- How people use a space was important; safe, welcoming, well maintained. Quality green and open spaces were maintained within the Business District to assist in people's health and enhancing the maintenance within Manor Royal so people enjoyed spending time in the space, rather than just passing through.
- It was important to consider what kind of transport was necessary – there was a need to have a place shaping role to look at how an area functions and how to add value to key partners to achieve its potential.
- Re-Energise Manor Royal Project was a vision to create a more sustainable business park. The aim was to increase all forms of renewable energy on Manor Royal. The energy supply would be more sustainable, secure and locally generated, reducing the carbon footprint and lower the cost for businesses.
- A more sustainable Business Park relied on co-operation in order for it to be a success.
- There was an acknowledgement that an innovative approach was needed in the future.
- 80% of people travel by car into Manor Royal, as the town had its challenges: parking, congestion, pollution, Air Quality Management Area.
- There was a need to find ways to encourage and incentivise schemes such as solar panels on sustainable new builds. Whilst the council's policies such as Planning ensure the infrastructure and policies were in place, there had be a compromise on what was achievable.
- Hydrogen buses were due to be introduced and it was envisaged that an Electric Vehicle charging infrastructure scheme would be rolled out to include Manor Royal.
- Environmental considerations formed part of the procurement weighting and evaluation for the council's contracts, thus ensuring that the climate change agenda was taken seriously by the current contractors in place.
- K2 Crawley Combined Heat and Power (CHP)
 - Unit replaced in May 2019, resulting in improved energy efficiency, reducing the carbon footprint, overall energy costs and generating free electricity to serve the building. Savings have contributed towards the improved management fee position achieved for K2 Crawley. Whilst there were some teething issues in synchronising to the building this was now running on average 12 hours per day (70%).
- Solar PV
 - 1,200 Panels installed over three phases in 2013, 2015 & 2016. This has provided 300 kWp or 252,000 kWh pa of free electricity to site and reduced the carbon footprint and running costs by over £36,000 pa thereby contributing to the improved management fee.
- LED replacement scheme
 - Two largest sporting areas were completed and this reduced wattage by 40%.
- Energy efficient pumps fitted to pool filtration system.
- LED Replacement scheme is ongoing in other areas.
- All areas fitted with Passive Infra-Red (PIR) detectors.
- The Hawth Solar PV
 - 190 solar PV panels installed Jan 2017, given 47 kWp and generating over 50,000 kWh of electricity pa and provided a saving of £7,200 pa
- LED Lighting
 - Main Theatre and Studio (two largest areas) were upgraded to LED lighting, which has significantly reducing consumption. The main car park and all external areas were also upgraded to LED lighting and a feasibility study is

currently ongoing looking at LED replacement throughout the main circulation areas.

- Vehicle Workshop Depot - Solar PV
 - 120 solar PV panels were installed Jan 2016, which providing 30 kWp or 27,700 kWh pa and produced an annual saving of £4,700 in running costs
 - LED lighting throughout since 2017
- Vehicle Fleet consists of mostly Light Commercial Vans. The policy is to consider electric first on replacement where available.
- Currently there are 4 electric vehicles on the CBC fleet:
 - Pest control, 2 x parking team, NHS Patch Leader
 - 2 x Hybrid vehicles on order for Community Wardens
- Handheld electric equipment was being trialled:
 - Trialling small tools: hedge cutter, strimmer, etc
- Refuse Vehicles - currently the Waste & Recycling fleet was made up of 16 front line vehicles.
- Last replaced in 2014 - all Euro VI diesel, are capable of using up to 7% bio diesel. RCV's have electric bin lifts which are quieter and reduce fuel consumption.
- In terms of performance, they do the following:
 - 109,000 miles
 - 157,000 ltrs of diesel
 - Average 4 MPG
 - 324,000 kg CO₂
- Contract has been extended to 2024 giving 10 year life on current fleet.
- This also gives time for new technologies to develop to a point of commercial viability. The new technology could include the following:
 - Hydro Treated Vegetable Oil – HVO: drop in fuel, 100% renewable, 12% less CO₂, 10% less NO_x, 80% less CO₂ production, 10-12 pence per litre more than diesel.
 - Gas to Liquid – GTL: drop in fuel, Chemically identical to HVO, colourless, odourless and biodegradable,
 - B100: 100% bio-diesel, requires a different engine, increased maintenance, not recommended below -10^o
 - CNG/LNG: Heavier chassis so reduced payload, lower torque so higher revving.
 - Electric: Very quiet operation, zero emission at tailpipe, now available and working in City of London and Sheffield, Range 6-9hrs, price premium £420k v £170k, cost of charging infrastructure a consideration as may need to fund a new substation c£250k
 - Hydrogen fuel cell: Production starting this year, currently only on Mercedes chassis, 100% clean, no CO₂ or NO_x at tailpipe, hydrogen would need to be produced by renewable energy, Price premium £500-£600k v £170k, refilling infrastructure needed.

Future Developments

- 7.25. There are a number of Major Factors in reaching the council's 2030 45% Carbon reduction requirements that will help with reaching the Councils corporate climate change commitment
- New Build – Construction Methodology/Specification
 - Net Zero Collective
 - Partnership Contractors
 - Estate Regeneration

- 7.26. The Panel has not specifically identified energy efficiency measures (such as solar PV, heat pumps, insulation, LED lighting, energy switching or meter installations) as some of these are already in place. Additionally each energy efficiency measure will be dependent on the type of property as a 'one size fits all' approach may not be appropriate and the decision will need to be taken following the necessary feasibility study by officers.
- 7.27. As highlighted from the discussions and the data audit, with K2 Crawley accounting for 47% of the council's CO2 emissions from gas and electricity use across its estate, with the swimming pool using the most energy, the Panel recommends a further need to consider investigating opportunities to utilise the CHP and BMS more effectively. It is recommended with the swimming pool operation using the most energy consumption, that consideration is given to lowering the pool temperature (taking into account the acceptable industry standard) to reduce energy consumption.
- 7.28. In terms of the council's fleet, as previously mentioned this consists of mostly Light Commercial Vans. The current policy is to consider electric first where available. It is recommended that an innovative approach is considered as and when any fleet replacement is required to moving to low carbon technologies. This should include the option to work with other partners in other sectors (eg hydrogen and Metrobus).
- 7.29. Similarly the Panel discussed the options of new technologies, in particular vegetable oil which can be used as diesel fuel just as it is, without being converted to biodiesel. Hydrotreating of vegetable oils (HVO) is a modern way to produce very high-quality biobased diesel fuels without compromising fuel logistics, engines, exhaust aftertreatment devices, or exhaust emissions. These fuels are now also referred to as "renewable diesel fuels" instead of "biodiesel" which is reserved for the fatty acid methyl esters (FAME). (Aatola, Larmi, Sarjoavaara, Mikkonen)
- 7.30. Sunde, Brekke and Solberg (2011) conducted a study (Environmental Impacts and Costs of Hydrotreated Vegetable Oils, Transesterified Lipids and Woody BTL - A Review) assessing three biodiesel fuels: (1) transesterified lipids, (2) hydrotreated vegetable oils (HVO), and (3) woody biomass-to-liquid (BTL) and found that using HVO produced from used cooking oil, tall oil and tallow or BTL from forest residues are wise environmental measures for the transport system in a short term.
- 7.31. It however worth noting however HVO is not as widely available as other fuel sources and it does apply a cost premium. There would be a cost implication of 10-12 pence per litre more than diesel. That being said, even Ford has now commenced the use of Hydrotreated vegetable oil (HVO) in its transit vans.
- 7.32. It was acknowledged that the District Heat Network (DHN) would provide more energy efficient heat and power to the new Town Hall site, the neighbouring Kilnmead site, and have the potential to be expanded to supply other sites in the vicinity. The scheme would bring the following benefits:
- Compliance with Crawley Borough Council Local Plan Crawley Policy ENV7 ('District Energy Networks') that requires any development located within a district energy network priority zone (this includes the town centre) to connect to a network where one exists. Given the proposed programme of new residential development in the town centre, the DHN enables the economic and carbon benefits to be secured from these schemes.
 - Delivery of Crawley Borough Council's Carbon and Waste Reduction Strategy (2012), and the subsequent Climate Emergency Declaration (agreed by Full Council in July 2019) commits the council to zero carbon by 2050. The council met its initial 20 per cent reduction target within five years – one year early – and now aims to reduce its emissions by 45 per cent by 2030. The town centre DHN will play a significant part in achieving both of these goals going forward

- 7.33. The Combined Heat and Power Unit (CHP) in the DHN would be powered by a gas engine. Both gas and biomass were evaluated as possible cost-effective fuel choices for the DHN for the first phase. Investigation revealed that biomass was not feasible at this stage, because a delivery and storage solution for the biomass fuel could not be identified and there were concerns about the air quality implications of using this fuel source.
- 7.34. In the future, by having a network infrastructure, the council would be able to adopt alternative low carbon fuel sources to power the DHN more easily and efficiently. This meant that the DHN could further decarbonise as new technologies mature and become cost-effective (for example hydrogen or heat pumps). These can be added to the system with little disruption to individual householders. Heat networks also provide system benefits such as thermal storage and reducing the energy demand of the grid at peak times.
- 7.35. With its connection to the new DHN, the new Town Hall has been designed to meet the BREEAM 'Excellent' rating. BREEAM is a sustainability assessment method which rates buildings for their environmental, social and economic sustainability performance. BREEAM rated developments aim to be more sustainable environments that enhance the wellbeing of the people who live and work in them and help protect natural resources.
- 7.36. The DHN itself will provide higher efficiency and better pollution control than individual boilers for the residential and commercial buildings that will connect to it. The DHN will use a CHP, which is essentially 'a mini power station' that is a highly efficient process that captures and utilises the heat that is a by-product of the electricity generation process. By generating heat and power simultaneously, the CHP can reduce carbon emissions by up to 30 per cent compared to the separate means of conventional generation via a boiler and power station. This approach will also allow for quick and wholesale transition to other more carbon efficient power units as and when technology and price allows.

Recommendations

- e) Continue to invest in renewable energy technologies and/or energy efficiency measures on the council's own estate, including domestic buildings.
- f) With K2 Crawley being the biggest single contributor of CO₂ of Crawley Borough Council's estate in the town, consider lowering the pool temperature (taking into account the acceptable industry standard) to reduce energy consumption.
- g) Commit to consider the use of new technology fuel such as hydro-treated vegetable oil which could be used immediately in diesel engines (noting however there would be a cost implication of 10-12 pence per litre more than diesel).
- h) Commit that as part of any fleet replacement, consider an innovative approach (in terms of moving to low carbon technologies), including the option to work with other partners in other sectors (for example Metrobus and hydrogen fuel).

Blue and Green Infrastructure

7.37. The Green infrastructure SPD provides detail on determining the priorities and future opportunities for green infrastructure together with ensuring the existing green infrastructure is protected and maintained. It supports the Crawley Borough Council Local Plan key policies:

- Policy SD1 – Presumption in Favour of Sustainable Development
- Policy SD2 – Enabling Healthy Lifestyles & Wellbeing
- Policy GI1 – Green Infrastructure
- Policy GI2 – Biodiversity and Net Gain
- Policy GI3 – Biodiversity Sites
- Policy OS1 – Open Space, Sport and Recreation
- Policy OS2 – Provision of Open Space, Sport and Recreational Facilities
- Policy DD4 – Tree Replacement Standards

Evidence

7.38. Elizabeth Brigden, (Planning Policy Manager - CBC), Richard Mosinghi, (Planning Officer - CBC), Kate Wilson, (Head of Community Services - CBC), Karen Rham, (Neighbourhood Services Manager - CBC), together with Councillor Jhans (Cabinet Member for Environmental Services and Sustainability - CBC) and Councillor Mullins (Cabinet Member for Wellbeing - CBC) provided information for this meeting:

- The Environment Bill currently progressing through Parliament requires development to conserve and enhance the natural environment to a higher level than that previously determined.
- There was a balancing act across local authorities which sought to determine developments which were important, necessary and beneficial to each local area.
- The Local Plan must be followed in accordance with government legislation. This encourages tree planting in accordance with policy CH6. Landscape proposals for residential development should contribute to the character and appearance of the town by including at least one new tree for each new dwelling, of an appropriate species and planted in an appropriate location. Where development proposals would result in the loss of trees, applicants must identify which trees are to be removed and replaced in order to mitigate for the visual impact resulting from the loss of the trees. It was confirmed that the additional, replacement tree planting requirements (including maintenance for a certain period of time) would normally be expected to be met within the development site. But where the local planning authority agrees that this is not feasible or desirable, commuted sums will be sought in lieu on a per tree basis, taking account of constraints to planting. This would usually be determined through the Development Control process when considering spending the Section 106 monies or a wider strategy if deemed set up through that agreed process.
- In terms of tree species it was confirmed that UK trees were the preference and there may be a requirement for drought resistance trees in some areas but the inclination would be to opt for UK native trees for the purposes of biodiversity and these were determined on a site by site basis.
- The Green Infrastructure SPD supports the local planning policy, national legislation, policy and guidance, whilst providing a greater level of detail to explain how they can successfully be implemented. There is a priority focus of protecting biodiversity sites and securing a net gain on new sites. It was acknowledged that securing a net gain in biodiversity was a new requirement for national planning policy. There was a critical balance between green infrastructure and development, yet it was recognised

that any biodiversity issues would be undertaken throughout the planning application process.

- It was confirmed that as part of the evidence to support the emerging Local Plan there was currently 3 studies being undertaken; Indoor Built Strategy, Playing Pitch Strategy, Open Space, Sport and Recreation Assessment. The Indoor Built Strategy explored indoor sporting facilities, together with athletics facilities, whilst the Open Space, Sport and Recreation Assessment identified Community Food Growing Initiatives, whereby food growing areas could be envisaged in limited open spaces (roof tops, community spaces or balconies).
- There was likely to be a deficit in the majority of open space typologies by 2035 as a result of future population growth. It was recognised it would be paramount to protect and enhance existing open space for multi-functional purposes, whilst providing multiple benefits to residents, nature and the climate.
- The Neighbourhood Services division maintains the green and blue infrastructure across the borough and this included the tree lined areas of the town, central reservations and the grass cutting on behalf of WSCC. The blue infrastructure typically focuses on a watercourse management role, although this also includes a flood prevention programme together with a reactive function.
- It was estimated that the total green infrastructure within Crawley was 1,931 out of 4497 hectares, divided up via three main areas of managed open space, sport and recreation; designated sites and reserves; habitat spaces. It was predicted that the green infrastructure removed just 1-1.5% of the overall emissions (Centre for Ecology & Hydrology). However it was important to note that other contributing factors were equally important such as carbon sequestration and storage, air quality, water management and urban cooling together with habitat and wildlife.
- It was estimated that Crawley has 250,000 trees and consequently it was welcomed that the government was currently consulting on accelerating tree planting.
- The scale of green infrastructure means that green spaces have multiple demands that frequently result in a conflict of uses. There is a requirement to ascertain the best solution and often means changes would only have a marginal impact.
- The wilding of grass verges was one such area whereby the conflict with aesthetics and preference for “managed wild” existed. The wild verges also posed issues with dog poop management yet there were still requests for additional sites for wildflower verges and engagement with councillors was due to be undertaken to identify potential sites where it was practical. It was noted these sites required investment as well as programmed maintenance.
- It was discussed that unfortunately littering not only created significant costs but also impacted on climate change. Whilst fixed penalty notices were able to be served this only impacted marginally and it was behaviours that needed to change through publicity and campaigns.
- It was acknowledged that the recent grass cutting through lockdown had been successful although had impacted on the machinery and potentially reducing cuts may be an option.
- The Panel wished to pass on its thanks to the Head of Community Services, Neighbourhood Services Manager and Teams during the pandemic for their ongoing hard work.
- It was recognised that green infrastructure has an important role to play and as severe weather becomes more frequent it was important that the infrastructure the council brings in is resistant to the changes, for example drought resistant trees.
- There was a need to reduce flood risks, create natural flood storage areas, sustainable drainage systems, carbon storage using trees for example.
- Maintenance is a central part to maximising the benefits of green infrastructure.
- The tension was recognised between the resources required to maintain green spaces versus the benefits and reconciling the dynamic between potential climate benefits and financial cost.
- It was noted that a survey conducted by Imperial College London (*Integrating Green and Blue Spaces into our Cities – Making it Happen*) had highlighted some barriers

to provision of blue and green infrastructure, including a lack of compulsory standards for local authorities to have a minimum amount of blue and green infrastructure in new or existing development.

- The amount of open and green spaces within the borough was acknowledged, including parks and recreation grounds, football pitches, play space and allotments. These were in addition to the other recreational facilities such as K2 Crawley, The Hawth and community centres.
- It was important to maintain the use not only for individuals' health and wellbeing (particularly during this current lockdown period), but also the environment and the climate to ensure everyone benefited.

Future Developments

- 7.39. The submission Crawley Local Plan 2021 – 2037 – states that “...ensure that retained trees that make a contribution to the streetscene are not at risk of being removed because they significantly reduce the usability of new gardens for residents or because new buildings are placed in close proximity. Tree losses through development that are accepted by the local planning authority should be mitigated by new planting”. “Existing trees can significantly contribute to the setting of new development, and can give the impression of early maturity and increased design quality. Development should retain individual specimens or groups of trees that make a positive contribution to visual and biodiversity amenity”.
- 7.40. “Proposals which reduce, block or harm the functions of green infrastructure should be avoided. Any loss will be required to be adequately justified, minimised, mitigate against any loss or impact or as a last resort compensate to ensure the integrity of the green and blue infrastructure network is maintained”.
- 7.41. The strategic green infrastructure network is afforded the highest protection due to its high value from existing or identified potential multiple functions, for example as recreation, route ways, access to the countryside, wildlife and climate mitigation
- 7.42. “Proposals should maximise the opportunity to maintain and extend green infrastructure links to form a multi-functional network of open space, providing opportunities for walking and cycling, and connecting to the urban/rural fringe and the wider countryside beyond”.
- 7.43. EcoServ – GIS Report (January 2020) maps the open spaces within Crawley on the basis of their abilities to support: The local climate – local climate regulation reflects the ability of different ecosystems and habitats to absorb or intercept sunlight and reflected heat, controlling local temperatures & reducing the urban heat island effect.
- 7.44. Securing wider Green Infrastructure benefits from new tree planting and alternative soft landscaping where whole-scale tree planting may not be appropriate or where alternatives offer better outcomes – including air quality, climate change adaptation/mitigation, pollination, flood alleviation
- 7.45. A significant loss is incurred even when a new tree is planted to replace an older one that has been felled. Depending on the species, it takes between 15 and 40 years for a tree to grow a sufficiently large canopy to deliver meaningful aesthetic, air pollution removal, rainwater management and other benefits. In terms of biodiversity, the older the tree the richer the wildlife that it supports. To ensure that adequate compensation is delivered the diameter measurement is used as a basis for the number of replacement trees that would achieve a similar canopy cover. The policy DD4, in conjunction with the requirements of Policy GI2 on Biodiversity and Net Gain, ensures that the green character and appearance of the borough is maintained.

- 7.46. Green Infrastructure can also offer benefits as a “Nature Recovery Network”. This is a joined-up system of places important for wild plants and animals. It allows plants, seeds, nutrients and water to move from place to place and enables the natural world to adapt to change. It provides plants and animals with places to live, feed and breed. It can only do so effectively if, like the road network, it is treated as a joined-up whole.
- 7.47. The Panel felt it was important that the council should seek to promote pedestrianisation where practicable in order to enhance the establishment of open spaces, trees and seating areas. The quality of the spaces between buildings is as important as the buildings themselves. Successful spaces and streets contribute to the quality and character of a place, allowing for increased trees and sustainable urban design, bringing people together in well-designed places – including walking, cycling, access to facilities, employment and convenience of public transport.
- 7.48. An Ecological Services study has been undertaken for Crawley, which identified the opportunities of Crawley’s Green Infrastructure to meet a wide range of positive functions, including air quality, noise mitigation and ecological connectivity. In terms of wildflower verges, the submission Crawley Local Plan 2021 – 2037 - “Wild flower meadows and flower-rich habitats, in particular, are crucial to supporting pollinators by providing good sources of nectar and pollen throughout the summer and also shelter and nest sites. The council is committed to securing such enhancements wherever possible”.
- 7.49. In this aspect traditional planting schemes could be adapted and to provide adequate shaded areas to ensure parks and open spaces are resilient to the changing climate.
- 7.50. EcoServ GIS Report (January 2020) maps the open spaces within Crawley on the basis of their abilities to support-
- Pollination - capacity reflects the ability of different ecosystems to support wild pollinators, using an estimate of likely visitation by pollinators. Pollination demand indicates areas of land that are expected to benefit from wild pollinators. Areas where crops in farmland, allotments or orchards are likely to benefit from wild pollinators from nearby semi-natural habitats.
 - Water Purification – Areas where vegetation may help to purify water and reduce pollution impacts before reaching watercourses. Areas of land that may generate pollution risks to watercourses. Areas where people may be benefiting from the water purification effects of vegetation near streams.

Recommendations

- i) Commit to strengthening the protection of the borough’s blue and green infrastructure within its neighbourhoods, in particular any replacement of trees if felled, as referenced in of the Crawley Local Plan 2021-2037.
- j) Commit to increase the number of sites for Wildflower Verges across the town, and increase the use of sustainable planting, (particularly drought resistant planting).
- k) Seek to promote pedestrianisation where practicable including the establishment of trees and seating areas.
- l) Request that as part of the Climate Emergency Action Plan, officers explore opportunities for maximising the contribution that the borough’s green and blue infrastructure can make to biodiversity net gain, air quality improvements, carbon sequestration and flood prevention/management.

Residential/Domestic Buildings

- 7.51. The current Crawley Homes housing stock is a mixture of flats and houses built between 1915 and the current day, of either traditional or non-traditional construction type. A new build programme continues and has included Passivhaus homes as well as more traditionally built homes.
- 7.52. The Crawley Homes projects include the following:

Previous Completed Energy Efficiency Measures

TSB funded retrofit Properties – (Technology Strategy Board), alongside decent homes programme	4 homes all of different construction type were identified and extensive retrofit carried out using all new technology methods
Own Solar PV – Sheltered Schemes	We currently have four sheltered schemes and four hostels providing the Council with an annual feed in tariff income totalling £13,806. This produces 47,000kw of electricity per quarter, and in turn equates to an approximate saving of 52000 kg of CO2 per year.
YES/WSCC Partnership - PV programme	236 solar PV installations carried out in partnership with WSCC who own & maintain the PV installations and take the FIT (feed in tariff). The tenants then get the benefit of the free electricity produced
Air Source Heat pumps	Heat pump installed as a free trial. At 151 London Road as a retrofit, where the tenant gets the benefit of the lower cost energy The new build properties at Dobbins Place have also been installed with Air Source Heat Pump Technology
Water Source Heat Pump – Schaeffer House	This significant installation now provides all the heat & hot water to Schaeffer House sheltered scheme communal areas. This was complex to set up as arrangements with the Environment Agency etc. were required (river water extract licence)
Passivhaus Construction: Gales Place / Dobbins Place	New development with all properties designed & built to Passivhaus standards
Cavity Wall, Insulation Programmes	Ongoing programme to insulate cavity walls (main focus on properties suffering from damp & mould)
LED Lighting installations	Various communal areas in flats have been converted to general LED lighting & LED emergency lighting. We are therefore phasing out the use of fluorescent tube lighting across all communal areas.

Working in partnership with Robin Hood Energy (Nottingham City Council) for energy switching and smart meter installations	All void properties over the past 18 months have been switched to a 'Robin Hood energy supply and a smart meter installed
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Current Projects underway

Net Zero Collective sign up	<p>Crawley Homes have joined the 'Net zero collective initiative.</p> <p>This is a growing collaboration of property landlords, equipment manufacturers and building owners - including local authority and social housing landlords, who are working with university researchers to find answers to the challenge of decarbonizing UK buildings and homes.</p> <p>NetZero Collective initial study will be to look at current energy performance and monitor the stock across 10 to 20 pilot properties. A full data study/analysis will be carried out in conjunction with Southampton University research team, before making any recommendations with regards to retrofitting properties with zero carbon heating, cooking and cooling solutions. This takes a building fabric and data first approach. After the retro fit completion, properties will continue to be monitored for performance which will result in a future methodology for carbon efficiency across all Crawley Homes housing stock.</p>
External wall Insulation (EWI)	Programme of installing external wall insulation to the timber framed properties within Broadfield & Bewbush is now in its 3 rd phase.
LED Lighting Upgrades	Our larger sheltered housing schemes have been upgraded with LED lighting and occupied switching, to produce further energy savings.
Cavity Insulation Fill	Ongoing cavity fill to properties identified as most in need (tenants with damp & mould issues)
Loft Insulation Top-ups	Following void scope asset surveys, lofts are topped where a need is identified
Solar PV & Battery Storage trial	A further 620 kw of PV installations has been identified on other blocks to utilise battery storage solutions for their communal areas or fed back into the grid. A trial battery

	storage installation has recently been installed to assess its savings, production and payback. If successful and cost effective, further sites could be upgraded.
Smart Meter Installation and energy Supply switch for all void properties	Robin Hood Energy has now transferred all its business customers to British Gas. We continue to work with BG regarding void properties switching to a BG supply and smart meter
Installation A-Rated Combination Boilers (see later more on their future)	Liberty Gas currently continue to supply new A-rated boilers
John Brackpool Ct	John Brackpool Ct is now connected to its own temporary communal boiler.
Bridgefield House	Stand-alone combined heat & power (CHP) currently supplies the building
Partnership contractors –energy efficiency & carbon reduction is key sub-group focus area	A sub-group has been set up with CBC and its key maintenance partnership contractors. The purpose of the group is to ensure that all parties work together and deliver their tender commitments with regard to carbon efficiency programmes.
New builds / Passivhaus / Part L building reg's or better: review planning policy	A current review is underway of all our new build energy/carbon efficiency specifications
Renewable technology – Current study underway	Discussions are currently taking place with regards to a design service and training for Crawley Homes and Liberty Gas engineers
Future of Gas boiler provision	We are currently in discussion with an energy management consultant to model our future boiler/heating system requirements. We are considering when best to stop installing gas boilers - (possibly 2025) Also looking at the best alternatives with regard to renewable technology to replace the existing boilers as and when they fail
Energy monitoring	We currently have a number of existing stock properties, as well as some new build homes being monitored for their energy usage & performance by Raleigh instruments. This system is adaptable to monitor many energy production and energy usage in a home and shown on one platform for an app or PC. Our larger plant boiler rooms use is monitored by Trend systems.

	<p>All systems allow for performance and monitoring results to be available locally. These platforms are used for metering and billing, performance reviews, complaints or for fault finding. We also have separate metering and billing systems for our District heat networks.</p>
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7.53. There are a number of Major Factors in reaching our 2030 45% Carbon reduction requirements that will help with reaching the Councils corporate climate change commitment

- New Build – Construction Methodology/Specification
- Net Zero Collective
- Partnership Contractors
- Estate Regeneration

7.54. New Build – Construction Methodology/Specification

Currently the Councils Employers Requirements (ER) specifications require 19% carbon reduction above current building regulation requirements. This is currently under review, looking to see if/how this could be improved. This could be by the increased use of the specification of certified Passivhaus or taking the Passivhaus fabric first approach and having reduced ventilation losses with added renewables. The current requirements are already very close to Passivhaus fabric standards. Ventilation rates/losses and could be further reduced, but then the council is almost specifying Passivhaus as standard. The council has yet to revisit the carbon credentials of construction types, eg Timber frame versus masonry thin bed joint. Other considerations will be the provision of electric car charging points to be standard across all new build developments, although it is anticipated that near future building regulation revisions are likely to recommend this.

7.55. NetZero Collective

CBC are very pleased to be joining the NetZero Collective and look forward to working together with other organisations across the UK to make a positive impact on reducing our carbon emissions with a view to having data driven future energy efficient development programmes at Crawley Borough Council. NetZero Collective has developed a Programme in conjunction with Southampton University to gather Data from domestic and commercial properties, and, based on an analysis of the Data to make recommendations (if applicable) for the installation of an intervention to reduce carbon emissions. It is intended that the Data collected from all Project Participants will be pooled by NetZero to be processed by its Analytic Partners to produce the most appropriate form of intervention recommendations for as many differing property archetypes as possible from the Data. Crawley Homes are committing ten different properties to the programme for the data study phase. The ten homes will reflect different property types, of varying age and build, allowing us to explore the range of options for each. On completion of the extensive data study supported by Southampton University, Crawley Homes will then be in a position to make an informed decision on the measures required to enable future retrofit programmes to be developed.

7.56. Partnership Contractors

Crawley Homes has recently procured some new long term maintenance contracts with 3 well established maintenance contractors. As part of the new contract an alliancing group has been formed to look at a number of key development areas, one being energy efficiency & carbon reduction. A sub-group has been set up with the purpose to ensure that all parties work together with regard to energy efficiency and carbon reduction programmes. All three contractors made commitments within their tenders to work in collaboration with Crawley in driving energy efficiencies and carbon reduction

throughout the lifetime of the contract. These measures include looking at transferring their fleet of vehicles to all electric, to reducing energy in the home and investing in the local community as projects are identified.

7.57. Estate Regeneration

As part of Crawley Homes future asset management strategy, we have recognised the need to explore the option of estate regeneration. Crawley Homes have a number of non-traditionally constructed properties that were system quick-built as part of the new town development. These homes require extensive maintenance to ensure they maintain a fit for habitation status. All options need to be considered in order to provide higher energy efficient standards, improve dwelling density and ensure homes are fit for future generations and feasibility study appraisals will be undertaken.

Evidence

7.58. Karen Dodds (Head of Crawley Homes - CBC), Russell Allison (Housing Enabling and Development Manager - CBC), Alan Moore (Mechanical and Electrical Surveyor - CBC), Louise Skipton-Carter (Sustainability Manager - CBC) and Clem Smith (Head of Economy and Planning - CBC), together with Councillor Irvine (Cabinet Member for Housing – CBC), provided information for this meeting:

- Crawley Homes was currently working towards the Government's target of carbon neutral homes by 2050.
- There was a programme of loft insulation, cavity wall insulation and external wall insulation to improve the energy performance of homes and in particular to address aspects of fuel poverty. Work had been undertaken since 2012 which had included a retrofit programme to reduce energy output in homes.
- Different approaches and technology worked for existing properties and new builds. It was important to identify the best solution and approach to ensure homes were future proof.
- It was important to understand how residents live and how best to use the technology to evaluate the ideal solution.
- Confirmation that smart meters were currently only being installed on void properties due to a current shortage. However at the DHN sites, these were automatically fitted with smart meters.
- Acknowledgement that historically a programme had been completed around insulation. Now a timetable was in place to complete those sites where previously access was unobtainable, there was an option to install deeper insulation for leaseholder flats where grants were available.
- There had been significant improvements in performance of cavity wall insulation but it was noted that whilst this had benefits for properties and energy efficiency this could become costly for leaseholders.
- Some homes may require extensive maintenance to ensure they maintain a fit for habitation status. All options needed to be considered in order to provide higher energy efficient standard, including retrofitting or potential regeneration to improve dwelling density and ensure homes were fit for future generations. Feasibility study appraisals would be undertaken when required.
- Confirmation that with regards to the installation of electric vehicle (EV) charging points within future developments these were reviewed as part of the new build specifications and would also form part of any regeneration. It was noted that quite often EV points fall out of the Crawley Homes remit, and were being planned as part of the current West Sussex wide EV Charging Network project. However with the increase in town centre housing locations offering limited parking spaces it was felt that car clubs may provide alternative provision.
- Acknowledgement that the air source heat pumps that were installed as a trial were not a 'one size fits all' approach. The Net Zero Collective initial study would

look at current energy performance and data. It would be important to ascertain the best fit for the each property type. It was noted that a full data study would be carried out in conjunction with Southampton university research team. Volunteer tenants had been identified across a range of property age/construction types and survey equipment had been fitted. It was estimated that full data would be available summer 2021 whereby it was anticipated that a retro-fitting plan could be developed. There could also be the option to liaise with Crawley College to assist and train individuals to fit the technology, however funding would need to be made available.

- Recognition that the energiesprong (whole house approach to energy retrofit or new build) whilst effective was also costly, particularly for leaseholders. It was noted that the funding was for Crawley Homes' properties and tenants.
- Confirmation that UPVC windows were currently still the best approach, although this was assessed regularly as part of the specification reviews. However they had been used for a long period due to the cost effectiveness and performance. There was a need to strike a balance between budget and value for money together with the environmental concerns and lack of maintenance required.
- Whilst the Government's current Green Homes Grant could not be utilised by Crawley Homes' tenants, the council would identify any funding opportunities when they became available.
- In order to assist and influence home owners there were various initiatives available:
 - Solar Together Scheme – This was a group buying programme for solar PV panels and battery storage, whereby home owners and SMEs could apply. It was run in conjunction with most district and borough councils within West Sussex. Residents register their interest and a reverse auction takes places with the winning bidder setting a competitive price for all solar and battery systems. All installers were pre-vetted and must comply with criteria to guarantee the quality of the offer. Installations for the first auction in October 2020 would be completed by May 2021.
 - Energy Switching - Robin Hood Energy, who provided the white label company for Your Energy Sussex, had been sold to Centrica, the parent company of British Gas. Existing Your Energy Sussex customers had been contacted and were able to continue with their existing energy tariff for the duration of their current supply agreement or be able to switch supplier, as Robin Hood Energy had offered a green energy tariff.
 - iChoosr - an alternative for energy switching. iChoosr hold three auctions in February, May and October in which energy companies bid their best prices to beat competitors and gain a large number of new customers. The more people who take part, the greater our chances of getting a competitive energy deal.
 - Green Homes Grant - homeowners or residential landlords could apply for a Green Homes Grant voucher towards the cost of installing energy efficient improvements (primary and secondary measures – criteria applies). Vouchers cover two-thirds of the cost of eligible improvements, up to a maximum government contribution of £5,000. Individuals in receipt of certain benefits may be eligible for a voucher covering 100% of the cost of the improvements. The maximum value of the voucher was £10,000.
 - Warmer Sussex – whilst still in its infancy, the Whole House Plan provided homeowners with an overview of their home and its current energy requirements. Using the information gathered during a home survey and a conversation with an energy advisor this would demonstrate all of the possible improvements to be made, indicative costs of these measures and the impact these will have on the energy efficiency, comfort and environmental impact of an individual's home. A report was then prepared and expert advice outlining the next stages including

- finalising specification, gathering prices from several vetted contractors, putting contracts in place, overseeing the quality of the work, dealing with any disputes and signing off the work.
- Towns Investment Fund – this incorporated a number of areas including (if successful) £5m green retrofitting grant fund for homes across the borough from April 2021 over a period of five years, £2.5m green tech business grants to assist businesses with expertise in installing the new technology and green construction skills training at Crawley College to help up-skill the local workforce. It was noted that the Towns Investment Fund was currently under consideration, with the outcome due imminently and councillors would be updated accordingly.

Future Developments

- 7.59. It was stated by the Committee on Climate Change in 2019, that “designing efficient homes from the outset is a one-time opportunity”. As a result the Panel recommends building new build housing to zero carbon standards from the start, avoiding the need to retrofit in the future. Thus designing energy efficient homes and making savings at the outset. “When already faced with the challenge of upgrading the energy performance of the entire housing stock, it is nonsensical to be continuously making the problem worse by allowing new homes to be built that will also need to be retrofitted”. (Committee on Climate Change 2019). The full Energy Efficiency: building towards net zero publication can be found [here](#).
- 7.60. These developments should include increasing the number of electric vehicle charging points across any new build developments. These should be reviewed as part of the new build specifications and would also form part of any regeneration. It is estimated that electric vehicle will add 6.8% to global electricity demand in 2040, and drive a growth in demand for Lithium-ion batteries from 151 GWh in 2019 to 1,748GWh by 2030. ([New Directions for Crawley – issues and options for Crawley Transport Strategy - March 2020](#)).
- 7.61. In order to assist with progressing further energy efficiency improvements within Crawley Homes, it is suggested an efficiency plan is completed following the analysis of NetZero Collective Data. CBC has joined the NetZero Collective are working together with other organisations across the UK to make a positive impact on reducing our carbon emissions with a view to having data driven future energy efficient development programmes at Crawley Borough Council
- 7.62. NetZero Collective has developed a Programme in conjunction with Southampton University to gather Data from domestic and commercial properties, and, based on an analysis of the Data to make recommendations (if applicable) for the installation of an intervention to reduce carbon emissions. It is intended that the Data collected from all Project Participants will be pooled by NetZero to be processed by its Analytic Partners to produce the most appropriate form of intervention recommendations for as many differing property archetypes as possible from the Data. Crawley Homes is committing ten different properties to the programme for the data study phase. The ten homes will reflect different property types, of varying age and build, allowing us to explore the range of options for each.
- 7.63. NetZero Collective initial study will be to look at current energy performance and monitor the stock across 10 to 20 pilot properties. A full data study/analysis will be carried out in conjunction with Southampton University research team, before making any recommendations with regards to retrofitting properties with zero carbon heating, cooking and cooling solutions. This takes a building fabric and data first approach. On completion of the extensive data study (approx. summer 2021) supported by

Southampton University, Crawley Homes will then be in a position to make an informed decision on the measures required to enable future retrofit programmes to be developed.

Recommendations

- m) Continue efforts to deliver new build housing to zero carbon standards that would ensure they would not need to be retrofitted by 2050 at great expense, including increasing the number of electric vehicle charging points across these developments.
- n) Agree to compile an efficiency plan following the analysis of Net Zero Collective data to progress further energy efficiency improvements within Crawley Homes.

8. Evidence and Engagement

8.1. Members considered a range of evidence including the Council's current carbon footprint and comparative, background information and desktop research from other local authorities, witness sessions, the Council's existing policies and contracts together with information from the Centre for Governance and Scrutiny. Prior to the Coronavirus Pandemic the Scrutiny Panel sought to engage local residents and community groups in the process.

8.2. Listed below were many of the key issues and themes that were raised during the consultation:

- The need for replacement trees once others were felled. It was noted there was current planning policy surrounding the investment and replacement of trees. Furthermore the submission Crawley Local Plan 2021 – 2037, had been revised with regards to the protection and enhancement of biodiversity.
- Recognition that changes in transport provision needed to reflect a variety of issues; those in transport poverty, isolation of people on low income, young, elderly, disabled, together with the condition of streets.
- There was support for community garden projects and potential links to working with the voluntary sector and obtaining future funding.
- It was queried whether the Council could obtain its energy through green energy.
- There was a keenness to work with the Council to progress actions and it was suggested the Council consult and compare with other Councils. It was confirmed that the Panel had and were continuing to investigate other councils and undertake further research.
- It was felt by some that reducing the target date for cutting carbon emissions to zero from 2050 to 2030 would highlight ambition, intent and commitment. However it was stressed that it was important to have the finances and resources to deliver the changes.
- It was hoped the climate change agenda would feature highly throughout each area of the council's work.
- It was questionable how much influence and power the Council had with partners, stakeholders and businesses.
- Confirmation was provided that any action plan needed to be practical in terms of what the Council could achieve and actually deliver with assistance with partners and stakeholders. It was anticipated this would be costed and combine CBC and private funds. The action plan would be available for consultation as and when available.
- The council was commended for the 'New Directions for Crawley' document.

- There would be a need for the council to consider how to deal with the use of petrol and diesel usage, both now and in the future.
- Would an emissions charge be feasible for the town
- There was support for promotion and education to highlight the advantages of use of sustainable transport, particularly bus and rail use.
- Whilst it was acknowledged that it was important to have the finances to deliver the changes, it would be beneficial if Metrobus could roll out the entire fleet to fuel cell electric buses powered by clean hydrogen by 2025 instead of 2030.
- There was support for greater pedestrianisation of the town centre, particularly The Boulevard.
- It was questioned if funding could be ring-fenced for climate change in the future.
- It was noted that Luxembourg had just allowed free cost public transport across the country.
- An acknowledgement that the traffic flow throughout the town needed improving and this would assist in reducing congestion and carbon emissions.
- There was support for further solar panels to be introduced wherever possible.
- There was support for ride share/car clubs.

9. Other Council Workings and Activities

- 9.1. The Panel has been mindful throughout the review to focus on where the Council can add value and influence. The scale of the challenge is unprecedented, but it is one that Council should pursue in good faith as ignoring climate change and its impact is not a viable option. The Council's challenge will be made easier if it successfully inspires both staff and residents. The Group has been consistently impressed with the scale of activity already underway across the borough and when researching committee reports from other local authorities and those action plans featured it is clear that this council already has in place those actions featured in other authorities' recommendations.
- 9.2. In order to respond to the climate emergency and embed environmental sustainability in decision making across the council it is recommended a Climate Change Impact Assessment is completed prior to establishing any new services, projects or programmes. This should be similar to an Equality Impact Assessment and submitted with the Cabinet report. This will ensure all services approved by the council are shown to be considering the importance of the climate change agenda and their contribution towards the Council's carbon reduction targets. Whilst some contractors and tenders are requested to consider environmental implications this is not the case for all new services, projects and programmes. By requesting the completion of a CCIA with a Cabinet report – similar to an EIA this will ensure that officers are at least considering the environmental and climate change implications – together with Cabinet and raising the climate emergency response agenda across the Council (see example of a local authority climate change impact assessment in Appendix A).
- 9.3. In order to instil the need to respond to the climate emergency through the town, it is felt that more promotion is required. Panel Members were not aware of the recent 'Solar Together Sussex' initiative that was being undertaken by the Council, together with other schemes being run. Consequently there is a need to promote energy saving initiatives and projects to local residents – including the benefits, particularly when trying to influence the need for green tariffs and energy efficiency; to encourage and engage with residents on various environmental projects. Decarbonising energy across the Borough is a key challenge and therefore consideration should be given to promoting initiatives that will increase the use of these technologies across the Borough, including the auctions, solar panels etc. Similar to a previous recommendation, the Panel has not identified specific energy efficiency measures (such as smart meters, solar PV, heat pumps, insulation, LED lighting, energy switching or meter installations) as some of these are already in place. Additionally each energy efficiency measure will be dependent on the type of property as a 'one size fits all'

approach may not be appropriate and the decision will need to be taken following the necessary feasibility study.

- 9.4. The Scrutiny Panel was confident that zero carbon can be achieved by 2050. However, even this will take a cultural shift from the Council and the genuine embedding of actions. For instance, prior to the Coronavirus pandemic, 22 councillors were paperless. However following the pandemic, councillors were issued with tablets and committee meetings have been run on Live Events since April 2020 with other meetings being run on MS Teams. Work was undertaken by Democratic Services and IT to ensure the technology was consistent and councillors received training by Democratic Services on Live Events (and using a split screen and Modern.gov where appropriate, or allowing access to meeting papers on the intranet using a password).
- 9.5. However, a decision was made that all councillors were to receive hard copies of agendas and reports on a trial basis whilst they became accustomed to the new IT equipment, even though training was deployed (unless requesting not to). As a result the environmental and financial impact of printing agendas and reports for all councillors has certainly increased and been evident. This has also had repercussions on the digital modernisation and transformation agenda where there is a future commitment to move towards paperless working. May 2021 municipal year therefore provides a lead in time.
- 9.6. The current (and future) committee papers are available on the Intranet (and website). Both the intranet and Modern.gov app approaches allow papers to be securely disseminated to Councillors whilst also having the papers on personal devices should this be the preference whilst having Live Event committee meetings on the Council devices, or using a split screen on Council devices should this be the preferred approach.
- 9.7. The Council originally began issuing tablets in 2015. Following this, the Cabinet Member for Resources took the decision that any newly elected councillor would be paperless from May 2018, whilst remaining compliant under the Equality Act. Since then any individual newly elected to the council has received a device and automatically been paperless (with the exception of the Full Council agenda unless also requested to be paperless). The Constitution states "*All Councillors will be notified and receive access to Committee papers electronically on the date of publication, including those containing exempt and/or confidential information. Those Councillors attending a Meeting may request a paper copy of the paperwork*". With the Coronavirus pandemic Councillors now have devices and can access papers electronically. Committee agendas, minutes and reports will continue to be published and distributed electronically to all members of the council.
- 9.8. A number of Councils have completed a transition to paperless meetings over recent years and there is a clear direction of travel in this regard, such it is expected to become standard practice in local government. Indeed, Stratford Upon Avon, Guildford, Wolverhampton and Epping Forest are just a number of other councils that have recently committed a move to paperless meetings. Furthermore the report from the [Independent Remuneration Panel and Recommendations for the Scheme of Allowances and Expenses from May 2021](#) published by WSCC, recognised that virtual meetings have had a positive impact on the sustainable environment. It concluded that virtual meetings resulted in not only cost savings, but also in CO₂ reduction and that the council should try to maintain this level of carbon saving. In addition it hoped that by 2030, at least 70% of members' vehicles would be electric or other non-fossil-fuelled vehicles. The report of the [Crawley's Independent Remuneration Panel Final Report](#) considered the HMRC approved mileage allowance payments (AMAP) rates and suggested it be emphasised that the rates were also applicable to electric cars. It hoped that this would be an incentive toward a reduction in carbon emissions in Crawley.

- 9.9. Across a wide number of service areas, the Council is increasingly encouraging its residents to access services electronically. Moving to paperless meetings provides Councillors with an opportunity to lead by example in this regard and demonstrate that they too are prepared to embrace new forms of technology to deliver savings, embrace more efficient working practices and reduce the Council's carbon footprint, having voted unanimously at July Full Council in 2019. To ensure paperless committee meetings are successful, the core principles will be adopted:
- Chairs will continue to be provided with guidance.
 - Officers will endeavour to produce all reports in a format that can be used on a compatible device.
 - That Councillors participate in training from IT or Democratic Services when required.
 - That any Councillor who is "an expert" in Modern.gov provide peer to peer support.
- 9.10. According to Standard Carbon (Standard Carbon LLC is a leader in the development and aggregation of carbon offset credits), a single sheet of paper is equivalent to 0.004173 kg of CO₂.
- 9.11. The printing costs together with the amount of CO₂ for each committee agenda from April-December 2019 and 2020 (which takes into account non-virtual and virtual meetings) are documented below. This does not take into account any internal briefings or meetings.

Ctte April - Dec 2019	Pages	No of copies	Total Pages	Sheets of Paper	CO2 lbs	CO2 kgs	Cost £s
Audit	296	8	2368	1184	10.89	4.94	£118.40
Cabinet	444	15	6660	3330	30.64	13.90	£333.00
Climate Change SP	6	6	36	18	0.17	0.08	£1.80
Full Council	400	22	8800	4400	40.48	18.36	£440.00
Governance	34	8	272	136	1.25	0.57	£13.60
Licensing	194	6	1164	582	5.35	2.43	£58.20
OSC	364	15	5460	2730	25.12	11.39	£273.00
Planning	419	5	2095	1047.5	9.64	4.37	£104.75
TOTAL	2157	85	26855	13427.5	123.53	56.03	£1,342.75

Figures do not include the entire year - merely a comparison between 2019-2020 and virtual meetings v non-virtual meetings.

Ctte April - Dec 2020 (virtual meetings)	Pages	No of copies	Total Pages	Sheets of Paper	CO2 lbs	CO2 kgs	Cost £s
Audit	270	9	2430	1215	11.18	5.07	£121.50
Cabinet	332	15	4980	2490	45.82	20.78	£249.00
Climate Change SP	48	6	288	144	2.65	1.20	£14.40
Full Council	414	36	14904	7452	137.12	62.20	£745.20
Governance	38	8	304	152	2.80	1.27	£15.20
Licensing	60	13	780	390	7.18	3.25	£39.00
OSC	328	15	4920	2460	45.26	20.53	£246.00
Planning	352	10	3520	1760	32.38	14.69	£176.00
TOTAL	1842	112	32126	16063	284.38	128.99	£1,606.30

NB - The figures in either of these tables do not include costs or CO2 relating to:

- Any internal briefings or meetings
- Any additional printing (eg spares)
- Fuel costs for Councillors' Mail Delivery (including special delivery for Full Council)
- Staff resources and time for Councillors' Mail Delivery (including special delivery for Full Council)

- 9.12. The scale of the challenge outlined by the Motion is unprecedented, but it is one that Council should pursue in good faith as ignoring climate change and its impact is not a viable option. The Scrutiny Panel has attempted to match this ambition and present a realistic way forward focusing on the Motion and the workings and activities of the Council. Pursuing the goal may mean there are some extremely difficult and potentially unpopular decisions ahead. It is imperative that in any relevant consultation the Council's aspirations for improving air quality and tackling climate change are included in all responses to Government and regional consultations.
- 9.13. It is proposed that the recommendations should be incorporated into an action plan being developed by the Climate Emergency Officer Advisory Group (as per the final

recommendation). The officers' group is best placed to have the expert knowledge and skill to identify actions, activities and timescales within the council's services. This action plan should identify resources, sources of funding and timescales for completion of actions in order to ensure the council remains on target to reduce carbon emissions generated by Crawley Borough Council activities by at least 45% by 2030 and to zero by 2050. This corporate Climate Change Action Plan will be cross cutting, led by the Climate Emergency Officer Advisory Group who have in-depth, enhanced expert knowledge of specific projects and have a crucial view on the council's services. This action plan should be subsequently monitored through CMT. Responsibility lies with the Cabinet Member for Environmental Services and Sustainability (for Climate Change and Sustainability) within the Constitution. The action plan and progress can be regularly reported back to Overview and Scrutiny Commission and Cabinet.

Recommendations

- o) Agree that a Climate Change Impact Assessment Document be completed for all new services/projects/programmes (similar to an EIA). This will ensure all services approved by the council are shown to be considering the importance of the climate change agenda and their contribution towards the Council's carbon reduction targets. (See example of a local authority climate change impact assessment in Appendix A).
- p) Promote energy saving initiatives and projects to local residents, particularly when trying to influence the need for green tariffs and energy efficiency; to encourage and engage with residents on various environmental projects.
- q) Endorses the Cabinet Member for Resources previous decision that from May 2018, all newly elected members will be paperless for committee meetings and that with effect from the new municipal year May 2021 all members will be paperless for committee meetings, especially as all Councillors have devices to enable this to happen.
- r) Assert the Council's aspirations for improving air quality and tackling climate change in all relevant responses to Government and regional consultations.
- s) Agree that the Climate Emergency Officer Advisory Group creates a Climate Emergency Action Plan for Crawley, taking into account the Scrutiny Panel's views and recommendations. This action plan should identify resources, sources of funding and timescales required for completion in order to ensure the council remains on target to reduce carbon emissions generated by Crawley Borough Council activities by at least 45% by 2030 and to zero by 2050.

10. Implications

- 10.1. Financial – There are financial implications with the continued printing of agendas, reports and minutes. Further financial implications will be addressed via the corporate Climate Emergency Action Plan for Crawley (to come forward at a future Cabinet meeting) as this identifies resources and funding attributed to specific areas and projects. An assessment and evaluation can then be individually conducted. Any recommendations with financial implications will feature in future Cabinet reports.
- 10.2. Environmental – The environmental implications are addressed throughout the report.

- 10.3. Legal – The legal implications have been highlighted within the report where necessary. The Council's Constitution takes account of the Local Government Act 1972, the Local Government (Executive Arrangements) (Meetings and Access to Information) (England) Regulations 2012 and Local Government (Electronic Communications) (England) Order 2015.

11. Background Papers

Anthesis Baseline Audit Report – June 2020

[Bath and North East Somerset Council Climate Emergency Study Pack September 2019](#)

[Bath and North East Somerset Climate Emergency Project Report October 2019](#)

[Centre for Governance & Scrutiny webinar – Scrutinising Climate Change September 2020](#)

[City of Bradford – Reducing your Emissions](#)

[City of Bradford – What is Climate Change & how will it affect the UK?](#)

[Climate Change Scrutiny Panel Minutes 20.11.19](#)

[Climate Change Scrutiny Panel Minutes 28.1.20](#)

[Climate Change Scrutiny Panel Minutes 27.2.20](#)

[Climate Change Scrutiny Panel Minutes 30.6.20](#)

[Climate Change Scrutiny Panel Minutes 10.9.20](#)

[Climate Change Scrutiny Panel Minutes 12.10.20](#)

[Climate Change Scrutiny Panel Minutes 11.11.20](#)

[Climate Local Tunbridge Wells](#)

[Crawley Borough Council New Directions for Crawley – issues and options for Crawley Transport Strategy - March 2020](#)

[Energy Efficiency: building towards net zero – Parliament publication](#)

[Evaluation of a Hydrotreated Vegetable Oil \(HVO\) and Effects on Emissions of a Passenger Car Diesel Engine, Dimitriadis, Natsios, Dimaratos, Katsaounis, Samaras, Bezergianni and Lehto \(2018\)](#)

[Hydrotreated Vegetable Oil \(HVO\) as a Renewable Diesel Fuel: Trade-off between NOx, Particulate Emission, and Fuel Consumption of a Heavy Duty Engine. In *Proceedings of the Powertrains, Fuels and Lubricants Meeting*, Aatola, H.; Larmi, M.; Sarjojavaara, T.; Mikkonen, S. 2008](#)

[Leeds City Council – Climate Emergency Update Report January 2020](#)

[Royal Borough of Kensington and Chelsea Air Quality and Climate Change Action Plan January 2019](#)

[York Climate Change Action Plan](#)

[York Climate Change Framework](#)

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EXAMPLE of a Local Authority Climate Change Impact Assessment

Completed by	
Date	
Approved by Head of Service	
Date Submitted to Sustainability Team	

Section 1 An CIA is applicable to the attached report because it	(Yes / No)
Proposes a new project (including new buildings and refurbishments) or service	
Proposes a change in service delivery	
Proposes a change/increase/decrease in assets, resources, equipment or products e.g. buildings, staff, vehicles, IT equipment, heating/lighting systems etc.	
Proposes a change in management of sites owned or rented by CBC (including those operated by others for CBC or for themselves)	

Section 2 Environmental impacts				
Consider the environmental impact the report's recommendations will have on the following	Assessment of Impact	Brief description of impact	If negative, how is it to be mitigated? If positive, how it being enhanced?	
Procurement	<ul style="list-style-type: none"> Accounting for social, economic and environmental outcomes in procurement and delivery in line with the Public Services (Social Value) Act 2012 	Choose an item.		State person(s) responsible for implementation

	<ul style="list-style-type: none"> • Stimulating commitment to improving environmental impact and innovation in the supply chain and by contractors • Waste generation • Use of natural resources such as raw materials, water, and energy • Supporting the local economy and reducing miles travelled by materials by using local suppliers. 			
New builds and refurbishments	<ul style="list-style-type: none"> • Build, energy, and thermal efficiency standards of new or refurbished buildings owned or rented by CBC e.g. Passivhaus, CBC Fabric First, Building Regs • Energy consumption (electricity/gas/oil/LPG etc) for lighting and heating • Water consumption • Waste generated and recycled • Natural lighting • LED lighting • Generation of renewable energy 	Choose an item.		
Facilities Management	<ul style="list-style-type: none"> • Build, energy, and thermal efficiency standards of new or refurbished buildings owned or rented by CBC (including those operated by others) e.g. Passivhaus, CBC Fabric First, Building Regs • Change in frequency of use • Energy consumption (electricity/gas/oil/LPG etc) for lighting and heating • Water consumption • Waste generated and recycled • Natural lighting • LED lighting • Generation of renewable energy 	Choose an item.		

Travel	<ul style="list-style-type: none"> • Business miles travelled by staff/contractors • Providing / improving / promoting alternatives to car based transport (e.g. public transport, walking and cycling) • Efficient use of vehicles (car sharing, low emission vehicles, community transport, environmentally friendly fuels and technologies) • Efficient/lower emission vehicles e.g. purchasing improved vehicles 	Choose an item.		
Equipment	<ul style="list-style-type: none"> • New or changes to equipment and how has electricity, gas, oil, LPG, water etc. use in offices, leisure and culture facilities been considered • E.g. IT equipment, heating systems, interactive equipment in public venues and How has electricity, gas, oil, LPG, water use 	Choose an item.		
Workforce	<ul style="list-style-type: none"> • Change in number of office based staff and related energy use. 	Choose an item.		
Adaptation to Climate Change	<ul style="list-style-type: none"> • Adapting to and mitigating against the expected effects of climate change in Crawley (e.g. building and contingency planning for warmer wetter winters and hotter summers, heavy precipitation, flooding, heatwaves and other weather extremes) 	Choose an item.		
Carbon emissions	<ul style="list-style-type: none"> • Current and future emissions expected and the impact on CBC's corporate or borough greenhouse gas emissions target. <p>Sustainability Team can provide assistance.</p>	Current emissions (CO₂e tonnes) State 0 if applicable		
		Proposed/estimated (CO₂e tonnes)		