Strategic Flood Risk Assessment (SFRA)

2022



Background

 The national Planning Practice Guidance (PPG) describes Strategic Flood Risk Assessments as:

"...a study carried out ... to assess the risk to an area from flooding from all sources, now and in the future, taking account of the impacts of climate change, and to assess the impact that land use changes and development in the area will have on flood risk".



Why we are undertaking a new SFRA?

- The District Council published the current Strategic Flood Risk Assessment (SFRA) in July 2015.
- Government guidance indicates that local authorities should update the SFRA early in the plan making process to inform policies and decisions.
- If there have been changes relating to the other matters, such as the predicted impacts on climate change or major flood events.



Key Changes since 2015

- New Places and Policies Local Plan 2020 and Core Strategy Review 2022
- Entering new local plan review
- NPPF Changes Sequential Test, Vulnerability classifications and resilient design
- New climate change projects and predictions for extreme sea levels.
- Updated defences





Key Findings of SFRA

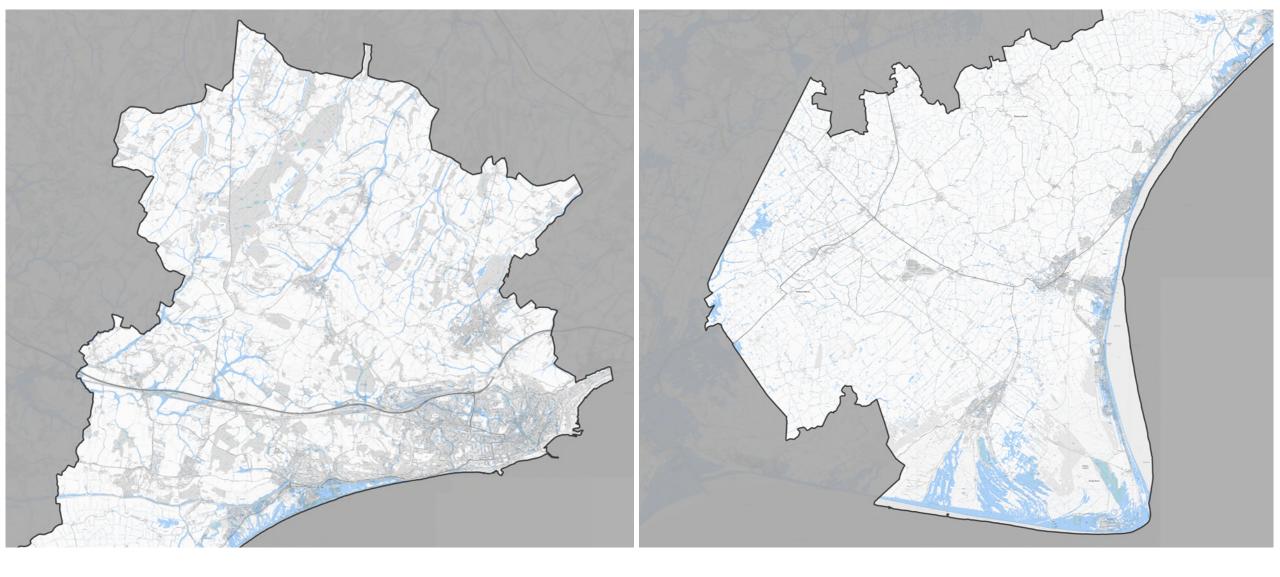
- Tidal Flooding
 - Wave overtopping
 - Breach
- Fluvial Flooding
- Surface Water Flooding
- Sewer flooding
- Groundwater
- Reservoirs













Fluvial - Climate Change

Modelled climate change scenarios

Watercourse	Allowances included
East Stour	20%, 35%, 45 % , 105%
Nailbourne	35% , 45% ,
Pent Streams	20%, 25%, 30%, 35%, <mark>45%</mark> , 50%, 105%
Brockhill Stream	None*
Seabrook Stream, Saltwood and Mill Leese Stream and Brockhill Stream	20%, 25%, 30%, 35%, <mark>45%</mark> , 50%, 105%

^{*1} in 1000 year return period used as a placeholder

EA climate change guidance

Percentile Allowance	Rother Catchment	Stour Catchment
Central	28%	38%
Higher Central	38%	55%





Tidal Climate Change

EA climate change guidance

Allowance	2000 to 2035	2036 to 2065	2066 to 2095	2096 to 2125	Cumulative rise 2000 to 2125 (m)
Higher Central	5.7	8.7	11.6	13.1	1.20
Upper End	6.9	11.3	15.8	18.2	1.60

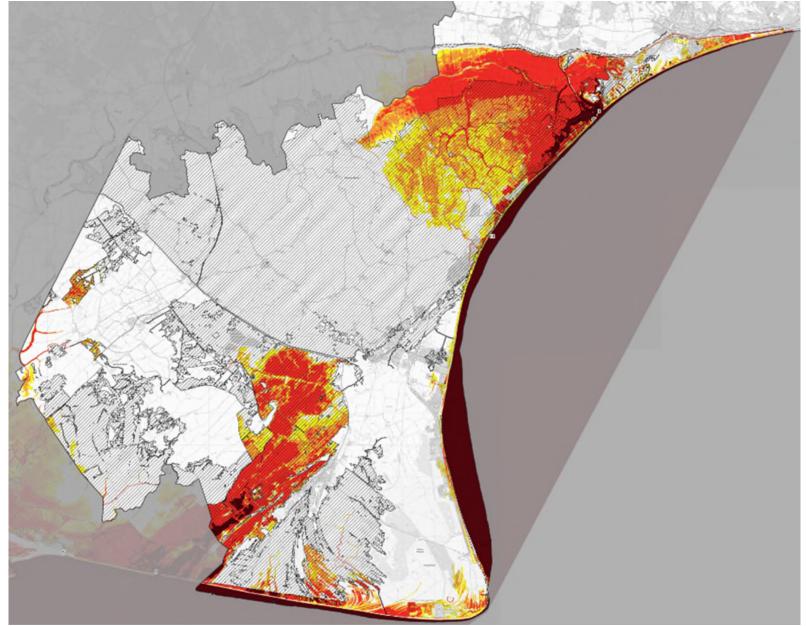
Modelled climate change scenarios

Year (Base year 2008)	Absolute Sea Level Rise based on UKCP09 predictions (m)	Absolute Sea Level Rise based on 'NPPF' predictions (m)	Absolute Sea Level Rise based on UKCP18 predictions** (m)
2070	0.39	0.52	0.48 / 0.62
2115*	0.78	1.17	1.02 / 1.36

*additional years to cover 100 year period ** Central / Higher Central



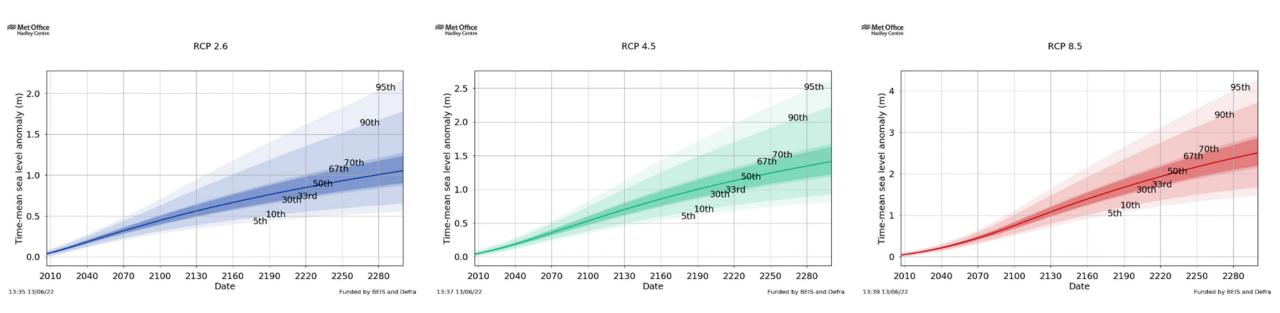








Exploratory sea level projections to 2300





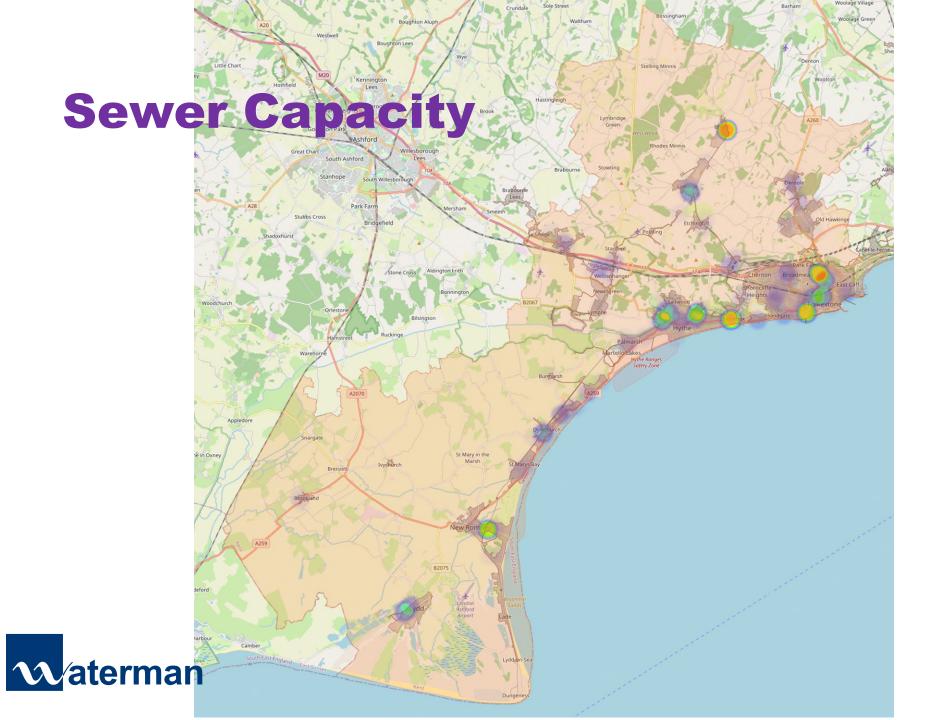


Rainfall Allowances

Allowance	3.33% Annual Exceedance Probability	1% Annual Exceedance Probability
Central	20%	20%
Upper End	40%	45%











To: Climate and Ecological Emergency Working Group

Date: 22 June 2021

From:

SUBJECT: BRIEFING NOTE ON UK100 MEMBERSHIP

SUMMARY: This report provides information on UK100, a network of

local authorities who have pledged to take action on climate

change.

1. BACKGROUND

1.1 Following a request from Councillor Whybrow to Councillor Monk, that the Council joins the UK100 network to demonstrate its commitment to reducing our own greenhouse gas emissions to zero by 2030, officers have made further enquiries, as was requested by the Leader.

2 UK100 NETWORK

2.1. UK100 has been in existence since 2016 and is described on its website¹ as:

"the only network for UK locally elected leaders who have pledged to play their part in the global effort to avoid the worst impacts of climate change by switching to 100% clean energy by 2050."

- 2.2. At the time of writing there are 57 members of the network², including a wide range of authorities from across the political spectrum, district and county councils, London boroughs and city regions. There are also a number of subgroups of authorities within the network (for example the Resilient Recovery Taskforce). For local authorities, it was initially more city-focussed but now does have a countryside network for rural local authorities. There are no costs for local authorities to join UK100.
- 2.3. Below are, according to UK100, the benefits of being part of the network:

"A network of local leaders focused on place committed to 100% clean energy that will:

¹ See: https://www.uk100.org/

² See: https://www.uk100.org/membership

- Devise plans to achieve 100% clean energy at city/local level by 2050 that are ambitious, cost effective and take the public and business with them.
- Support decision-makers in UK towns and cities by connecting them to business allies, bringing private and public sector together
- Ensure initiatives and solutions are network-led
- Enable leaders to collaborate across a peer-to-peer network, learning from each other
- Deliver climate action by promoting co-benefits of economic growth and health and well-being
- Convene local leaders to influence national policy
- Make material contribution to emissions reductions"
- 2.4. According to the website, UK100 explains the following with regard to the Net Zero target date:
 - Net Zero target date: council operations/estate by 2030, whole area by 2045 at the latest.
 - Countryside counties can have a Net Zero target date of 2050 for their areawide emissions, with the aim of moving towards an earlier Net Zero target date as soon as possible.
- 2.5. The focus of the UK100 membership pledge is mitigation (the full text of the membership pledge is set out in **Appendix 1** to this report). The ecological emergency, biodiversity and adaptation are important, related issues but not specific targets of this pledge. The pledge is designed to demonstrate the ambition and ability of democratically-elected local leaders to deliver on net zero emissions. It is also intended to create the conditions for stronger climate action at national level to help local authorities reach the net zero target faster.
- 2.6. Those councils which are members see the UK100 as giving them a voice and the opportunity to engage with government to keep up momentum. The intention of the network is 'to take the politics out of climate change' due to the need for action.
- 2.7. The Low Carbon and Sustainability Specialist requested more information from UK100 about the level of commitment and advocacy that would be expected of member authorities. UK100's response was as follows:
 - "Advocacy is one part of what members do as UK100, and currently this is focused on more and better powers, funding and collaboration from national government to local government to enable delivery on Net Zero. Most of our research is currently focused on this (our <u>Power Shift report</u> as mentioned in the webinar), but we are also currently looking what can be done to fill that gap, what we're calling the 'Net Zero Local Delivery Framework'. We're currently in

discussion with various gov departments (BEIS, MHCLG, Cabinet Office, Defra), as are our members, in order to help shape policy to local government to act on their climate targets which are often much sooner than 2050.

We also regularly send letters to various Ministers, the PM, Chancellor, etc, when relevant to ask for more to be done to enable local government to act. We will also be presenting a declaration at our Summit in July that lays out in detail what we need (shaped by our members). You can see a similar example with what we did via our Resilient Recovery Taskforce last year.

UK100 is definitely more about the collective advocacy and knowledge sharing, and convening at a political level, rather than at a technical level like ICLEI or other similar climate networks."

2.8. The Power Shift report examines the powers local authorities have and could be given to deliver on climate actions. It draws on previous expert reports, including those produced for government, combined with a series of interviews with local authorities and other stakeholder organisations. Whilst recognising the lead the UK has taken, the report says that local authorities need more help from government.

3 CONCLUSION AND RECOMMENDATION

3.1. The UK100 network's ambitions do not appear to go beyond what the Council has already set itself as a result of the Climate Emergency declaration. It does, as stated above, advocate on behalf of local government with national government in various arenas. The network produces publications and organises events on a range of topics.

Recommendation

3.2. The request to join the network must come from the Leader of the council.

The Working Group is therefore asked to discuss the contents of this report and provide a recommendation to the Leader on whether to join the UK100 network.

APPENDIX ONE

UK100 MEMBERSHIP PLEDGE

The people who live in the cities, towns and villages we serve deserve warm homes, secure and affordable energy, clean air and water, and local and seasonal food. They deserve access to thriving nature and healthy landscapes, and to live in a place they can be proud of.

As **local leaders across the UK**, we see the challenges our communities face. We recognise our responsibility to tackle the climate emergency and protect our environment to secure the future for them and for people around the world.

In 2019, the UK Parliament passed legislation to bring all greenhouse gas emissions to Net Zero by 2050. This was to keep in line with international commitment in the Paris Agreement to limit global warming to 1.5 degrees. But science tells us **we need to start now and make rapid reductions** much sooner.

We will do everything within our power and influence to rapidly reduce our greenhouse gas emissions. We will bring our **council emissions to Net Zero by 2030*** and we will work with our residents and businesses to bring our wider **communities**' **emissions in line with Net Zero as soon as possible** (and by 2045* at the latest).

We will continue to lead the UK's response to Net Zero, going ahead of the government goal and taking the first steps with urgency. We will make substantial progress within the next decade to deliver Net Zero. With greater powers, we would go further, faster.

We will be **bold and brave**, carrying out strong climate action now and building prosperous, secure and more resilient communities that are healthier, cleaner and safer, in ways that follow the science and are practical and achievable.

We pledge to **assess** our largest impacts on climate change, **prioritise** where action needs to be taken and **measure** and **monitor** progress towards targets. We will reduce our emissions at source and limit the use of carbon offsets as part of the global effort to avoid the worst impacts of climate change.

As local leaders, we are uniquely placed to help tackle the climate emergency. We are closer to the people who live and work in our communities, so we have a better understanding of their needs. This means we can collaborate with them to build consensus for the solutions we need to transition to a Net Zero society that delivers multiple benefits and is fair, just and works for everyone.

We have come together from local authorities across the UK to share knowledge and collaborate with each other, with businesses and our residents to deliver action now. And we will also use our experience of our ability and achievements to advocate to the UK government in order to accelerate the transition to a Net Zero society.

As a nation, we have demonstrated throughout our history that we are able and willing to lead on finding solutions to the challenges the world faces. The success and prosperity of our nation has largely rested on our ability to harness the power of dirty

fossil fuels. It is now our shared responsibility to turn this ingenuity to solving the climate emergency in a way that has a positive impact on our communities. **We need to ensure our future is better than our past**.



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To: Climate and Ecological Emergency Working Group

Date: 20 April 2022

From:

SUBJECT: Update on Current Consultations

SUMMARY: This paper summarises three current consultations for the Working Group's

information and for comment as necessary.

1. BACKGROUND

1.1. Kent County Council is currently consulting on a tree establishment strategy, 'Plan Tree'. This is described in section 2 of this report and the full document is included in Appendix 1.

1.2. The Department for Environment, Food and Rural Affairs (Defra) is currently consulting on two documents, on protected sites and species and on environmental targets. These are described in sections 3 and 4 of the report and links are provided to the consultation documents.

2. PLAN TREE – KENT COUNTY COUNCIL'S TREE ESTABLISHMENT STRATEGY 2022-2032

- 2.1. Kent County Council (KCC) is currently consulting on 'Plan Tree: Kent County Council's Tree Establishment Strategy 2022-2032'. The consultation closes on 2 May 2022. Plan Tree is provided as **Appendix 1** to this report and can be viewed on the county council's website¹.
- 2.2. Plan Tree is a high level document, setting out principles for tree establishment and some broad actions. A ten-year strategic tree planting plan and a three-year delivery plan will follow.
- 2.3. The introduction states that trees currently cover around 17 per cent of Kent; the aim of the strategy is to increase this to 19 per cent by 2050, the target recommended by the Committee on Climate Change. At the very minimum, KCC will establish 28,600 trees on its own land, a tree for every person in its workforce. KCC members will have the opportunity to establish trees within their own divisions; with a target of 350 trees per division, this will account for another 28,350 trees.

¹ See: https://letstalk.kent.gov.uk/plantree

- 2.4. The strategy sets out the importance of trees to Kent. The county has a relatively large proportion of ancient woodland (particularly in the Kent Downs Area of Outstanding Natural Beauty) and a legacy of orchards, through Kent's history of fruit growing. The dangers of diseases are highlighted (including Ash dieback, chestnut gall wasp and sweet chestnut blight), as are the effects of climate change, invasive plants and mammal browsing.
- 2.5. Trees provide vital and multiple benefits including supporting wildlife, mitigating air pollution, reducing flood risk, improving soils, providing timber and other products and improving people's physical and mental health. It is estimated that Kent and Medway's woodlands store 367,374 tonnes of carbon dioxide a year.
- 2.6. The strategy sets out a number of objectives for tree establishment, including:
 - Contributing to the county's net zero targets.
 - Reducing and reversing the trend of decline in nature and the loss of trees.
 - Tackling the multiple threats to the county's trees.
 - Delivering nature-based solutions to some of the county's challenges, including: improved soil quality and integrity; improved air quality; reductions in surface water flooding; and providing urban cooling.
 - Providing enhanced opportunities for recreation and amenity, contributing to people's health and wellbeing.
 - Addressing the decline in trees outside woodlands, including the loss of urban trees.
 - Realising the economic benefits of trees, including timber, wood products and fruit and supporting leisure businesses.
 - Increasing our knowledge and providing better protection.
- 2.7. The strategy sets out four principles for tree establishment in Kent:
 - 1. **Better management and protection of existing stock** preventing the loss of trees, and where this is unavoidable, ensuring trees are replaced with greater numbers than are lost.
 - 2. The right tree in the right place following guidelines of:
 - i. The right tree;
 - ii. In the right place;
 - iii. For the right reason; and
 - iv. With the right management.
 - 3. **Delivering multiple benefits** including alleviating pollution, flooding and urban heat, benefitting people's health and wellbeing, enhancing biodiversity and expanding economic benefits, developing new markets and creating jobs.
 - 4. Ensuring the biosecurity of new tree stock through the application of strict standards using UK grown trees of known provenance.

- 2.8. A high level action plan sets out five broad actions; as noted, a delivery plan and tree planting plan are to follow. The actions are to:
 - Deliver against the tree establishment target including through: working with district councils and other partners; setting annual expansion targets; working with farmers to expand the hedgerow network; and working with parish and town councils to increase urban trees. KCC will work with partners to establish a resourced Kent Plan Tree Partnership to support coordinated action.
 - 2. Exemplar provision of trees on the county council's estate reviewing policies across KCC's estate and identifying opportunities for woodland and tree planting, as well as working with KCC highways to see whether it is feasible to increase trees along the county's roads.
 - 3. **Improve protection to trees in Kent** using the county council's planning functions to protect trees and working with districts and boroughs to ensure trees are considered in local plan policies and provided within new developments.
 - 4. **Improve our understanding of Kent's trees** including ensuring that ancient woodlands and veteran trees are properly mapped and natural threats understood; landowners, businesses and the local community know how they can contribute; and an information hub is created to support the work.
 - Developing Kent's carbon offset market for unavoidable emissions –
 increase the nature-based carbon offset market and identify opportunities on the
 county council's estate to offset carbon to deliver investment in tree planting and
 management.
- 2.9. Plan Tree closes with consideration of the partners who will need to contribute and potential sources of funding. A three-year delivery plan will be drafted which will identify targets and funding for that initial period.

3. DEFRA - NATURE RECOVERY GREEN PAPER: PROTECTED SITES AND SPECIES

- 3.1. The Department for Environment, Food and Rural Affairs (Defra) is currently consulting on 'Nature recovery green paper: protected sites and species'. The consultation closes on 11 May 2022. The consultation paper can be viewed on Defra's website.²
- 3.2. The foreword by the Rt. Hon. George Eustice MP, Secretary of State for Environment, Food and Rural Affairs, highlights that the UK is one of the most nature-depleted countries in the world. The country's departure from the EU offers the opportunity to look again at how best to protect and restore nature, and whether existing regulations and designations are sufficient to meet the Government's ambitions.
- 3.3. The foreword emphasises the complexity of existing multiple regulatory regimes. The Secretary of State suggests that a single type of designation, with different tiers of protection, might bring more consistency and help public understanding. The paper also considers how we can make space for nature in new areas and restore nature in depleted areas, rather than just trying to arrest its decline.

² See: https://consult.defra.gov.uk/nature-recovery-green-paper/nature-recovery-green-paper/supporting_documents/Nature%20Recovery%20Green%20Paper%20Consultation%20%20Protected%20Sites%20and%20Species.pdf

- 3.4. The introduction highlights the new framework of environmental targets set out in the Environment Act 2021, including the objective to halt the decline in nature by 2030. The Government has also committed to protect 30 per cent of our land and sea by 2030 ('30 by 30'), and to reach net zero emissions by 2050. This will be supported by recent legislation governing agriculture and fisheries, the sustainable farming incentive and Local Nature Recovery and Landscape Recovery initiatives.
- 3.5. The 2023 Environmental Improvement Plan (EIP) will follow the green paper, and will set out the Government's approach to nature recovery and how it intends to deliver the targets in the Environment Act. Reforms to the planning system are being developed in parallel with the green paper, and the consultation states that these reforms will play a crucial role in bringing about nature's recovery.

Protecting wildlife sites on land and at sea

- 3.6. This section of the consultation states that the UK's system of designated sites has developed in a piecemeal way over a number of decades, arising from UK law, EU legislation and international treaties. Important sites may be protected as Sites of Special Scientific Interest (SSSIs), Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsar sites. (Within Folkestone & Hythe district the Dungeness peninsula is covered by a number of these designations, with different and overlapping boundaries; this is illustrated on the plan in **Appendix 2**.)
- 3.7. The green paper states that the Government wishes to consolidate the protected sites regime into a simpler legal structure. A new system could do more to promote nature recovery, the paper argues, as well as respond to climate change, ensure greater consistency, promote public understanding and make it easier to adopt a strategic approach to nature recovery, looking beyond the site boundaries to the wider landscape.
- 3.8. The consultation stresses that any review of legislation relating to protected sites will maintain current levels of protection for the network as a whole and its constituent sites, and be consistent with the UK's international commitments.
- 3.9. Three options are put forward for reform:
 - A tiered approach, including the designation of 'highly protected sites', with stronger protections than currently applied to SACs and SPAs, and 'protected sites', managed for their national or international importance as SSSIs, SACs and SPAs are now.
 - Lighter touch reforms, which would streamline and merge existing site designations.
 - One single designation, with different levels of protection within the designation.
 This could offer scope to adapt sites more easily to accommodate the effects of
 climate change, where features may move into or out of a site in response to
 changing climatic conditions.

Similar options are put forward for marine areas.

3.10. A simpler and more ecologically coherent network of sites would ensure that duties and accountabilities are consistent and reside in the right place. Currently responsibilities for SSSIs lie with Natural England, whereas decisions on other designated sites are made by the Secretary of State.

- 3.11. While the existing regime may have stemmed decline, the paper argues that any new system must also look beyond designated sites and make space for nature in new areas and in wildlife corridors connecting sites. The Government intends to pursue this through creating a Nature Recovery Network with willing landowners, supported by a range of financial incentives. The consultation asks whether 'Nature Recovery Sites' could be formally identified to contribute to the network.
- 3.12. The consultation states that 'rewilding' has delivered significant successes, for example at the Knepp estate in West Sussex³; however, these approaches are not recognised by the existing regime of protections, because they rarely follow traditional conservation practices. A more flexible system is needed, as designating such sites under the current system could act as a constraint, as it would require them to be managed in conventional ways which could limit the ability of species to flourish.
- 3.13. Regarding assessment of the likely impact of proposals on designated sites, the consultation argues that the existing regimes of Habitats Regulations Assessment (HRA), Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA) have become process-driven and burdensome. Decision-makers are more concerned by potential legal challenges to their decisions than by the actual impact of the proposed activity, the consultation argues. Some of these processes may have unintended consequences; for example, afforestation projects, even in areas of relatively low environmental value, are required to seek approval under the EIA regulations, which can take considerable time and resources.
- 3.14. The Government wants to reform these processes to create a clearer decision-making framework, including earlier consideration of alternative ways to implement a plan or project and clearer expectations about the evidence needed. Where impacts are unavoidable, mitigation and compensation should be planned strategically across the protected sites network. The consultation states that in simplifying processes the same high level of protection should be maintained.

Delivering '30 by 30'

- 3.15. The Nature Recovery Network will increase connections between sites, by creating and restoring additional habitat, including wildlife corridors and buffers around sites. This will be key to delivering the Government's '30 by 30' pledge.
- 3.16. In order to measure which areas of land are contributing to this target, the consultation states that the Government will develop a framework based on certain criteria; areas must:
 - Have a clear purpose of conserving biodiversity (although this may not be their primary purpose).
 - Have long-term protection and management measures in place to counter loss or actively improve biodiversity.
 - Deliver measurable biodiversity improvements.
- 3.17. The consultation suggests that sites under current national and international protections would contribute to the '30 by 30' target, as would areas under conservation covenants and land within National Parks and Areas of Outstanding Natural Beauty that is actively managed for biodiversity. Public woodlands and forests

³ See: https://knepp.co.uk/home

could also contribute if they are managed for biodiversity, and the Government is considering introducing a new duty for landowners to protect nature and enhance biodiversity in managing woodlands.

Protecting species

- 3.18. The consultation argues that, as with protections for habitats, species protections have developed in a piecemeal fashion through overlapping pieces of legislation. Protections are not always linked to a species' conservation status; for example, some invasive non-native wild birds have a similar, if not higher, level of protection than native species considered to be more vulnerable.
- 3.19. The consultation argues that the system of licensing for works which may affect protected species is complex, inconsistent and outdated, as are enforcement provisions and penalties for wildlife and poaching offences.
- 3.20. Secondary legislation could be used to modify lists of protected species to make the system more responsive to new evidence and environmental change. The consultation argues that a tiered approach to protecting species could provide clarity and complement the reform of protected sites (outlined above), reflect evidence more closely and respond to the effects of climate change on wildlife.
- 3.21. Three tiers are suggested:
 - **Tier 1 Minimum management standards** minimum welfare protections for wild animals, including, for example, certain prohibitions on trapping or trade.
 - **Tier 2 Protected** including tier 1 protections with additional, stricter controls on capture, possession, trade and disturbance.
 - **Tier 3 Highly protected** including tier 1 and 2 protections in addition to restrictions on the loss of habitats and dwelling places of species.

Delivering nature recovery

- 3.22. This section of the consultation discusses accountability and funding. Defra is underpinned by scientific, advisory and operational expertise provided by around 30 'Arm's length bodies' (ALBs), including the Forestry Commission, Animal and Plant Health Agency, Natural England, Environment Agency, Marine Management Organisation and others. The consultation states that the regulatory landscape has become fragmented and complex and the Government wants to develop a new operating model which will reduce duplication and consolidate institutional and delivery arrangements.
- 3.23. The consultation also states that the Government is exploring how best to enable environmental regulators to recover more of the costs of regulation.
- 3.24. The final section of the consultation explores the potential for attracting more private finance to deliver nature recovery. The Government has set a target to raise at least £500 million in private finance to support nature recovery every year by 2027 in England, rising to more than £1 billion a year by 2030. A variety of funds and land management schemes are discussed which, it is argued, will help to meet these targets.

4. DEFRA – CONSULTATION ON ENVIRONMENTAL TARGETS

- 4.1. The Department for Environment, Food and Rural Affairs (Defra) is currently consulting on a paper 'Consultation on environmental targets'. The consultation closes on 11 May 2022. The paper can be viewed on Defra's website. 4
- 4.2. The Environment Act 2021 requires the Government to set at least one target in each of four priority areas: air; water; biodiversity; and resource efficiency and waste reduction. It also requires targets to be set for fine particulate matter and species abundance. These targets must be laid as draft Statutory Instruments by 31 October 2022 and will come into force once approved by Parliament.
- 4.3. The consultation sets out the proposed targets, which have been developed with the advice of expert groups.

Biodiversity

4.4. The proposed biodiversity targets include measures to increase species abundance, improve the England-level Red List Index for species extinction and create or restore in excess of 500,000 hectares of habitats outside protected sites. The proposed end date for these targets is 2042, and has been set to align with the Government's 25 Year Environment Plan goals.

Water quality and availability

- 4.5. The proposed water quality and availability targets include measures to: reduce pollution from abandoned mines; reduce nitrogen, phosphorus and sediment pollution from agriculture to the water environment; reduce phosphorus pollution from treated wastewater; and reduce the use of public water supply in England per head of population.
- 4.6. 2037 is proposed as the target date for these measures. Targets are expressed as percentage reductions against a baseline, with a target of 40 per cent reduction in nitrogen, phosphorus and sediment pollution from agriculture by 2037 and a target of an 80 per cent reduction in phosphorus pollution from treated wastewater by the same date. It is proposed that water demand should be reduced by 20 per cent per head of population by 2037.

Woodland cover

4.7. The consultation proposes that a target should be set for an increase in tree canopy and woodland cover from 14.5 per cent of the total land area in England currently to 17.5 per cent by 2050.

Resource efficiency and waste reduction

- 4.8. A target is proposed to reduce residual waste, measured in kilogrammes per person, by 50 per cent by 2042 from 2019 levels. There is a separate Government commitment within the 25 Year Environment Plan to eliminate avoidable plastic waste by 2042.
- 4.9. The consultation discusses how resource efficiency could be measured and further work will be done on this target area. The consultation states that this target might be expressed as a ratio of economic output (gross domestic product) to raw material consumption by material weight.

⁴ See: https://consult.defra.gov.uk/natural-environment-policy/consultation-on-environmental-targets/

Air quality

4.10. Lastly the consultation sets out two proposed targets for air quality. One is for annual mean levels of pollution to be met across England by 2040. The second target is for a reduction in the population exposed to particulate matter pollution by 35 per cent compared to a base year of 2018.

STAGE	ACTION	PROGRESS
Stage 1: Short- term	Carbon literacy / climate change training for staff and Members	 As of 1/11/2021, 193 members of staff have completed Climate Change e-learning module. Managers were advised to liaise with staff and now we are targeting staff directly who have not yet completed the module.
Actions		 Training scheduled for 18 November 2021 for report writing for officers, and training will include climate impact statement. OF and AT drafting training materials
	Climate Change Champions staff scheme	 Presentation for Climate Change Green Champions has been added to the climate change page on the intranet. Personnel Contact details updated to Olu Fatokun on the intranet.
		 Next Climate Change Champions meeting to be scheduled for 08/12/21
		Environmental Year Calendar updated
		Need to further explore options to raise targeted energy awareness campaign by using the environmental year calendar.
	Measure waste produced by the Council operations	 Work being undertaken to alter the waste streams coming out of the Civic Centre and reduce recycling contamination (changes to bins and clarifications/communications for waste streams).
		 95% bins in place (elections is on lock down, so I wasn't able to properly finish that area unfinished)
	End single-use plastic	Plastic cups are on stop with water cooler company
		• Cleaning solutions are being bought in 5L bottles, including dish soap and hand soap.
		 The desk sanitiser is also being bought in a 5L bottle that staff are to dilute into refillable 750ml spray bottles. A number of bottles already set up Civic with signage.
		Plastic cups are on stop with water cooler company

Reduce printing and paper waste	 My Account (customer self-service) roll out and E-billing in place. Continued expansion of My Account planned throughout 2021. Licensing and fees information now being sent out by e-billing rather than by letters.
	 14 devices in use and are looking to reduce this down to 6/7 within the next six months (by the end of March). This figure also includes the print room devices and devices located remotely, such as at Ross Depot
	• The current contracts end in March 2022, so this will be when the reduction in devices will happen.
	 As part of transformation we are looking to change the availability and access of printing easily, to reduce printing documents needlessly, such as emails.
Expand the energy awareness campaign	 Regular energy and water updates going out to staff as part of Organisational Development's weekly all-staff messages.
	Further ideas would be sought from Climate Change Champions
Explore the use of EV staff pool car(s)	 Feasibility studies have been completed. We have now agreed the sites that will have the EVCP. The Contract has now been signed and supplier is now working on the installation programme. A total of 94 EVCPs will be installed in car parks across the district. No progress on on-street EVCPs. KCC still developing a strategy Work ongoing to ascertain viability of co wheels for corporate and commuter users
Assess the scope for extending sustainable travel incentives for	 Cycle-to-work scheme already in place; information on cycle training is on the intranet. Climate Change Specialist is researching Stagecoach corporate discount scheme.
staff	 Need to assess whether commuting patterns justify further initiatives; levels of use of Civic Centre desk space will be kept under review through new desk-booking system.
	 OF sent an email to a
Promoting reductions in water usage	 Included alongside a general energy awareness campaign with regular staff bulletins sent out every Friday by the council's Organisational Development team.

		Still done on a weekly basis refer to comments on action 5 above
	Review the use of peat, redesign mowing regimes, etc.	The review of mowing regimes is ongoing.
		Use of peat-free alternatives in 2022 should hopefully resume.
	Convert street lighting to LED	Report to go to Cabinet on the 24 th November.
	Review carbon and waste impacts of catering for events	 Propose this is reviewed in October to see if events return to 'normal' or significant percentage remain online. New caterers are being used; Climate Change Specialist will investigate to see if they have a sustainability policy. Again ability to use china plates etc. depends on post-pandemic hygiene measures and Civic Centre take-up.
		Ongoing
Stage 2: Medium-	Checklist of criteria to inform decision-making	 Report-writing guidance is now on the intranet, along with contact details for reports. Climate Change Specialist is currently providing comments for report writers.
term Actions		 Climate Impact Statement (CIS) was included in reports for last cabinet meeting (July 2021). Training session is scheduled for 18 November 2021 to train report authors on how to undertake their own Climate Impact Statement (CIS).
		 To trail CIS for 6 months, and then contact report authors and Cabinet Members to find out if it has helped and how they have incorporated suggested mitigating factors to help review. See comments on action 1 above
	Reports to cabinet to include a	Ongoing; see update for checklist of criteria to inform decision-making above.
	climate impact statement	 Climate Change Impact Statement is being added to all reports to committee and cabinet and documented accordingly.
		 OF and AT also check with Leadership support to make sure CIS is included on all reports as required.
	Review sub-metering installations	 Exploring specific bills for individual occupants - awaiting decision on usage of Civic Centre
		• team leading on this. Email sent to to get update

Carry out energy audits across the whole Council non-residential property	 LASER have been contacted as potential provider and waiting to hear back on whether LASER will charge for this service. No update yet from LASER
Potential for voltage optimisation.	 Would seem to be practical only at Civic Centre, but would need further specialist advice to look at power consumption - dependent on decision on future of Civic Centre.
	We have a optimiser in civic center
Evaluate adding to the Council's own estate EV charging	 The funding available is for charge-points that can be accessed by local residents at all times. However, under the workplace-charging scheme, we may also qualify for 75% grant for the depot. The remaining 25% plus any electricity upgrade costs would need to be funded by the council so we need to have discussions about budget position.
	 No progress on this. We still need to determine sites and provide extra funding.
Expand opportunities for flexible working	 Staff have been introduced to the new Agile Working Framework at the staff briefing. To explore and review uptake and impact of Agile Working in July 2022.
Sustainable procurement policies	 Procurement staff attending KCC Climate Change Network Procurement meetings.
	 Procurement staff watching for training opportunities and case studies to advance our understanding of how best to implement in the public sector, especially with regard to other obligations.
	Discussed with S151 officer
	First meeting attending and will be attending subsequent meetings as scheduled
	No further update
Council-owned land to increase biodiversity	 Already in progress; need to assess land owned by council; Climate Change Specialist to discuss current practice with Grounds Maintenance. Potential to integrate approach with Green Infrastructure Strategy. Map of land being managed for pollinators being produced with council's GIS specialist.

		Managed and and another to 10 and another and another and the
		 Map produced and according to JG only one made needs cross checking. Also, Are we including the four sites that are managed by us on behalf of KCC; Birkdale Drive, Churchill Avenue, Cherry Garden Lane and Southern Way.
	Switch to green tariff for Council- purchased electricity	 Initial enquiries made. Response from LASER received with potential costs - likely to be small increase in cost for electricity. Awaiting response from LASER as to whether lead-in time is necessary, (it is possible we may have to wait until next financial year) and impact on energy emissions.
		 Update received from LASER from Purchase System (DPS). From what I understand, it's doable and would not have adverse effect on any contractual arrangements.
		Ongoing
	Review of Green Infrastructure Strategy	 Work well progressed. Initial summary of potential projects produced and ideas from consultees have been received. More detailed work (e.g. mapping of specific routes/projects) is on-going.
		Summary of projects received and draft full report is expected this month
Stage 3: Longer-	Work with contractors to move towards Ultra-Low Emission Vehicles	 Suppliers are either required (in the specification) or encouraged (in the specification and tender) to do this, depending on what is proportional for the tender/contract.
term Actions		No updates
	Reduce energy losses by retro-fit technologies	Housing stock condition survey being undertaken.
	Examine installation of low emission heating	 Dependent on future decision on Civic Centre building complex and housing stock condition survey.
	Identify any suitable locations for solar photovoltaic (PV) panels	 Survey of Civic Centre has shown the building would require strengthening in order to accommodate PV panels.
		Housing stock - review potential when results of stock condition survey published.
		 Engineers have identified potential for other sites (e.g. grounds maintenance depots) but would need assessment of individual sites.
		1 major site with potential

Examine the business case for Vehicle-to-Grid EV	 Action to be looked at when fleet starts to switch to EV.
Install water-saving technology within all commercial buildings	 Operations Lead Specialist has identified possible potential - would need specialist in to assess whether projects could go forward.
within the Council portfolio.	Need resource to deliver feasibility- Email sent to explore how we can progress on the feasibility.
Explore the potential for rain water	As above.
harvesting systems and treatment.	 Need resource to deliver feasibility – Email sent to explore how we can progress on the feasibility.
Seek to incorporate carbon reduction requirements into new tender contracts	To be incorporated into review of procurement process.
Where possible contracted out service proposals include and deliver high levels of sustainability	To be incorporated into review of procurement process.
Develop appropriate flood mitigation measures and tree planting	 Policy Senior Specialist is currently finalising the tender for consultants to update the council's 2015 Strategic Flood Risk Assessment (SFRA).
schemes	 KCC working on Spatial Risk Assessment for Water for Kent (see presentation to Working Group, 9 September 2021) which can feed into the council's SFRA update.
	Flood Risk is due to go out to tender shortly
Ensure that the Local Plan sets developments and land use standards that reduce carbon and	 Awaiting details of proposed changes to the planning system. Tom Henderson from KCC also working on this through work being done on adaptation. To explore including recommendations for tree planting.
increase sustainability (subject to proposed Government reforms of the planning system)	 Council is assessing whether to apply to become a pilot under the Government's Stage 2 – Design Codes Pilot which could explore how standards can be incorporated into the new planning system. Application was submitted for the design code by the deadline
Explore phased upgrade of the council fleet to hybrid (HEV) or full battery electric vehicles (BEV)	 Prioritise vehicles in fleet around Folkestone and Hythe. Also consider ensuring vehicles are multi-purpose and can be used across different services. Implementation is dependent on introduction of charging points and assessment of costs. Exploring

	potential for charging points at other locations apart from Civic Centre. • 23 car parks to have EV charging in, but these are for public.
Stage 4: Offsetting Where Emissions Cannot be Reduced	To be explored dependent on results of emissions reductions actions in Stages 1-3.

A. City information	Data source	Notation keys:
Official name of local		
government	Folkestone & Hythe District	Not Occuring
Country		Integrated Elsewhere
Region		Not Estimated
Inventory year		Confidential
Resident population		Combination of notation keys
Description of boundary and map		N/A
GDP		Required
Heating/cooling degree days		Ontional

B. Inventory setup

SWP (IPCC AR version used) IPCC 4th AR (2007)

Types of emissions factors IPCC

Global Warming Potentials

emissions															Global Warming Po	tentials 25	298			
Sector	Sub-sector	Description of activity /facility	Direct (fuel combustion) or Indirect (grid energy) or Other	Total tCO2e or notation key	Activity data		Description of emission source		Emissions factors						Emissions (kgCO2e)				Notation i	eys Explanation
					Amount Unit	SCATTER data reference		Data source	Emissions factor reference	CO2	CH4	N2O I	F CO2e Unit	Data source	CO2 C	H4 N2O	F	COZe	Unit	
Stationary energy	Residential buildings	Domestic space heating and hot water	Direct Direct	3,240.58 14,342.07	9,400,342 kWh 61,444,870 kWh	DATA_ECUK DATA_ECUK	Domestic space heating and hot water; Coal (2) Domestic space heating and hot water; Petroleum products (2)	Please see references tab Please see references tab	Coal (domestic) Petrol	0.315 0.232	0.023 0.001	0.004 0.000	 0.233 kWh (Gross CV) 	BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin	g: co. 14272980.5 4520	2.81836 23881.86	717	0 3,240,579.90 0 14,342,065.21	kgCO2e	
			Direct Indirect	89,594.68 14,919.67	486,494,003 kWh 42,438,462 kWh	DATA_ECUK DATA_ECUK	Domestic space heating and hot water; Gas Domestic space heating and hot water; Electricity	Please see references tab Please see references tab	Natural gas Electricity generated	0.184 0.349			- 0.184 kWh (Gross CV) - 0.352 KWh	BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin	g: co. 89421528.1 1261 g: co. 14804657.4 2631	75.8208 46972.213	208	0 89,594,676.18 0 14,919,665.59	kgCO2e	
			Direct Other	1,475.12 472.56	70,613,810 kWh 9,400,342 kWh	DATA_ECUK DATA_ECUK	Domestic space heating and hot water; Bioenergy & wastes Domestic space heating and hot water; Coal (2)	Please see references tab Please see references tab	Biomass Grass/Straw Coal (domestic)_Sc3	-	-	-	- 0.021 kWh - 0.050 kWh (Gross CV)	BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin	g: co. 0 g: co. 0	0	0	0 1,475,122.49 0 472,555.19	kgCO2e	
			Other Other	3,890.07 13,548.86 2.601.05	61,444,870 kWh 486,494,003 kWh	DATA_ECUK DATA_ECUK	Domestic space heating and hot water; Bloenergy & wastes Domestic space heating and hot water; Coal (2) Domestic space heating and hot water; Petroleum products (2) Domestic space heating and hot water; Set of the space heating and hot water; Set	Please see references tab Please see references tab Please see references tab	Petrol_Sc3 Natural gas_Sc3	-		-		BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin		0	0	0 3,890,074.72 0 13,548,857.97 0 2,601,053.32	kgCO2e kgCO2e	
		Domestic lighting, appliances, and cooking	Other	1,132.65 NO	70,613,810 kWh	DATA_ECUK DATA_ECUK	Domestic space heating and hot water; Electricity Domestic space heating and hot water; Bloenergy & wastes Domestic lighting, appliances, and cooking; Coal (2)	Please see references tab Please see references tab Please see references tab	Electricity generated_Sc3 Biomass Grass/Straw_Sc3 Coal (domestic)	- 0.315	0.023	- 0.004	- 0.016 kWh	BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin	g: col 0	0	0	0 1,132,645.51	kgCO2e	No coal products reported used for lighting, appliances and cooking in the UK in ECUK data.
			Direct	NO	Laure	DATA FOUR	Describe lighting and leaves and analysis Datasian and data (3)	Please see references tab	Petrol	0.232	0.001	0.000		BEIS, 2018. Greenhouse gas reportin		0	0	0 -	kgCO2e NO	No petroleum products reported used for lighting, appliances and cooking in the UK in ECUK data.
			Direct Indirect	2,383.36 52,936.90	12,941,497 kWh	DATA ECUK	Domestic lighting, appliances, and cooking; Petroleum products (2) Domestic lighting, appliances, and cooking; Gas Domestic lighting, appliances, and cooking; Electricity	Please see references tab Please see references tab	Natural gas Electricity generated	0.184 0.349			- 0.184 kWh (Gross CV)	BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin	a: co. 2378751.78 3356	.473146 1249.533 7.82576 314706.2	924 191	0 2,383,357.78 0 52,936,898.75	kgCO2e kgCO2e	
			Direct Other	NO NO	- kWh	DATA ECUK	Domestic lighting, appliances, and cooking: Bioenergy & wastes Domestic lighting, appliances, and cooking: Coal (2)	Please see references tab Please see references tab	Biomass Grass/Straw Coal (domestic)_Sc3	-			- 0.021 kWh	BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin	a: col 0	0	0	0 -	kgCO2e NO kgCO2e NO	Not reported for this LA No coal products reported used for lighting, appliances and cooking in the UK in ECUK data.
			Other	NO	- kWh	DATA ECUK	Domestic lighting, appliances, and cooking: Petroleum products (2)	Please see references tab	Petrol_Sc3			-	- 0.063 kWh (Gross CV)	BEIS, 2018. Greenhouse gas reportin	g: co. 0	0	0		kgCO2e NO	No petroleum products reported used for lighting, appliances and cooking in the UK in ECUK data.
			Other Other	360.42 9,228.87	12,941,497 kWh 150,577,138 kWh	DATA_ECUK DATA_ECUK	Domestic lighting, appliances, and cooking: Gas Domestic lighting, appliances, and cooking: Electricity Domestic lighting, appliances, and cooking: Bioenergy & wastes	Please see references tab Please see references tab	Natural gas_Sc3 Electricity generated_Sc3	-	-	-	- 0.028 kWh (Gross CV) - 0.061 kWh (Gross CV)	BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin	g: co. 0 g: co. 0	0	0	0 360,420.70 0 9,228,872.81	kgCO2e	
	Commercial buildings &	Commercial space heating, cooling, and hot	Other	NO 3 100 16	- kWh	DATA_ECUK		Please see references tab Please see references tab	Biomass Grass/Straw_Sc3	0.232	0.001	0.000	- 0.016 kWh	BEIS, 2018. Greenhouse gas reportin		0 5453.33	400	0 -	kgCO2e NO	Not reported for this LA
	Tacilities	water	Direct Indirect	5,617.91 1,445.17			Commercial space heating, cooling, and hot water: Petroleum products (2) Commercial space heating, cooling, and hot water; Gas Commercial space heating, cooling, and hot water; Electricity	Please see references tab Please see references tab Please see references tab	Natural gas Electricity generated	0.232 0.184 0.349	0.000	0.000		BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin	g: col 5607056.22 7911 g: col 1434077 5 7548	.684526 2945.329 651419 8591.42	486 154	0 3,100,163.07 0 5,617,913.23 0 1.445.167.57	kgCO2e	
			Direct	NO NO	- kWh	DATA_ECUK	Commercial space heating, cooling, and hot water; Coal (2)	Please see references tab	Coal (domestic)	0.315	0.023	0.004	- 0.345 KWh	BEIS, 2018. Greenhouse gas reportin		0	0	0 -	kgCO2e NO	No coal products reported used for commercial / institutional heating in the UK according to ECUK data.
			Other Other	840.87 849.56	13,281,847 kWh 30,504,950 kWh	DATA FCLIK	Commercial space heating, cooling, and hot water: Petroleum products (2)	Please see references tab Please see references tab	Petrol_Sc3 Natural gas_Sc3	-	-	-	- 0.063 kWh (Gross CV)	BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin	g: col 0	0	0	0 840,873.74 0 849,562.85	kgCO2e kgCO2e	
			Other	251.95	4,110,728 kWh		Commercial space heating, cooling, and hot water; Gas Commercial space heating, cooling, and hot water; Electricity	Please see references tab	Electricity generated_Sc3	-	-	-	- 0.061 kWh (Gross CV)	BEIS, 2018. Greenhouse gas reportin	g: col 0	0	0	0 251,946.52	kgCO2e	No coal products reported used for commercial / institutional heating in the UK according to
		Commercial lighting, appliances, equipment,	Other	NO	- kWh	DATA_ECUK	Commercial space heating, cooling, and hot water; Coal (2)	Please see references tab	Coal (domestic)_Sc3	-	-	-		BEIS, 2018. Greenhouse gas reportin		0	0	0 -	kgCO2e NO	ECUK data.
		and catering	Direct Direct	221.33 857.97	948,235 kWh 4,658,751 kWh	DATA_ECUK DATA_ECUK	Commercial lighting, appliances, equipment, and catering; Petroleum products (2) Commercial lighting, appliances, equipment, and catering; Gas Commercial lighting, appliances, equipment, and catering; Electricity	Please see references tab Please see references tab	Petrol Natural gas Electricity generated	0.232 0.184		0.000	- 0.233 kWh (Gross CV) - 0.184 kWh (Gross CV)	BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin	g: co. 220264.678 697. g: co. 856316.095 1208	.281589 449.8140	378 667	0 221,330.81 0 857,974.19	kgCO2e	
			Indirect	7,209.90 NO	20,508,292 kWh	DATA_ECUK		Please see references tab Please see references tab	Electricity generated Coal (domestic)	0.349		0.002				5.14089 42862.32	977	0 7,209,895.05	kgCOZe	No coal products reported used for commercial / institutional lighting or appliances in the UK according to ECUK data.
			Other	60.03 129.75	948,235 kWh	DATA ECUK	Commercial lighting, appliances, equipment, and catering; Coal (2) Commercial lighting, appliances, equipment, and catering; Petroleum products (2) Commercial lighting, appliances, equipment, and catering; Petroleum products (2)	Please see references tab Please see references tab Please see references tab	Petrol_Sc3	0.315	0.023	-	- 0.063 kWh (Gross CV)	BEIS, 2018. Greenhouse gas reportin. BEIS, 2018. Greenhouse gas reportin. BEIS, 2018. Greenhouse gas reportin.	q: co. 0	0	0	0 60,032.73	kgCO2e kgCO2e	according to economic.
			Other	1,256.95	20,508,292 kWh	DATA_ECUK	Commercial lighting, appliances, equipment, and catering; Gas Commercial lighting, appliances, equipment, and catering; Electricity	Please see references tab	Natural gas_Sc3 Electricity generated_Sc3	-	-	-	- 0.061 kWh (Gross CV)	BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin	g: col 0	0	0	0 129,746.22 0 1,256,953.20	kgCO2e	No coal products reported used for commercial / institutional lighting or appliances in the UK
	Institutional buildings &		Other	NO	- kWh	DATA_ECUK	Commercial lighting, appliances, equipment, and catering; Coal (2)	Please see references tab	Coal (domestic)_Sc3	-	-	-		BEIS, 2018. Greenhouse gas reportin		0	0	0 -	kgCO2e NO	according to ECUK data.
	facilities	Institutional space, heating and hot water	Direct Direct	8,580.08 7,597.16	36,759,130 kWh 41,252,164 kWh	DATA_ECUK DATA_ECUK	Institutional space heating, cooling, and hot water; Petroleum products (2) Institutional space heating, cooling, and hot water; Gas	Please see references tab Please see references tab	Petrol Natural gas	0.232 0.184			- 0.233 kWh (Gross CV) - 0.184 kWh (Gross CV)	BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin	g: col 8538749.5 2704 g: col 7582481.1 106	2.39258 14287.22 99.0542 3982.999	481 594	0 8,580,079.12 0 7,597,163.15		
			Indirect	15,630.67	44,460,879 kWh		Institutional space heating, cooling, and hot water; Electricity	Please see references tab	Electricity generated	0.349				BEIS, 2018. Greenhouse gas reportin		5.74473 92923.23	627	0 15,630,666.48	kgCO2e	No coal products reported used for commercial / institutional heating in the UK according to
			Direct Other	NO 0.00	- kWh 37	DATA_ECUK DATA_ECUK	Institutional space heating, cooling, and hot water; Coal (2) Institutional space heating, cooling, and hot water; Petroleum products (2) Institutional space heating, cooling, and hot water; Gas	Please see references tab Please see references tab	Coal (domestic) Petrol_Sc3	0.315	0.023	0.004	- 0.345 kWh (Gross CV) - 0.063 kWh (Gross CV)	BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin	g: co 0 g: co 0	0	0	0 - 0 2.33 0 1,148,872.78	kgCO2e NO kgCO2e	ECUK data.
			Other Other	1,148.87 2,725.01	41,252,164 kWh 44,460,879 kWh	DATA_ECUK DATA_ECUK	Institutional space heating, cooling, and hot water; Gas Institutional space heating, cooling, and hot water; Electricity	Please see references tab Please see references tab	Natural gas_Sc3 Electricity generated_Sc3	-	-	-	- 0.028 kWh (Gross CV) - 0.061 kWh (Gross CV)	BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin	g: col 0 g: col 0	0	0	0 1,148,872.78 0 2,725,007.25	kgCO2e kgCO2e	No coal products reported used for commercial / institutional heating in the UK according to
		Institutional lighting, appliances and	Other	NO	- kWh	DATA_ECUK	institutional space heating, cooling, and hot water; Coal (2)	Please see references tab	Coal (domestic)_Sc3	-	-	-	- 0.050 kWh (Gross CV)	BEIS, 2018. Greenhouse gas reportin	g: co. 0	0	0	0 -	kgCO2e NO	Ro coal products reported used for commercial / institutional neating in the UK according to ECUK data.
		cooking	Direct	4,268.43 1.458.52	18,286,966 kWh 7,919,687 kWh	DATA_ECUK	Institutional lighting, appliances, equipment, and catering: Petroleum products (2) Institutional lighting, appliances, equipment, and catering: Gas	Please see references tab Please see references tab	Petrol Natural gas	0.232 0.184		0.000	- 0.233 kWh (Gross CV)	BEIS, 2018. Greenhouse gas reportin	g: co. 4247864.86 1345	3.07403 7107.621	575 574	0 4,268,425.55 0 1,458,521.11		
			Indirect	28,105.18	79,944,182 kWh	DATA_ECUK DATA_ECUK	Institutional lighting, appliances, equipment, and catering; Electricity	Please see references tab	Electricity generated	0.349	0.001	0.002	- 0.352 KWh	BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin	g: co. 27888528 4956	5.39308 167083.3	412	0 28,105,176.76	kgCO2e	No coal products reported used for commercial / institutional lighting or appliances in the UK
			Direct Other	NO 1,157.75	- kWh 18,286,966 kWh	DATA_ECUK DATA_ECUK	Institutional lighting, appliances, equipment, and catering; Coal (2) Institutional lighting, appliances, equipment, and catering; Petroleum products (2)	Please see references tab Please see references tab	Coal (domestic) Petrol_Sc3	0.315	0.023	0.004	- 0.063 WWh (Gross CV)	BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin	0:00	0	0	0 - 0 1,157,747.79	kgCO2e NO kgCO2e	according to ECUK data.
			Other Other	220.56 4,899.78	7,919,687 kWh 79,944,182 kWh	DATA_ECUK DATA_ECUK	Institutional lighting, appliances, equipment, and catering: Gas Institutional lighting, appliances, equipment, and catering: Electricity	Please see references tab Please see references tab	Natural gas_Sc3 Electricity generated_Sc3	-	-	-	- 0.028 kWh (Gross CV) - 0.061 kWh (Gross CV)	BEIS, 2018. Greenhouse gas reportin. BEIS, 2018. Greenhouse gas reportin.	g: co 0 g: co 0	0	0	0 220,563.28 0 4,899,778.94	kgCO2e kgCO2e	
			Other	NO	- kWh	DATA_ECUK	Institutional lighting, appliances, equipment, and catering; Coal (2)	Please see references tab	Coal (domestic)_Sc3	-		-		BEIS, 2018. Greenhouse gas reportin		0	0	0 -	kgCO2e NO	No coal products reported used for commercial / institutional lighting or appliances in the UK according to ECUK data.
	Industrial buildings & facilities	Industrial buildings & facilities	Direct	3,120.20 8,048.16	13,367,702 kWh	DATA_ECUK	Industrial buildings & facilities; Petroleum products (2)	Please see references tab	Petrol	0.232 0.184	0.001	0.000	- 0.233 kWh (Gross CV)	BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin	g: co. 3105173.04 983	4.14589 5195.644	308	0 3,120,202.83	kgCO2e	
			Indirect	25,352.86 5,473.61	72,115,319 kWh	DATA_ECUK	Industrial buildings & facilities; Gas Industrial buildings & facilities; Electricity Industrial buildings & facilities; Cas(1) Industrial buildings & facilities; Cas(1)	Please see references tab Please see references tab Please see references tab	Natural gas Electricity generated Coal (domestic)		0.001	0.002	- 0.184 kWh (Gross CV) - 0.352 kWh	BEIS, 2018. Greenhouse gas reportin	g: co. 25157429.1 4471	1.49788 150721.0:	171	0 8,048,159.31 0 25,352,861.61 0 5,473,605.70	kgCO2e kgCO2e	
			Other	846.31 1.217.07	13,367,793 kWh 13,367,702 kWh 43,701,048 kWh	DATA_ECUK	Industrial buildings & facilities; Coal (2) Industrial buildings & facilities; Petroleum products (2) Industrial buildings & facilities; Gas	Please see references tab Please see references tab Please see references tab	Petrol_Sc3 Natural gas_Sc3	-	-	-	- 0.063 kWh (Gross CV)	BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin	g: col 4990822.43 3042 g: col 0	0	0	0 846,309.23 0 1.217.074.18	kgCO2e	
			Other Other	4,419.95 798.18	72,115,319 kWh 15,877,950 kWh	DATA_ECUK DATA_ECUK	Industrial buildings & facilities; Electricity Industrial buildings & facilities; Coal (2)	Please see references tab Please see references tab	Electricity generated_Sc3 Coal (domestic)_Sc3	-	-	-	- 0.061 kWh (Gross CV) - 0.050 kWh (Gross CV)	BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin	g: co. 0 g: co. 0	0	0	0 4,419,947.91 0 798,184.55	kgCO2e kgCO2e	
	Agriculture	Off-road transportation	Direct Indirect	5,518.59	22,504,054 kWh	DATA_RF DATA_RF	Petroleum - Agriculture2 Electricity	Please see references tab Please see references tab	Diesel (average biofuel blend) Electricity generated	0.243 0.349	0.000	0.002 0.002	- 0.245 kWh (Gross CV) - 0.352 KWh	BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin	g: co. 5472559.2 1094 g: co. 0	.535714 44940.8	161 0	0 5,518,594.55	kgCO2e kgCO2e	
			Other Other	1,315.81	22,504,054 kWh kWh	DATA_RF DATA_RF	Petroleum - Agriculture2 Electricity Scope 3	Please see references tab Please see references tab	Diesel (average biofuel blend)_Sc3 Electricity generated_Sc3	-	-	-	- 0.061 kWh (Gross CV)	BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin	g: col 0	0	0	0 1,315,812.02 0 -	kgCO2e	
		Agricultural final energy consumption	Direct Direct	0.31	7,994 kWn	DATA_AG	Electricity Scope 3 Natural Gas Bioenergy & waste	Please see references tab Please see references tab	Natural gas Biogas	0.184	-	-	- 0.184 kWh (Gross CV) - 0.000 kWh	BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin	g: co 307.74325 0.43 g: co 0	0	0		kgCO2e	
			Direct Indirect Other	2.00 0.05	7,217 kWh 5,680 kWh 1,674 kWh	DATA_AG DATA_AG	Petroleum Electricity Natural Gas	Please see references tab Please see references tab Please see references tab	Diesel (average biofuel blend) Electricity generated	0.243			- 0.352 KWh	BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin	g: co. 1981.61983 3.52	1023431 14.41275 1869844 11.87210	963	0 1,769.84 0 1,997.01	kgCO2e kgCO2e kgCO2e	
			Other Other	0.05 0.19 1.77	7,994 kWh		Natural Gas Bioenergy & waste Petroleum	Please see references tab Please see references tab Please see references tab	Natural gas_Sc3 Biogas_Sc3 Diesel (average biofuel blend)	0.243	0.000	0.002	- 0.024 kWh (Gross CV)	BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin	g: coi 0	0 1023431 14 412754	0	0 46.63 0 192.25 0 1,769.84	kgCO2e	
	Fugitive emissions	Fugitive emissions	Other Direct	0.35	5,680 kWh - kgCO2e		Petroleum Electricity Fugitive Sc1	Please see references tab Please see references tab Please see references tab	Electricity generated_Sc3 n/a	1.000		-		BEIS, 2018. Greenhouse gas reportin n/a		0	0		kgCO2e kgCO2e	
Transportation	On-road	Road transport / Petroleum Road transport / Electricity	Direct Indirect	186,384.54 IE		Data_fuel	Petroleum products (2)Road transport Electricity for road transport	Please see references tab Please see references tab	Diesel (average biofuel blend) Electricity generated	0.243 0.349	0.000	0.002 0.002		BEIS, 2018. Greenhouse gas reportin. BEIS, 2018. Greenhouse gas reportin.				0	kgCO2e IE	Electricity consumption from on-road transport included in Stationary Energy figures
		Road transport / Scope 3	Other Other	54,270.43 IE	232,507,633 kWh kWh	_	Onroad Sc Petroleum Electricity for road transport_WTT and T&E	Please see references tab Please see references tab	Petrol Electricity generated_Sc3	0.232	0.001	0.000	- 0.233 kWh (Gross CV) - 0.061 kWh (Gross CV)	BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin	g: co. 54009015.1 1710 g: co. 0	0	0	0 54,270,431.83	kgCO2e kgCO2e IE	Electricity consumption from on-road transport included in Stationary Energy figures
		Rail transport / Coal Rail transport / Petroleum	Direct Direct	2,269.84 60.13	6,987,993 kWh 245,213 kWh	Data_fuel Data_fuel	Coal (2) Rail Petroleum products (2)Rail	Please see references tab Please see references tab	Coal (industrial) Diesel (average biofuel blend)	0.321 0.243		0.002 0.002	- 0.325 kWh (Gross CV) - 0.245 kWh (Gross CV)	BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin	g: co. 2245377.38 6191 g: co. 59631.1524 11.9	.405434 15476.02 2649063 489.6927	325 665	0 2,269,839.89 0 60,132.77	kgCO2e	
		Rail transport / Electricity Rail transport / Scope 3	Other	351.29	6,987,993 kWh	Data fuel	Electricity for rail transport Coal (2) Rail	Please see references tab Please see references tab	Electricity generated Coal (industrial)_Sc3	0.349	0.001	0.002	- 0.352 KWh - 0.050 kWh (Gross CV)	BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin	g: co 0 g: co 0	0	0	0 351,286.41		Electricity consumption from rail included in Stationary Energy figures
	Waterborne navigation	Waterborne transport / internal waterways	Other Direct	14.34 IE	245,213 kWh kWh		Petroleum products (2)Rail Electricity for rail transport_Sc3 (OMI Intergular products interces)	Please see references tab Please see references tab	Diesel (average biofuel blend)_Sc3 Electricity generated_Sc3 Diesel (average biofuel blend)		0.000		- 0.061 kWh (Gross CV)	BEIS, 2018. Greenhouse gas reportin	g: col 0	0	0	0 14,337.60	kgCO2e IE kgCO2e NO	Electricity consumption from rail included in Stationary Energy figures Not reported for this LA
			Direct Direct Indirect	NO NO	- kwh	DATA_Transport_W DATA_Transport_W	(D04:Petroleum products_internal / 004:Petroleum products_coastal / Electricity Indirect	Please see references tab Please see references tab Please see references tab	Diesel (average biofuel blend) Diesel (average biofuel blend) Electricity generated	0.243 0.243 0.349	0.000	0.002	- 0.245 kWh (Gross CV) - 0.352 KWh	BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin	g: co 0 a: co 0	0	0	0 -	kgCO2e NO kgCO2e	Not reported for this LA Not reported for this LA
		Waterborne transport / Scope 3	Other Other		kWh	DATA Transport W	/ Diesel Direct	Please see references tab Please see references tab	Diesel (average biofuel blend)_Sc3 Electricity generated	0.349		-	- 0.058 kWh (Gross CV) - 0.352 KWh	BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin	g: co 0 g: co 0	0	0	0 -	kgCO2e kgCO2e	
	Aviation	Aviation / in-boundary Aviation / electricity	Direct Indirect	9,835.73 IE	3,092 tonnes	DATA_Transport_W DATA_Aviation	Aviation_fuel_Sc1 Aviation electricity consumption	Please see references tab Please see references tab	Aviation turbine fuel	3,149.667	1.754	29.800	- 3,181.221	BEIS, 2018. Greenhouse gas reportin	g: co. 9738174.24 5423	.736772 92135.96	0	0 9,835,733.94	kgCO2e IE	Electricity consumption from aviation not possible to separate from stationary energy data.
	Off-road	Aviation / out of boundary Off-road transport / Petroleum products	Other Direct	58,983.62 1,863.85	7,600,500 kWh	DATA_OFFROAD	Aviation electricity consumption Aviation_fuel_Sc3 OFFROAD petroleum	Please see references tab Please see references tab	Aviation turbine fuel Diesel (average biofuel blend)	3,149.667 0.243	1.754 0.000		- 0.245 kWh (Gross CV)	BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin	g: col 1848297.5 369.			0 58,983,621.39 0 1,863,845.44	kgCO2e kgCO2e	- wat 1111
Waste	Solid waste disposal	Solid Waste Disposal / Open-loop	Other Direct	-	kWh 29,039 Tonnes	DATA_Waste	Electricity Indirect_WTT and T&D Open-loop	Please see references tab Please see references tab	Electricity generated_Sc3 Municipal Waste Open-loop	-		-	- 0.061 kWh (Gross CV) - tonnes	BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin	g: co 0 g: co 0	0	0	0 -	kgCO2e kgCO2e	
		Solid Waste Disposal / Closed-loop Solid Waste Disposal / Landfill	Direct Direct	NO 2,371.38		DATA_Waste DATA_Waste		Please see references tab Please see references tab	Municipal Waste_Closed-loop Municipal Waste_Landfill	-	-	-	- tonnes - 567.146 tonnes	BEIS, 2018. Greenhouse gas reportin BEIS, 2018. Greenhouse gas reportin		0	0	0 2,371,380.29	kgCO2e NO kgCO2e	Not reported for this LA
		Solid Waste Disposal / Scope 3	Other	IE NG	Tonnes	DATA W.	Solid Waste Disposal / Scope 3	Please see references tab	Ownerly Comment!	-	-	-		aric 2010 Court	0	0	0	0 -	kgCO2e IE	Waste data is allocated at the point of generation, regardless of treatment location, so all emissions inc. Scope 3 attributable to that waste are included in the scope 1 figure Not reported for this IA
		Biological Treatment / Composting Biological treatment / Scope 3	Other	NO IF	- Tonnes	DATA_Waste		Please see references tab Please see references tab	Organic_Composting			-	- tonnes	BEIS, 2018. Greenhouse gas reportin	g: col 0	0	0	0	kgCO2e NO	Not reported for this LA Waste data is allocated at the point of generation, regardless of treatment location, so all emissions inc. Scope 3 attributable to that waste are included in the scope 1 figure
	Incineration and open	Biological treatment / Scope 3 Incineration and open burning / Combustion	Direct	IE .	Z9,337 Tonnes	DATA_Waste	Biological treatment / Scope 3 Combustion	Please see references tab Please see references tab	Municipal Waste Combustion				- tonnes	BEIS, 2018. Greenhouse gas reportin	a: co 0	0	0		kgCO2e IE	and the scope a standardle to that waste are included in the scope 1 righte
		Incineration and open burning / Scope 3	Other	IE	Tonnes	-AID_Waste	Incineration and open burning / Scope 3	Please see references tab					tornes)	0	0	0	0 -	kgCO2e IE	Waste data is allocated at the point of generation, regardless of treatment location, so all emissions inc. Scope 3 attributable to that waste are included in the scope 1 figure
	Wastewater	Wastewater	Direct Other	6,958.55		DATA_Wastewater DATA_Wastewater	Wastewater Wastewater	Please see references tab Please see references tab	Municipal waste_wastewater-treatment	-	-	-	- 0.708 m3	BEIS, 2018. Greenhouse gas reportin	0	0	0	0 6,958,550.35		
IPPU	Industrial process	Industrial process	Direct	1,619.41	1,906,363 kWh	DATA_IP	iron and steel	Please see references tab	Industrial Processes_Iron and steel	-	-	-	- 0.849 kWh	BEIS (Amanda Penistone, Roger Little	ewoo 0	0	0	0 1,619,411.59	kgCO2e	

Sector	Sub-sector	Description of activity /facility	Direct (fuel combustion) or Indirect (grid energy) or Othe	r Total tCO2e or notation key	Activity da	ita		Description of emission source		Emissions factors						Emissions (kg	gCO2e)				Notation keys Explanation
					Amount	: Unit	SCATTER data reference		Data source	Emissions factor reference	CO2	CH4	N20	F CO2e Unit	Data source	CO2	CH4	N2O F	CO2e	Unit	
			Direct	117.11		4,906 kWh 3,785 kWh	DATA_IP DATA_IP	Non-ferrous metals Mineral products	Please see references tab	Industrial Processes_Non-ferrous metals	-	-	-	- 0.038 kWh - 0.054 kWh	BEIS (Amanda Penistone, Roger Littlewoo	0	0	0	0 117,109.20 0 232,466.99	kgCO2e	
			Direct	1,042.78		7,651 kWh		Mineral products Chemicals	Please see references tab Please see references tab	Industrial Processes_Mineral products Industrial Processes Chemicals		-		- 0.054 kWh	BEIS (Amanda Penistone, Roger Littlewoo BEIS (Amanda Penistone, Roger Littlewoo	0	0	0	0 232,466.99	kgCO2e	
			Direct	12,067.00	45,473	3,553 kWh 6,259 kWh	DATA_IP	Other industry	Please see references tab	Industrial Processes_Other industry	-	-		- 0.265 kWh	BEIS (Amanda Penistone, Roger Littlewoo	0	0	0	0 12,067,003.93		
	Industrial product use	Industrial product use	Direct	0.00	65,816	6,259 kWh	DATA_IP	Total industrial fuel	Please see references tab	Product use_Product use	-	-	-	- 0.000 kWh	BEIS (Amanda Penistone, Roger Littlewoo	0	0	0	0 0.13	kgCO2e	
AFOLI	I brooke als	I bearing and a second	Other						Please see references tab		-	-	-		0	0	0	0	0 -	kgCO2e	
APOLO	Livestock	Livestock	Direct Direct	6,971.97 6,186.45	1	1,680 nead 3.536 head	DATA_Livestock	Total number of dairy cattle Total number of non-dairy cattle Total number of sheep	Please see references tab Please see references tab	Dairy Cattle Non-dairy cattle	-	159.945 63.043	0.505	- 4,149.268 head - 1,749.705 head	UK average livestock emissions factors UK average livestock emissions factors		268754.7679 84 222901.1224 20		0 6,971,974.23	kgCO2e	
			Direct	6,669.54	56	6,795 head	DATA_Livestock	Total number of sheep	Please see references tab	Sheep	-	4.668	0.002	- 117.432 head	UK average livestock emissions factors	0	265118.6031 13	9.5077069	0 6,669,538.37		
			Direct	86.85		306 head	DATA Livestock	Total number of pigs	Please see references tab	Swine	-	6.698	0.175	- 219.569 head	UK average livestock emissions factors	0	2649.653441 69	.17060641	0 86,854.18	kgCO2e	
			Direct	NO 126.32		- head	DATA_Livestock	Total number of horses Total number of poultry	Please see references tab	Horses Poultry	-	19.560 0.021	0.616	- 672.592 head - 2.001 head	UK average livestock emissions factors UK average livestock emissions factors	0	1341.094919 31	0	0 126.315.44	kgCO2e NO	No horse data for England
	Land use	Land use non-CO2	Direct	- 0.00				Intai number of politry Ion(LULUCF non-CO2	Please see references tab Please see references tab	Poultry n/a	1.000	0.021	0.005	- 2.001 head	UK average livestock emissions factors	-0.5577857	1341.094919 31	1.3693398	0 - 126,315.44		
		Forestland	Direct	- 25,756.79		6,793 KgCO2	DATA LULUCF	Forestland	Please see references tab	n/a	1.000	-	-	- 1.000	n/a	-25756793	0	0	0 - 25,756,793.39	kgCO2	
		Cropland	Direct	NO		 KgCO2 	DATA_LULUCF	Cropland	Please see references tab	n/a	1.000	-	-	- 1.000	n/a	0	0	0	0 -	kgCO2 NO	No data for Cropland reported in this LA
		Grassland	Direct	- 11,438.52	- 11,438		DATA_LULUCF		Please see references tab	n/a	1.000	-		- 1.000	n/a	-11438516	0	0	0 - 11,438,515.71		
		Wetlands Settlements	Direct	NO NO		- KgCO2	DATA_LULUCF DATA_LULUCF	Wetlands Settlements	Please see references tab Please see references tab	n/a	1.000	-	-	- 1.000 - 1.000	n/a	0	0	0	0 -	kgCO2 NO	No data for Wetlands reported in this LA No data for Settlements reported in this LA
		Other	Direct	NO		- KgCO2	DATA_LULUCF	Other	Please see references tab	n/a	1.000	-		- 1.000	n/a	0	0	0	0 -	kgCO2 NO	No data for Other reported in this LA
		HWP	Direct	NO		- KgCO2	DATA_LULUCF	HWP	Please see references tab	n/a	1.000	-	-	- 1.000	n/a	0	0	0	0 -	kgCO2 NO	No data for HWP reported in this LA
		Land use CO2	Direct	-		- KgCO2	EMISSIONS_Data	N. LULUCF Net Emissions	Please see references tab		-				0	0	0	0	0 -	kgCO2	
	Other AFOLU	Other AFOLU	Direct	-					Please see references tab		-	-	-		0	0	0	0	0 -	kgCO2e	
Generation of grid-supplied	Electricity-only generation	Electricity-only generation / Natural Gas	Direct	NO		- MWh	DATA DUKES 5.1	1 Matural Cos	Please see references tah	Natural Gas	0.184	0.000	0.000	D 184 JANIA (Gross CV)	BEIS. 2018. Greenhouse gas reporting: col	0	0	0	0	keCO2e NO	Natural Gas power generation not reported in this LA in DUKES
energy		Electricity-only generation / Gas Oil	Direct	NO		- kWh	DATA DUKES 5.1		Please see references tab	Gas Oil	0.184				BEIS, 2018. Greenhouse gas reporting: co.	0	0	0	0 -	kgCO2e NO	Gas Oil power generation not reported in this LA in DUKES
		Electricity-only generation / Coal	Direct	NO		- kWh	DATA_DUKES 5.1		Please see references tab	Coal (electricity generation)	0.307			- 0.311 kWh (Gross CV)	BEIS, 2018. Greenhouse gas reporting: co	0	0	0	0 -	kgCO2e NO	Coal power generation not reported in this LA in DUKES
		Electricity-only generation / Biomass Wood																			
		logs	Direct	NO		kWh	DATA_DUKES 5.1	1 Biomass Pellets	Please see references tab	Biomass Wood logs	-	-	-	- 0.013 kWh	BEIS, 2018. Greenhouse gas reporting: co.	0	0	0	0 -	kgCO2e NO	Biomass Pellets power generation not reported in this LA in DUKES
		Electricity-only generation / Biomass Grass/Straw	Direct	NO		- kWh	DATA DUKES 5.1	.1 Biomass Grass/Straw	Please see references tab	Biomass Grass/Straw				- 0.021 kWh	BEIS, 2018. Greenhouse gas reporting: co.	0	0	0	0	kgCO2e NO	Biomass Grass/Straw power generation not reported in this LA in DUKES
		Electricity-only generation / Diesel	Direct	NO			DATA_DUKES 5.1		Please see references tab	Diesel (average biofuel blend)	0.243	0.000	0.002		BEIS, 2018. Greenhouse gas reporting: co.	0	0	0	0 -	kgCO2e NO	Diesel power generation not reported in this LA in DUKES
Generation of grid-supplied																					
energy		Electricity-only generation / Natural Gas	Other	NO		- kWh	DATA_DUKES 5.1	1 Natural Gas	Please see references tab	Natural gas_Sc3 Gas Oil_Sc3	-	-	-	- 0.028 kWh (Gross CV)	BEIS, 2018. Greenhouse gas reporting: co BEIS, 2018. Greenhouse gas reporting: co	0	0	0	0 -	kgCO2e NO	Natural Gas power generation not reported in this LA in DUKES
		Electricity-only generation / Gas Oil Electricity-only generation / Coal	Other	NO NO		- kWh	DATA_DUKES 5.1	1 Gas Oil	Please see references tab Please see references tab		-	-	-	- 0.059 kWh (Gross CV)	BEIS, 2018. Greenhouse gas reporting: col BEIS, 2018. Greenhouse gas reporting: col	0	0	0	0 -	kgCO2e NO	Gas Oil power generation not reported in this LA in DUKES Coal power generation not reported in this LA in DUKES
		Electricity-only generation / Biomass Wood	Other	NO		- KVVII	DATA_DOKES 3.1	1 Coal	Fieuse see rejerences tub	Coal (electricity generation)_Sc3	-			- 0.030 KWII	BE13, 2018. Greenhouse gus reporting. Col		,	9	0 -	AgCOZE NO	Coal power generation not reported in this bein boxes
		logs	Other	NO		kWh	DATA_DUKES 5.1	1 Biomass Pellets	Please see references tab	Biomass Wood logs_Sc3	-	-	-	- 0.013 kWh	BEIS, 2018. Greenhouse gas reporting: co.	0	0	0	0 -	kgCO2e NO	Biomass Pellets power generation not reported in this LA in DUKES
		Electricity-only generation / Biomass																			
		Grass/Straw	Other	NO NO		- kWh	DATA_DUKES 5.1 DATA_DUKES 5.1	1 Biomass Grass/Straw	Please see references tab Please see references tab	Biomass Grass/Straw_Sc3 Diesel (average biofuel blend)_Sc3	-	-	-	- 0.016 kWh	BEIS, 2018. Greenhouse gas reporting: col BEIS, 2018. Greenhouse gas reporting: col	0	0	0	0 -	kgCO2e NO	Biomass Grass/Straw power generation not reported in this LA in DUKES Diesel power generation not reported in this LA in DUKES
	CHP generation	Electricity-only generation / Diesel CHP generation / Coal (2)	Direct	NO			DATA_CHP		Please see references tab	Coal (industrial)	0.321	0.001	0.002	- 0.058 kWn (Gross CV)	BEIS, 2018. Greenhouse gas reporting: col	0	0	0	0 -	kgCO2e NO	CHP generation not reported in this DA in DUKES
		CHP generation / Fuel oil	Direct	NO		- kWh	DATA_CHP	Fuel oil	Please see references tab	Gas oil	0.254		0.022	 0.276 kWh (Gross CV) 	BEIS, 2018. Greenhouse gas reporting: co.	0	0	0	0 -	kgCO2e NO	CHP generation not reported in this LA in DUKES
		CHP generation / Natural gas	Direct	NO		- kWh	DATA_CHP	Natural gas Renewable fuels (3)	Please see references tab	Natural gas	0.184	0.000	0.000	- 0.184 kWh (Gross CV)	BEIS, 2018. Greenhouse gas reporting: co. BEIS, 2018. Greenhouse gas reporting: co.	0	0	0	0 -	kgCO2e NO	Natural Gas power generation not reported in this LA in DUKES
		CHP generation / Renewable fuels (3)	Direct	NO			DATA_CHP	Renewable fuels (3)	Please see references tab	Biogas	0.184	-	0.000	- 0.000 kWh	BEIS, 2018. Greenhouse gas reporting: co.	0	0	0	0 -	kgCO2e NO	CHP generation not reported in this LA in DUKES
		CHP generation / Other fuels (4) CHP generation / Coal (2)	Othor	NO NO		- KWN	DATA_CHP	Other fuels (4) Coal (2)	Please see references tab Please see references tab	Natural gas Coal (industrial) Sc3	0.184	0.000	0.000	- U.184 kWh (Gross CV)	BEIS, 2018. Greenhouse gas reporting: co	0	0	0	0 -	kgCO2e NO	CHP generation not reported in this LA in DUKES CHP generation not reported in this LA in DUKES
		CHP generation / Fuel oil	Other	NO		- kWh	DATA_CHP	Fuel oil	Please see references tab	Gas oil_Sc3	-	-		- 0.059 kWh (Gross CV)	BEIS, 2018. Greenhouse gas reporting: co	0	0	0	0 -	kgCO2e NO	CHP generation not reported in this LA in DUKES
		CHP generation / Natural gas	Other	NO		- kWh	DATA_CHP DATA_CHP DATA_CHP	Natural gas Renewable fuels (3)	Please see references tab	Natural gas_Sc3	-	-		- 0.028 kWh (Gross CV)	BEIS, 2018. Greenhouse gas reporting: co BEIS, 2018. Greenhouse gas reporting: co BEIS, 2018. Greenhouse gas reporting: co BEIS, 2018. Greenhouse gas reporting: co	0	0	0	0 -	kgCO2e NO	Natural Gas power generation not reported in this LA in DUKES
1		CHP generation / Renewable fuels (3)	Other	NO		- kWh	DATA_CHP DATA_CHP	Renewable fuels (3) Other fuels (4)	Please see references tab	Biogas_Sc3	-	-	-	- 0.024 kWh (Gross CV)	BEIS, 2018. Greenhouse gas reporting: co. BEIS, 2018. Greenhouse gas reporting: co.	0	0	0	0 -	kgCO2e NO	CHP generation not reported in this LA in DUKES
1	Heat/cold generation	CHP generation / Other fuels (4) Heat/cold generation	Other	NO		- kWh	DATA_CHP	Other fuels (4)	Please see references tab Please see references tab	Natural gas_Sc3	0.349	0.001	0.002				0	0	0 -	kgCO2e NO	CHP generation not reported in this LA in DUKES
1	Local renewable generation		Direct		165 487	3.583 kWh	DATA_HCGEN DATA_DUKES 5.1	1 Wind	Please see references tab Please see references tab	Electricity generated EF Wind	0.349	0.001	0.002	- 0.352 KWn	BEIS, 2018. Greenhouse gas reporting: col Zero emissions - all emissions are scope 3		0	0	0	kgCO2e	
1		Wind (Offshore)	Direct	NO	223,403	- kWh	DATA_DUKES 5.1	1 Solar PV	Please see references tab	EF_Wind (Offshore)	-	-	-	- kWh	Zero emissions - all emissions are scope 3		0	0	0 -	kgCO2e NO	DUKES large-scale renewables data reports no Wind (Offshore) generation for this LA
		Solar PV	Direct	NO		- kWh	DATA_DUKES 5.1	1 Solar PV	Please see references tab	EF_Solar PV	-	-		- kWh	Zero emissions - all emissions are scope 3	0	0	0	0 -	kgCO2e NO	DUKES large-scale renewables data reports no Solar PV generation for this LA
		Nuclear Hydro	Direct	NO -	7,588,963		DATA_DUKES 5.1		Please see references tab Please see references tab	EF_Nuclear EF_Hydro	-		-	- kWh	Zero emissions - all emissions are scope 3 Zero emissions - all emissions are scope 3		0	0	0 -	kgCO2e kgCO2e NO	DUKES large-scale renewables data reports no Hydro generation for this LA
		Hydro/Pumped Storage	Direct	NO NO			DATA_DUKES 5.1	1 Hydro/Pumped Storage	Please see references tab Please see references tab	EF_Hydro/Pumped Storage			- :	kwn	Zero emissions - all emissions are scope 3 Zero emissions - all emissions are scope 3	0	0	0	0 -	kgCO2e NO	DUKES large-scale renewables data reports no hydro/Pumped Storage generation for this DA DUKES large-scale renewables data reports no Hydro/Pumped Storage generation for this LA
		Small-Scale / Solar PV	Direct	-		7,098 kWh	DATA_Renewable	es Photovoltaics	Please see references tab	EF_Solar PV	-	-	-	- kWh	Zero emissions - all emissions are scope 3	0	0	0	0 -	kgCO2e	
		Small-Scale / Onshore Wind	Direct	-	122,802	2,153 kWh	DATA_Renewable	es Onshore Wind	Please see references tab	EF_Wind	-	-		kWh	Zero emissions - all emissions are scope 3	0	0	0	0 -	kgCO2e	
		Small-Scale / Hydro Small-Scale / Anaerohic Digestion	Direct	NO		- kWh	DATA_Renewable	es Hydro	Please see references tab	EF_Hydro	-	-	-	kWh	Zero emissions - all emissions are scope 3	0	0	0	0 -	kgCO2e NO	DUKES large-scale renewables data reports no Hydro generation for this LA
1		Small-Scale / Anaerobic Digestion Small-Scale / Offshore Wind	Direct	0.25 NO	1,103	3,760 kWh	DATA Renewable	Anaerobic Digestion Softshore Wind	Please see references tab Please see references tab	Biogas EF Wind (Offshore)	-	-		- 0.000 kWh	BEIS, 2018. Greenhouse gas reporting: col Zero emissions - all emissions are scope 3	0	0	0	0 253.86	kgCO2e kgCO2e NO	No report of Offshore Wind in local renewables data
1		Small-Scale / Wave/Tidal	Direct	NO		- kWh	DATA Renewable	es Wave/Tidal	Please see references tab	n/a	1.000			- 1.000	0 n/a	0	0	0	0	kgCO2e NO	No report of Wave/Tidal in local renewables data
		Small-Scale / Sewage Gas	Direct	NO NO		- kWh	DATA_Renewable	es Sewage Gas	Please see references tab	Biogas	-	-	-	- 0.000 kWh	BEIS, 2018. Greenhouse gas reporting: co.	0	0	0	0 -	kgCO2e NO	No report of Sewage Gas in local renewables data
		Small-Scale / Landfill Gas Small-Scale / Municipal Solid Waste	Direct						Please see references tab	Landfill gas	-	-	-	- 0.000 kWh	BEIS, 2018. Greenhouse gas reporting: co.	0	0	0	0 -	kgCO2e NO	No report of Landfill Gas in local renewables data No report of Municipal Splid Waste in local renewables data
		Small-Scale / Municipal Solid Waste Small-Scale / Animal Biomass	Direct	NO NO		- kWh	DATA_Renewable	es Municipal Solid Waste	Please see references tab Please see references tab	Municipal Waste_Electricity Biomass Grass/Straw	-	-	-	kWh - 0.021 kWh	ecoinvent 3.4 (2017); electricity, from mu		0	0	0 -	kgCO2e NO	No report of Municipal Solid Waste in local renewables data No report of Animal Biomass in local renewables data
1		Small-Scale / Plant Biomass	Direct	NO 13.07	625	5,757 kWh	DATA Renewable	es Animal Biomass es Plant Biomass	Please see references tab	Biomass Grass/Straw				- 0.021 kWh	BEIS, 2018. Greenhouse gas reporting: col BEIS, 2018. Greenhouse gas reporting: col	0	0	0	0 13.072.06	kgCO2e	,
1		Small-Scale / Cofiring	Direct	NO	1		DATA_Renewable	es Cofiring	Please see references tab	Biomass Wood logs	-	-	-	- 0.013 kWh	BEIS, 2018. Greenhouse gas reporting: co.		0	0	0 -	kgCO2e NO	No report of Cofiring in local renewables data
1		Onshore wind	Indirect	-					Please see references tab		-	-	-		0	0	0	0	0 -	kgCO2e	
1		Wind (Offshore) Solar PV	Indirect	-			1		Please see references tab Please see references tab	+	-		-		0	0	0	0	0 -	kgCO2e kgCO2e	
		Nuclear	Indirect Indirect				1		Please see references tab Please see references tab		-				0	0	0	0	0	kgCO2e	
		Hydro	Indirect	-					Please see references tab		-	-	-		0	0	0	0	0 -	kgCO2e	
		Hydro/Pumped Storage	Indirect	-					Please see references tab		-	-	-		0	0	0	0	0 -	kgCO2e	

	Inclu	ded?		1700 / /	222/ ()				
Sectors and sub-sectors in GCoM reporting framework	Direct	Indirect	Note	IPCC (ref no.)	GPC (ref no.)	European CoM reporting framework			
	emissions	emissions							
Stationary Energy						Final energy consumption in the 'buildings, equipment/facilities, industries' sector			
Residential buildings	Required	Required	This covers emissions from fuel combustion and use of grid-supplied energy by buildings,	1A4b	l.1.1, l.1.2	Residential			
Commercial building and facilities	Required	Required	equipment and facilities within city boundary (including transportation and waste	1A4a	I.2.1, I.2.2	Tertiary/commercial			
Institutional buildings and facilities	Required	Required	facilities), as well as fugitive emissions from production, transformation and distribution	1A4a	1.2.1, 1.2.2	Municipal (incl. public lighting)			
Industrial buildings and facilities	Required	Required	of fuels. Emissions from sources covered by a regional or national emissions trading	1A1, 1A2	1.3.1, 1.3.2, 1.4.1, 1.4.2	Industry			
Agriculture	Required	Required	system should be identified and described. See section 3.6.1 for detailed guidance and	1A4c	1.5.1, 1.5.2	Agriculture/Forestry/Fisheries			
Fugitive emissions	Required		requirements.	1B1, 1B2	1.7.1, 1.8.1	Other emissions (incl. fugitive emissions)			
Transportation						Final energy consumption in the 'transport' sector (several subsectors proposed, incl. municipal, public, private and commercial)			
On-road	Required	Required	This covers emissions from fuel combustion and use of grid-supplied energy for all	1A3b	II.1.1, II.1.2	Road*			
Rail	Required	Required	modes of transportation activities within city boundary (For waterborne and aviation,	1A3c	II.2.1, II.2.2	Rail*			
Waterborne navigation	Required	Required	cities only need to report journeys fully confined within the city boundary). On-road and rail travel should additionally be disaggregated by municipal fleet, public transport,	1A3d	II.3.1, II.3.2	Local and domestic waterways*			
Aviation	Required	Required	private and commercial transport. See section 3.6.2 for detailed guidance and		II.4.1, II.4.2	Local aviation*			
Off-road	Required	Required	requirements.	1A3e	II.5.1, II.5.2	Other/Off-road*			
Waste						Other emission sources (not related to energy consumption)			
Solid waste disposal	Required		This covers non-energy related emissions from disposal and treatment of waste (inci.	4A	III.1.1, III.1.2	Wasta managament Sub sectors, salid wasta higherical wasta			
Biological treatment	Required		wastewater) generated within the city boundary, as a result of aerobic or anaerobic	4B	III.2.1, III.2.2	Waste management Sub-sectors: solid waste, biological waste, incinerated and burned waste *			
Incineration and open burning	Required		decomposition of waste, or incineration. Emissions from waste-to-energy, where waste/wastewater material is used directly as fuel or converted into a fuel, should	4C	III.3.1, III.3.2	incinerated and burned waste			
Wastewater	Required		cantured under the Stationary Energy sector. See section 3.6.3 for detailed guidance and	4D	III.4.1, III.4.2	Wastewater management			
Industrial Process and Product Use (IPPU)						Final energy consumption in the 'industry' sector			
Industrial Process	Optional		This covers non-energy related emissions from industrial processes, the use of certain products, and non-energy use of fossil fuels. See section 3.6.4 for detailed guidance and	2A, 2B, 2C, 2E	IV.1.1	Industry			
Product Use	Optional		requirements.	2D, 2F, 2G, 2H	IV.2.1				
Agriculture, Forestry and Other Land Use (AFOLU)						Other emission sources (not related to energy consumption)			
Livestock	Optional		This covers non-energy related emissions produced in the digestive processes of	3A	V.1.1	Agriculture, Forestry and Fisheries			
Land use	Optional		livestock, and emissions/removals as a result of land use and management. See section	3B	V.2.1				
Other AFOLU	Optional		3.6.5 for detailed guidance and requirements.	3C, 3D	V.3.1				
Energy Generation						Energy Supply			
Electricity-only generation	Required		This means disclosure of information on activity and emissions specifically related to	1A1	144	Electricity production (incl. certified green electricity, local electricity production)			
CHP generation	Required	, , ,			1.4.4				
Heat/cold generation	Required		controlled or influenced by the city. It is for information only and not added to the total emissions.			Local heat/cold production			
Local renewable generation	Optional	Optional	CIIII33IOII3.			Renewable energy generation			

			GWP	1	25	298	,					
Reference	EF name	Unit		l CO2				Source	Tab	Source link	Location	Method
Reference	EF name	Unit	Year	kg CO2	kg CH4	kg N2O	kg CO2e	Source	lab	Source link	Location	Method
					1	1	1	BEIS, 2018. Greenhouse gas reporting: conversion				
						1		factors 2017. Conversion factors 2017 - Full set (for				Fuel for piston-engined aircraft - a high octane
in taking parints	Assinting against		2017	2 127 67	17.54	20.00		advanced users)	Finale			(aka AVGAS).
Aviation spirit	Aviation spirit	tonnes	2017	3,127.67	17.54	29.80	3,175.00	advanced users)	Fuels			(aka AVGAS).
						1	1					
						1	1	DEIC 2019 Croophouse gas reporting conversion				Fuel for turbe area sizeraft and into (ake int fu
						1		BEIS, 2018. Greenhouse gas reporting: conversion				Fuel for turbo-prop aircraft and jets (aka jet fu
					1	l'		factors 2017. Conversion factors 2017 - Full set (for				to kerosene used as a heating fuel, but refined
Aviation turbine fuel	Aviation turbine fuel		2017	3,149.67	1.75	29.80		advanced users)	Fuels			higher quality.
Biogas	Biogas	kWh	2017			<u> </u>		BEIS, 2018. Greenhouse gas reporting: conversion	Bioenergy	https://www.gov.uk/governme		
Biogas_Sc3	Biogas WTT	kWh (Gross CV)	2017			<u> </u>		BEIS, 2018. Greenhouse gas reporting: conversion		https://www.gov.uk/governme		
Biomass Grass/Straw	Biomass_Grass/straw	kWh	2017			<u> </u>		BEIS, 2018. Greenhouse gas reporting: conversion	Bioenergy	https://www.gov.uk/governme	UK	
Biomass Grass/Straw_Sc3	Biomass Grass/Straw_Sc3	kWh	2017			<u> </u>		BEIS, 2018. Greenhouse gas reporting: conversion				
						1	1	BEIS, 2018. Greenhouse gas reporting: conversion				
Biomass Wood logs	Biomass_Wood logs	kWh	2017			1	0.0127	factors 2017. Conversion factors 2017 - Full set (for	Bioenergy	https://www.gov.uk/governme	UK	
							1	BEIS, 2018. Greenhouse gas reporting: conversion				
Biomass Wood logs_Sc3	Biomass Wood logs_Sc3	kWh	2017			1	0.0128	factors 2017. Conversion factors 2017 - Full set (for				
<u> </u>								BEIS, 2018. Greenhouse gas reporting: conversion				
Coal (domestic)	Coal (domestic)	kWh (Gross CV)	2017	0.31470	0.02294	0.00444		factors 2017. Conversion factors 2017 - Full set (for	Fuels	https://www.gov.uk/governme	UK	
Coal (domestic)_Sc3	Coal (domestic)_Sc3	kWh (Gross CV)	2017	0.02.77	0.0223.			BEIS, 2018. Greenhouse gas reporting: conversion		https://www.gov.uk/governme		
Coal (electricity generation)	Coal (electricity generation)	kWh (Gross CV)	2017	0.30683	0.00009	0.00173		BEIS, 2018. Greenhouse gas reporting: conversion	Fuels	https://www.gov.uk/governme		
con (circulately Beliefulion)	Sur (cicculativity generation)	KTTT (G1033 CV)	2017	0.50005	0.00009	0.001/3		BEIS, 2018. Greenhouse gas reporting: conversion	. 4013			+
Coal (electricity gonoration) Coa	Coal (electricity gonoration) So	LW/h	2017		1	1			Fuels			
Coal (electricity generation)_Sc3	Coal (electricity generation)_Sc3	kWh	2017			 		factors 2017. Conversion factors 2017 - Full set (for	Fuels			
						'		BEIS, 2018. Greenhouse gas reporting: conversion				
Coal (industrial)	Coal (industrial)	kWh (Gross CV)	2017	0.32132	0.00089	0.00221		factors 2017. Conversion factors 2017 - Full set (for	Fuels	https://www.gov.uk/governme	UK	
					1	1		BEIS, 2018. Greenhouse gas reporting: conversion				
Coal (industrial)_Sc3	Coal (industrial) WTT	kWh (Gross CV)	2017				0.0503	factors 2017. Conversion factors 2017 - Full set (for	WTT - fuels	https://www.gov.uk/governme	UK	
Dairy Cattle	Dairy Cattle	head	2017		159.9	0.505	4,149	UK average livestock emissions factors	Table3.As1; Table3.	http://naei.beis.gov.uk/reports	UK	factor is the direct N2O emissions from manu management when housed. Emissions from n dropped on he land by livestock when grazing manure collected then spread on the land, ar excluded. Note that dairy cattle includes cows cows not yet in milk (heifers) and young cattle replace the dairy cows in milk. Emissions are higher for dairy cattle actually producing milk
Deer	Deer	head	2017		20.2	0.110		UK average livestock emissions factors BEIS, 2018. Greenhouse gas reporting: conversion	Table3.As1; Table3.	http://naei.beis.gov.uk/reports	uk	These are the UK averages based on the latest submission to the UNFCCC. CH4 emissions fac comprised of the sum of enteric fermentation (direct methane from burping and farting), an emissions from manure storage. The N2O emifactor is the direct N2O emissions from manumanagement when housed. Emissions from m dropped on he land by livestock when grazing manure collected then spread on the land, are
Deer Diesel (average biofuel blend)	Deer Diesel	head kWh (Gross CV)	2017	0.24318	20.2		0.2452	BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for		http://naei.beis.gov.uk/reports		submission to the UNFCCC. CH4 emissions fac comprised of the sum of enteric fermentation (direct methane from burping and farting), an emissions from manure storage. The N2O emi factor is the direct N2O emissions from manu management when housed. Emissions from m dropped on he land by livestock when grazing
Diesel (average biofuel blend)		kWh (Gross CV)	2017	0.24318			0.2452	BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for BEIS, 2018. Greenhouse gas reporting: conversion	Fuels	https://www.gov.uk/governme	UK	submission to the UNFCCC. CH4 emissions fac comprised of the sum of enteric fermentation (direct methane from burping and farting), an emissions from manure storage. The N2O em factor is the direct N2O emissions from manu management when housed. Emissions from n dropped on he land by livestock when grazing
piesel (average biofuel blend) piesel (average biofuel blend)_Sc3	Diesel	kWh (Gross CV)	2017	0.24318			0.2452 0.0585	BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for	Fuels	https://www.gov.uk/governme	UK	submission to the UNFCCC. CH4 emissions fac comprised of the sum of enteric fermentation (direct methane from burping and farting), an emissions from manure storage. The N2O em factor is the direct N2O emissions from manu management when housed. Emissions from n dropped on he land by livestock when grazing
Diesel (average biofuel blend) Diesel (average biofuel blend)_Sc3 F_Hydro	Diesel electricity production, hydro, run-of-	kWh (Gross CV) kWh (Gross CV) f-rive kWh	2017 2017 2013	0.24318			0.2452 0.0585	BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for Zero emissions - all emissions are scope 3 and not	Fuels	https://www.gov.uk/governme	UK UK GB	submission to the UNFCCC. CH4 emissions factomprised of the sum of enteric fermentation (direct methane from burping and farting), are missions from manure storage. The N2O emfactor is the direct N2O emissions from manumanagement when housed. Emissions from manufropped on he land by livestock when grazing
Diesel (average biofuel blend) Diesel (average biofuel blend)_Sc3 EF_Hydro	Diesel	kWh (Gross CV) kWh (Gross CV) f-rive kWh	2017 2017 2013 2013	0.24318			0.2452 0.0585	BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for	Fuels	https://www.gov.uk/governme	UK UK GB GB	submission to the UNFCCC. CH4 emissions fac comprised of the sum of enteric fermentation (direct methane from burping and farting), an emissions from manure storage. The N2O em factor is the direct N2O emissions from manu management when housed. Emissions from n dropped on he land by livestock when grazing
Diesel (average biofuel blend) Diesel (average biofuel blend)_Sc3 IF_Hydro IF_Hydro/Pumped Storage	Diesel electricity production, hydro, run-of-	kWh (Gross CV) kWh (Gross CV) f-rive kWh ed st kWh	2017 2017 2013	0.24318			0.2452 0.0585 - -	BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for Zero emissions - all emissions are scope 3 and not	Fuels	https://www.gov.uk/governme	UK UK GB	submission to the UNFCCC. CH4 emissions fac comprised of the sum of enteric fermentation (direct methane from burping and farting), ar emissions from manure storage. The N2O em factor is the direct N2O emissions from manu management when housed. Emissions from n dropped on he land by livestock when grazing
Diesel (average biofuel blend) Diesel (average biofuel blend)_Sc3 F_Hydro F_Hydro/Pumped Storage F_Nuclear	electricity production, hydro, run-of- electricity production, hydro, pumpe electricity production, nuclear, press	kWh (Gross CV) kWh (Gross CV) f-rive kWh ed st kWh sure kWh	2017 2017 2013 2013	0.24318			0.2452 0.0585 - -	BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not	Fuels	https://www.gov.uk/governme	UK UK GB GB	submission to the UNFCCC. CH4 emissions factomprised of the sum of enteric fermentation (direct methane from burping and farting), are missions from manure storage. The N2O emfactor is the direct N2O emissions from manumanagement when housed. Emissions from manufropped on he land by livestock when grazing
Diesel (average biofuel blend) Diesel (average biofuel blend)_Sc3 EF_Hydro EF_Hydro/Pumped Storage EF_Nuclear EF_Solar PV	electricity production, hydro, run-of- electricity production, hydro, pumpe electricity production, nuclear, press electricity production, photovoltaic,	kWh (Gross CV) kWh (Gross CV) f-rive kWh ed st kWh sure kWh ,570 kWh	2017 2017 2013 2013 2013 2013	0.24318			0.2452 0.0585 - - - -	BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not	Fuels	https://www.gov.uk/governme	UK GB GB GB GB	submission to the UNFCCC. CH4 emissions far comprised of the sum of enteric fermentation (direct methane from burping and farting), at emissions from manure storage. The N2O em factor is the direct N2O emissions from manumanagement when housed. Emissions from in dropped on he land by livestock when grazing
Diesel (average biofuel blend) Diesel (average biofuel blend)_Sc3 EF_Hydro EF_Hydro/Pumped Storage EF_Nuclear EF_Solar PV EF_Wind	electricity production, hydro, run-of- electricity production, hydro, pumpe electricity production, nuclear, press electricity production, photovoltaic, electricity production, wind, 1-3MW	kWh (Gross CV) kWh (Gross CV) f-rive kWh ed st kWh sure kWh , 5700 kWh	2017 2017 2013 2013 2013 2013 2013 2013	0.24318			0.2452 0.0585 - - - - -	BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not	Fuels	https://www.gov.uk/governme	UK GB GB GB GB GB	submission to the UNFCCC. CH4 emissions fa comprised of the sum of enteric fermentatio (direct methane from burping and farting), a emissions from manure storage. The N2O em factor is the direct N2O emissions from manumanagement when housed. Emissions from I dropped on he land by livestock when grazin.
Diesel (average biofuel blend) Diesel (average biofuel blend)_Sc3 IF_Hydro IF_Hydro/Pumped Storage IF_Nuclear IF_Solar PV IF_Wind IF_Wind (Offshore)	electricity production, hydro, run-of- electricity production, hydro, pumpe electricity production, nuclear, press electricity production, photovoltaic, electricity production, wind, 1-3MW electricity production, wind, 1-3MW	kWh (Gross CV) kWh (Gross CV) f-rive kWh ed st kWh sure kWh , 5700 kWh V turt kWh	2017 2017 2013 2013 2013 2013 2013 2013 2013		0.00005	0.00200	0.2452 0.0585 - - - - - -	BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not	Fuels WTT - fuels	https://www.gov.uk/governme	UK GB GB GB GB GB GB GB GB	submission to the UNFCCC. CH4 emissions far comprised of the sum of enteric fermentation (direct methane from burping and farting), at emissions from manure storage. The N2O em factor is the direct N2O emissions from manumanagement when housed. Emissions from in dropped on he land by livestock when grazing
Diesel (average biofuel blend) Diesel (average biofuel blend)_Sc3 F_Hydro F_Hydro/Pumped Storage F_Nuclear F_Solar PV F_Wind F_Wind (Offshore)	electricity production, hydro, run-of- electricity production, hydro, pumpe electricity production, nuclear, press electricity production, photovoltaic, electricity production, wind, 1-3MW	kWh (Gross CV) kWh (Gross CV) f-rive kWh ed st kWh sure kWh , 5700 kWh	2017 2017 2013 2013 2013 2013 2013 2013	0.24318		0.00200	0.2452 0.0585 - - - - - - - - - - 0.3516	BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not factors 2017. Conversion factors 2017 - Full set (for	Fuels WTT - fuels	https://www.gov.uk/governme	UK GB GB GB GB GB GB GB GB	submission to the UNFCCC. CH4 emissions factomprised of the sum of enteric fermentation (direct methane from burping and farting), are missions from manure storage. The N2O emfactor is the direct N2O emissions from manumanagement when housed. Emissions from manufropped on he land by livestock when grazing
viesel (average biofuel blend) viesel (average biofuel blend)_Sc3 F_Hydro F_Hydro/Pumped Storage F_Nuclear F_Solar PV F_Wind F_Wind (Offshore)	electricity production, hydro, run-of- electricity production, hydro, pumpe electricity production, nuclear, press electricity production, photovoltaic, electricity production, wind, 1-3MW electricity production, wind, 1-3MW	kWh (Gross CV) kWh (Gross CV) f-rive kWh ed st kWh sure kWh , 5700 kWh V turt kWh	2017 2017 2013 2013 2013 2013 2013 2013 2013		0.00005	0.00200	0.2452 0.0585 - - - - - - - - - - 0.3516	BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not	Fuels WTT - fuels	https://www.gov.uk/governme	UK GB GB GB GB GB GB GB GB	submission to the UNFCCC. CH4 emissions fac comprised of the sum of enteric fermentation (direct methane from burping and farting), ar emissions from manure storage. The N2O em factor is the direct N2O emissions from manu management when housed. Emissions from n dropped on he land by livestock when grazing
viesel (average biofuel blend) viesel (average biofuel blend)_Sc3 F_Hydro F_Hydro/Pumped Storage F_Nuclear F_Solar PV F_Wind F_Wind (Offshore)	electricity production, hydro, run-of- electricity production, hydro, pumpe electricity production, nuclear, press electricity production, photovoltaic, electricity production, wind, 1-3MW electricity production, wind, 1-3MW	kWh (Gross CV) kWh (Gross CV) f-rive kWh ed st kWh sure kWh , 5700 kWh V turt kWh	2017 2017 2013 2013 2013 2013 2013 2013 2013		0.00005	0.00200	0.2452 0.0585 - - - - - - - - - 0.3516	BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not factors 2017. Conversion factors 2017 - Full set (for	Fuels WTT - fuels UK Electricity	https://www.gov.uk/governme	UK GB	submission to the UNFCCC. CH4 emissions fac comprised of the sum of enteric fermentation (direct methane from burping and farting), an emissions from manure storage. The N2O emi factor is the direct N2O emissions from manu management when housed. Emissions from m dropped on he land by livestock when grazing manure collected then spread on the land, are
viesel (average biofuel blend) viesel (average biofuel blend)_Sc3 F_Hydro F_Hydro/Pumped Storage F_Nuclear F_Solar PV F_Wind F_Wind (Offshore)	electricity production, hydro, run-of- electricity production, hydro, pumpe electricity production, nuclear, press electricity production, photovoltaic, electricity production, wind, 1-3MW electricity production, wind, 1-3MW Electricity	kWh (Gross CV) kWh (Gross CV) f-rive kWh ed st kWh sure kWh , 5700 kWh V turt kWh V turt kWh KWh	2017 2013 2013 2013 2013 2013 2013 2013 2013		0.00005	0.00200	0.2452 0.0585 - - - - - - - - 0.3516	BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not factors 2017. Conversion factors 2017 - Full set (for BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for	Fuels WTT - fuels UK Electricity	https://www.gov.uk/governme	UK GB	submission to the UNFCCC. CH4 emissions fac comprised of the sum of enteric fermentation (direct methane from burping and farting), an emissions from manure storage. The N2O emi factor is the direct N2O emissions from manu management when housed. Emissions from m dropped on he land by livestock when grazing manure collected then spread on the land, are
viesel (average biofuel blend) viesel (average biofuel blend)_Sc3 F_Hydro F_Hydro/Pumped Storage F_Nuclear F_Solar PV F_Wind F_Wind (Offshore)	electricity production, hydro, run-of- electricity production, hydro, pumpe electricity production, nuclear, press electricity production, photovoltaic, electricity production, wind, 1-3MW electricity production, wind, 1-3MW Electricity WTT- UK electricity (generation)	kWh (Gross CV) kWh (Gross CV) f-rive kWh ed st kWh ssure kWh , 5700 kWh V turt kWh KWh KWh	2017 2013 2013 2013 2013 2013 2013 2013 2017 2017		0.00005	0.00200	0.2452 0.0585 - - - - - - - 0.3516	BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 end not Zero emissions - all emissions are scope 3 end not factors 2017. Conversion factors 2017 - Full set (for BEIS, 2018. Greenhouse gas reporting: conversion BEIS, 2018. Greenhouse gas reporting: conversion	Fuels WTT - fuels UK Electricity WTT- UK & oversea	https://www.gov.uk/governme https://www.gov.uk/governme https://www.gov.uk/governme https://www.gov.uk/governme	UK GB GB GB GB GB GB GB UK	submission to the UNFCCC. CH4 emissions fac comprised of the sum of enteric fermentation (direct methane from burping and farting), an emissions from manure storage. The N2O emifactor is the direct N2O emissions from manumanagement when housed. Emissions from m dropped on he land by livestock when grazing manure collected then spread on the land, are
	electricity production, hydro, run-of- electricity production, hydro, pumpe electricity production, nuclear, press electricity production, photovoltaic, electricity production, wind, 1-3MW electricity production, wind, 1-3MW Electricity	kWh (Gross CV) kWh (Gross CV) f-rive kWh ed st kWh sure kWh , 5700 kWh V turt kWh V turt kWh KWh	2017 2013 2013 2013 2013 2013 2013 2013 2013		0.00005	0.00200	0.2452 0.0585 - - - - - - 0.3516 0.0561	BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not Zero emissions - all emissions are scope 3 and not factors 2017. Conversion factors 2017 - Full set (for BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for	Fuels WTT - fuels UK Electricity WTT- UK & oversea	https://www.gov.uk/governme https://www.gov.uk/governme https://www.gov.uk/governme https://www.gov.uk/governme	UK GB GB GB GB GB GB GB UK	submission to the UNFCCC. CH4 emissions fac comprised of the sum of enteric fermentation (direct methane from burping and farting), an emissions from manure storage. The N2O em factor is the direct N2O emissions from manu management when housed. Emissions from n dropped on he land by livestock when grazing manure collected then spread on the land, and

Reference	EF name	Unit	Year	kg CO2	kg CH4	kg N2O	kg CO2e	Source	Tab	Source link	Location	Method
Fuel Oil	Fuels	WWh (Cross CV)	2017	0.26722	0.00034	0.00064		BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for	Fuels			
Fuel Oil	Fuels	kWh (Gross CV)	2017	0.26733	0.00034	0.00064	0.2683	BEIS, 2018. Greenhouse gas reporting: conversion	Fuels			
Fuel Oil_Sc3	WTT - fuels	kWh (Gross CV)	2017	-	-	-	0.0508	factors 2017. Conversion factors 2017 - Full set (for	WTT - fuels			
Gas Oil	Liquid fuels Gas oil	kWh (Gross CV)	2017	0.253588513	0.000282608	0.0220053	0.2759	BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for	Fuels	https://www.gov.uk/governme	UK	
								BEIS, 2018. Greenhouse gas reporting: conversion		,		
Gas Oil_Sc3	Gas Oil_Sc3	kWh (Gross CV)	2017	-	-	-	0.0589	factors 2017. Conversion factors 2017 - Full set (for	WTT - fuels			
Goats	Goats	head	2017		5.1	0.056	145	UK average livestock emissions factors	Table3.As1; Table3.	http://naei.beis.gov.uk/reports	UK	These are the UK averages based on the latest UK submission to the UNFCCC. CH4 emissions factor is comprised of the sum of enteric fermentation emissions (direct methane from burping and farting), and CH4 emissions from manure storage. The N2O emissions factor is the direct N2O emissions from manure management when housed. Emissions from manure dropped on he land by livestock when grazing, and from manure collected then spread on the land, are excluded.
Horses	Horses	head	2017		19.6	0.616	673	UK average livestock emissions factors	Table3.As1: Table3.	http://naei.beis.gov.uk/reports	J UK	These are the UK averages based on the latest UK submission to the UNFCCC. CH4 emissions factor is comprised of the sum of enteric fermentation emissions (direct methane from burping and farting), and CH4 emissions from manure storage. The N2O emissions factor is the direct N2O emissions from manure management when housed. Emissions from manure dropped on he land by livestock when grazing, and from manure collected then spread on the land, are excluded.
Tiorses	1101363	nedu	2017		13.0	0.010	073	BEIS (Amanda Penistone, Roger Littlewood, Sam	145165.7151, 145165.	Tittp://Tidensels.gov.dig/reports	O.K	manare concerce then spread on the land, are enduded
								Bradley); Scottish Government (Claire McFadden, Andrew Mortimer); Welsh Government (Sam				
Industrial Processes_Chemicals	Chemicals	kWh	2016	-	-	-		Clemmens); Northern Ireland Government (Pamela	DA Pivot Tables wit	http://naei.beis.gov.uk/reports	UK	
								BEIS (Amanda Penistone, Roger Littlewood, Sam				
								Bradley); Scottish Government (Claire McFadden, Andrew Mortimer); Welsh Government (Sam				
Industrial Processes_Iron and steel	Iron and steel	kWh	2016	-	-	-	0.8495	Clemmens); Northern Ireland Government (Pamela	DA Pivot Tables wit	http://naei.beis.gov.uk/reports	UK	
								BEIS (Amanda Penistone, Roger Littlewood, Sam Bradley); Scottish Government (Claire McFadden,				
								Andrew Mortimer); Welsh Government (Sam				
Industrial Processes_Mineral products	Mineral products	kWh	2016	-	-	-	0.0535	Clemmens); Northern Ireland Government (Pamela BEIS (Amanda Penistone, Roger Littlewood, Sam	DA Pivot Tables wit	http://naei.beis.gov.uk/reports	UK	
								Bradley); Scottish Government (Claire McFadden,				
								Andrew Mortimer); Welsh Government (Sam				
Industrial Processes_Non-ferrous metals	Non-ferrous metals	kWh	2016	-	-	-		Clemmens); Northern Ireland Government (Pamela BEIS (Amanda Penistone, Roger Littlewood, Sam	DA Pivot Tables wit	http://naei.beis.gov.uk/reports	UK	
								Bradley); Scottish Government (Claire McFadden,				
Industrial Processes_Other industry	Other industry	kWh	2016			_		Andrew Mortimer); Welsh Government (Sam Clemmens); Northern Ireland Government (Pamela	DA Pivot Tables wit	http://naei.beis.gov.uk/reports	IIIK	
industrial Frocesses_Other industry	Other industry	KVVII	2010			_	0.2034	BEIS, 2018. Greenhouse gas reporting: conversion	DA FIVOL Tables WIL	Tittp://Tidel.beis.gov.dk/Teports	OK	
Landfill gas	Landfill gas	kWh	2017					factors 2017. Conversion factors 2017 - Full set (for BEIS, 2018. Greenhouse gas reporting: conversion	Bioenergy	https://www.gov.uk/governme	UK	
Landfill gas_Sc3	Landfill gas WTT	kWh (Gross CV)	2017					factors 2017. Conversion factors 2017 - Full set (for	WTT - bioenergy	https://www.gov.uk/governme	UK	
			221-	0.2111	0.0001=	0.0001-		BEIS, 2018. Greenhouse gas reporting: conversion				
LPG	LPG	kWh (Gross CV)	2017	0.21419	0.00015	0.00016		factors 2017. Conversion factors 2017 - Full set (for BEIS, 2018. Greenhouse gas reporting: conversion	Fuels	https://www.gov.uk/governme	UK	
LPG_Sc3	LPG WTT	kWh (Gross CV)	2017				0.0270	factors 2017. Conversion factors 2017 - Full set (for	WTT - fuels	https://www.gov.uk/governme	UK	
Marine fuel oil	Marine fuel	kWh (Gross CV)	2017	0.26757	0.00010	0.00198		BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for	Fuels	https://www.gov.uk/governme	UK	
marine ruer oil	arme ruel	KVVII (G1033 CV)		0.20/3/	0.00010	0.00130	0.2037	BEIS, 2018. Greenhouse gas reporting: conversion				
Marine fuel oil Scope 3		kWh (Gross CV)	2017				0.0508	factors 2017. Conversion factors 2017 - Full set (for	WTT - fuels	https://www.gov.uk/governme	UK	

Reference	EF name	Unit	Year kg (CO2 kg CH4	kg N2O kg CO2e	Source	Tab	Source link	Location	Method
						BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for				As defined under the Scope 3 standard, emissions associated with recycling and energy recovery are attributed to the organisation which uses the recycled material or which uses the waste to generate energy. The emissions attributed to the company which generates the waste cover only the collection of waste from their site. The remaining emissions (21.3842kgCO2e per tonne waste) allocated by BEIS are related to transport, and therefore not within the scope of waste reporting here. Additional "minimal preparation emissions" are considered negligible. See BEIS Methodology paper https://assets.publishing.service.gov.uk/government/upl oads/system/uploads/attachment_data/file/726911/201
Municipal Waste_Combustion	Refuse_Municipal Waste_Closed-loop Refuse_Municipal Waste_Combustion electricity, from municipal waste inciner.	tonnes	2017			BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for advanced users) ecoinvent 3.4 (2017); electricity, from municipal waste incineration to generic market for electricity; kWh; GB; EI3.4 cutoff; Ref. Prod: electricity, medium voltage	Waste disposal Waste disposal	https://www.gov.uk/governmeUK		8_methodology_paper_FINAL_v01-00.pdf As defined under the Scope 3 standard, emissions associated with recycling and energy recovery are attributed to the organisation which uses the recycled material or which uses the waste to generate energy. The emissions attributed to the company which generates the waste cover only the collection of waste from their site. The remaining emissions (21.3842kgCO2e per tonne waste) allocated by BEIS are related to transport, and therefore not within the scope of waste reporting here. Additional "minimal preparation emissions" are considered negligible. See BEIS Methodology paper https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/726911/2018_methodology_paper_FINAL_v01-00.pdf
Municipal Waste_Landfill	Refuse_Municipal Waste_Landfill	tonnes	2017		567.1463	BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for advanced users)	Waste disposal	https://www.gov.uk/governmeUK		This factor is the total Landfill emissions remain within the accounting scope of the organisation producing waste materials. Factors for landfill are provided within the waste disposal sheet in the 2018 GHG Conversion Factors. As noted above, these factors are now drawn directly from MELMod, which contains information on landfill waste composition and material properties, with the addition of collection and transport emissions. See BEIS Methodology paper https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/726911/2018_methodology_paper_FINAL_v01-00.pdf As defined under the Scope 3 standard, emissions associated with recycling and energy recovery are attributed to the organisation which uses the recycled
Municipal Waste_Open-loop	Refuse_Municipal Waste_Open-loop	tonnes	2017		_	BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for advanced users)	Waste disposal	https://www.gov.uk/governmeUK		material or which uses the waste to generate energy. The emissions attributed to the company which generates the waste cover only the collection of waste from their site. The remaining emissions (21.3842kgCO2e per tonne waste) allocated by BEIS are related to transport, and therefore not within the scope of waste reporting here. Additional "minimal preparation emissions" are considered negligible. See BEIS Methodology paper https://assets.publishing.service.gov.uk/government/upl oads/system/uploads/attachment_data/file/726911/201 8_methodology_paper_FINAL_v01-00.pdf

_	Reference	EF name	Unit	Year	kg CO2	kg CH4	kg N2O	kg CO2e	Source	Tab	Source link	Location	Method
N	Municipal wastewater NMVOC		m3	2016				0.0000150	European Environment Agency; EMEP (2016) EMEP/EEA air pollutant emission inventory guidebook 2016		http://www.eea.europa.eu/pu	Europe	
									BEIS, 2018. Greenhouse gas reporting: conversion		,,		
_	Municipal waste_wastewater-treatment	Head where data is provided in CO2s	m3	2017	1 0000			0.7080 1.0000	factors 2017. Conversion factors 2017 - Full set (for		https://www.gov.uk/governme		n/a
n	n/a	Used where data is provided in CO2e	+		1.0000			1.0000	BEIS, 2018. Greenhouse gas reporting: conversion	n/a	n/a	n/a	n/a
N	Natural gas	Natural gas	kWh (Gross CV)	2017	0.18381	0.00026	0.00010	0.1842	factors 2017. Conversion factors 2017 - Full set (for	Fuels	https://www.gov.uk/governme	UK	
	-								BEIS, 2018. Greenhouse gas reporting: conversion				
N	Natural gas_Sc3	Natural gas WTT	kWh (Gross CV)	2017				0.0279	factors 2017. Conversion factors 2017 - Full set (for	WTT - fuels	https://www.gov.uk/governme	UK	
N	Non-dairy cattle	Non-dairy cattle	head	2017		63.0	0.583	1,750	UK average livestock emissions factors	Table3.As1; Table3.	http://naei.beis.gov.uk/report:	U K	These are the UK averages based on the latest UK submission to the UNFCCC. CH4 emissions factor is comprised of the sum of enteric fermentation emission (direct methane from burping and farting), and CH4 emissions from manure storage. The N2O emissions factor is the direct N2O emissions from manure management when housed. Emissions from manure dropped on he land by livestock when grazing, and from manure collected then spread on the land, are excluded as defined under the Scope 3 standard, emissions associated with recycling and energy recovery are attributed to the organisation which uses the recycled material or which uses the waste to generate energy. The emissions attributed to the company which generates the waste cover only the collection of waste from their site. The remaining emissions (21.3842kgCO2e per tonne waste) allocated by BEIS arrelated to transport, and therefore not within the scop of waste reporting here. Additional "minimal preparation emissions" are considered negligible. See
C	Organic_Composting	Refuse_Organic: mixed food and garde	n tonnes	2017				-	BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for advanced users)	Waste disposal	https://www.gov.uk/governme	UK	BEIS Methodology paper https://assets.publishing.service.gov.uk/government/ oads/system/uploads/attachment_data/file/726911/ 8_methodology_paper_FINAL_v01-00.pdf
P	Petrol	Petrol (average biofuel blend)	kWh (Gross CV)	2017	0.23229	0.00074	0.00039		BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for	Fuels	https://www.gov.uk/governme	UK	
	Petrol Sc3	Petrol (average biofuel blend) WTT	kWh (Gross CV)	2017				0.0633	BEIS, 2018. Greenhouse gas reporting: conversion factors 2017. Conversion factors 2017 - Full set (for	WTT - fuels	https://www.gov.uk/governme		
													These are the UK averages based on the latest UK submission to the UNFCCC. CH4 emissions factor is comprised of the sum of enteric fermentation emissic (direct methane from burping and farting), and CH4 emissions from manure storage. The N2O emissions factor is the direct N2O emissions from manure management when housed. Emissions from manure dropped on he land by livestock when grazing, and from
P	Poultry	Poultry	head	2017		0.0	0.005		UK average livestock emissions factors	Table3.As1; Table3.	http://naei.beis.gov.uk/reports	UK	manure collected then spread on the land, are exclud
									BEIS (Amanda Penistone, Roger Littlewood, Sam Bradley); Scottish Government (Claire McFadden,				
									Andrew Mortimer); Welsh Government (Sam				
P	Product use_Product use	Product use	kWh	2016		-			Clemmens); Northern Ireland Government (Pamela	DA Pivot Tables wit	http://naei.beis.gov.uk/report	s/reports?secti	on_id=9
													These are the UK averages based on the latest UK submission to the UNFCCC. CH4 emissions factor is comprised of the sum of enteric fermentation emissic (direct methane from burping and farting), and CH4 emissions from manure storage. The N2O emissions factor is the direct N2O emissions from manure management when housed. Emissions from manure dropped on he land by livestock when grazing, and from the submission of the land by livestock when grazing, and from the latest UK are submissions from manure dropped on he land by livestock when grazing, and from the latest UK are submissions from the latest

Reference	EF name	Unit Ye	ear kg CO2	kg CH4	kg N2O	kg CO2e	Source	Tab	Source link	Location	Method
Swine	Swine	head 2	017	6.7	0.175	220	UK average livestock emissions factors	Table3.As1; Table	3. http://naei.beis.gov.uk/report.		These are the UK averages based on the latest UK submission to the UNFCCC. CH4 emissions factor is comprised of the sum of enteric fermentation emissions (direct methane from burping and farting), and CH4 emissions from manure storage. The N2O emissions factor is the direct N2O emissions from manure management when housed. Emissions from manure dropped on he land by livestock when grazing, and from manure collected then spread on the land, are excluded.
END	END	END EN	DEND	END	END	END	END	END	END	END	END



To: Climate and Ecological Emergency Working Group

Date: 25 November 2021

From:

SUBJECT: BRIEFING NOTE ON GOVERNMENT'S 'NET ZERO

STRATEGY: BUILD BACK GREENER'

SUMMARY: This report summarises the Government's recently

published Net Zero Strategy, 'Build Back Greener', for the

Working Group's information.

1. BACKGROUND

1.1 The Government published the 'Net Zero Strategy: Build Back Greener' on 19 October 2021. The strategy sets out the Government's plan to reduce the country's greenhouse gas emissions to net zero by 2050.¹

- 1.2 The strategy has four chapters:
 - Chapter 1: Why Net Zero;
 - Chapter 2: The Journey to Net Zero;
 - Chapter 3: Reducing Emissions across the Economy; and
 - Chapter 4: Supporting the Transition across the Economy.
- 1.3 Technical appendices set out information on carbon budgets and international emissions targets and the science on the changing climate.
- 1.4 The sections below summarise the main discussion points and proposals set out in the document. An executive summary has been extracted from the document and is included as Appendix 1 to this report.
- 1.5 There is a strong focus on technology and innovation throughout the strategy. Financial measures and investment tools are promoted to capture private sector resources for net zero projects. The role of education and skills is also stressed,

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/10 26655/net-zero-strategy.pdf

¹ Available to view at:

- with the need to retrain existing workers and prepare young people for the emerging net zero economy.
- 1.6 The role of local authorities is dealt with in Chapter Four, and paragraphs 5.22 to 5.29 of this report summarise the Government's aims under the heading 'Local climate action'. The Government's focus is on setting clear expectations of how central and local government should interact in the delivery of net zero. The Government will set up a 'Local Net Zero Forum' to bring together national and local government senior officials on a regular basis to discuss policy and delivery options.
- 1.7 The strategy states that the Government will support local energy hubs to help all areas of England to reach net zero, promote best practice, share knowledge and incentivise local net zero projects that can attract commercial investment.

2 CHAPTER ONE: WHY NET ZERO

- 2.1. This chapter sets out the case for action on climate change. It stresses that we are already seeing the impacts of climate change today and that we need to act urgently to reduce global greenhouse gas emissions.
- 2.2. The strategy stresses that decarbonisation measures will not reduce emissions to absolute zero by 2050 and that greenhouse gas removals (GGR), including tree planting, carbon capture and storage technology, will be essential to compensate for remaining emissions from sectors such as industry, agriculture and aviation that are difficult to decarbonise completely.

3. CHAPTER TWO: THE JOURNEY TO NET ZERO

- 3.1. The strategy explores three scenarios for reaching net zero by 2050, modelled in detail in the Technical Annex, although it stresses that these are not 'most likely' or 'preferred' solutions:
 - **Scenario 1: High electrification** widespread electrification with deep decarbonisation of the electricity supply;
 - Scenario 2: High resource using low carbon hydrogen extensively, for decarbonising buildings, power and heavy vehicles, with increased tree planting; and
 - **Scenario 3: High innovation** where innovations enable lower residual emissions and carbon capture technologies are used extensively.
- 3.2. Having considered these options, the strategy puts forward what it terms an 'indicative pathway' to 2037, prioritising emissions reductions where known technologies exist and minimising reliance on the use of greenhouse gas removals. This is designed to drive progress in the short-term, while keeping further options open to stay on track for net zero by 2050. Key features of the indicative pathway for different sectors are summarised below:

- **Power** (11 per cent of current emissions) by 2035 all electricity will come from low carbon sources, while residual emissions will be limited to carbon capture and storage plants, unabated gas and energy from waste.
- Fuel supply and hydrogen (5 per cent of current emissions) emissions savings from the existing fuel supply sector will be offset by emissions from low carbon hydrogen, enabling significant emissions savings through fuel switching across a range of sectors. Hydrogen production will significantly increase in the early 2030s.
- **Industry** (15 per cent of current emissions) industry will be decarbonised by a combination of increased energy efficiencies, fuel switching and carbon capture, starting with major emitters, such as the steel sector.
- **Heat and buildings** (17 per cent of current emissions) emissions will be reduced by improved energy efficiency and the substantial uptake of low carbon heating up to 2035, when all new installations will be net zero compatible.
- **Transport** (32 per cent of current emissions) road transport will be transformed through the uptake of zero emission vehicles, increased cycling, walking and public transport. Energy efficiency improvements and low carbon fuels will decarbonise aviation and shipping.
- Natural resources (20 per cent of current emissions) emissions from natural resources will be reduced through increased afforestation, peat restoration and the cultivation of energy crops and short rotation forestry. Biodegradable waste will be diverted from landfill and improved farming practices will reduce emissions from livestock.
- **Greenhouse gas removals** deployment will be dependent on the development of carbon capture, usage and storage (CCUS) infrastructure.
- 3.3. The strategy builds on the Government's *Ten Point Plan for a Green Industrial Revolution*² noting the ambition to create the conditions for the private sector to invest with confidence, expand new green industries (including hydrogen production and clean aviation) alongside the accelerating decarbonisation of buildings, transport and the electricity and heat networks.
- 3.4. The strategy notes the importance of attracting private-sector finance and highlights additional Government support to: deliver energy efficiency in homes and businesses; invest and strengthen the electricity distribution grid; expand sustainable electricity generation; accelerate hydrogen production; and provide research grants to develop carbon capture technologies.
- 3.5. The strategy puts forward four principles which will underpin the transition to net-zero:

² 'The Ten Point Plan for a Green Industrial Revolution', HM Government (November 2020). See: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/93 6567/10 POINT PLAN BOOKLET.pdf#:~:text=Introduction%205%20The%20Ten%20Point%20Plan%20for%20a,Accelerating%20the%20Shift%20to%20Zero%20Emission%20Vehicles%2014

- Working with the grain of consumer choice;
- The biggest polluters pay most for the transition through fair carbon pricing;
- The most vulnerable are protected through support in the form of energy bill discounts and energy efficiency upgrades; and
- Working with businesses to deliver cost reductions in low-carbon technology, to reduce costs for consumers and to deliver benefits for businesses.

4. CHAPTER THREE: REDUCING EMISSIONS ACROSS THE ECONOMY

- 4.1. By 2035, the strategy states, all electricity will come from low carbon sources, subject to security of supply. This will be achieved by: accelerating the delivery of solar and offshore wind; securing a decision on large-scale nuclear plants within the current parliament; maximising system flexibility; driving the rollout of smart meters; ensuring that consumers pay a fair price for electricity; and ensuring that the planning system supports low carbon energy infrastructure.
- 4.2. Regarding nuclear power, the strategy also states that the Government will launch a new £120 million Future Nuclear Enabling Fund, exploring options for future technologies, including Small Modular Reactors (SMRs). The Government is also progressing plans for an Advanced Modular Reactor (AMR) demonstrator project; there are a number of potential sites, although the Wylfa site in North Wales is the only location named in the strategy.
- 4.3. Even with major improvements in overall energy efficiency, revised market design and increased flexibility in the energy system, the transition to net-zero represents a doubling of electricity demand which requires a four-fold increase in low carbon electricity generation and significant expansion of distribution networks.
- 4.4. The strategy highlights the need for an energy system transformation to a smart and digital system alongside a new market design that supports and rewards flexibility. The planning system must also support the deployment of low carbon energy infrastructure; this will be achieved by updating the energy National Policy Statements and streamlining the consenting process.
- 4.5. The strategy notes that new low carbon generation assets will require investment of £280-£400 billion and an additional £20-£30 billion investment by 2037 in the national and local distribution systems, alongside a growth in industrial capabilities and skills.
- 4.6. The strategy supports the deployment of unsubsidised rooftop solar and local battery storage to complement the market-based approach of ensuring exporters receive a fair price through the Smart Export Guarantee.

Heat and buildings

Electricity

- 4.7. The strategy states that the transition to low carbon buildings will be made affordable and achievable by phasing out the installation of new and replacement natural gas boilers by 2035 and ensuring that all heating systems used in 2050 are compatible with net zero.
- 4.8. The market for heat pumps will be expanded to support 600,000 installations a year by 2028, working with industry to reduce costs by at least 25 to 50 per cent by 2025 and to parity with gas boilers by 2030 at the latest. Households will be supported with a new £450 million Boiler Upgrade Scheme providing £5,000 capital grants and a new incentive for heating system manufacturers, while investing £60 million in heat pump innovation.
- 4.9. A range of interventions are set out to help households and businesses reduce their energy bills while making buildings warmer, including:
 - Upgrading fuel-poor homes to EPC Band C by 2030 where reasonably practicable and providing additional funding to the Home Upgrade Grant and the Social Housing Decarbonisation Fund – investing £1.75 billion;
 - Consulting on phasing in higher minimum performance standards to ensure all homes meet EPC Band C by 2035, where cost-effective, practical and affordable;
 - Setting long-term regulatory standards to upgrade privately-rented homes to EPC C by 2028 and considering setting a long-term regulatory standard for Social Housing, subject to consultation;
 - Setting a minimum energy efficiency standard of EPC Band B by 2030 for privately-rented commercial buildings;
 - Reducing the energy consumption in commercial and industrial buildings by 2030, using measures including regulations and a performance-based measurement scheme:
 - Investing a further £1.425 billion in the Public Sector Decarbonisation Scheme, with the aim of reducing direct emissions from public sector buildings by 75 per cent by 2037;
 - Establishing large-scale trials of hydrogen for heating to inform a decision on the role of hydrogen in decarbonising heating in 2026. The Government will consult on the case for enabling or requiring hydrogen-ready boilers and broader heating system efficiencies;
 - Continuing to grow and decarbonise the UK Heat Network market through the £338 million Heat Network Transformation Programme of which at least £270 million will go towards the Green Heat Network Fund, introducing sector regulation and new heat network zones by 2025; and
 - Launching a new world-class policy framework for energy-related products to ensure products use less energy.
- 4.10. There are four enabling factors that the Government will address including: providing advice and guidance tailored to local circumstances; green finance

innovation; rebalancing energy prices to equalise zero-carbon energy prices with fossil fuel prices; and developing the skilled workforce.

Industrial decarbonisation

- 4.11. The rate of industrial decarbonisation has slowed in recent years and the strategy recognises the importance of: carbon capture, utilisation and storage (CCUS); the need for further reductions of embedded carbon in the supply chain; energy efficiency savings; realising the demand side measures; and the impact of the anticipated increase in carbon pricing.
- 4.12. The need for short-to-medium term capital funding and revenue support to industry is recognised, with the aim of stimulating long-term private sector investment.
- 4.13. A programme of industrial decarbonisation is planned through the mid-2020s, recognising the differences between sectors and that key investment decisions are affected by the degrees of certainty on low carbon resources and zero carbon fuel types on production methods.

Hydrogen

- 4.14. The strategy highlights the Government's commitment to further research and investment to reduce risk for the transition to a hydrogen economy for: haulage; electricity generation (for example fuel cells); long-term power storage; and the development of sustainable aviation fuel (SAF).³
- 4.15. The strategy acknowledges that the future demand for natural gas will decline and that the gas system will need to change to meet the net zero targets. In 2022 there will be a call for evidence and research undertaken into the introduction of blended hydrogen into the gas grid to support initial steps to decarbonise heating.

Transport

- 4.16. The Government will accelerate the development of low carbon transport fuels, including biomass, and the development of UK plants to produce advanced fuels, with grant funding through schemes including the Future Fuels for Flight and Freight Competition (F4C) and Advanced Biofuels Demonstration Competition (ABDC).
- 4.17. The sale of new petrol and diesel cars and vans will be ended by 2030. All new cars and vans must be zero emission at the tailpipe by 2035. Subject to consultation, the sale of all new non-zero emission vehicles, including buses and HGVs, will ended by 2040. The taxation of motoring will keep pace with the change to electric vehicles.

³ See also: 'UK Hydrogen Strategy', HM Government (August 2021), available to view at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/10 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/10 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/10

- 4.18. Building on the £1.9 billion from the 2020 Spending Review, the Government has committed an additional £620 million to support the transition to electric vehicles. The funding will support the rollout of charging infrastructure, with a particular focus on local on-street residential charging, and targeted plug-in vehicle grants.
- 4.19. The strategy states that the Government will support decarbonisation by investing more than £12 billion in local transport systems over the current parliament. This will include investment of £2 billion in cycling and walking, with the aim that half of all journeys in towns and cities will be cycled or walked by 2030, with freight encouraged to shift to rail, cargo bikes and inland waterways. The Transport Decarbonisation Plan⁴ announced the creation of at least one 'zero emission transport city'.
- 4.20. Investment will also be made in the *National Bus Strategy*⁵, a net-zero UK marine industry and phasing out the sale of non-zero-emission domestic shipping vessels, working with the UK Shipping Office for Reducing Emissions and investing in zero-emission flights and sustainable aviation fuels (SAF).

Natural resources, waste and fluorinated gases

- 4.21. The strategy anticipates that 75 per cent of farmers in England will be engaged in low carbon practices by 2030. The Government will introduce farming schemes, and increase investment in research and development, to help deliver net zero in agriculture and horticulture.
- 4.22. The commitment is also made to treble woodland creation rates by the end of the current Parliament, reflecting England's contribution to meeting the UK's overall target of increasing tree planting rates to 30,000 hectares per year and maintain new planting at least at this level from 2025 onwards.
- 4.23. An increase of £124 million is pledged to the existing £640 million Nature for Climate Fund targeted on peat restoration and woodland creation and management. Private investment will be supported in tree planting through the Woodland Carbon Code and the Government's Woodland Carbon Guarantee.
- 4.24. The Government will explore options for the near elimination of biodegradable municipal waste to landfill from 2028, with £295 million of capital funding which will allow local authorities in England to prepare to implement free separate food waste collections for all households from 2025.

⁴ 'Decarbonising Transport: A Better, Greener Britain', Department for Transport (2021), available to view at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/10 09448/decarbonising-transport-a-better-greener-britain.pdf

⁵ 'Bus Back Better: National Bus Strategy for England', Department for Transport (2021), available to view at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/98 0227/DfT-Bus-Back-Better-national-bus-strategy-for-England.pdf

4.25. A commitment is also made to complete a review of the fluorinated gas regulation and assess whether the Government can go further than the current requirements and international commitments, looking at what additional reductions in fluorinated gas use can be made to help the UK meet net zero by 2050.

Greenhouse gas removal

4.26. The Government's ambition is to remove, by engineered means, 5 million tonnes of carbon dioxide a year by 2030 and deliver £100 million of innovation funding into Direct Air Carbon Capture and Storage and other greenhouse gas removal systems. The market and regulatory framework will be explored and developed.

5. CHAPTER FOUR: SUPPORTING THE TRANSITION ACROSS THE ECONOMY

- 5.1. This chapter highlights key commitments to innovation in the new green sectors including:
 - The hydrogen economy with carbon capture and storage;
 - Green finance;
 - Creating the skilled workforce to deliver net zero;
 - Developing the supply chains to put the UK in the forefront of global markets;
 and
 - Embedding net-zero in Government through leadership, public procurement, oversight of key projects and decarbonising the public sector.

Innovation for net zero

- 5.2. The commitment is made to increase Government investment in research and development to £22 billion. The Government will publish the *Net Zero Research & Innovation Framework* to establish the challenges for the next five to ten years and deliver a programme of innovation to enable decarbonisation. The UK will also take a leadership role in *Mission Innovation 2.0*, a global initiative to accelerate clean energy innovation, with the goal of becoming a global leader in decarbonisation technologies, processes, services and business models.
- 5.3. Investment in research will be supported by a cross-government portfolio of netzero innovation support to accelerate commercialisation, prioritising areas where there is a strong case for Government investment alongside leveraging funds from private sector. The Industrial Strategy Challenge Fund (ISCF), delivered by UK Research and Innovation (UKRI), has invested in eight challenges (including transforming food production and the Faraday Battery Challenge), which will be refreshed by the *Innovation Missions* programme.
- 5.4. The strategy states that there will be continued investment in research and development, including the creation of a new institution, the Advanced

- Research and Innovation Agency (ARIA), specifically to fund high-risk, high-reward research.
- 5.5. The strategy notes the importance of market design, regulation and policy to incentivise the development and deployment of new technologies, particularly where competition and Government support has reduced the capital costs and created the right conditions and confidence. The *Net Zero Research & Innovation Framework*⁶ sets out the structure for this approach.
- 5.6. The Government is engaging with industry to address the barriers to long-term investment and unlock the £2.2 trillion held in UK Pension Funds, alongside targeting the fiscal incentives for research and development and early-stage investment.
- 5.7. Non-financial support highlighted in the strategy includes international collaboration with *Horizon Europe* and with *Mission Innovation* to deliver clean energy innovation and low cost, low carbon hydrogen and, in the domestic market, the UK Research and Innovation (UKRI) Knowledge Transfer Network. Other support includes:
 - UKRI's digital platform pilot programme, that brings together investors and with net zero businesses;
 - Innovate UK's On-line Innovation Hub, to navigate the Government's funding offer; and
 - Innovate UK's EDGE service to enhance investment readiness.

Green investment

- 5.8. Key commitments for green investment include:
 - Using the UK Infrastructure Bank (UKIB) to bring in private finance to kickstart large-scale infrastructure projects, regional growth, sector maturity and scale particularly by supporting projects led by local authorities;
 - Issuing further Green Gilts;
 - The Government-owned British Business Bank (BBB) has been charged with economic development to drive sustainability and incorporate net-zero across all activity; and
 - Introducing new Sustainability Disclosure Requirements through *Greening Finance: A Roadmap to Sustainable Investing* and a second iteration of the *Green Finance Strategy* to be published in 2022 that will outline the pathway to net zero.
- 5.9. The Government recognises that each sector will require strategic use of public funds, long-term policy frameworks and the leverage of private investment

⁶ 'UK Net Zero Research and Innovation Framework', HM Government (October 2021), available to view at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/10 30656/uk-net-zero-research-innovation-framework.pdf

- tailored to meet the technology and sector challenges and the funding life cycle (from early stage through to commercialised mass market).
- 5.10. Public funds will provide support for research and development, later stage investment from the Clean Growth Venture Capital Fund (VC) or support from the BBB, with UK Export Finance and the UKIB providing funding to bring forward private sector investments using models similar to that which has brought forward off-shore wind. The Industrial Decarbonisation and Hydrogen Revenue Support (IDHRS) scheme will unlock private finance for industrial carbon capture and hydrogen production projects by providing long-term certainty and reducing risks.
- 5.11. The strategy states that the new UKIB will be pivotal in accessing private sector finance to kick-start regional infrastructure projects as a cornerstone investor or guarantor to tackle climate change and support regional economic growth. The UKIB will also catalyse the role of local Government in the transition, by financing strategic infrastructure projects led by local authorities and providing investment advice and expertise.

Green jobs, skills and industries

- 5.12. The strategy commits to creating and supporting a skilled workforce to deliver net zero and put UK supply chains at the forefront of global markets. The Government will:
 - Publish sector and supply chain development plans;
 - Support the development of a skilled, competitive supply chain for key green industries;
 - Reform the skills system, including introducing legislation, to incentivise training providers, employers and learners;
 - Deliver a Lifetime Skills Guarantee and grow post-16 training programmes aligned to the needs of green employers; and
 - Introduce a sustainability and climate change strategy for education and children's services to equip children and young people to contribute to the green economy.
- 5.13. The strategy recognises the need for engineers, digital and automation experts and the need to transition to a net zero economy and support the expected 440,000 new jobs across net zero industries by 2030. The support includes:
 - Supporting workers in high carbon economy jobs to transition into green jobs;
 - Working with businesses to ensure people from all backgrounds can access the opportunities;
 - Providing children and young people with high quality education and training to work in a green career, improving teacher training and development in STEM (science, technology, engineering and mathematics) and key subjects; and

- Expanding post-16 training programmes aligned to green employer needs.
- 5.14. Central to the reforms are the plans set out in the *Skills for Jobs* White Paper⁷, where employers set out their skills needs to drive provision at local colleges through the local skills development plan, and the Development Fund that undertook 18 pilots in July 2021.
- 5.15. Government will increase support for workers in high-carbon sectors to transition to green jobs, work with businesses to support inclusivity and access to a green career and build the foundations for future green careers. The Government is also working with the Green Apprenticeships Advisory Panel (GAAP) to align apprenticeships to net zero objectives and create the required green standards.
- 5.16. The Government has also published the *Carbon Capture, Usage and Storage* (CCUS) Supply Chain Roadmap⁸ and will publish a hydrogen sector development plan in 2022. The strategy recognises that the impact of the transition will not be evenly spread across the UK, reflecting the areas where new industries will flourish and old industries contract.

Embedding net zero in Government

- 5.17. The commitments in this section include, through the *Environment Bill*, embedding environmental issues in national policy-making through the consideration of five environmental principles:
 - Protection policy-makers will embed environmental protection policies in other policy fields;
 - Prevention preventing, reducing or mitigating environmental harm;
 - Rectification damage to the environment to be tackled at source;
 - Polluter pays responsibility for mitigation or compensation for pollution;
 and
 - Precautionary the need for scientific certainty shall not be used to postpone cost-effective measures to prevent environmental degradation.
- 5.18. The Government will also ensure that decisions on spending are informed by their impact on net zero, positive measures will reduce carbon emissions from procurement and the Government will continue to fund the £475 million a year Public Sector Decarbonisation Scheme.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/95 7810/Skills for jobs lifelong learning for opportunity and growth print version .pdf

⁷ 'Skills for Jobs: Lifelong Learning for Opportunity and Growth', Department for Education (January 2021), available to view at:

^{8 &#}x27;CCUS Supply Chains: a roadmap to maximize the UK's potential', Department for Business, Energy and Industrial Strategy (May 2021), available to view at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/984308/ccus-supply-chains-roadmap.pdf

- 5.19. The strategy recognises the need for a consistent approach across the UK (and with the devolved administrations) and the HM Treasury Green Book has a major priority to ensure spending decisions contribute to net zero. The strategy notes that the industry regulators have a key role to play and have legal obligations in setting strategic priorities to achieve net zero.
- 5.20. Public sector procurement will include the Social Value Model and a requirement for larger public sector tenders to require the commitment of the tenderer to achieve net zero by 2050 and detail their emissions in the Carbon Reduction Plan. Policy will be brought forward to allow procurers to balance carbon and cost.
- 5.21. The strategy promotes increased transparency in reporting and outcomes against the quantified targets in power, industry, fuel supply and hydrogen, heat and buildings, transport, natural resources, waste and fluorinated gases and Greenhouse Gas Removal.

Local climate action

- 5.22. In supporting decarbonisation and regeneration in local areas and in communities the key commitments of the strategy are to:
 - Set clear expectations on how local and central Government interact in the delivery of net zero;
 - Establish a Local Net Zero Forum to bring together national and local government officials on a regular basis to discuss policy and delivery options for net zero; and
 - Continue the Local Net Zero Programme including:
 - Supporting the Local Net Zero Hubs (formerly local energy hubs) and Local Enterprise Partnerships (LEP);
 - Promoting best practice and supporting local authorities to develop net zero projects that can attract commercial interest; and
 - Increase knowledge-sharing and sharing successful net zero solutions.
- 5.23. Local authorities are recognised as having a key role to play (the strategy claims that 82 per cent of all UK emissions are within the scope of influence of local authorities). The strategy considers that, although a new general statutory requirement is not required, there is a real need to support local leaders by clarifying national expectations and enhancing the capacity and capabilities of local areas to accelerate and deliver net zero. Taking a place-based approach to net zero, the strategy states, will also ensure that the opportunities from the transition support the Government's levelling up agenda.
- 5.24. The strategy recognises that coastal communities face significant challenges as they may be vulnerable to more frequent flooding, rises in sea level and accelerated coastal erosion; however, they may be able to utilise tidal energy or industrial scale water source heat pump technologies.

- 5.25. The strategy pledges that local leaders and the community will be empowered to deliver emissions savings, including continuing to provide support for public and private investment opportunities. To support this the Government will:
 - Set clearer expectations for local places;
 - Provide resources to deliver stronger contributions to net zero targets with dedicated funding streams; and
 - Build capacity and capability and support areas to accelerate delivery.
- 5.26. The Department for Business, Energy and Industrial Strategy (BEIS) will take overall responsibility for improving coordination with local government. BEIS will chair the new Local Net Zero Forum to support the establishment of clearer delivery roles for local government and provide a single engagement route to central Government.
- 5.27. The strategy notes that funding for local climate action is sourced from a combination of the Local Government Finance Settlement, Government grants and support schemes, borrowing and private finance some 22 dedicated grant schemes for net zero work from central to local government. Additional investment advice and lending support for strategic and high-value, local authority-led projects is available from the UK Investment Bank (UKIB).
- 5.28. The strategy notes the importance of local authorities and local communities working in partnership to deliver local energy solutions, decarbonise heat and power in buildings, decarbonise local transport and deliver local green infrastructure and Local Nature Recovery strategies which the Government will support through the launch of the *National Framework of Green Infrastructure Standards* in 2022.
- 5.29. The new Community Renewal Fund, the Rural Community Energy Fund (RCEF), the Levelling-Up Fund and the Towns Fund enable local areas to tackle net zero goals tailored to their areas noting the importance of development stage grants to projects focusing on technologies including solar, wind, low carbon heating and electric vehicle charging. Community energy schemes have predominately been financed commercially through share offers and borrowing against future revenues.

Empowering the public and business to make green choices

- 5.30. The strategy's aim is to make it significantly easier, clearer and cheaper to choose green options. The Government intends to work within the grain of existing behaviour and trends by working in partnership with local authorities, voluntary organisations, social enterprise regulators and businesses to encourage the behaviours that impact on net zero, including:
 - Adopting new low carbon technologies;
 - Using energy more efficiently; and
 - Making everyday business and consumer choices that are green.
- 5.31. The six principles underpinning the green choices are to:

- Minimise the 'ask', by sending clear regulatory signals;
- Make the green choice easier by addressing major barriers and reducing the impact on people's lives;
- Make the green choice affordable and mobilise savings into green Local Climate Bonds;
- Empower people and businesses to make their own choices, with clear information coupled with tailored impartial advice (e.g. Simple Energy Advice service) and operational data (e.g. in-home displays for smart meters);
- Motivate and build public acceptance for major change, recognising that it is vital to listen to public views on how to reach net zero and shape policies and actions accordingly, including avoiding negative impacts on disadvantaged groups; and
- Present a clear vision on how to get to net zero and the role of people and business.

APPENDIX 1: H.M. GOVERNMENT, 'NET ZERO STRATEGY: BUILD BACK GREENER' – EXECUTIVE SUMMARY



The policies and proposals for power in the Net Zero Strategy will ...

Support for up to 59,000 jobs in 2024 and up to 120,000 jobs in 2030

Start to mobilise additional public and private investment of £150-270 billion, in line with our 2037 delivery pathway

Fully decarbonise our power system by 2035

The net zero economy will be underpinned by cheap clean electricity, made in Britain. A clean, reliable power system is the foundation of a productive net zero economy as we electrify other sectors – so we will fully decarbonise our power system by 2035, subject to security of supply. Our power system will consist of abundant, cheap British

renewables, cutting edge new nuclear power stations, and be underpinned by flexibility including storage, gas with CCS, hydrogen and ensure reliable power is always there at the flick of a switch. The transformation of the power sector will bring high skill, high wage job opportunities right across the UK.

- By 2035 the UK will be powered entirely by clean electricity, subject to security of supply.
- Secure a final investment decision on a large-scale nuclear plant by the end of this Parliament, and launch a new £120 million Future Nuclear Enabling Fund, retaining options for future nuclear technologies, including Small Modular Reactors, with a number of potential sites including Wylfa in North Wales.
- 40GW of offshore wind by 2030, with more onshore, solar, and other renewables

 with a new approach to onshore and offshore electricity networks to incorporate
 new low carbon generation and demand in the most efficient manner that takes
 account of the needs of local communities like those in East Anglia.
- Moving towards 1GW of floating offshore wind by 2030 to put us at the forefront of this new technology that can utilise our North and Celtic Seas – backed by £380 million overall funding for our world-leading offshore wind sector.
- Deployment of new flexibility measures including storage to help smooth out future price spikes.



The policies and proposals for fuel supply and hydrogen in the Net Zero Strategy will...

Support up to 10,000 jobs in 2030 in fuel supply

Start to mobilise additional public and private investment of £20-30 billion, in line with our 2037 delivery pathway

Deliver 5 GW of hydrogen production capacity by 2030, whilst halving emissions from oil and gas

While electricity will be the primary source of energy, we cannot rely on it alone. Many sectors require low carbon energy, including those where electrification is not a viable option, making the supply of cleaner fuels essential to achieving net zero. Building on commitments in the *North Sea Transition Deal*, we will significantly reduce emissions from traditional oil and gas fuel supplies,

whilst scaling-up the production of low carbon alternatives such as hydrogen and biofuels. Current gas prices spikes underline the need to get off hydrocarbons as quickly as possible, but we will manage the transition in a way that protects jobs and investment, uses existing infrastructure, maintains security of supply, and minimises environmental impacts.

- We have set up the Industrial Decarbonisation and Hydrogen Revenue Support (IDHRS) scheme to fund our new hydrogen and industrial carbon capture business models. We will be providing up to £140 million to establish the scheme, including up to £100 million to award contracts of up to 250MW of electrolytic hydrogen production capacity in 2023 with further allocation in 2024.
- Introducing a new climate compatibility checkpoint for future licensing on the UK Continental Shelf and regulating the oil and gas sector in a way that minimises greenhouse gases through the revised Oil and Gas Authority strategy.



The policies and proposals for industry in the Net Zero Strategy will...

Support up to 54,000 jobs in 2030 in industry

Start to mobilise additional public and private investment of at least £14 billion in industry, in line with our 2037 delivery pathway

Deliver four carbon capture usage and storage (CCUS) clusters, capturing 20-30 MtCO2 across the economy, including 6 MtCO₂ of industrial emissions, per year by 2030

We will decarbonise industry in line with our net zero goals whilst simultaneously transforming our industrial heartlands by attracting inward investment, future-proofing businesses, and securing high wage, high skill jobs. We will do this by supporting industry to switch to cleaner fuels; helping them improve their resource and energy efficiency, and through fair carbon pricing to drive deep decarbonisation of industry. Growing new industries in low carbon hydrogen alongside

CCUS and renewable energy will put our industrial 'SuperPlaces' at the forefront of technological development – accelerating decarbonisation in 'clusters', which account for approximately half of the UK's industrial emissions. These clusters could have the opportunity to access support under government's CCUS programme, which includes the £1 billion CCS Infrastructure Fund and revenue support mechanisms.

- Following the Phase 1 of the Cluster Sequencing process, the Hynet and East Coast Clusters, will act as economic hubs for green jobs in line with our ambition to capture 20-30 MtCO2 per year by 2030. This puts Teesside and the Humber, Merseyside and North Wales, along with the North East of Scotland as a reserve cluster, among the potential early SuperPlaces which will be transformed over the next decade.
- Future-proofing industrial sectors, and the communities they employ through the £315 million Industrial Energy Transformation Fund (IETF), (£289 million for England, Wales and Northern Ireland, £26 million for Scotland).
- Incentivise cost-effective abatement in industry at the pace and scale required to deliver net zero, through the UK ETS by consulting on a net zero consistent UK ETS cap (in partnership with the Devolved Administrations).



The policies and proposals for heat and buildings in the Net Zero Strategy will...

Support up to 100,000 jobs n the middle of the 2020s and up to 175,000 in 2030

Start to mobilise additional public and private investment of approximately £200 billion, in line with our 2037 delivery pathway

Set a path to all new heating appliances in homes and workplaces from 2035 being low carbon

Reaching net zero means tackling all sources of emissions – and heating for homes and workspaces makes up almost a third of all UK carbon emissions. So we will improve the energy efficiency of housing and nondomestic properties across the UK, ensuring they require less energy to heat, making them cheaper to run and more comfortable to live and work in while reducing our dependence on imported energy. We are setting the ambition that, by 2035, once costs have come down, all new heating appliances installed in homes and workplaces will be low-carbon technologies, like electric heat pumps or hydrogen boilers. We will take a decision in 2026 on the role of hydrogen heating. Crucially, this will be a gradual transition that

works with the grain of consumer choice. But the costs of low carbon technology can fall quickly - working with industry, we expect a heat pump to be as cheap to buy and run as a gas boiler this decade. We want to reduce electricity costs so when the current gas spike subsides we will look at options to shift or rebalance energy levies (such as RO and FiTs) and obligations (such ECO) away from electricity to gas over this decade. This will include looking at options to expand carbon pricing and remove costs from electricity bills while ensuring that we continue to limit any impact on bills overall. We know that in the long run, green products are more efficient and cheaper, and we are putting fairness and affordability at the heart of our approach.

- An ambition that by 2035, no new gas boilers will be sold.
- A new £450 million three-year Boiler Upgrade Scheme will see households offered grants of up to £5,000 for low-carbon heating systems so they cost the same as a gas boiler now.
- A new £60 million Heat Pump Ready programme that will provide funding for pioneering heat pump technologies and will support the government's target of 600,000 installations a year by 2028.
- Delivering cheaper electricity by rebalancing of policy costs from electricity bills to gas bills this decade.

- Further funding for the Social Housing Decarbonisation Scheme and Home Upgrade Grants, investing £1.75 billion. Additional funding of £1.425 billion for Public Sector Decarbonisation, with the aim of reducing emissions from public sector buildings by 75% by 2037.
- Launching a Hydrogen Village trial to inform a decision on the role of hydrogen in the heating system by 2026.



The policies and proposals for transport in the Net Zero Strategy will ...

Support for up to 22,000 jobs in 2024 and up to 74,000 jobs in 2030

Start to mobilise additional public and private investment of around £220 billion, in line with our 2037 delivery pathway

Remove all road emissions at the tailpipe and kickstart zero emissions international travel

We will transform our cities and towns with greener, faster and more efficient transport. Our streets will be cleaner and people healthier from breathing cleaner air, walking and cycling more. Our zero emissions vehicle (ZEV) mandate will guarantee greater number of zero emission vehicles on our roads, unlocking the transformation of our road transport. Additional funding will support our automotive sector to stay at the cutting edge and capture jobs of the future. Significant new investment in vehicle grants and electric vehicle infrastructure will ensure that we see even more green vans delivering our goods and big improvements in local public

chargepoint provision. We will increase the share of journeys taken by public transport, cycling and walking, electrifying more railway lines, investing £3 billion to transform bus services and £2 billion for cycling. We will build on our strong maritime heritage and the success of the Clean Maritime Demonstration Competition to deliver a more ambitious multi-year programme for the sector. Setting out an ambitious position on SAF will set us on a path to decarbonise this challenging sector. Accelerating the decarbonisation of transport will save lives and significantly reduce noise, making our urban centres more enjoyable places to live.

- A zero emission vehicle mandate to improve consumer choice and ensure we
 maximise the economic benefit from this transition by giving a clear signal to
 investors. This will deliver on our 2030 commitment to end the sale of new
 petrol and diesel cars, and 2035 commitment that all cars must be fully zero
 emissions capable.
- Further funding of £620 million for zero emission vehicle grants and EV Infrastructure, including further funding for local EV Infrastructure, with a focus on local on street residential charging.
- Allocating a further £350 million of our up to £1 billion Automotive Transformation Fund (ATF) to support the electrification of UK vehicles and their supply chains.
- Building on the success of our £20 million zero emission road freight trials, we will
 expand these to trial three zero emission HGV technologies at scale on UK roads to
 determine their operational benefits, as well as their infrastructure needs.

- £2 billion investment which will help enable half of journeys in towns and cities to be cycled or walked by 2030.
- £3 billion to create integrated bus networks, more frequent services and bus lanes to speed journeys.
- Transformation of local transport systems, with 4,000 new zero emission buses and the infrastructure to support them, and a net zero rail network by 2050, with the ambition to remove all diesel-only trains by 2040.
- Building on the success of the Clean Maritime Demonstration Competition, we will be extending this to a multi-year programme, delivering real-world demonstrations and technology trials of clean maritime vessels and infrastructure to decarbonise the maritime sector. This is part of our commitment to a UK Shipping Office for Reducing Emissions.
- Significant investment in rail electrification and city rapid transit systems.
- Aim to become a world-leader in zero emission flight and kick-starting the commercialisation of the UK sustainable aviation fuel so people can fly, and connect without guilt. Our ambition is to enable delivery of 10% SAF by 2030 and will be supporting UK industry with £180 million funding for the development of SAF plants.



The policies and proposals for natural resources, waste, and fluorinated gases in the Net Zero Strategy will...

New employment opportunities across the UK. Afforestation in England could support up to 1,900 jobs in 2024 and 2,000 jobs in 2030

Start to mobilise additional public and private investment of approximately £30 billion, in line with our 2037 delivery pathway

Treble woodland creation rates in England, contributing to the UK's overall target of increasing planting rates to 30,000 hectares per year by the end of this Parliament

Halting climate change and protecting the natural world are two sides of the same coin, so we will restore our countryside to reduce emissions, sequester carbon and build our resilience to climate change at the same time. We will support farmers to implement a range of low carbon farming practices that can help increase productivity and enable more efficient use of land, such as through agroforestry. We will increase tree planting to sequester carbon, and protect and restore our peatlands. As part of reforms to the resources and waste system, we also will move towards a circular economy, improve resource efficiency, and achieve near elimination of biodegradable waste to landfill. We will continue to phase down the use of F-gases in line with domestic regulations and international commitments.

- Supporting low-carbon farming and agricultural innovation through the Farming Investment Fund and the Farming Innovation Programme to invest in equipment, technology, and infrastructure to improve profitability, benefit the environment and support emissions reductions.
- We will boost the existing £640 million Nature for Climate Fund with a further £124 million of new money, ensuring total spend of more than £750 million by 2025 on peat restoration, woodland creation and management above and beyond what was promised in the manifesto. This will enable more opportunities for farmers and landowners to support Net Zero through land use change.
- Restoring approximately 280,000 hectares of peat in England by 2050 and trebling woodland creation rates in England, contributing to the UK's overall target of increasing planting rates to 30,000 hectares per year by the end of the Parliament.
- £75 million on net zero related R&D across Natural Resources, Waste & F-gases, to inform our pathway to 2037.

• To support our commitment to explore options for the near elimination of biodegradable municipal waste to landfill from 2028, we are bringing forward £295 million of capital funding which will allow local authorities in England to prepare to implement free separate food waste collections for all households from 2025.



The policies and proposals for GGRs in the Net Zero Strategy will provide...

New, highly skilled, jobs in our industrial heartlands

Start to mobilise additional public and private investment of around £20 billion, in line with our 2037 delivery pathway

An ambition to deploy at least 5 MtCO₂/year of engineered GGRs by 2030.

Our most important step to achieving net zero is to take ambitious decarbonisation measures across society. However, greenhouse gas removals (GGRs) will also play a critical role in balancing residual emissions from the hardest to decarbonise sectors such as aviation, agriculture, and heavy industry. Our innovation-led approach position the UK as a global leader in this rapidly developing sector.

Government intervention in the short term will support early commercial deployment of GGRs, with an ambition to move towards a market-based framework for GGRs. This will support our delivery of net zero emissions and position us to export our skills and expertise, capitalising on economic opportunities for the UK and supporting the global shift to net zero.

- Delivering £100 million of investment in GGR innovation could enable further deployment of GGRs, which in turn will leverage private investment and demand for transferrable engineering expertise from the UK's oil and gas sector.
- Explore options for regulatory oversight to provide robust monitoring, reporting and verification (MRV) of GGRs, following the recommendations of the BEIS-led MRV Task & Finish Group involving experts from industry and academia.



Supporting the transition with cross-cutting action

We will maximise the opportunities of this transition, and make sure we are geared up to deliver these changes by also taking cross-cutting action. As the host nation for COP26 in Glasgow this year, we will use our global platform to continue to urge countries to set targets to get to net zero by 2050, and more ambitious 2030 emissions reduction targets to get us there. We will back innovation and our world-leading green finance sector. We will support each stage of the innovation chain to drive down costs and bring through key technologies and ideas to meet net zero. We will work with the private sector to leverage private investment to provide the finance needed, while providing the conditions for green finance to flourish.

We will put consumers at the heart of the transition and our goal is to make choosing green options significantly easier, cheaper, and more rewarding. We will back training and skills, supporting workers to retrain and upskill and build low carbon industries with strong UK supply chains that are resilient to changes. We will also take a place-based approach to net zero, working with local government to ensure that all local areas have the capability and capacity for net zero delivery as we level up the country. And Government is leading the way - embedding climate into our policy and spending decisions, increasing the transparency of our progress on climate goals, and providing funding to drive ambitious emissions reductions in schools and hospitals.

- Deliver at least £1.5 billion of funding to support net zero innovation projects.
- Use the UK Infrastructure Bank (UKIB) to crowd in private finance, support more than £40 billion of investment, and pull through low carbon technologies and sectors to maturity and scale.
- Introduce a new Sustainability Disclosures Regime, including mandatory climate related financial disclosures and a UK green taxonomy.
- Reform the skills system so that training providers, employers and learners are incentivised and equipped to play their part in delivering the transition to net zero.
- Publish an annual progress update against a set of key indicators for achieving our climate goals.

Carbon Action Plan Progress

(actions impacted by office closure marked with asterisk)

Stage	Action	Progress
Stage 1	Carbon literacy / climate change training for staff and Member	Climate Change training started beginning of May with new elearning package. Plans for further training being finalized – first officer session to take place 9th June
	Climate Change Champions staff scheme	This has been raised at staff briefings. Will launch further communications via weekly staff briefing. Have emailed OD. Aim to have list of people by end of May and to have met by July Climate Change page on staff intranet in place.
	*Measure waste produced by the Council operations	Had started to consider waste pre pandemic e.g. target reduction of contamination, as reducing general waste will reduce cost if less collections are needed. Cost obtained for changing large bins (typically in staff areas i.e. kitchens) Changing a large bin to single type works out £32.87 per bin. Changing a bin to split cans/plastic would be £67.90. BUT could be £49.91 if we had a single aperture with a twin label. Total for changes to large bins potentially £328.7, £679 or £499.
	*End single-use plastic	Need to assess full extent of use, i.e. define single use plastic. When officers are back in the office we can better understand the plastic use and take action e.g. encouraging better use of office consumables. Undertake review from June to September. Procurement specialist already ordering bulk refills of cleaning products to cut down use of bottles. The intention was to use glasses in meeting rooms and china cups for vending machines. Also intention to use fabric washcloths and tea towels. Currently seeking advice from post-pandemic hygiene point of

	view, are there any issues with those actions.
*Reduce printing and paper waste	Over 6000 council tax bills sent by email. 80% of revenues and benefits, e.g. council tax and housing benefit done online. Continuing to put more services online and understand which are the main areas to focus on. Ongoing work on reducing printing even further e.g. Citizen Online. Number of photocopiers in the Civic Centre will be reduced by time of return. Contract currently being negotiated.
*Expand the energy awareness campaign	This can be included alongside a water usage awareness campaign. Consider setting a target e.g. 10% within 3 years. Discussion with Comms team next week. Ready for June/ July i.e. whenever office reopens
*Explore the use of EV staff pool car(s)	Need to understand reasons for reduction in business miles and whether permanent. Charging point not viable in staff car park, potential for slow charge point in visitors' carpark – will be looked at this in June as part of EV charging point rollout. Awaiting up to date cost of ev vehicle. Review business mileage by October having costed ev car.
*Assess the scope for extending sustainable travel incentives for staff	Cycle to work scheme already in place, information on cycle training on intranet. Car sharing is encouraged through offering a Civic Centre car parking space as incentive, which is not available to all staff routinely. By June to have gauged interest in schemes to encourage sustainable travel e.g. to encourage walking pair-up / walking buddies
*Promoting reductions in water usage	This can be included alongside a general energy awareness campaign. Discussion with Comms team next week . Can be really

		simple message e.g. "save water" and "report leaks" etc. Ready for June/ July i.e. whenever office reopens
	Review the use of peat, redesign mowing regimes etc	Already underway
	Convert street lighting to LED	In progress. Waiting for KCC response regarding adoption
	*Review carbon and waste impacts of catering for events	Propose this is reviewed October to see if events return to 'normal' or significant percentage remain online
Stage 2	Checklist of criteria to inform decision making	Will be able to progress this using work from the climate change impact statement and training
	Review sub-metering installations	Check if this can be done inhouse, likely not to include Civic Centre due to changes already made to building and long term future.
	Reports to cabinet to include a climate impact statement	Various iterations of method drafted. Revised method being prepared following initial feedback from Corporate Leadership Team. To be considered by CLT in June
	Carry out energy audits across the whole Council non-residential property	Potentially can be done in house or by energy supplier. Awaiting response from Laser as this was a service they offered.
	Potential for voltage optimization	Research companies who do this and where would be feasible
	Evaluate adding to the Council's own estate EV charging	Only partly possible at Civic Centre, other locations e.g. depot need to be evaluated
	Expand opportunities for flexible working	Already under review
	Sustainable procurement policies	Some updates to the Contract Standing Orders and a green paper was out about proposed changes to procurement regulations. Discussions will start this month to look at Council's current practices and what we want to achieve,
	Council-owned land to increase biodiversity	Already in progress, need to assess land owned by council. Could it be used for planting trees or other vegetation? Issue of maintenance. Potential to integrate approach with Green Infrastructure Strategy

	Switch to green tariff for Council purchased electricity	Awaiting update from Laser re costs. Have expressed interest in Laser proposed Public Energy Partnership PPA (PEPPPA)
	Review of Green Infrastructure Strategy	Long list of proposals due May
Stage 3	Work with contractors to move towards Ultra Low Emission Vehicles *Reduce energy losses by retro-fit technologies	Follow on from review of procurement process. Expert survey of buildings required to get accurate costs and
		feasibility of potential measures
	Examine installation of low emission heating	Survey needed to determine best type of heat pump.
	Identify any suitable locations for solar photovoltaic (PV) panels	Survey of civic centre has shown the building would require strengthening in order to accommodate PV panels. This would not be cost effective Future developments in technology may change this^ Maybe possible on other council owned buildings
	Examine the business case for Vehicle-to-Grid EV	Action to be looked at when fleet starts to switch to EV
	Install water saving technology within all commercial buildings within the Council portfolio.	More work to establish feasibility needed. Waterless urinals have already been installed at civic centre
	Explore the potential for rain water harvesting systems and treatment.	Dependent on decision on future of Civic Centre and feasibility in other buildings in the Council's estate
	Seek to incorporate carbon reduction	Follow on from review of
	requirements into new tender contracts	procurement policy Follow on from review of
	Where possible contracted out service proposals include and deliver high levels of sustainability	procurement policy
	Develop appropriate flood mitigation measures and tree planting schemes	Could tie in with GI strategy and Kent Local Flood Risk Management Strategy. Opportunity to work with parish councils. New Strategic Flood Risk Assessment being commissioned to provide evidence base.
	Ensure that the Local Plan sets developments and land use standards that reduce carbon and increase sustainability (subject to proposed Government reforms of the planning system)	Awaiting outcome of proposed changes to planning system – further information expected following Queen's Speech, 11 May 2021 and outline of proposed legislation for new parliamentary session.

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CLIMATE CHANGE IMPACT STATEMENT GUIDANCE NOTE

Reports with 'No Implications'

If your item is of a purely administrative nature (e.g. corporate performance, corporate finance, standing orders) there may be no climate impact. An appropriate statement could be:

As this report deals entirely with administrative/perfomance matters, there is no climate change impact.

Reports to be considered for climate change implications

If climate change is a principal factor in your report, analysis should be included in the body of the paper. Provided this discussion is explicit and easy to locate, an appropriate statement could be:

Climate change implications associated with this decision are discussed in section XX of the report.

In most other cases, you will need to describe how the decision will impact emissions and / or how the decision will be affected by a changing climate. The table that accompanies this guidance sets out the questions you should consider.

In completing this statement you should be clear about limitations in the information available. Acknowledging uncertainty is a key part of decision-making on climate change impacts. While it will be difficult to quantify the impact of most decisions / initiatives at this stage, it is important to show you have thought through the implications for emissions and any opportunity to mitigate a rise in emissions. Decisions may involve both increases and reductions in emissions – for example, planting trees creates a carbon sink but driving a few saplings to a remote site in a truck burns diesel. You may need to make a judgement about which effect predominates, in which case your reasoning should be set out in this section.

How to use this guidance

The impact assessment table lists a number of areas which may be impacted by your proposal. These are broken down into sections below with examples and possible mitigation where needed. The impact assessment table asks you to consider whether your proposal will have an impact or no impact. If the answer is yes, you are asked whether the impact will be a positive or negative one. Please think about impact over the lifetime of the project. The intention is to enable decision makers to understand the full impact of a project over time, particularly where there will be positive impacts in the longer term. For example, a project might be very expensive in the short term if capital investment is required but this could pay back over time in energy savings, and reductions of emissions, over a longer period. Please provide details where this is the case. You are asked to summarise any impacts and mitigation, this will form the statement that will be included in your report.

SECTION 1: GREENHOUSE GAS EMISSIONS

Folkestone and Hythe District Council have committed to be carbon neutral by 2030.

Will your proposal affect the consumption of fossil fuels or electricity in vehicles, buildings or construction?

The burning of fossil fuel directly or to produce electricity emits greenhouse gases. Examples of how your proposal could affect fossil fuel or electricity consumption include:

- Constructing or demolishing a building, or changing the occupancy or opening hours
- Changing the technology (e.g. heating, ventilation, lighting, IT) in a building
- Altering the amount of travel required by staff or service users increasing or decreasing car journeys
- Changing the mode of travel or vehicle type will staff or service users have to use the car, could they walk or cycle or use public transport?

Using the energy hierarchy can help identify opportunities to minimise consumption:

- Reduce demand for energy. Is there a way of doing less of these things? e.g. schedule
 heating to match building occupancy; redesign a process to need less travel; make use of
 flexible working; enable residents to access services digitally.
- 2. **Improve energy efficiency.** Could the proposal achieve the same outcome with less energy input? e.g. Add insulation; use more efficient vehicles; buy low-energy appliances. Could you use different models of ownership, for example rental or sharing models?
- 3. **Use renewable sources of energy.** Could the proposal use or promote the development of wind, solar, biomass and hydro energy?

SECTION 2: WASTE

Will your proposal produce waste?

Waste of any type contributes to greenhouse gas emissions due to its 'embodied energy' – the energy that has been used to produce the item. Specifying recycled materials when making purchasing decisions, not over-ordering and ensuring unwanted resources are reused and recycled will minimise wasted energy. Biodegradable waste, such as food, garden waste, paper, and wood, produces methane (a greenhouse gas 21 times more powerful than carbon dioxide at causing global warming) if it is allowed to degrade in a landfill site. For further guidance see the Reduce, Reuse, Recycle and Compost section.

Will your proposal contribute to land-use change?

Generally, permanently removing vegetation such as trees and hedgerows and replacing them with grass or hard surfaces is treated as an emission of greenhouse gases because the carbon stored in the vegetation is released to the air when it is burned or biodegrades. This emission can be avoided by designing your proposal not to remove the vegetation or ensure that replanting takes place.

If you answered 'no' to the above questions then your proposal will not significantly affect greenhouse gas emissions.

Waste

Your proposal will affect waste management if it:

Needs new materials or supplies

Generates waste materials

How you can minimise waste - Reduce, reuse, recycle and compost

Reduce:

- Could the quantity of waste produced by your proposal be minimised?
- Could perishable materials be stored or transported more intelligently to minimise the potential for them to become unfit for purpose before they're required?
- Has the proposal been designed to minimise the quantity of any packaging materials?

Reuse

- Is the proposal going to cause items or materials to be disposed of before the end of their useful life? Could the proposal be altered to ensure these are used again before disposal or could they be sold on for use elsewhere?
- Could items or materials that have been initially thought of as waste be given a new life as something else?
- Can you use a rental or sharing model for items?

Recycle and Compost

- Can the waste be recycled?
- If the waste products are not currently recyclable, can the process that produces the waste products be altered to use materials that are recyclable?
- Items such as food waste and garden/arboriculture waste should be composted.

Can you buy recycled products?

If your proposal needs new materials or supplies, before purchasing those from virgin sources, consider whether there is an alternative available that contains recycled material. All sorts of materials and products are available with recycled content, from office stationery to construction materials. Ask your suppliers whether they can provide a similar product with recycled content.

Can you specify alternatives to single-use plastics?

Could you specify reusable products instead or use paper or bioplastic alternatives? Biodegradable alternatives, such as paper or bioplastic, need to be recycled or sent to an energy-from-waste facility rather than landfill.

SECTION 3: WATER CONSUMPTION

Water

This district is in an area of 'serious water stress'. According to the Environment Agency this means:

- a) The current household demand for water is a high proportion of the current effective rainfall which is available to meet that demand; or
- (b) The future household demand for water is likely to be a high proportion of the effective rainfall available to meet that demand.

The expected impacts of climate change, as well as population and household growth, will make this an increasing problem for. The Water Act (2003) requires local authorities to "take into account the desirability of conserving water".

Does your proposal affect water consumption?

Will your proposal:

Make use of water directly?

Change the way the county council, households or businesses use water?

If you can answer 'yes' to either of the above questions, then your proposal does have implications for water consumption.

How can your proposal minimise water consumption?

There are three ways to reduce water consumption:

1. Reduce demand for water

Is any of the water to be used by the proposal unnecessary? Examples to help reduce water include:

- Install a water meter to help change behaviour.
- Use push-taps, low-flow shower fittings and put a Hippo in single-flush toilet cisterns.
- Specify drought tolerant plants for landscaping.

2. Improve water-use efficiency

Could the proposal achieve the same outcome with less water? Examples include:

- Specify appliances that use less water the EU Energy Label includes water consumption for dishwashers and washing machines
- · Use dishwashers (full) rather than hand-washing.
- Specify dual-flush toilet cisterns

3. Reuse and recycle water

Could the proposal reuse water? Examples include:

- Harvest rainwater in water butts for irrigation and outdoor cleaning (e.g. vehicles, hard standing).
- Use greywater (e.g. water from basins, baths, showers, vehicle cleaning processes) for irrigation and toilet flushing.

SECTION 4: POLLUTION

Pollution (including air, land, water, light and noise)

Pollution has negative environmental impacts which in turn affect our health.

Air Pollution

Transport - Your proposal could affect air quality if it will make significant changes to transport patterns or vehicle types.

Mitigation options include:

Is the transport necessary? Could technology be used to avoid the need to travel?

- Transport mode buses, coaches and heavy goods vehicles are less clean than trains but are cleaner than cars and vans on a per tonne of freight or per passenger basis.
- Could you use an electric vehicle?

Other sources – Your proposal could affect air quality if it includes a significant use of combustion of any kind, or increases agricultural emissions.

Water pollution

Water pollution arises from a variety of sources. Could your proposal do any of the following?

- Soil erosion will wash sediment and soil pollutants into watercourses. Maintaining ground cover (i.e. vegetation) will help reduce soil erosion.
- Substance spills oil, fuel, chemicals, paint etc. Store and use hazardous substances appropriately and have a clean-up plan in place to deal with spills immediately.
- Cleaning products contain chemicals that can harm the environment, such as phosphoric acid and bleach. Could you reduce the frequency of cleaning? Or could you use natural/ecological cleaning products instead?
- Use of pesticides and herbicides. Could the use of these products be minimised or natural/ecological products be used instead?

Noise pollution

Will your proposal significantly affect noise associated with these activities, or ones like them?

- Road, air and rail transport
- Events
- Construction work
- Entertainment venues

Light Pollution

Will your proposal increase night-time, external lighting?

- Is the lighting necessary?
- Could it be timed to switch off part-way during the night?
- Could you specify a light fitting that shines downwards and therefore minimises the amount of light that leaks away into the night sky?

SECTION 5: RESILIENCE TO THE EFFECTS OF CLIMATE CHANGE

Resilience to the effects of climate change (e.g. increased flood events, drier and hotter summers, rising sea levels)

Enhancing the resilience of your proposal to extreme weather and climate change will save time and money by avoiding future impacts, such as service interruptions or damage to property. It's useful to think of weather as what is going on outside right now, whereas climate is weather averaged over 30 years.

Is your proposal sensitive to weather or climate change? Does it:

Include aspects that are affected by the current weather and climate? For example:

- Buildings, structures, roads
- Green spaces and landscaping
- The need to travel
- A location vulnerable to flooding. Check the vulnerability of the location <u>here</u> and long term flood risk information <u>here</u>
- Vulnerable groups e.g. the elderly or people with sensory impairment

Have a lifetime or legacy that extends beyond a few years?

Provide or support critical infrastructure? For example:

- Highways, bridges, drainage
- · Waste management
- Health and community support
- Education
- Utilities
- Digital / communications
- Provide contingency planning or business continuity needs?

What are the potential impacts of climate change on the proposal?

Consider how climate change effects could impact the business aspects of your proposal. What would be the effects on your proposal if a heat wave, flood or extreme tide became the 'normal weather'. To help you, an example proposal for sheltered housing/ care facility is provided in the table.

	Change in climate						
		Hotter summers	Drier summers	Wetter winters	Warmer winters	Intense storms (rain, wind and snow)	Higher sea level
on	Logistics/travel			Staff and other care professionals travel affected by potential flooding.		Staff and other care professionals travel affected by potential snow or storms.	
impact	People	Older people adversely affected by high temperatures					
Positive or negative	Premises/location	Maintenance of garden areas will require more water.	Maintenance of garden areas will require more water.	May be affected by flooding, dependent upon siting		Higher maintenance costs of building.	May be vulnerable to coastal flooding.
Pos	Commercial opportunity						

Financi	al	More costly if air conditioning is run during		Reduction in heating bills over winter.	
		hot summers			
Infrastr	ucture		Food medicines		
Enviror	nment		Avoid siting of new facility in flood risk areas		

How can you adapt your proposal to minimise the impacts and maximise any opportunities from climate change?

Mitigating measures should increase the resilience of your proposal so that it can tolerate a wider range of extreme weather before serious impacts occur. They should also be flexible so that adjustments can be made easily in the future as new information about climate change and its effects emerges.

Consider low cost measures that could be incorporated now and also higher cost measures, needing more research.

To help you, examples have been provided in table below based on the same example proposal.

Impact	Low cost, no regret measures	Higher cost measures needing research
Older people adversely affected by high temperatures due to hotter, drier summers	Design building to ensure it can be kept cool in the summer and warm in the winter.	
Maintenance of garden areas will require more water in hotter, drier summers	Specific plant species that withstand summer drought and winter deluges	Investigate the cost and practicality of installing rainwater harvesting equipment.
Staff and other care professionals' travel affected by potential flooding, snow or other extreme weather.	Doctors' appointments by skype to avoid inclement weather	Provide some staff accommodation within the premises to allow staff to stay overnight if necessary.

SECTION 6: CONSERVATION AND WILDLIFE

Conservation and enhancement of wildlife

The Council resolution declared a climate **and ecological emergency**. The current situation has ensured we have realised the value of being able to connect with nature. Our environment underpins our wellbeing and economic prosperity. It provides products such as fuel, water and timber; services such as pollination, flood control, water purification and climate regulation; and with recreational and cultural opportunities. The Council has a duty to have regard to the conservation of biodiversity in exercising its functions. This duty was introduced by the Natural Environment and Rural Communities Act in 2006.

Will your proposal affect wildlife?

Your proposal will affect wildlife if it is likely to cause the following types of changes:

- Gains or losses in the amount of area covered by habitat
- Gains or losses in the connections between habitats e.g. hedgerows and lanes
- Gains or losses in the variety of species
- · Gains or losses in the abundance of species
- Change land and/or water management
- Alter wildlife management
- Introduce or remove elements from habitats, such as pesticides, water supply or forestry activities
- Cause disturbance to ecosystems through infrastructure, tourism or recreation

These changes are important to consider even if they occur in environments which are already managed, such as farms, parks and greenspace within urban areas.

If your proposal has a specific location, you should check if it is in or near a site designated for its wildlife or geological value. You can check here

How to maximise the opportunity:

Redesign your proposal to:

- Increase the area of habitat
- Provide additional connections between habitats
- Avoid disturbing species but provide additional shelter
- Avoid affecting a site designated for its wildlife or geological value

SECTION 7: SOCIAL AND ECONOMIC IMPACTS

Social and/or Economic Impacts

There are many direct and indirect social and economic impacts of climate change. Deprivation often increases vulnerability to climate change, and climate change increases deprivation. The people who are likely to be most vulnerable to the impacts of climate change are:

- those living in places at risk;
- people who are already deprived by the health, level of income, the quality of their homes and mobility

Ways of tackling this include tailoring existing climate change adaptation measures to the needs of vulnerable people; and work building the capacity of vulnerable people should consider the impacts of climate change.

Warmer temperatures, sea level rise and extreme weather will damage property and critical infrastructure, impact human health and productivity, and negatively affect sectors such as agriculture, forestry, fisheries and tourism. Severe weather episodes causes damage to supply chain disruptions that can lead to loss of revenue and reduced productivity

There are still opportunities such as encouraging the development of low carbon/climate change adaptation skills, as one of the barriers for firms in responding to climate change risks is a lack of necessary skills among the workforce.

Considerations of impacts/benefits can include:

Reduce domestic energy use and alleviate fuel poverty

- Identify clients at risk (financial / care support assessments) and connect with District Councils/ support organisations and support schemes
- Promote Kent Warm Homes and energy switching schemes

Supports sustainable growth/creates jobs in the low carbon and environmental goods services sector

- Supporting growth in the rural economy and low carbon and environmental services sector.
- Public sector decisions and spending are consistent with our net-zero and clean growth targets and are utilising opportunities to drive market change and support expansion in the clean growth sector.
- Ensure sustainable access and connectivity for businesses and communities.

SUMMARY

This summary will form the statement that will be included in your Cabinet report. The District Council has adopted a Carbon Action Plan that contains 33 actions designed to help reduced the Council's carbon emissions. If your proposal is an action from the Action Plan or contributes to an action please include that information here. The Carbon Action Plan can be found here http://sdc-intranet/wp-content/uploads/2021/03/FHDC-Carbon-Action-Plan.pdf

Folkestone and Hythe Green and Blue Infrastructure Strategy

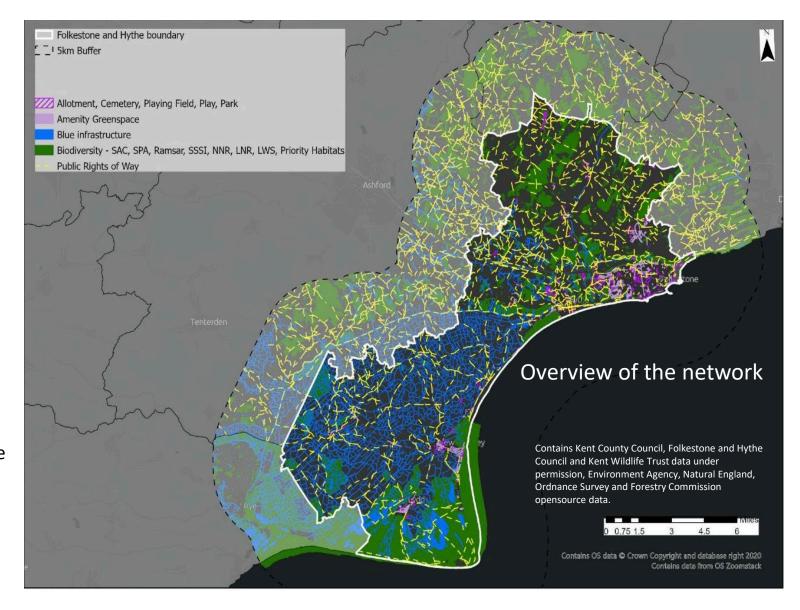
About the Strategy

Folkestone and Hythe's Green and Blue Infrastructure Strategy is an analysis of the strategic network of green and blue infrastructure across the district.

Green and blue infrastructure planning takes a multidisciplinary approach to seek opportunities which address issues across many areas.

A comprehensive study of GBI across the district included:

- All relevant national and local planning policy
- Impacts of climate change
- Consultation with many stakeholders
- Reports, studies and initiatives relevant to the district's strategic green and blue infrastructure now and in the future
- GIS mapping to analyse and visually 'layer' data in detail across the district



Why is a Green and Blue Infrastructure Strategy Needed?

- Positive planning for green infrastructure is required by the National Planning Policy Framework. This underpins the Core Strategy and PPLP.
- Environment Bill 2021 brings in a range of measures to improve the natural environment including:
- Biodiversity Net Gain
- Local Nature Recovery Strategies
- Strengthened Biodiversity Duty on local authorities
- It supports delivery of the Government's 25 Year Environment Plan which includes priorities for green infrastructure including Green Infrastructure Standards, which local authorities will need to apply.
- It provides a robust, well-evidenced and comprehensive strategy to underpin future FHDC policy including climate change.





Analysis of Evidence...

Five detailed evidence areas were described and assessed:

- Biodiversity, trees and woodlands
- Access, recreation and active travel
- Health and wellbeing
- Blue infrastructure and the coast
- Landscape character and heritage

The areas of the district are also described in more detail

- Folkestone and Hythe towns;
- Romney Marsh; and
- The North Downs

It provides an assessment of the needs and opportunities, strategic priorities and future actions.



The District's valuable habitats

- 5 of UK's 7 rarest bumblebee species present in Kent, making it the most important county in the UK for bumblebee species diversity – in Folkestone and Hythe the shorthaired bumble bee
- Turtle dove the UK's fastest declining bird species.
- At Dungeness 94% of the county's vegetated shingle habitat is found in Folkestone and Hythe district
- Folkestone and Hythe district has 20.3% of Kent's lowland calcareous grassland
- Late spider-orchid on the chalk downland is unique to Kent









The district provides an outstanding landscape to live and work

- A unique and diverse coastline
- Glorious grasslands
- Valuable woodlands and trees
- Exceptional recreational facilities
- Important rivers and streams
- Outstanding heritage assets
- Green and blue infrastructure is important in supporting a landscape-scale or 'nature network' approach, through securing biodiversity value in a planned way. Green infrastructure also helps to bring nature into urban centres, which also connects people with wildlife.

Photo credits top left Sustrans National Cycle Route Way Post at Hythe credit Nigel Small (Unsplash); top right Folkestone Warren, credit Diamond Geezer under Creative Commons; bottom right Sugar Loaf Hill, Folkestone, credit Residents_parking under Creative Commons; bottom left Dungeness credit Kai Bossom (Unsplash)

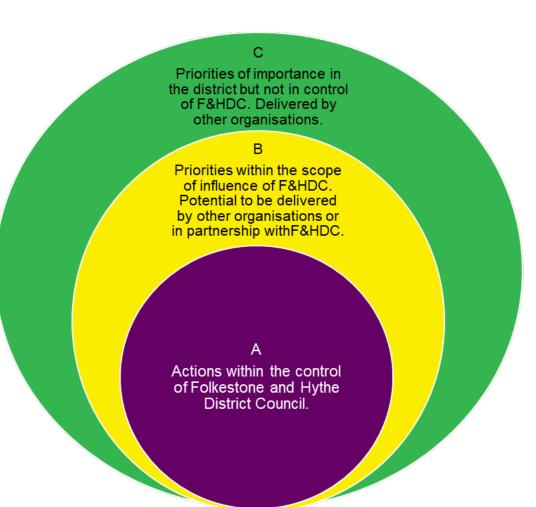
Draft Action Plan

A summary of the **needs, opportunities and priorities** for the Green and Blue Infrastructure Strategy has been drawn together in an Action Plan from the five evidence areas and the three spatial areas.

The Action Plan should be seen as an initial long list. Not all of which are within the direct control of the council, or which can be delivered by the council alone.

The graphic on the right explains the colour coding in the chart for delivery.

Initially priorities for delivery have been coded A B or C, although these may change after further consultation





Next Steps

- That the Council should carry out a four week targeted consultation of expert and other environmental groups on the Green Infrastructure Strategy and proposed action plan.
- That the Council then carry out a period of wider public consultation on the Green Infrastructure Strategy proposed action plan for four weeks.
- The Strategy and results of consultation be presented to members at Cabinet.



To: Climate and Ecological Emergency Working Group

Date: 25 November 2021

From:

SUBJECT: DISTRICT-WIDE CARBON PLAN - PROJECT PROPOSAL

SUMMARY: This report outlines the proposed structure for the District—wide Carbon Plan

and proposal for consultation in response to the Climate & Ecological Emergency Declaration Resolution: to develop a strategy for Folkestone and Hythe District Council to play a leadership role in community, public and business partnerships for our Carbon Neutral 2030 commitment throughout

the district.

1. BACKGROUND

1.1. Full Council declared a Climate and Ecological Emergency on 24 July 2019. There were nine points within the declaration and progress has been made on the majority of these points, including the adoption of a Carbon Action Plan dealing with carbon emissions from the council's own estate and operations.

1.2. Point 5 of the declaration is that the council develops "a strategy for Folkestone and Hythe District Council to play a leadership role in promoting community, public and business partnerships for this Carbon Neutral 2030 Commitment throughout the District". This district-wide plan forms the subject of this report.

2. PROPOSED ROLE OF THE DISTRICT COUNCIL

- 2.1. The decarbonisation of the district will rely on the entire district, its community and businesses, being involved and taking positive action to change behaviours and implement actions over the coming years to deliver net zero.
- 2.2. It is therefore proposed that, for the District-wide Carbon Plan, the council supports a collaborative leadership style that encourages the active community groups and leaders to come together and adopt net zero behaviours and actions by engaging in regular dialogue to share the objectives, inform and signpost both the actions and resources available to unlock the community drive to be net zero. The District-wide Carbon Plan needs to recognise that the council would not be able to enforce many of the actions that will be needed, but must encourage and provide information and support for people to make changes for themselves.

2.3. This leadership is envisaged to include bringing together and chairing a regular informal meeting with leaders and representatives from business, education, community and special-interest groups to act in concert to deliver the plan.

3. RELATIONSHIP TO OTHER PLANS AND STRATEGIES

- 3.1. The proposed District-wide Carbon Plan will sit within the framework of the Corporate Plan 2021-30, 'Creating Tomorrow Together'. The Corporate Plan sets out guiding principles and service ambitions looking beyond recovery from the pandemic to how recovery can be made sustainable.
- 3.2. The framework set out in the following sections also reflects the policies, and acknowledges the support, announced by the Government in its recently published 'Net Zero Strategy: Building Back Greener' (Department for Business, Energy & Industrial Strategy, October 2021).1

4. BASELINE POSITION

- 4.1. The starting point for the district-wide plan will be the baseline position for the emissions that could be attributed to activities within the district. As Members may recall, there has been some initial discussion about this at the Climate Change and Ecological Emergency Working Group.
- 4.2. At the Working Group meeting on 18th of March 2021, Members expressed their caution about using figures from the SCATTER Cities online tool, questioning the inclusion of elements such as emissions from the motorway network and aviation and querying how these could be fairly attributed to activities within the district.
- 4.3. Officers undertook further work and brought a discussion paper to the Working Group meeting on 13th May 2021, highlighting the more limited sub-set of emissions published by the Department of Business Energy and Industrial Strategy (BEIS) that BEIS identifies as being within the scope of local authorities to influence. This total is reported as being 406.5 ktCO₂ (tonnes of carbon dioxide) for Folkestone & Hythe district for the year 2018 (the most recent year reported). In summary, the district total comprises the following:

Element	Emissions (KtCO ₂)	Percentage of total
Industrial and commercial total (including industrial and commercial gas, large industrial installations, industrial and commercial other fuels, agriculture)	107.4	26%
Domestic total (including domestic electricity, domestic gas, domestic 'other fuels')	159.6	39%
Transport total (including road transport 'A' roads, road transport minor roads, transport other)	139.5	34%

¹ Outlined in the accompanying report to this Working Group.

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Total 406.5	
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- 4.4. Folkestone & Hythe District, according to the BEIS dataset, emitted 406,500 tCO2e in the baseline year of 2018/19. The council's own emissions from its estate and operations for 2018/19, as reported in the adopted Carbon Action Plan (February 2021), were 1,536 tCO2e, around 0.38 per cent of emissions from the entire district. This demonstrates that collaborative working across the district is essential if we are to meet our net zero target.
- 4.5. As outlined above, the council can play a leadership role in pulling resources together and facilitate partnership working to help influence actions towards reducing carbon and adapting to climate change. However, we recognise that the journey to net zero will be extremely challenging and will require actions often outside the direct control of the council. The council will need to work with local communities, key partner organisations, businesses and the public across the district if we are to deliver significant reductions in carbon emissions as quickly as possible.

5. PRIORITY AREAS

- 5.1. Given the district emissions profile outlined above, it is evident that the council will have different levels of control and/or influence over how emissions are reduced across the district.
- 5.2. Five areas of activity are proposed to structure the district-wide plan, to inform how we could encourage, engage and empower local communities, key partner organisations, businesses and the public to achieve our net zero target: road transport; residential buildings; commercial and industrial buildings and processes; other activities; and land-use absorption.
- 5.3. Pillar 1: Road transport contributes around 34 per cent of the district's total carbon emissions, according to the BEIS dataset (which includes emissions from A-roads and minor roads only). This is further impacted by the reliance of the rural district on motor transport, freight and delivery traffic, growth in working from home as a result of the pandemic and national policies to phase out petrol vehicles. The council can have some level of control through infrastructure provision (for example through Community Infrastructure Levy spending), influence by encouraging active travel through the Corporate Plan, engaging with key stakeholders such as Kent County Council, as the transport authority, and bus operators, empower various parties in promoting electric charging points, car clubs, e-bikes and bike storage and educating on sustainable travel options.
- 5.4. **Pillar 2: Residential buildings** contributes around 39 per cent of total emissions, using the BEIS dataset, which includes emissions from domestic electricity, domestic gas and other fuels. This is further impacted by the existing house stock, independent property owners, housing market and new building regulations on future home standards.
- 5.5. The council has less control and some level of influence in this area. This can be done by providing advice on insulation, energy efficient home systems, encouraging skills training, promoting available funding and grants. We can empower various parties by building on experience of retrofitting the council's housing stock and exemplar new build HRA schemes as well as engage with key players to facilitate exploring community energy options and water conservation measures.

- 5.6. **Pillar 3: Commercial and industrial buildings and processes** contributes around 26 per cent of the district's total emissions, according to the BEIS subset, which includes industrial and commercial energy use (electricity, gas and other fuels) and agricultural fuels.
- 5.7. Here, the council has some control and less influence. This is further impacted by rising job vacancies due to pandemic, internet shopping and the economy, movement out of town due to homeworking and ownership dispersed across numerous private and institutional land owners. The council can financially incentivise and encourage businesses to adopt more sustainable practises through grant schemes to encourage investment, as well as to engage with key players to explore opportunities through the Place Plan and other town centre regeneration initiatives. The Corporate Plan already promotes "shop local" and increased footfall and various initiatives through the Recovery Plan and ongoing Town Centre Regeneration.
- 5.8. **Pillar 4: Other activities -** While not specifically included within the BEIS subset of data, the treatment of waste, food production and other elements could be included as an additional pillar within the plan.
- 5.9. The council has some control and less influence in this area. This is further impacted by individual lifestyle choices, consumption patterns, their dietary requirements, vast number of providers and complex supply chains. The council, through the Corporate Plan, is already promoting the circular economy, encouraging driving up recycling rates. The council can engage with key players to promote a 'reduce, reuse and recycle' approach to reduce waste and empower others where applicable to take necessary actions. Local food growing could be encouraged and promoted across the district.
- 5.10. **Pillar 5: Land use absorption -** While not explicitly quantified within the BEIS subset, a small proportion of the district's total emissions is reabsorbed through land use, such as forestry, and this could also be included as a pillar within the plan. Woodland planting, nature-based solutions and other forms of carbon capture could be explored.
- 5.11. The council has less control and less influence and this is further impacted by control of many different landowners, changes in land management practices, responsibilities emerging through the Environmental Act. However, it presents opportunities to deliver multiple benefits such as biodiversity net gain and food resilience.
- 5.12. Appendix 1 sets out the proposed structure of the District-wide Carbon Plan.

The Working Group is asked to comment on the proposed structure of the District-wide Carbon Plan outlined above and in Appendix 1.

6. PROPOSAL FOR CONSULTATION AND PROPOSED PROJECT PLAN

- 6.1. As outlined above, a key aim of the plan is for the council to be an influencer of change while supporting local communities, key partner organisations, businesses and the public to implement measures to reduce carbon emissions and adapt to climate change in a way that reflects local circumstances and future aspirations.
- 6.2. The success of any plan is largely determined by the degree to which the stakeholder's expectations are met; consulting on a draft plan towards the end of the process is unlikely to secure the participation and engagement of the many different

stakeholders who would need to contribute to the goal of reducing the district's carbon emissions.

6.3. It is therefore proposed that the council engages with representatives from key stakeholder groups at an early stage to develop the plan and to guide its long-term implementation. It is proposed that the council establishes and chairs a regular 'Carbon Innovation Lab' (CI-Lab) to be a small, informal and inclusive group. The CI-Lab could include elected members, officers and invited community representatives from key local groups, businesses and academics and interested members of the pubic. The objective is to promote a collaborative dialogue, work in partnership, be an influencer of change, exchange ideas, agree priorities and encourage the local actions to deliver the net-zero objectives.

The Working Group is asked to comment on the proposed Carbon Innovation Lab approach set out above and suggest possible interested parties.

- 6.4. The CI-Lab could report to the Climate and Ecological Emergency Working Group on a regular basis, providing updates on its activities within the community (perhaps quarterly to begin with, then moving to six-monthly). The CI-Lab could provide the impetus for the community itself to jointly draft the actions and identify their own resources (including applying for funds and existing grants targeted at the community initiatives) to deliver the actions.
- 6.5. Based on experience elsewhere, it is estimated that the CI-Lab could be set up relatively quickly, identifying interested parties, framing the scope, agenda and conducting the first meeting. The CI-Lab would work closely with the council's communications team.
- 6.6. The aim is that the Lab would be a short- to medium-term light-touch initiative convened by a council-appointed chair, with a secretariat provided from our existing resources to prepare the agenda, circulate minutes and papers, maintain the simple action log, collate the feedback and report to the Working Group, Cabinet and other committees as necessary.
- 6.7. The first meeting would be likely to involve some scene-setting, including an exploration of the carbon emissions arising from the district and the BEIS dataset. Depending on the background knowledge of the participants, there could be a need to provide some carbon literacy training for the participants. When this initial stage has been completed the agenda could move to ideas about how to tackle carbon reduction, drawing on the experience of those around the table, summarising the opportunities from the Government's Net Zero Strategy and inviting the community to share where is already working to reduce carbon emissions and where it sees opportunities to be involved. (Appendix 4 to this report sets out some possible areas to explore.) As the Lab develops, the dialogue could develop into very local, active collaboration involving community groups, volunteers and the council acting in concert to drive behaviour change and emissions reductions.
- 6.8. Success will be measured by the level of engagement and activity in the green sector. The cost of this proposal would be limited to the investment of time and effort in establishing and running the Lab and the benefit will be in the partnership working and increased support for low carbon initiatives.
- 6.9. The proposed community engagement approach is set out in Appendix 2, together with potential stakeholders.

The Working Group is asked to comment on the proposed community engagement approach outlined above and in Appendix 2 and suggest potential groups or individuals who could be approached for their participation.

6.10. A draft project plan of immediate actions is set out in Appendix 3, including key stages and steps for the Working Group's involvement, formal Cabinet approval and public engagement.

The Working Group is asked to comment on the draft project plan outlined in Appendix 3.

6.11. Some initial ideas for the District-wide Carbon Plan are set out in Appendix 4, showing key partners, suggested actions and potential benefits under each of the five pillars outlined above. It is intended that the actions will be drafted by the CI-Lab, drawing on the experience and knowledge of the participants; however, the suggestions in Appendix 4 could be introduced into the discussion to stimulate debate and critically evaluate their likely effectiveness.

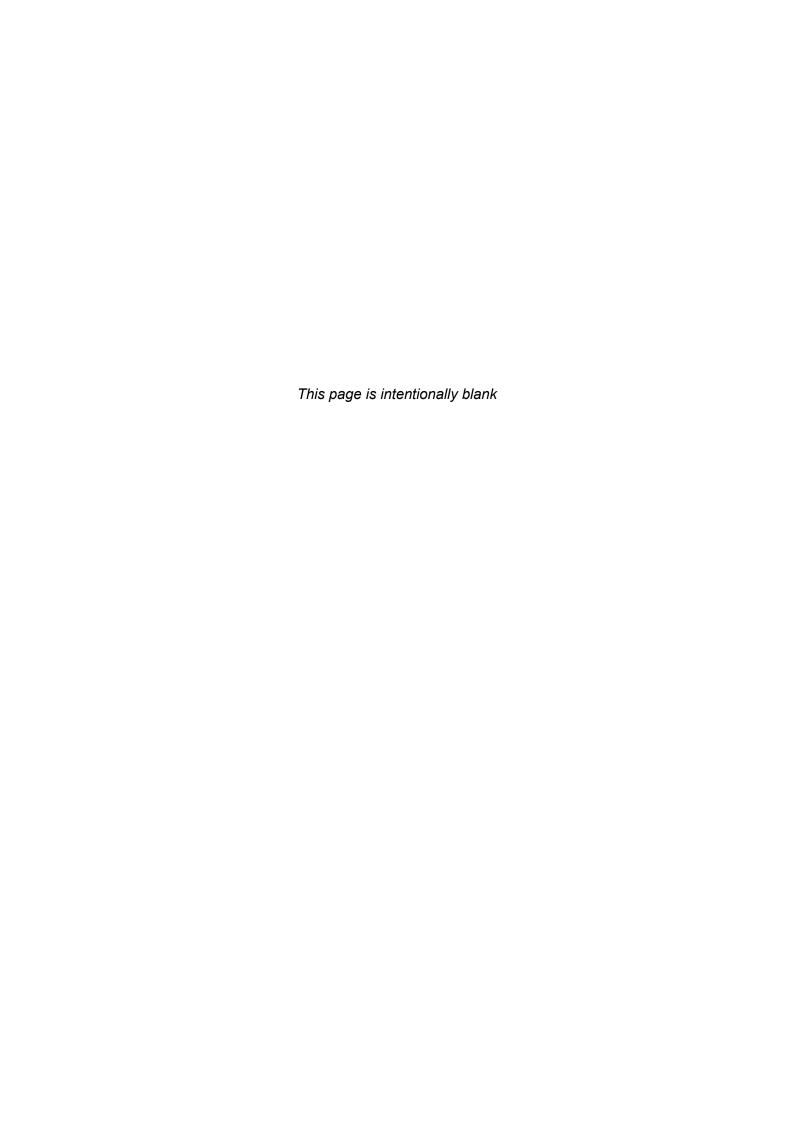
The Working Group is asked to comment on the draft action plan outlined in Appendix 4.

7. CONCLUSIONS AND NEXT STEPS

- 7.1. This report has set out proposals for a District-wide Carbon Plan to deliver the commitment made in the climate emergency declaration for the council to play a leadership role in community, public and business partnerships for our Carbon Neutral 2030 commitment throughout the district.
- 7.2. The following are put forward to the Climate & Ecological Emergency Working Group for comment:
 - Draft structure for the plan, based around five pillars to guide areas of action –
 Appendix 1;
 - Draft proposal for community engagement to help develop the plan and deliver its actions – Appendix 2;
 - Draft project plan with key dates and stages for the preparation of the plan –
 Appendix 3; and
 - Draft high-level actions for the District-wide Carbon Plan Appendix 4.



APPENDIX 1: DISTRICT-WIDE CARBON PLAN – DRAFT PROPOSEI
STRUCTURE



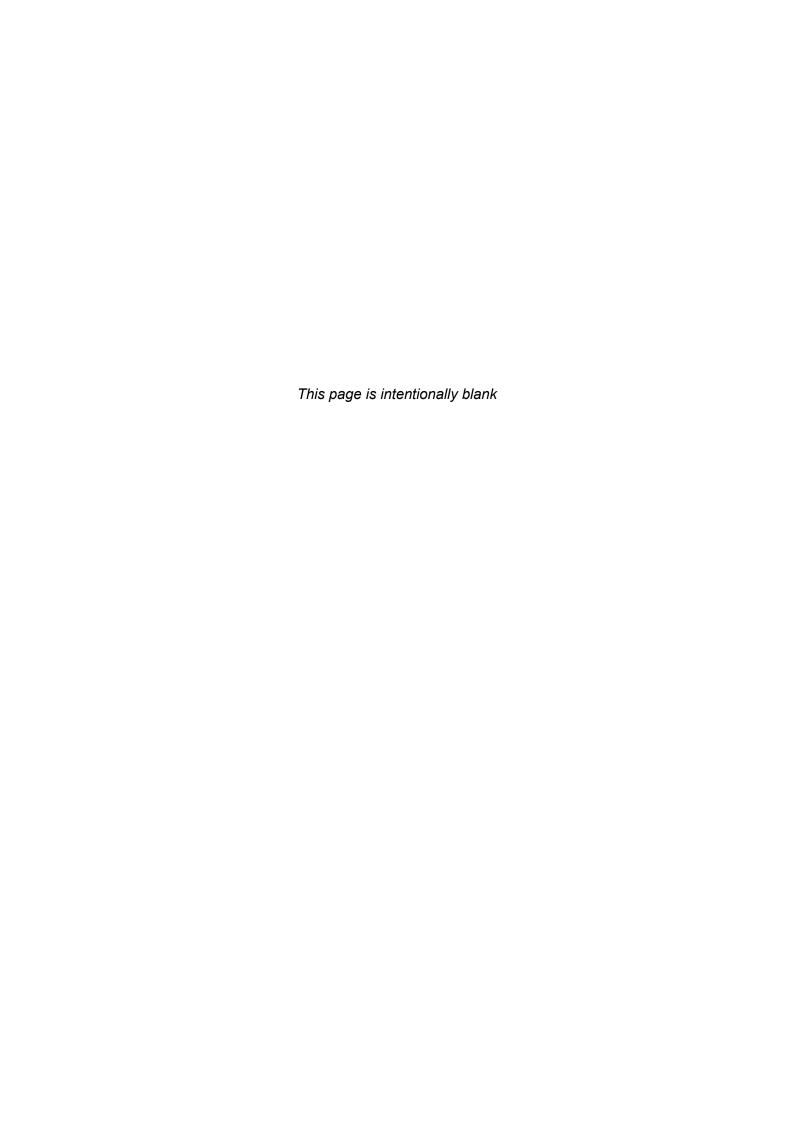
APPENDIX 1: DISTRICT-WIDE CARBON PLAN – DRAFT PROPOSED STRUCTURE

Cont	Contents				
1.	Executive summary	1.1	Forward		
		1.2	Summary		
		1.3	Introduction		
2.	Policy	2.1	Regional, national and local		
	Drivers	2.2	Corporate Plan – Creating Tomorrow Together with reference to Climate & Ecological Emergency Declaration		
		2.3	Climate risks and vulnerability assessment		
3.	Purpose and Scope	3.1	Role of district council - focus of leadership role – enabling and empowering		
		3.2	District-wide emissions profile and baseline (BEIS data)		
		3.3	What we mean by net zero by 2030		
		3.4	The 'five pillars' for action – road, residential, commercial and industrial, other, land-use absorption		
4.	Define Level	4.1	Direct Control		
	of Influence	4.2	Indirect Influence		
		4.3	Challenges, Risks and Opportunities		
		4.3.1	Pillar 1 - Road Transport		
		4.3.2	Pillar 2 - Residential		
		4.3.3	Pillar 3 - Commercial and Industrial		
		4.4.4	Pillar 4 - Other activities		
		4.4.5	Pillar 5 – Land use absorption		
5.	Our approach	5.1	 Where we are now - Using the five pillars summarise progress made mitigating and adapting to climate change Exploration of best practice already operating within the district or that partners can draw on from elsewhere Highlight range of initiatives and projects to mitigate the impacts of and adapt to climate change across the district 		
		5.2	Where we want to be – Using the five pillars outline what the vision of the future would look like.		
		5.2.1	Setting out the vision		
		5.2.2	What will success look like		

APPENDIX 1: DISTRICT-WIDE CARBON PLAN – DRAFT PROPOSED STRUCTURE

		5.2.3	Future projections including identified interdependencies, gaps and potential issues
		5.3	How would we fund our vision
		5.4	 How do we get there? How we would encourage, engage, empower actions to reduce emissions while adapting to climate change Potential future projects that could add to the best practice outlined in Section 5.1 above
6.	Action plan	6.1	Details of actions we would take to get there
7.	Monitoring and Evaluating Progress	7.1	To include how we will monitor progress and incorporate lessons learnt from the process
8.	Conclusion	8.1	To include conclusion
9.	Actions by Pillar	Appendix 1	Summary Table

APPENDIX 2: DISTRICT-WIDE CARBON PLAN – DRAFT PROPOSED
ENGAGEMENT PROPOSAL



APPENDIX 2: DISTRICT-WIDE CARBON PLAN – DRAFT PROPOSED ENGAGEMENT STRATEGY

1.0 Introduction

- 1.1 The Climate and Ecological Emergency Declaration made a resolution to develop a strategy for the council to play a leadership role in promoting community, public and business partnerships for this carbon neutral 2030 commitment throughout the district.
- 1.2 The council is committed to actively engage with the local community, key partner organisations, businesses and the public across the district to develop a plan that reflects local issues and aspirations to enable us achieve net zero emissions by 2030.

2.0 Details of the Engagement

2.1 Aim

- 2.1.1. To achieve net zero by 2030 across the district while maximising the social and economic benefits of transitioning towards a low carbon future.
- 2.1.2. The aim recognises that carbon reduction and climate adaptation are cross-cutting and affect all that we do both as individuals and as organisations. To be truly successful everyone will need to take positive action, with leaders and influencers working in concert to make those actions easier to take.

2.2 Objectives

- 2.2.1. To develop and deliver the action plan to *reduce carbon emissions* from our buildings, economy, environment and behaviour, including collaboration with the community and business.
- 2.2.2. To develop and deliver the action plan to aid *adaptation to climate change* in our buildings, economy, environment and behaviour including collaboration with the community and business.
- 2.2.3. To align with and deliver the Corporate Plan objectives.
- 2.2.4. To demonstrate through our actions our commitment to lowering carbon emissions, reducing energy bills for residents and adapting to climate change.
- 2.2.5. To understand the opportunities and address local hurdles to achieving net zero, including signposting infrastructure and funding opportunities (e.g. EV charging, sustainable generation, energy efficient housing, community volunteer projects).
- 2.2.6. To utilise the resources available to deliver quick results both in the public realm, private sector and the community.
- 2.2.7. To develop seminar-style training programme focused around understanding carbon and the opportunities available under the Government's Net Zero

APPENDIX 2: DISTRICT-WIDE CARBON PLAN – DRAFT PROPOSED ENGAGEMENT STRATEGY

Carbon strategy, targeted at different audiences encouraging behavioural change and action plans to take up opportunities – for example:

- a. Council leadership (e.g. the alignment of new opportunities with the Corporate Plan, the big wins for FHDC, procurement opportunities)
- b. Community groups (e.g. behavioural change and actions)
- c. Special interest groups (e.g. vulnerable and addressing fuel poverty)
- d. Council officers (e.g. horizon scan of new low carbon policies and impacts)
- e. Local businesses (e.g. to highlight good practice and draw attention to available resources)

3.0 Method and Level of Engagement

- 3.1 Undertaking a public engagement exercise provides an opportunity to establish working relationships with relevant stakeholder groups which will enable the council to understand any issues and concerns to the district achieving net zero by 2030.
- 3.2 It is proposed that the following methods of engagement will be used:
 - a. Working with the corporate communications team to create an informal working group of invited key stakeholders from business, academia, the community and the council to create a dialogue around the local actions to deliver the carbon emissions reduction a 'Carbon Innovation Lab' (CI-Lab).
 - b. Holding public drop-in events at selected locations across the district (Folkestone, Hythe, North Downs and Romney Marsh), with results summarised for consideration by the CI-Lab.
 - c. Holding online public consultations for any new statutory/obligatory requirements that may arise from the Government's Net Zero Carbon strategy, with results summarised for consideration by the CI-Lab.
 - d. Commissioning Canterbury City Council to undertake a targeted consultation (as used to get feedback from a representative sample of the district's residents on the Corporate Plan), with results summarised for consideration by the CI-Lab.
 - e. Holding online briefing seminars for members of the CI-Lab, and other invited guests as appropriate, on reducing carbon and energy bills and signposting and clarifying the support mechanisms under energy efficiency schemes that are available to the public and the private sector.
 - f. Establishing a dedicated email address and social media presence for comments/feedback on draft documents that are put out for consultation, with results summarised for consideration by the CI-Lab.

- 3.3 It is proposed that the CI-Lab would be chaired by the council and provide a regular forum for invited academics, key stakeholders, community representatives, business leaders and interested members of the public, to receive evidence and update reports on carbon-related matters to inform the District-wide Carbon Plan. The CI-Lab would also be involved in the creation of the long-term action plan and short-term activities for the district to implement the Plan's actions. Regular updates would be given to the Climate and Ecological Emergency Working Group, Cabinet and other committees as appropriate.
- 3.4 The data collection process will use questions to gather qualitative and quantitative data that will be used to inform and build the evidence for any future consultation. We recognise the importance of inclusivity and equality in particular listening to the 'seldom heard' groups. The data collection process will consider how to reach and hear from all relevant groups using the public engagement spectrum and stakeholder analysis template below. This will help identify who to consult, establish the level of consultation to be had and understand the best way to engage with the identified stakeholder groups. We aim to ensure inclusive dialogue while developing the plan.
- 3.5 We propose to work with the community groups, 'seldom heard groups' and special interest groups identified by the council's communications team.

4.0 Public Engagement Spectrum

Increasing impact of decision

	Inform	Consult	Involve	Collaborate	Empower
Public engagement goal	Provide the public with balanced and objective information to assist them understand the problem, alternative opportunities and/or solutions.	Obtain public feedback on analysis, alternatives and/or decisions	Work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered	Partner with the public on each aspect of the decision including the development of alternatives and identification of preferred solution.	Highlighting available grants and resources to help the public implement changes

	Inform	Consult	Involve	Collaborate	Empower
Promise to the public	Keep the public informed	Keep public informed, listen and acknowledge concerns and aspirations as well as provide meaningful feedback on how public input influenced decisions. Seek feedback on drafts and proposals.	Work the public to ensure that their concerns and aspirations are directly reflected in any alternatives developed and provide feedback on how public input influenced the decision.	Work together with to formulate solutions and incorporate your actions and recommendation into decisions to the maximum extent possible.	Act in supporting role to allow the public to access resources and implement projects and proposals

Note: the level of engagement should reflect the level of risks and anticipated impacts of the plan. The plan might include priorities and short-term action plan.

5.0 Potential Stakeholders

5.1 The table below provides an initial list of different stakeholder groups we could engage with as part of this proposal.

Members of the Working Group are invited to comment on these suggested groups and to highlight key parties that may be missing.

Key Stakeholder Groups
Interested members of the public
Town and Parish Councils
Shepway Employment Forum
FHDC Staff
Community Safety Partnerships
Local Children's Partnership Group
Resident associations

Key Stakeholder Groups
East Kent Wellbeing and Health Improvement Partnership
Business Advisory Forum
'Seldom heard' groups
Department of Transport
KCC Transport
Cycle Clubs
Registered Landlords Association
Registered Providers
Kent County Council
Rainbow Centre
Public Sector Landowners
Commercial Landlords
KCC Waste Infrastructure Providers
Infrastructure providers (electricity, gas, water, digital)
Landowners and developers (e.g. Folkestone Harbour)
Schools and colleges
Food growing groups
Allotment associations

6.0 Risks

6.1 Potential risks to the consultation are assessed in the table below:

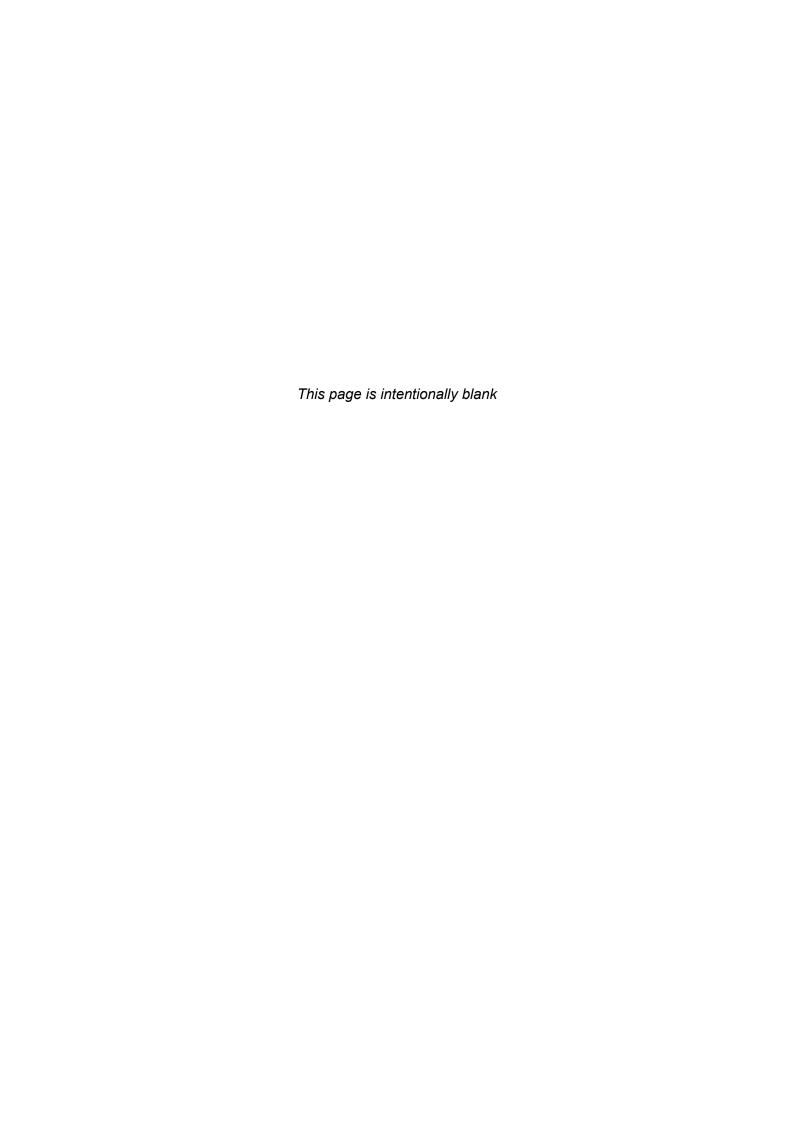
What are the potential risks?	Risk Assessment - High (H), Medium (M), Low (L)	Action to minimise the risks
Conversation with the CI- Lab members is ineffective / unfocused	L	Invitation process, clear objectives, evidence-based collaboration with conclusions and semi-formal minutes
Conversation with the CI- Lab members becomes drawn out and leads to delays	М	Focus on actions at meetings, comparison of progress against timetable, commissioning external support if progress founders

What are the potential risks?	Risk Assessment - High (H), Medium (M), Low (L)	Action to minimise the risks
Disengagement over time	М	Identify and deliver quick wins; involving the community in voluntary actions and communicate successes.
Engagement not clear and inclusive	М	Efforts will be made to identify all relevant groups and early buy in from the steering group
Length of consultation	L	12 weeks consultation window for formal consultations and dedicated emails for comments and feedback
Understanding key issues and aspirations of the wider community	Н	Early engagement and different types of consultation being employed
Implementation of action plan towards achieving net zero	Н	Encourage ownership, buy in and partnership working among local communities, key partner organisations, businesses and the public across the district

7.0 Evaluation and Feedback

- 7.1 We understand that effective evaluation can help find out what did and did not work. As a result, we will produce an evaluation checklist to ensure a robust process for evaluation is in place. In addition, a dedicated email address and social media profile will be created for comments and feedback.
- 7.2 When the plan is being implemented, we will implement a process for ongoing monitoring to enable us record progress. In so doing, we will identify areas where more action will be needed, learn from our successes and subsequently understand targeted activities to enable us reach our net zero target.

APPENDIX 3: DISTRICT-WIDE CAI	RBON PLAN – DRAFT PROPOSED
PROJECT TIMETABLE	



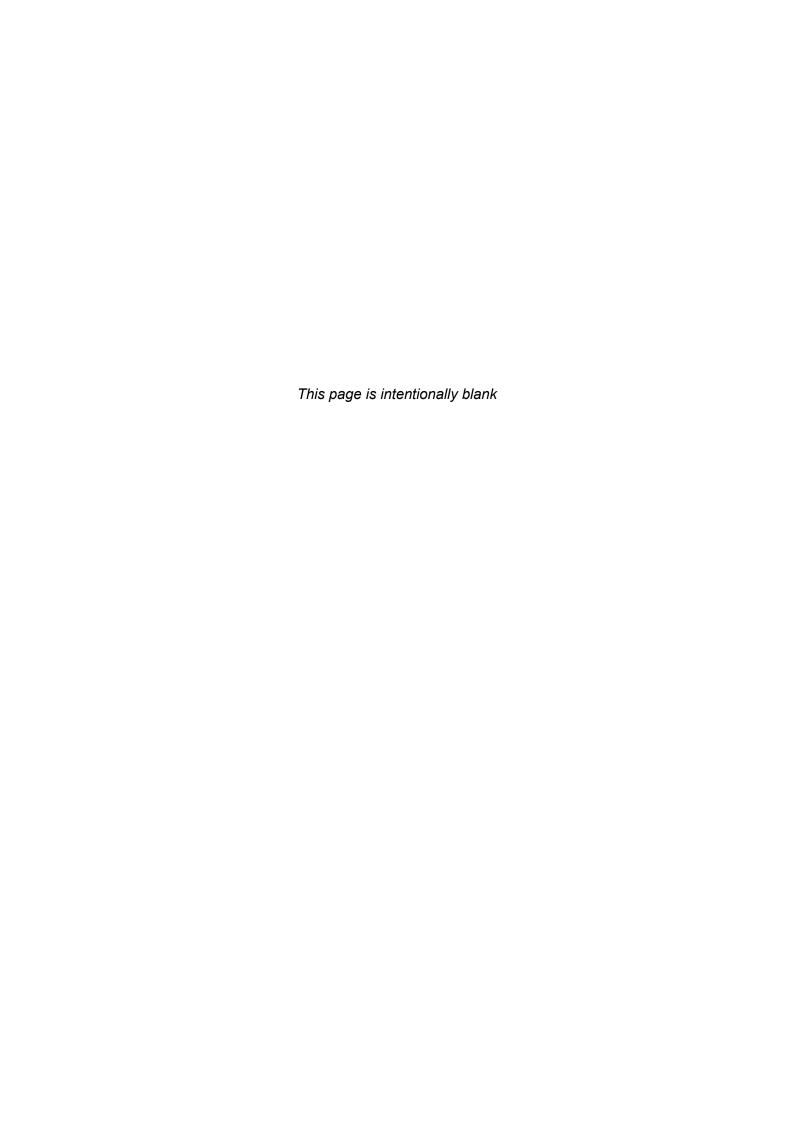
APPENDIX 3: DISTRICT-WIDE CARBON PLAN - PROPOSED DRAFT PROJECT PLAN AND TIMETABLE

Proposed Draft Project Plan and Timetable															
Actions/Date	8/ 21	9/ 21	10 /21	11 /21	12 /21	01 /22	02 /22	03 /22	04 /22	05 /22	06 /22	07 /22	08 /22	09 /22	10 /22
Develop proposed structure for the District-wide Carbon Plan (DWCP)															
Define the strategic aims/objectives for the DWCP															
Develop proposals for engagement															
Present proposal to Corporate Leadership Team (CLT) for approval															
Take to Climate and Ecological Emergency Working Group (CEEWG) for comment															
Regular progress report to CEEWG															
Identify key stakeholders, form CI-Lab and engage with them to shape development of the DWCP															
Develop a communication plan using the public engagement spectrum															
Agree key strategic aims and objectives with CI-Lab															
Produce a draft DWCP for collaboration with CI-Lab															
Identify who needs to be consulted															
What are the priority issues (for the consultees and for the council)															
Agree a draft action plan for the DWCP															
Prepare and take draft DWCP to CLT for approval															
Take draft DWCP to CEEWG for comment															
Take draft DWCP to Cabinet for approval															
Prepare for and undertake public consultation															

APPENDIX 3: DISTRICT-WIDE CARBON PLAN - PROPOSED DRAFT PROJECT PLAN AND TIMETABLE

Proposed Draft Project Plan and Timetable															
Actions/Date	8/ 21	9/ 21	10 /21	11 /21	12 /21	01 /22	02 /22	03 /22	04 /22	05 /22	06 /22	07 /22	08 /22	09 /22	10 /22
Compile consultation results and analyse, present results to CI-Lab															
Produce final DWCP incorporating amendments as recommended															
Identify other opportunities for further engagement with stakeholders to ensure key messages are communicated															
Define a list of 'quick win' actions															
Present final DWCP to CLT for approval															
Present draft final DWCP to CEEWG for comment															
Incorporate comments and produce final DWCP															
Take final DWCP to Cabinet for adoption															
Implement DWCP (with continued involvement of CI-Lab)															
Monitor progress (with continued involvement of CI-Lab)															

APPENDIX 4: DISTRICT-WIDE CARBON PLAN – DRAFT PROI	POSED
HIGH LEVEL ACTIONS	



APPENDIX 4: DISTRICT-WIDE CARBON ACTION PLAN – PROPOSED DRAFT HIGH LEVEL ACTIONS

Proposed District Wide Carbon Action Plan - Potential High Level Actions

The following actions are suggested for discussion. It is intended that the actions will be developed by the CI-Lab, drawing on the experience and knowledge of the participants; however, these suggestions could be introduced into the discussion to stimulate debate and critically evaluate their effectiveness.

	Our Approach	Proposed Key Partners	High Level Actions for Joint Delivery by Partners	Potential Benefits
Pillar 1: Road Transport	 Promote active travel including cycling and walking Facilitate Infrastructure plan and provision Promote car clubs, e-bikes and bike storage 	Department for transport Kent County Council Cycle Clubs Schools and Colleges Town and Parish Council	 Increase cycle network with dedicated cycle lanes. Infrastructure Delivery Plan Educate and promote active and sustainable travel options Work with key partner organisations to ensure clean-up of buses and modes of transportation. Increase electric charging infrastructure, car clubs, e-bikes and bike storage facilities Improve digital connectivity across the district. 	Improved air quality Improve health and wellbeing Attraction of new businesses to the district
Pillar 2: Residential Buildings	 Facilitate skills training and capacity building. Signposting to grants, funding and resources. Encouraging retrofitting. 	Registered Providers Residents Associations House Builders Town and Parish Councils	 Support residential property owners to access advice about appropriate heating systems and insulation, etc. Support residential property owners to access grants, funds and resources for energy efficiency improvements measures. Decarbonisation plan for buildings. Promote sustainable generation and supply. 	Improved energy efficiency in residential buildings Partnership working Improved health and wellbeing Improved quality of life

APPENDIX 4: DISTRICT-WIDE CARBON ACTION PLAN – PROPOSED DRAFT HIGH LEVEL ACTIONS

	Encouraging water conservation		 5. Educate on and promote the cost savings and benefits on implementing energy efficiency measures. 6. Develop a future proof retrofit programme. 7. Explore community energy options 	
Pillar 3: Commercial and Industrial Buildings	 Establish and Recovery and Place Plan. Town Centre Regeneration Signpost to business grants and resources. 	Kent County Council Public Sector Landowners Commercial Landlords Businesses Town and Parish Councils	 Improve energy efficiency in commercial and industrial buildings Explore solar PVs and battery installation for local businesses Promote grant schemes and funding e.g. The Green Business Grant Scheme Recovery and Place Plan 	Improved energy efficiency in commercial industrial buildings Partnership working Attract new businesses to the district Thriving economy
Pillar 4: Other activities	 Repair Cafes and Collection Points. Promote water conservation measures. 	Kent County Council Waste Waste Infrastructure Providers Schools and Colleges	 Specify and promote water conservation measures Establish and promote wild flower and food growing areas Promote reduce, reuse and recycle as well as circular economy 	Water efficiency Increase in healthy diets and wellbeing

APPENDIX 4: DISTRICT-WIDE CARBON ACTION PLAN – PROPOSED DRAFT HIGH LEVEL ACTIONS

		vn and Parish uncils.		
Pillar 5: Land Use Absorption	mitigation and adaption through land ente management practices Associated Recovery	mers and rural d-based erprises tment ociations althcare vides od growing	Adopt sustainable land management practices for climate change mitigation and adaption Implement tree planting and other nature-based carbon capture schemes Produce a Local Nature Recovery Strategy Finalise and implement Green Infrastructure Strategy	1. Improved biodiversity and movement of habitat. 2. Improved flood management and resilience to changing climate. 3. Increase in green infrastructure. Increase in SuDs

Folkestone and Hythe Response to the Draft Implementation Plan for the Kent and Medway Energy and Low Emissions Strategy

Thank you for sharing on what is a comprehensive approach to achieving the priorities of the ELES. We welcome the opportunity to further work with you in what is a continuing process. The aims and priorities are supported by this Council, below are comments that were considered by the Climate and Ecological Emergency Working Group. The plan has been positively received and our comments are generally concerned with requiring more clarity on some actions.

Priority 1: Emission Reduction Pathways to 2050 Set five-year carbon budgets and emission reduction pathways to 2050 for Kent and Medway, with significant reduction by 2030.

Action 1.3 is to 'Incorporate carbon budgets and pathways into local area net-zero plans'. The partners for this action are all Local Authorities and KALC / Town / Parish Councils. A way of achieving this could be to develop a template for a zero carbon action plan to help parish councils. It may also be helpful to encourage the production of neighbourhood plans

Priority 2: Public Sector Decision Making

Develop a consistent approach across Kent and Medway, to assess, manage and mitigate environmental impacts (both positive and negative), resulting from public sector policies, strategies, service delivery, commissioning and procurement.

Other actions under this heading align with the council's own actions. In fact the Economic Development team already work with local businesses to improve their sustainability. The following action appears to be very ambitious give the times scales (2021 to develop and test) and number of partners involved

Action 2.3 is 'Develop, test and rollout a comprehensive climate change impact assessment and social value framework for public sector decision making, with associated policies, guidance, training and support'. The partners are KCC (Sustainable Business and Communities), Kent Estates Partnership, Kent and Medway Environment Group, Kent Climate Change Network and Kent Nature Partnership. partially funded and partially staffed. The outputs would be Climate change impact assessment tool and social value framework as well as policies, guidance and training materials.

There is a further action 2.4 'Encourage and support SMEs within public sector supply chains to effect positive environmental change by utilising LoCASE and STEM support programmes'. Again this would be consistent with the Council's own Carbon Action Plan

Priority 3: Planning and Development

Ensure climate change, energy, air quality and environmental considerations are integrated into Local Plans, policies and developments, by developing a clean growth strategic planning policy and guidance framework for Kent and Medway, to drive down emissions and incorporate climate resilience.

The following action is welcomed. Action 3.3 which is 'Secure political buy-in and identify resource requirements to develop a shared Kent and Medway clean growth evidence-base and strategic planning policy and guidance framework'. There has been a number of studies such as assessing Climate Change Risk and Impact Assessment for Kent and another concerned with opportunities for renewable energy. Whilst valuable they do not drill down to a local level. This topic is also a fast moving area which would be difficult for a single council to keep up with.

The aim from the ELES:

Develop a clean growth and climate change strategic planning framework for Local Plans and development, by identifying common guidance, position statements, policies and targets.

This has become this action

3.4 Develop a shared Kent and Medway clean growth strategic planning policy and guidance framework that identifies latest evidence, good practice, position statements and policies for Local Plans and development control

The following are the delivery partners with KCC as the lead.

KCC (EPE and ED)

Kent Planning Authorities

Kent Developers Group

Design South East

Kent and Medway Economic Partnership

There is no objection in principle but not sure how it could be implemented if government's planned changes to planning go ahead, i.e. no SPD and no local plan policies other than site specific ones. Staff resources and funding for this action have not been identified

Action 3.5 is 'Raise clean growth / climate change awareness and skills of planners, planning committees, developers and supply chain'. Delivery partners KCC (Sustainable Business and Communities)

- Kent Planning Officers Group
- LA Planning Committees

- Kent Climate Change Network
- Kent Developers Group
- LoCASE

The Outputs are net-zero planning seminar / CPD training events. The outcome would be 'the planning community, developers and supply chain are more aware of clean growth opportunities and champion low carbon and climate resilient developments'

Feel this objective is important however there maybe issues with developers and the supply chain. Difficult without government support and viability often used by developers as reason not to undertake options that may cost extra. An approach to developing approach that deals with the viability issue would be welcome.

Action 3.6 is 'Set stretching net-zero targets for any new development over 100 houses.' The Kent Planning Authorities are the partners with the output of revised planning policies. The outcome would be new developments are sustainable, low carbon and climate resilient. There is a need to understand how we will be able to go beyond building regulations and other standards. Also subject to changes in the planning system and local government.

An action that has been further developed since the ELES:

3.7 Develop tailored Kent and Medway public sector buildings design guidance for new build and refurbishment.

The Partners are:

- KCC (Sustainable Business and Communities / Infrastructure)
- All Local Authorities
- Kent Police
- Kent Fire and Rescue
- NHS
- Schools

The output would be design guidance for public sector new buildings and refurbishment. Outcome is new public sector buildings and refurbishment projects will have sustainability designed into them from the start, reducing the cost of later retrofit and reducing emissions. This could be potentially useful to Council's own ambitions and potentially make it easier to apply for government funding.

Priority 4: Climate Emergency Investment Fund

Establish a trusted Kent and Medway 'Climate Emergency' carbon sequestration, offset and renewable energy investment scheme and fund.

Relevant actions include:

- 4.3 Establish a working group to evaluate options for a Kent and Medway climate emergency investment fund / offset fund to support local natural capital and renewable energy projects.
- 4.4 Assess the viability of establishing a permanent crowd funding space to support local environmental projects

The idea of such an investment fund is welcomed. It is important to support projects, there is the potential to use money from CIL. However we would need to understand if there are implications for staff resources in the Council.

Priority 5: Building Retrofit Programme

Develop Kent and Medway net-zero buildings retrofit plans and programmes for public sector, domestic and businesses.

The Council's housing team are also responding to this via the Kent Energy Efficiency Partnership. It is to be welcomed that that schemes concerning this are tied to tackling fuel poverty. However there are serious issues with staff resources to undertake a number of the actions. For example administer grants for retro fitting private sector housing or working with private landlords.

Priority 6: Transport, Travel and Digital Connectivity

Set up a smart connectivity and mobility modal shift programme – linking sustainable transport, transport innovations, active travel, virtual working, broadband, digital services, artificial intelligence and behaviour change.

The Council is already working with KCC on rolling out EV points. Welcome consideration of other technology such as hydrogen. The adopted Local Plan includes policies to encourage cycling and walking as well as to improve and increase such routes. There is still a need for strategic level action by KCC and action at national level. For example it requires action at government level to encourage haulage firms to switch from road to rail. Actions concerning public transport must ensure that such measures do not disadvantage low income and vulnerable citizens

With regard to the action 6.7:

'Work with private transport sector, including school transport providers and taxi licencing to incentivise and switch to Ultra Low Emission Vehicles'

It is important to know how the economic impact on taxi companies and individual taxi drivers will be considered.

Priority 7: Renewable Energy Generation

Set up an opportunities and investment programme for renewable electricity and heat energy generation

Action 7.7 is 'Support the development and rollout of low-carbon heating options for gas-heated and off-gas homes'. We would welcome more clarity how this would be achieved. Again it likely that there would be issues over staff resources and ability to play a role

Priority 8: Green Infrastructure

Develop and implement a multi-functional, natural capital opportunity and investment programme – focusing on environmental projects that store carbon, increase climate change resilience, improve air quality and soil health, and increase biodiversity.

We welcome the actions under this section that include assessing opportunities for natural solutions and the aim of planting 1.5 million trees or equivalent. We suggest that the actions should tie in with any projects identified in Green Infrastructure strategies. Any strategy on tree planting will need to considered who will undertake the planting on such a scale and where as well as ensuring there is a long term management plan in place for the trees (or equivalent)

Priority 9: Supporting Low Carbon Business

Develop and implement a business recovery and support programme for Kent and Medway businesses to cut costs and win new business

In terms of the actions proposed the Council's Economic Development team already direct businesses to LOCASE and is involved in discussions with the Kent Economic Development Officers Group about the introduction of additional business support measures as part of the economic recovery plan for the county, including support to stimulate the green sector and encouraging existing businesses to become more environmentally sustainable. Consideration is also being given to introducing a specific district scheme or 'topping up' county-wide provision for this. The Economic development team already run workshops for local businesses on being sustainable as part of Folkestone Community Works (Community Led Local Development EU funded). A sustainability statement is required as part of the grant application. STEM is a KCC initiative, it primes businesses for making applications to Carbon Trust etc.

There does seem to be more activity in developing low carbon technologies in other areas of the country. To address this a further action is proposed: Encourage wider partnerships concerning research into low carbon technologies with local universities and wider national and international research organisations.

Priority 10: Communications

Develop a comprehensive communications, engagement and behaviour change programme targeted at residents, employees, businesses and visitors.

Such a comprehensive communications strategy such as is suggested is welcomed. It is also agreed that working in partnership would be welcome although the Council would still need a local strategy particularly to enable quick reaction to circumstances where needed. One concern might be implications for staff resources given the Council has a relatively small communications team. It would be helpful if it could be clarified as to who is producing the strategy and would the Council simply be required to amplify it?

Finally we welcome the opportunity for a meeting between Kent County Council and Folkestone and Hythe District Council to discuss how best we can support one another in achieving the priorities.



To: Climate and Ecological Emergency Working Group

Date: 18th March 2021

SUBJECT: DRAFT KENT AND MEDWAY ENERGY AND LOW

EMISSIONS STRATEGY IMPLEMENTATION PLAN

CONSULTATION

SUMMARY: This report reviews the draft Implementation Plan for the

Kent and Medway Energy and Low Emissions Strategy (ELES). The ELES sets out how Kent County Council in partnership with other councils will respond to the UK climate emergency and drive clean, resilient economic recovery across the county. The Implementation Plan proposes a range of actions to enable the ELES to achieve its priorities. This report suggests responses that Folkestone and Hythe District Council could make to the

consultation on the Implementation Plan.

1. BACKGROUND

- 1.1 The Kent and Medway Energy and Low Emissions Strategy (ELES) identifies 10 priority actions to:
 - promote the development of an affordable, clean and secure energy supply for the county
 - reduce greenhouse gas emissions
 - eliminate poor air quality reduce fuel poverty.
- 1.2 The ELES was considered by the Climate and Ecological Emergency Working Group on 5 November. A more detailed report was taken to the December meeting so that the implications of adopting the strategy could be properly considered.
- 1.3 The Strategy is supported as a vital partnership between Councils across Kent. The Working Group recommended to Cabinet that the strategy be adopted in as far the actions are within the Council's control and it has the resources to do so. In matters that are outside its control the Council should use it's influence to achieve the priorities. This was agreed by Cabinet at it's meeting on 24th February.

2. DRAFT KENT AND MEDWAY ENERGY AND LOW EMISSIONS STRATEGY IMPLEMENTATION PLAN

- 2.1 The plan has been developed using the following:
 - the findings of the ELES implementation plan workshop held in late 2019;
 - comments from the public consultation;
 - Local Authority Net Zero Plans (where available);
 - Kent Net Zero Pathways Report;

as well as ongoing conversations with partners and partnerships. Kent County Council have said that they will now be engaging with all the delivery partners and champions listed in the plan to secure their support. They are proposing in the case of priority 3 actions which are concerned with planning and development that KPOG should fulfil the Champion role for actions 3.2, 3.3 and 3.4 as well as a delivery partner for actions 3.5 and 7.8.

- 2.2 The County Council requires any comments by 19th March. They would also be happy to attend a future meeting to discuss the ELES and how we can work collaboratively towards achieving Net Zero. It sets out what the resources the actions have. The key shows whether the actions are fully funded, partially funded or whether funding is to be secured. It also shows if the actions are to be delivered through existing staff, partially staffed or staff resource to be secured.
- 2.3 The Implementation deals with short and medium term and develop actions from the priorities in the ELES. Our concerns with regard to the original strategy tended to be on long term actions.

3. COMMENTS ON THE DRAFT IMPLEMENTATION PLAN

Priority 1: Emission Reduction Pathways to 2050 Set five-year carbon budgets and emission reduction pathways to 2050 for Kent and Medway, with significant reduction by 2030.

3.1 Action 1.3 is to 'Incorporate carbon budgets and pathways into local area netzero plans'. The partners for this action are all Local Authorities and KALC / Town / Parish Councils. A way of achieving this could be to develop a template for a zero carbon action plan to help parish councils. It may also be helpful to encourage the production of neighbourhood plans

Priority 2: Public Sector Decision Making

Develop a consistent approach across Kent and Medway, to assess, manage and mitigate environmental impacts (both positive and negative), resulting from public sector policies, strategies, service delivery, commissioning and procurement.

- 3.2 Other actions under this heading align with the council's own actions. In fact the Economic Development already work with local businesses to improve their sustainability. The following action appears to be very ambitious give the times scales (2021 to develop and test) and number of partners involved
- 3.3 Action 2.3 is 'Develop, test and rollout a comprehensive climate change impact assessment and social value framework for public sector decision making, with associated policies, guidance, training and support'. The partners are KCC (Sustainable Business and Communities), Kent Estates Partnership, Kent and Medway Environment Group, Kent Climate Change Network and Kent Nature Partnership. partially funded and partially staffed. The outputs would be Climate change impact assessment tool and social value framework as well as policies, guidance and training materials.
- 3.4 There is a further action 2.4 'Encourage and support SMEs within public sector supply chains to effect positive environmental change by utilising LoCASE and STEM support programmes'. Again this would be consistent with the Council's own Carbon Action Plan

Priority 3: Planning and Development

Ensure climate change, energy, air quality and environmental considerations are integrated into Local Plans, policies and developments, by developing a clean growth strategic planning policy and guidance framework for Kent and Medway, to drive down emissions and incorporate climate resilience.

- 3.7 Action 3.3 is 'Secure political buy-in and identify resource requirements to develop a shared Kent and Medway clean growth evidence-base and strategic planning policy and guidance framework'. This action is welcomed. There has been a number of studies such as assessing Climate Change Risk and Impact Assessment for Kent and another concerned with opportunities for renewable energy. Whilst valuable they do not drill down to a local level. This topic is also a fast moving area which would be difficult for a single council to keep up with.
- 3.8 The aim from the ELES:

Develop a clean growth and climate change strategic planning framework for Local Plans and development, by identifying common guidance, position statements, policies and targets.

This has become this action

- 3.4 Develop a shared Kent and Medway clean growth strategic planning policy and guidance framework that identifies latest evidence, good practice, position statements and policies for Local Plans and development control
- 3.9 The following are the delivery partners with KCC as the lead.

KCC (EPE and ED)

Kent Planning Authorities

Kent Developers Group

Design South East

Kent and Medway Economic Partnership

There is no objection in principle but not sure how it could be implemented if government's planned changes to planning go ahead, i.e. no SPD and no local plan policies other than site specific ones. Staff resources and funding for this action have not been identified

- 3.10 Action 3.5 is 'Raise clean growth / climate change awareness and skills of planners, planning committees, developers and supply chain'. Delivery partners KCC (Sustainable Business and Communities)
 - Kent Planning Officers Group
 - LA Planning Committees
 - Kent Climate Change Network
 - · Kent Developers Group
 - LoCASE

The Outputs are net-zero planning seminar / CPD training events. The outcome would be 'the planning community, developers and supply chain are more aware of clean growth opportunities and champion low carbon and climate resilient developments'

- 3.11 Feel this objective is important however there maybe issues with developers and the supply chain. Difficult without government support and viability often used by developers as reason not to undertake options that may cost extra. An approach to developing approach that deals with the viability issue would be welcome.
- 3.12 Action 3.6 is 'Set stretching net-zero targets for any new development over 100 houses.' The Kent Planning Authorities are the partners with the output of revised planning policies. The outcome would be new developments are sustainable, low carbon and climate resilient. There is a need to understand how

we will be able to go beyond building regulations and other standards. Also subject to changes in the planning system and local government.

- 3.13 An action that has been further developed since the ELES:
 - 3.7 Develop tailored Kent and Medway public sector buildings design guidance for new build and refurbishment.

The Partners are:

- KCC (Sustainable Business and Communities / Infrastructure)
- All Local Authorities
- Kent Police
- Kent Fire and Rescue
- NHS
- Schools
- 3.14 The output would be design guidance for public sector new buildings and refurbishment. Outcome is new public sector buildings and refurbishment projects will have sustainability designed into them from the start, reducing the cost of later retrofit and reducing emissions. To be delivered through existing staff but no funding in 2021/22. This could be potentially useful to Council's own ambitions and potentially make it easier to apply for government funding.

Priority 4: Climate Emergency Investment Fund

Establish a trusted Kent and Medway 'Climate Emergency' carbon sequestration, offset and renewable energy investment scheme and fund.

- 3.15 Relevant actions include:
 - 4.3 Establish a working group to evaluate options for a Kent and Medway climate emergency investment fund / offset fund to support local natural capital and renewable energy projects.
 - 4.4 Assess the viability of establishing a permanent crowd funding space to support local environmental projects

The idea of such an investment fund is welcomed. It is important to support projects, there is the potential to use money from CIL. However we would need to understand if there are implications for staff resources in the Council.

Priority 5: Building Retrofit Programme

Develop Kent and Medway net-zero buildings retrofit plans and programmes for public sector, domestic and businesses.

3.16 The housing team are also responding to this via the Kent Energy Efficiency Partnership. It is to be welcomed that that schemes concerning this are tied to tackling fuel poverty. However there are serious issues with staff resources to undertake a number of the actions. For example administer grants for retro fitting private sector housing or working with private landlords.

Priority 6: Transport, Travel and Digital Connectivity

Set up a smart connectivity and mobility modal shift programme – linking sustainable transport, transport innovations, active travel, virtual working, broadband, digital services, artificial intelligence and behaviour change.

- 3.17 The Council is already working with KCC on rolling out EV points. Welcome consideration of other technology such as hydrogen. The adopted Local Plan includes policies to encourage cycling and walking as well as to improve and increase such routes. There is still a need for strategic level action by KCC and action at national level. For example it requires action at government level to encourage haulage firms to switch from road to rail. Actions concerning public transport must ensure that such measures do not disadvantage low income and vulnerable citizens
- 3.18 With regard to the action 6.7:

'Work with private transport sector, including school transport providers and taxi licencing to incentivise and switch to Ultra Low Emission Vehicles'

It is important to know how the economic impact on taxi companies and individual taxi drivers will be considered.

Priority 7: Renewable Energy Generation

Set up an opportunities and investment programme for renewable electricity and heat energy generation

- 3.19 Action 7.7 is 'Support the development and rollout of low-carbon heating options for gas-heated and off-gas homes'. However there is no detail on how this would happen. The outputs would be:
 - Identification of priority off-gas locations and solutions using C-Path tool
 - Workshop and report to identify barriers, public sector role and priority next steps
 - Business cases and funding bids (as necessary)

Again it likely that there would be issues over staff resources and ability to play a role

Priority 8: Green Infrastructure

Develop and implement a multi-functional, natural capital opportunity and investment programme – focusing on environmental projects that store carbon, increase climate change resilience, improve air quality and soil health, and increase biodiversity.

3.20 Actions under this section include assessing opportunities for natural solutions and the aim of planting 1.5 million trees or equivalent. Actions should tie in with any projects identified in Green Infrastructure strategies. Any strategy on tree planting will need to considered who will undertake the planting on such a scale and where as well as ensuring there is a long term management plan in place for the trees (or equivalent)

Priority 9: Supporting Low Carbon Business

Develop and implement a business recovery and support programme for Kent and Medway businesses to cut costs and win new business

- 3.21 In terms of the actions proposed the Economic Development team already direct businesses to LOCASE and is involved in discussions with the Kent Economic Development Officers Group about the introduction of additional business support measures as part of the economic recovery plan for the county, including support to stimulate the green sector and encouraging businesses become more environmentally sustainable. Consideration is also being given to introducing a specific district scheme or 'topping up' county-wide provision for this. The Economic development team already run workshops for local businesses on being sustainable as part of Folkestone Community Works (Community Led Local Development EU funded). A sustainability statement is required as part of the grant application. STEM is a KCC initiative, it primes businesses for making applications to Carbon Trust etc.
- 3.22 There does seem to be more activity in developing low carbon technologies in other areas of the country. To address this a further action is proposed: Encourage wider partnerships concerning research into low carbon technologies with local universities and wider national and international research organisations.

Priority 10: Communications

Develop a comprehensive communications, engagement and behaviour change programme targeted at residents, employees, businesses and visitors.

3.23 A comprehensive communications strategy such as is suggested is welcomed. It is also agreed that working in partnership would be welcome although the

Council would still need a local strategy particularly to enable quick reaction to circumstances where needed. One concern might be implications for staff resources given the Council has a relatively small communications team. It would be helpful if it could be clarified as to who is producing the strategy and would the Council simply be required to amplify it?

4. RESPONSE TO KENT COUNTY COUNCIL

- 4.1 In summary it is suggested that the comments above are sent as part of this Council's response to the consultation on the draft Implementation Plan.
- 4.2 Arrangements are being made for a meeting between Kent County Council and Folkestone and Hythe District Council to discuss how best we can support one another in achieving the priorities.

District Street Lighting Review



BACKGROUND

- F&H DC owns 1340 street lights located in car parks, housing land, open spaces and highway
- KCC currently maintain all our street lights
- KCC advised districts in 2018 that they will no longer be able to continue maintenance under current terms
- Lighting stock can be upgraded and transferred to KCC for adoption



SURVEY FINDINGS

The majority of assets are ageing

Estimated remaining life (years)	Number of assets
0-5	31
6-10	298
11-15	407
16-20	256
25+	44
Not Tested	29

Recommended repair & maintenance recommendations

Date required	Number of assets
Action required now	31
By May 2022	755
By May 2025	250
Untested	29



PROJECTED COSTS

Asset	Quantity	Costs for upgrades/repairs
District owned columns	1340	
Columns available for upgrade for KCC adoption	684	£500,000
Remaining assets not suitable for adoption but can be LED upgraded for easier maintenance and energy savings	656	£450,000
Columns requiring urgent repair should adoption not go ahead and ownership remains with FHDC	31	£55,000

OPTIONS

Option 1 - Do nothing, the council continues to maintain and replace the assets as and when necessary.

Option 2 - Upgrade and keep all lights, FHDC would upgrade all of its lights to KCC Specification, but keep and maintain them itself

Option 3 – Upgrade all and transfer where possible, FHDC would upgrade all street lights and transfer all adoptable assets (684) to KCC

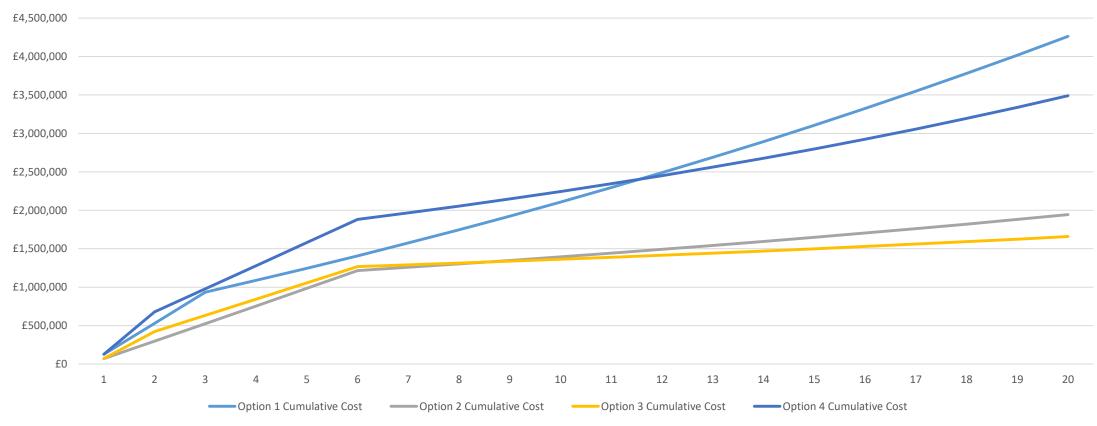
Option 4 – Upgrade transferable assets and transfer, leave others. FHDC would upgrade only the transferable assets and transfer all adoptable assets (684) to KCC.

OPTIONS APPRAISAL

OPTION 1- Do nothing	OPTION 2- Upgrade & keep	OPTION 3- Upgrade & transfer where possible (RECOMMENDED)	OPTION 4- Upgrade only transferable assets, and leave others
Large revenue & capital costs	Reasonable methodology for the future management of the stock	Most appropriate option for the future management of the lights	Remove the burden of transferable assets
Immediate funding of £55k for lights in red status required	Initial investment means a reasonable revenue outgoing for the foreseeable future	Initial investment allows FHDC to remove the burden of half of its stock	The most difficult left in- house so huge revenue costs will continue going forward
Additional funding for light in 'amber' status of £330k 2021-2023	Leaves the district with a large number of lights to maintain long term	Remaining stock will be easier and cheaper to maintain	Works contractor will need to be appointed to manage stock moving forward
Revenue funding of active repairs will remain at £72k pa	No commuted sum but the long term costs will be higher	Huge carbon emissions savings	
Works contractor will need to be appointed to manage stock moving forward	Huge carbon emissions savings	Significant revenue savings long-term	

COST MODEL





CARBON EMISSIONS SAVINGS

	Existing	Proposed
Number of Lamps	1144	1144
Average Wattage	58.5	20
Average Burn Time	3918	3918
Watts	66924	22880
kWH	262208.2	89643.84
Co2 per kWH	0.256	0.256
kg Co2	67125.31	22948.82
Tons Co2 per year	66.06822	22.58742
SAVING Co2		43.48079
Average cost per kWh	0.127	0.127
Cost to run	£33300.45	£11384.77
Electricity £ Saving		£21915.68

Questions?





To: Climate and Ecological Emergency Working Group

Date: 20th April 2022

From:

SUBJECT: Draft Green Infrastructure Strategy

SUMMARY: This report introduces the draft Green Infrastructure Strategy, its findings

and recommendations. It is a local plan evidence document that will provide further detail to development plan policies as well as providing information for the consideration of planning applications. It could also form the basis for a future Green Infrastructure Supplementary Planning Document (SPD)

to provide additional clarity for decision-making.

1. BACKGROUND

- 1.1. Consultants Blackwood Bayne were commissioned to work on an update of the 2011 Green Infrastructure Plan. They have carried out a comprehensive evidence gathering exercise which was followed by analysis of mapped datasets and a review of documents and strategies, from both Folkestone & Hythe District Council and other organisations. Drafts of the document have been shared with officers and teams across the council as the work has progressed. Workshops and meetings to explore green and blue infrastructure priorities were held virtually with stakeholders, local councils and elected councillors between February and April 2021. The findings from the workshops and the consultation responses have been taken into account in this strategy.
- 1.2. The draft Green Infrastructure Strategy is included as **Appendix 1** to this report. Completion of the Green Infrastructure Strategy would meet the service ambitions of the Corporate Plan 2021-30: Creating Tomorrow Together, particularly 'A thriving environment' and 'Positive community leadership', as well as the Corporate Plan's guiding principles 'Greener Folkestone and Hythe', 'Locally distinctive' and 'Working effectively with partners'.
- 1.3. It would also help to deliver the three-year ambitions of the Corporate Action Plan 2021-24, including 'Ensure a clean, attractive and safe environment for residents, visitors and businesses', 'Improving cycling and walking routes', 'Take positive measures to encourage biodiversity' and 'Ensure the Garden Town is developed in a sustainable way in line with the agreed Otterpool Park Charter'.
- 1.4. The production of the Green Infrastructure Strategy fulfils action 33 in the Carbon Action Plan. It will also provide natural solutions to meeting the challenges of climate change.

2. SUMMARY OF THE STRATEGY

- 2.1. The strategy takes a multi-functional and cross-boundary approach to green infrastructure planning. Although this evidence base is presented in themes, an important aspect of green infrastructure planning is to take a multidisciplinary approach and to seek opportunities which address issues across many areas. The strategy is in three parts.
- 2.2. In Part 1 of the strategy five evidence areas are described and assessed. Each area includes a section on 'Drivers of Change, Pressures and Threats' followed by a section on 'Needs, Opportunities and Priorities'. These sections set out the projects and opportunities which apply across the whole district and which are not confined to a particular geographic area. The evidence areas are:
 - Biodiversity, trees and woodlands;
 - Access, recreation and active travel;
 - Health and wellbeing;
 - · Blue infrastructure and the coast; and
 - Landscape character and heritage.
- 2.3. In Part 2 three broad areas of the district are described in more detail, alongside priorities and actions: Folkestone town, Romney Marsh and the North Downs.
- 2.4. Part 3 is concerned with delivery. At the moment it is relatively brief as it deals with delivery at a high level. However it is clear that delivering the strategy will require partnerships between a number of organisations and individuals. As the strategy states:

"The aims in this strategy are not all within the remit of Folkestone and Hythe Council to deliver but are considered important in order to set out an ambition for Folkestone and Hythe."

The council has already engaged in partnership working with multiple organisations, individuals and teams through its work in delivering the Dungeness Sustainable Access and Recreational Management Strategy (SARMS).

- 2.5. It is proposed that an action plan will be produced that sets out projects at a more detailed level, including delivery partners and associated costings. It is also proposed that the action plan is the subject of focussed consultation with expert and community organisations who are likely to have projects or would be instrumental in delivering projects (see Section 8 below).
- 2.6. Each component part of green infrastructure has the potential to deliver wider benefits (functions), including recreation, biodiversity, health, climate change mitigation and adaptation and water quality (termed 'multi-functionality'). When planned, designed and managed as a network, these benefits are maximised. Green and blue infrastructure networks cross local authority boundaries and the strategy considers biodiversity, strategic access routes, watercourses and other green and blue infrastructure across neighbouring authority boundaries.

3. NATIONAL AND LOCAL CONTEXT

3.1. Positive planning for green infrastructure is a requirement of the National Planning Policy Framework (NPPF). Paragraph 20 of the NPPF sets out that strategic planning policies should:

"set out an overall strategy for the pattern, scale and design quality of places, and make sufficient provision for ... d) conservation and enhancement of the natural, built and historic environment, including landscapes and green infrastructure, and planning measures to address climate change mitigation and adaptation."

As well as enabling the council to meet the requirements of the NPPF, the strategy will assist the council in meeting the requirements of new legislation. The development of Green Infrastructure Standards was a core commitment of the Government's 25 Year Environment Plan. Natural England are developing a National Framework of Green Infrastructure Standards with the aim to roll these out in 2022. Mandatory biodiversity net gain, as set out in the 2021 Environment Act, will be applied in England through amending the Town and Country Planning Act (TCPA). This part of the 2021 Act is planned to become a mandatory requirement in 2023.

- 3.2. A range of green infrastructure priorities have been identified in the Core Strategy Review (2022) and the Places and Policies Local Plan (2020). In the Core Strategy Review these policies are principally: Policy CSD4 Green Infrastructure of Natural Networks, Open Spaces and Recreation and Policy CSD5 Water and Coastal Environmental Management. In the Places and Policies Local Plan relevant policies include: Policy NE1 Enhancing and Managing Access to the Natural Environment; Policy NE2 Biodiversity; and Policy NE3 Protecting the District's Landscapes and Countryside. These can be summarised as:
 - Provision of green infrastructure corridors for access and wildlife;
 - Adapting to and managing impacts of climate change;
 - The identification of strategic green infrastructure opportunities;
 - Access management, especially in relation to Natura and sensitive sites;
 - Avoiding the fragmentation of habitats;
 - Increasing the multi-functionality of green spaces, including potential enhancements to public open spaces and sports green spaces;
 - Identifying network and qualitative deficiencies in the most accessible, ecologically or visually important green infrastructure;
 - Improving the green infrastructure fringe zones identified in the Core Strategy Review, including access, biodiversity and landscape improvements and linking corridors;
 - Targeting biodiversity enhancements;
 - Dealing with the impact of development on nutrient enrichment in the Stodmarsh system of protected sites north east of Canterbury; and
 - Setting out a framework for biodiversity net gain.
- 3.3. Green infrastructure is also fundamental to the proposed new garden town which is recognised by the Core Strategy Review in Policy SS7 New Garden Settlement Place Shaping Principles and Policy SS8 New Garden Settlement Sustainability and Healthy New Town Principles. The consultants who have produced the Green Infrastructure Strategy have fed into the process of producing the planning application on the issue of green infrastructure, having provided a 'critical friend' analysis of the approach to green infrastructure by the Otterpool Park Limited Liability Partnership.

4. FINDINGS AND IMPORTANCE OF THE DISTRICT'S GREEN INFRASTRUCTURE FOR BIODIVERSITY

- 4.1. Due to the variety and extent of important habitats the district supports many specialised and rare species. Below are examples of species identified in the Green Infrastructure Strategy for which the district is important:
 - **Turtle Doves:** The Turtle Dove, a Kent Biodiversity Action Plan priority species, is the UK's fastest declining bird species and is threatened with global extinction. The RSPB has identified 'Turtle Dove Friendly Zones' (TDFZs) and works with Natural England and local farmers to provide feeding habitat and supplementary feeding. Two TDFZs are within Folkestone & Hythe District.
 - **Medicinal Leeches:** By the beginning of the 20th century, the medicinal leech was declared extinct in the British Isles. However, since 1970, populations have been found scattered across the British Isles, including in the Romney Marsh.
 - Chalk Grassland Orchids: The outstanding chalk grasslands of Folkestone and Hythe are home to several rare orchids, including monkey orchid, late spider orchid, early spider-orchid, musk orchid, lady orchid and burnt orchid.
- 4.2. Green infrastructure is important in supporting a landscape-scale or 'nature network' approach, through securing biodiversity value in a planned way. Green infrastructure also helps to bring nature into urban centres, which also connects people with wildlife.
- 4.3. Overall, Folkestone & Hythe's tree canopy is around 8 per cent of its area, less than half the Kent average of 17 per cent. There is a distinct north-south divide in the district: the highest coverage is in Hythe at 19 per cent; Romney Marsh ward was reported as having the lowest level of canopy, at 1.1 per cent. However given the history and low-lying agricultural character of the area this is to be expected. Any increase in tree and woodland cover, should therefore follow the principles of 'right tree, right place'. Trees should be planted where this fits with the landscape character. The wide range of woodlands in Folkestone & Hythe all have value for wildlife. Around 1,320 hectares, or 57 per cent, of Folkestone & Hythe's woodland is ancient. Ash dieback could result in profound changes to wildlife and landscape, due to the high proportion of ash in many of the district's woodlands.
- 4.4. Natural England has developed a climate change vulnerability model to assess the vulnerability of priority habitats. The model uses four measurements which, when combined, provide an overall assessment of vulnerability to climate change. (As the model only includes priority habitats some important habitat areas which are not in Natural England's dataset are not included.) The mapping shows that the fragmented, wetland and low-lying habitats around Romney Marsh are highly vulnerable. The chalk stream in the Elham Valley and the Royal Military Canal are also noticeable as vulnerable.

5. ISSUES IDENTIFIED IN THE DISTRICT

- 5.1. At the end of each evidence area in the strategy, there is a section that sets out the drivers of change, pressures and threats. The following points are particularly notable:
 - Climate change impacts compounded by other threats to habitats and species;
 - Lack of resources to manage some nature conservation sites sustainably and in the long term;

- Development has been identified as the greatest pressure on Kent habitats, through loss of land and increased population. This pressure can be mitigated in part through obligations on developers to deliver biodiversity net gain;
- The location of new development, especially larger developments, will increase recreational use in new areas of the district;
- The transport corridor of the M20/A20, railway line and Channel Tunnel Rail Link is a significant barrier to access for Folkestone and other settlements to the south;
- Woodland which is small, fragmented and not managed;
- Increase in invasive non-native species, pests and diseases particularly ash dieback;
- Safety is an important consideration for users. Overgrown areas, poor sight lines, vandalism and litter can increase perceptions of lack of safety;
- There are deficiencies of accessible green space¹ in parts of the district, namely Lympne, Sellindge, Brookland and Brenzett;
- Some areas of poor health also have low levels of greenspace such as Brenzett and St Mary in the Marsh;
- Evidence shows that spending time in nature is also good for mental wellbeing.
 Folkestone & Hythe has a range of good green spaces. Examples include Lower Leas Coastal Park and the Warren: these should be invested in for the future:
- Folkestone & Hythe is at risk of flooding from a number of sources, including tidal and surface water flooding, as well as flooding from groundwater, streams, ditches and the coast;
- Summer droughts are also likely to be more frequent, alongside an increased risk
 of flooding. This combined with increased demand from development requires an
 active approach to the management of both risks through the planning system;
- Parts of the Landscape Character of the district are much more affected by nearby development than others. In the eastern part, around Folkestone, views from the scarp are affected by developments around Folkestone and associated with the Channel Tunnel Rail Link; and
- The landscape is sensitive to the impacts of development and infrastructure within and beyond the Kent Downs Area of Outstanding Natural Beauty (AONB) boundary.

6. STRATEGIC PRIORITIES

- 6.1. The strategy sets outs strategic priorities in the 'Needs, Opportunities and Priorities' section for each evidence area; these are broken down into further priorities. The section sets out the projects and opportunities which apply across the whole district and which are not confined to a particular geographic area. The strategic priorities are:
 - 1. Protect, enhance and improve the core biodiversity sites and take action for priority species;
 - 2. Create an ecologically resilient network to join habitats, allow species to move and to help nature adapt to climate change;

¹ Accessible green space: places available for public access, usually free of charge and without time restrictions.

- 3. Link people and nature;
- 4. Adapt and mitigate for climate change impacts;
- 5. Ensure development is sustainable;
- 6. Ensure that greenspace provision keeps pace with population growth and provides for Folkestone & Hythe's future residents;
- 7. Support increased active travel, to relieve congestion and air pollution and encourage healthy living through a strategic cycle network and walking routes;
- 8. Maximise the benefits of recreation and access to Folkestone & Hythe's unique landscapes and green spaces, whilst ensuring that this does not have a negative impact on them or their biodiversity;
- 9. Provide access to green infrastructure close to home and which is inclusive for all:
- 10. Support people in taking healthy exercise and engaging in nature for both their physical and mental health;
- 11. Initiate local evidence-informed research to understand the impact that accessible greenspace has on local health outcomes, especially for disadvantaged groups;
- 12. Incorporate Sustainable Drainage Systems (SuDS) into new development and retrofit into existing green infrastructure where such an approach is appropriate to help address flooding issues;
- 13. Protect water resources and protect and enhance the biodiversity value of water and wetland habitats;
- 14. Strengthen and reinforce landscape character and ensure green and blue infrastructure enhances and fits with local landscape character; and
- 15. Ensure heritage is recognised in green infrastructure planning, interpretation, and tourism.
- 6.2. Examples of lower level priorities include to:
 - Develop a tree and woodland strategy to ensure tree planting follows principle of 'right tree, right place';
 - Promote sustainable woodland management;
 - Plan for the effects of ash dieback;
 - Increase the overall tree canopy of Folkestone & Hythe, and designate more Local Nature Reserves to increase the hectare provision per 1,000 people with a more even distribution across the district.

7. STRATEGIC AND SPATIAL OPPORTUNITIES

- 7.1. The district has been divided into three broad areas, in which the priorities and actions are examined in more detail. The three areas align with the Core Strategy Review and are:
 - Folkestone town, Hythe and Saltwood;
 - · Romney Marsh; and
 - North Downs.

- 7.2. There are several actions and recommendations which relate to green and blue infrastructure, including: creating unified public spaces, public realm greening and new public spaces; wayfinding and enhancing the cycling and walking experience, creating better connections; planting and landscaping for biodiversity, sustainable drainage and carbon sequestration. These should be prioritised as part of any regeneration of the town centre. Access for residents out of Folkestone to the north is severely restricted by the severing effect of transport infrastructure corridors. The railway to the south also limits access choices for these residents. The strategy focuses on the undeveloped land west of Folkestone from Shorncliffe and St Martin's Plain and north of Hythe and Saltwood. It is bounded to the north by the transport infrastructure of the A20 and railway line. Most of this area is within the Kent Downs AONB.
- 7.3. There are threats to this landscape. Although it is well-treed, the woodland blocks and hedgerows are threatened by ash dieback. Climate change is likely to lead to hotter drier summers, and warmer, wetter winters. The area is surrounded by urban areas to the east and south, with Otterpool Park planned along the western edge. This is an important area for recreation for current and future residents, particularly as there are only two access points across the transport corridor in the north. A large, and growing, local population will put pressure on recreation facilities within the landscape, such as public footpaths, which can result in erosion and damage. Providing high quality, well managed multi-functional paths to recreational spaces that can accommodate high levels of use, will help to protect more fragile elements of the landscape from indiscriminate use. These should be managed to direct visitors away from vulnerable 'honeypot' areas and to disperse recreational pressure.
- 7.4. One of the priorities for this area is to take a holistic view and develop a plan for biodiversity, landscape, blue infrastructure and access in the Saltwood and Hythe area. This should include interactions with urban fringe and accommodate the new Otterpool Park development in a way that takes account of the issues mentioned.

Romney Marsh

- 7.5. There is the need to strike a continual balance in an area that is internationally important for geomorphology and wildlife, but where local communities make a living and enjoy the natural assets on their doorstep. One of these is Coast Drive Car Park. This area is under-utilised, dilapidated, and provides little benefit to the community. It is adjacent to designated wildlife sites and therefore it is imperative that assessments and mitigation measures are agreed in advance the project is being planned and designed with this in mind
- 7.6. A priority for this area would be to consider a new cycle path from Lydd to New Romney to take traffic off the road and give families who haven't any other way of travelling, a chance to explore areas nearby. Many people in this area are unable to have holidays as it is a deprived area. This would help them with mental and physical wellbeing. Employees of the Dungeness Power Station would also benefit if a cycle path was put in situ along Dungeness Road, again taking traffic off the roads.
- 7.7. Another priority would be to plan strategically to ensure destination green spaces such as Dungeness RSPB, Dungeness Point, the Royal Military Canal, Romney Hythe and Dymchurch Railway and the coast are connected through promotional routes.

The North Downs

- 7.8. Most of this area is within the Kent Downs AONB. Woodlands are a prominent feature of the landscape and chalk grassland is particularly notable. The Open Spaces Strategy showed that in the North Downs some areas are currently below the quantity standard, for example Sellindge. Plans for new open spaces in Otterpool Park will help to alleviate this deficit and good access into them from these areas should be encouraged in the master planning process. Between Lyminge, through Elham and Wingmore is the course of the Nailbourne, a chalk 'bourne' which only flows at some times of the year.
- 7.9. Priorities include to protect the tranquillity of the landscape and sensitively manage, promote and celebrate the area's rich cultural and natural heritage, famous landmarks and views for future generations. Working in partnership with the Kent Downs Area of Outstanding Natural Beauty Unit to identify management opportunities in accordance with their management plans. Another priority that was identified through the workshops was a project to address the current lack of biodiversity and flooding problems associated with the Nailbourne.

8. PROPOSED NEXT STAGES

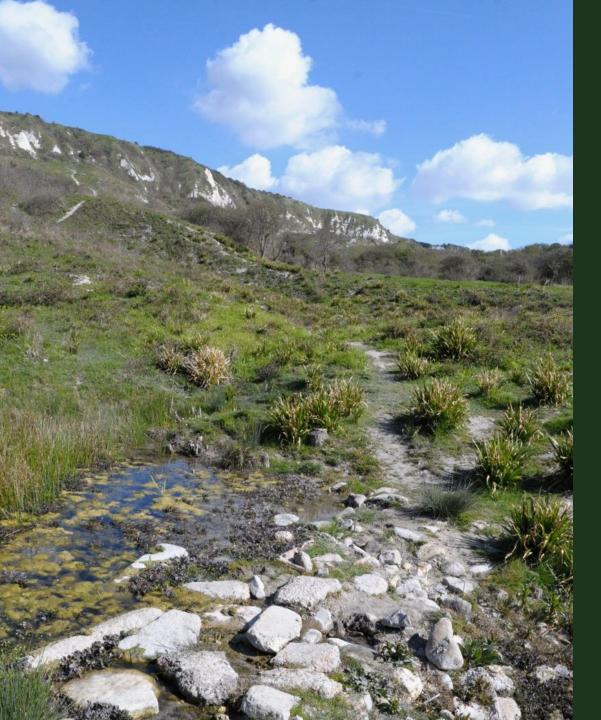
- 8.1 The Green Infrastructure Strategy (see **Appendix 1**) is referenced in the Places and Policies Local Plan and the Core Strategy Review. It provides important evidence to enable the implementation of the policies in the two local plans. To ensure that it carries weight in decisions on planning applications, it would need to be adopted in some form we would suggest as a Supplementary Planning Document (SPD) on Green Infrastructure, of which the main body could form the basis to provide guidance to developers.
- 8.2 The document has the potential to be wider than planning in terms of potential actions. However those actions would meet other objectives such as contributing to the Corporate Plan and Carbon Action Plan. The proposed Action Plan would make clear what partnerships are required for delivery (like the SARMS). Those actions that would fall within the council's responsibility would require monitoring either separately or through the Authority Monitoring Report (a monitoring document on the development plan that is published annually).
- 8.3 The consultants have produced an initial draft action plan of projects at a more detailed level (see **Appendix 2**). This draft action plan identifies priorities and needs, not all of which are within the direct control of the council, or which can be delivered by the council alone. The actions are therefore colour-coded to reflect this. As well as details of the projects it is intended to include information about partnerships delivering the projects and estimated costings. This would be similar to the action plan previously produced for the SARMS. It is proposed that the strategy and action plan are the subject of a focussed consultation with expert and local environmental organisations to ensure accuracy and relevance. This would also help to identify projects for inclusion in the plan. Again it is suggested that this would follow a similar process to the one undertaken for the SARMS, which was subject to a four-week focussed consultation.
- 8.4 Canterbury City Council's Green Infrastructure Strategy that was produced in 2018 was subject to a period of public consultation. Very little of the document was changed as a result but it was felt that the consultation helped to foster a sense of public ownership of the document. Consultation in the form of workshops was undertaken with environmental groups, expert organisations, Parish Councils, council officers and Members to understand the issues with the area. For the Folkestone & Hythe Green Infrastructure Strategy, it is suggested that rather than consulting on the entire

- strategy, public comment is invited on the final version of the action plan. This may identify more opportunities and enable the consultation to be more focussed, as well giving the public a sense of ownership.
- 8.5 A presentation on the Green Infrastructure Strategy work was given to the Climate & Ecological Emergency Working Group and then to all members as part of an event to inform all members of the work. It is suggested that following the two periods of consultation the Green Infrastructure Strategy, the action plan and results of the consultations are presented to Cabinet.



Appendix 1: Folkestone & Hythe Green and Blue Infrastructure Strategy (third draft April 2022)

Appendix 2: Folkestone & Hythe Green and Blue Infrastructure Strategy – Draft Action Plan (April 2022)





WHITE CLIFFS & ROMNEY MARSH COUNTRYSIDE PARTNERSHIP







WHAT IS OUR PURPOSE?

Our purpose is to protect and enhance the wild spaces of South-East Kent.

We will achieve this by inspiring people to act for the local environment and the future of our planet.



Wildlife – Climate - People





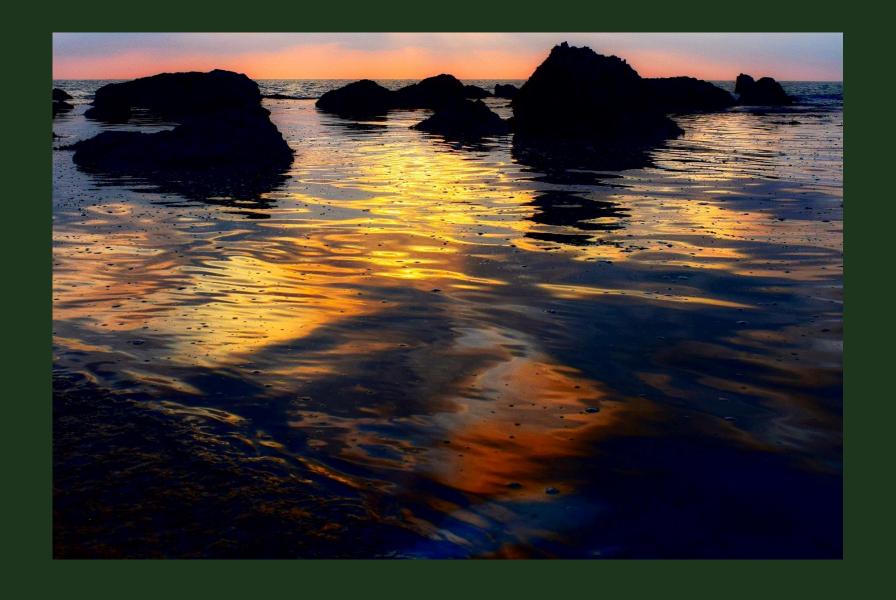
Focus Areas

- 1. Managing wild spaces
- 2. Reducing our climate impact
- 3. Inspiring local communities
- 4. Managing the Partnership









MANAGING WILD SPACES





HELPING OTHERS TO HELP THE ENVIRONMENT

We also help local landowners and communities alike to create wildlife havens on their doorstep for them to enjoy. This provides the added benefit for wildlife of a greater level of connectivity between the wild spaces in South-East Kent.



















INSPIRING LOCAL COMMUNITIES







PROMOTING THE LOCAL AREA











Managing FHDC's Nature Reserves











Romney Warren











Greatstone Dunes











Folkestone Warren





BEING THE EYES AND EARS ON THE GROUND

We are keen to make sure that the Nature Reserves that we manage are kept special for all site visitors and wildlife that drops by. Our Rangers are frequently found patrolling known issue spots, to try to proactively deal with any concerns as soon as they start to develop.













Any Questions?















The Climate Change Adaptation Programme for Kent and Medway

Kent County Council

Tom Henderson

Climate Change Adaptation

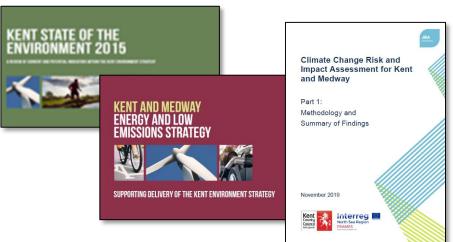
Kent County Council





What are we doing?





Adaptation Programme and Implementation Plan

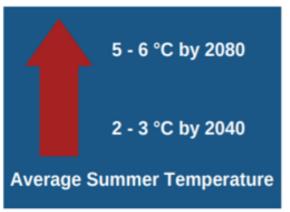
- Building on the Climate Change Risk and Impact Assessment for Kent and Medway (2019)
- Sector based approach:
 - Agriculture
 - Natural Environment
 - People and the Built Environment
 - Local Government
 - Transport
 - Industry
 - Utilities

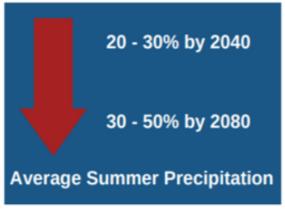
2050 Vision: By 2050, Kent and Medway will have enhanced their resilience to climate change and will be regarded as a model of excellence for climate adaptation, evidenced by their thriving society, economy, and environment.



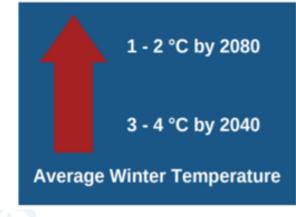
Future climate changes (UKCP18)

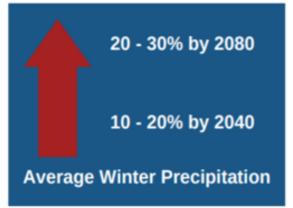
HOTTER DRIER SUMMERS





WARMER WETTER WINTERS



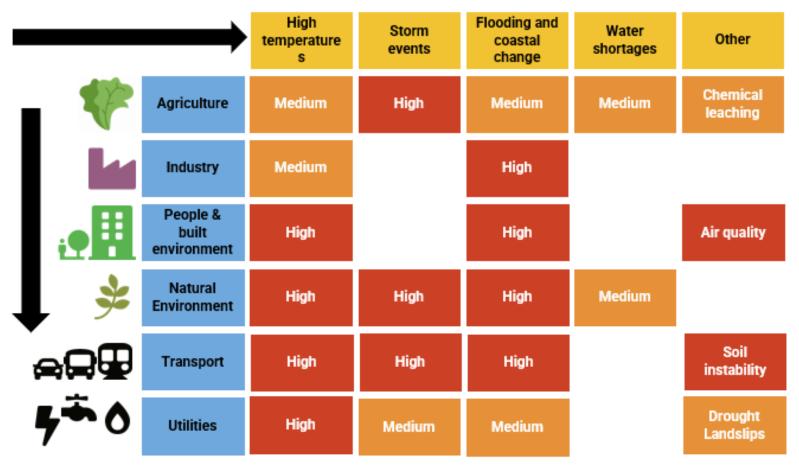






Kent's Risks from Climate Change

Kent CC Risk Assessment







Draft Adaptation Programme structure

- Introductory chapters; why adapt, policy context, purpose and vision.
- Sector Chapters:
 - Key risks, opportunities and organisations
 - Our priority
 - Resilience outcomes
 - High level activities
 - Now (2023-2025)
 - Medium term (2025-2030)
 - Longer term (2030 and beyond)





How? Local Government chapter example

Our priority: To embed climate adaptation into all key policy areas across local governments in Kent and Medway to ensure the quality and continuity of the key services they provide and safeguard the health and wellbeing of the county's residents as our climate changes.

Resilience outcome 1: Collaborative approach to embedding adaptation: Local authorities will work together to systematically incorporate climate adaptation into planning, commissioning, procurement processes and long-term decision-making.

Resilience outcome 2: Climate awareness and preparedness: Residents', local government officers' and local politicians' knowledge of local climate risks and the actions that must be taken to reduce the impacts of our changing climate will be raised through sustained and targeted awareness raising campaigns.

Resilience outcome 3: Climate resilient infrastructure and emergency planning. Ensure that existing and new local government infrastructure is climate resilient, and that emergency planning and response is prepared and able to cope with the growing impacts of our changing climate on infrastructure supporting the

Feedback

1. Risks and opportunities

- Accurate/representative for your areas?

2. Resilience outcomes and high level activities

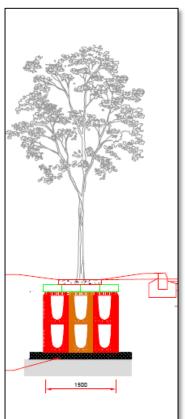
- Do you agree with them as priorities?
- Do you agree with the proposed activities?
- What are you already doing and to what extent?
- What is not being done but needs to be done? Why (barriers)?

3. High level activities and timelines

- What are the priority adaptation actions and timeframes in your areas?











Kent and Medway Energy and Low Emissions Strategy

PRIORITY 1: EMISSION REDUCTION PATHWAYS TO 2050

Set five-year carbon budgets and emission reduction pathways to 2050 for Kent and Medway, with significant reduction by 2030.

- Agree evidence and current baseline for five-year carbon budgets.
- Set local authority carbon budgets with emission reduction pathways to net zero by 2050, with significant reduction by 2030.

PRIORITY 2: PUBLIC SECTOR DECISIONMAKING

Develop a consistent approach across Kent and Medway, to assess, manage and mitigate environmental impacts (both positive and negative), resulting from public sector policies, strategies, service delivery, commissioning and procurement.

- Develop a simple checklist to identify where significant environmental issues and opportunities may arise, for use on imminent key decisions, major commissions and procurements.
- Revisit existing social value commitments within contracts and align to climate change and net-zero ambitions where possible.
- Stronger emphasis on reducing carbon miles and on buying local goods and services where possible.

PRIORITY 3:PLANNING AND DEVELOPMENT

Ensure climate change, energy, air quality and environmental considerations are integrated into Local Plans, policies and developments, by developing a clean growth strategic planning policy and guidance framework for Kent and Medway, to drive down emissions and incorporate climate resilience.

- Secure agreement for a joint Kent and Medway clean growth and climate change evidence base and planning resource, to ensure that planning decisions are fully informed by the latest evidence and advice.
- Refresh the Kent Design Guide to reflect clean growth, net-zero and climate change mitigation and adaptation.

PRIORITY 4: CLIMATE EMERGENCY INVESTMENT FUND

Establish a trusted Kent and Medway 'climate emergency' carbon offset scheme and renewable energy investment fund

- Review existing funding streams and see how they can be tweaked to provide additional resource.
- Package up quick wins and 'oven-ready' projects suitable for external funding such as crowd funding or business sponsorship
- Review external funding expertise and opportunities and look at increasing access to finance through collaboration and development of a central resource.

PRIORITY 5: BUILDING RETROFIT PROGRAMME

Develop Kent and Medway net-zero buildings retrofit plans and programmes for public sector, domestic and business.

- Undertake 'quick-wins' in public and commercial premises such as converting lighting to LEDs, installing energy and water efficiency measures and controls and training building managers.
- Utilise and promote existing funding pots: e.g Kent and Medway Warm Homes Programme, LOCASE (Low Carbon Across the South East) grant support programme to improve efficiency of local businesses.

PRIORITY 6: TRANSPORT, TRAVEL AND DIGITAL CONNECTIVITY

Set up a smart connectivity and mobility modal shift programme – linking sustainable transport, transport innovations, active travel, virtual working, broadband, digital services, artificial intelligence and behaviour change.

- Set a challenging 2030 business miles reduction target for the public sector.
- Work collaboratively with the public and private sector to roll out EV charging points and infrastructure for walking and cycling.
- Support public transport providers, including school transport providers, to use lower emission vehicles.
- Tackle poor air quality hotspots through the implementation of Air Quality Management Plans.

PRIORITY 7: RENEWABLE ENERGY GENERATION

Set up an opportunities and investment programme for renewable electricity and heat energy generation.

- Install roof-top solar panels on all suitable public sector buildings.
- Support residents and small businesses to install roof-top solar panels, by offering a group purchasing scheme such as Solar Together Kent.

PRIORITY 8: GREEN INFRASTRUCTURE

Develop a multi-functional, natural capital opportunity and investment programme – focusing on environmental projects that store carbon, increase climate change resilience, improve air quality and soil health and increase biodiversity.

- Identify natural environment 'quick-wins' and areas where tree establishment is needed, especially in relation to Ash Dieback.
- Produce tree planting guidance to ensure the right tree species are planted in the most appropriate places.

PRIORITY 9: SUPPORTING LOW CARBON BUSINESS

Develop and implement a Kent and Medway business recovery and support programme to cut costs and win new business.

- Support public sector suppliers to complete Steps to Environmental Management (STEM) training (or equivalent), in order to identify supply chain emissions and drive efficiencies where possible.
- Promote and refer businesses and supply chain to LOCASE, for support and access to grant funding to reduce their costs and access new markets.

PRIORITY 10: COMMUNICATIONS

Develop a comprehensive communications, engagement and behaviour change programme targeted at residents, employees, businesses and visitors.

- Link up existing stakeholder communications and agree shared messages on topics such as air quality, fuel poverty, active travel and energy efficiency.
- Use the Kent Environment Strategy Conference as a mechanism to raise the profile of local authority collective action.



Grants and Projects Brochure 2022

What is LoCASE?

- The Low Carbon Across the South and East (LoCASE) programme is supported by the European Regional Development Fund to provide a free business support programme in the Southeast.
- The aim is to help your business to become more competitive and profitable while protecting the environment & encouraging low carbon solutions.
- To do this, LoCASE provides grants for businesses of up to £20,000* as well <u>STEM (Steps to</u> <u>Environmental Management)</u> training and fully funded events. Targeted business support is on offer for companies who offer "green" or low carbon goods and services.

What can I get help with?

- Energy efficiency and other environmental improvements (e.g. waste reduction projects)
- Businesses in the 'low carbon' sectors can also buy: Marketing and websites, Covid 19 Recovery, IT and software and systems, tools and equipment, plant or machinery, product design, development and consultancy or industry accreditation



LOW CARBON ACROSS THE SOUTH AND EAST

How much?

- Up to £20k (*typically capped at £5k for second hand electric vehicles & £10k for most projects)
- 40% of project expenditure so total project costs of £10k, you will receive a grant up to £4k

Who is eligible?

- SMEs (most sectors)
- Based in Kent, East Sussex or Essex
- Have a commitment to tackle climate change



Why?

Lower emissions
Reduce costs
Tackle climate change
Grow the Green
Economy

https://locase.co.uk/



How do I apply?

- Contact us via the LoCASE website and click on <u>register</u> to complete eligibility questionnaire
- 2. We'll help you complete the forms
- 3. Get quotes to ensure value for money
- 4. After approval, order and pay for items
- 5. Upon proof of purchase, we'll pay you the grant within 30 days, usually much sooner







What is the C-Care Green Recovery Voucher Scheme?

- The Green Recovery voucher scheme will help small companies take advantage of environmental advice and services.
- Businesses in Kent can apply for a voucher of up to £1,500 to implement an environmental project to help improve business sustainability, resilience, and support economic recovery.



Why?

Covid recovery
Lower emissions
Reduce costs
Tackle climate
change
Spread best
practice

Who is eligible?

- SMEs must be based in Kent
- Have a commitment to tackle climate change
- Must have received less than €200,000 worth of publicly funded assistance over the last 3 financial years

How do I apply?

- 1. Contact us by emailing lowcarbon@kent.gov.uk to book an appointment or apply online by completing an eligibility form
- 2. We'll help you complete the forms
- If your application is successful, you will be able to select a supplier from our approved list of service providers (PDF), 499.6 KBI
- 4. You can then contact your chosen supplier who will assist you going forward.



How much?

 Typically, up to £1,500 as 100% of project value

What can I get?

- Design, supply and installation of energy efficiency measures and biodiversity solutions
- Review, development and supply of waste reduction interventions
- Review, development and supply of sustainable transport solutions
- 'Net Zero' transition planning
- E-cargo bikes and other e-bike transport solutions

https://lowcarbonkent.com/ccare-green-recovery-voucherscheme/





European Regional Development Fund







What is South East New Energy (SENE)?

The South East New Energy (SENE) is a £6.4 million project, led by the University of East London and part funded by the European Regional Development Fund (ERDF). The project aims to help businesses decarbonise their operations and learn more about how we can remove the barriers to rapid decarbonisation across our communities. There are also some other excellent activities supporting community energy, retrofit and innovation solutions to these key barriers.



Who is eligible?

- Most SMEs based in Kent (also targeting the wider SELEP region)
- Have a commitment to tackle climate change
- Must have received less than €200,000 worth of publicly funded (state aid) assistance over the last 3 financial years

https://lowcarbonkent.com/south-east-new-energy-sene/

How do I apply?

- Contact us via the <u>SENE website and click on Enquire Now</u> to submit interest
- 2. We'll help you complete the forms
- 3. Get quotes to ensure value for money
- 4. After approval, order and pay for items
- 5. Upon proof of purchase, we'll pay you the grant within 30 days, usually much sooner



How much?

- Typically, up to £30,000
- 25% of project expenditure

 e.g. if a project costs
 £100,000 total you will
 receive a grant up to
 £25,000

What can I get?

- 1) Free energy audits and surveys for renewable energy projects
- 2) Grants of up to £30,000 towards investment in energy projects

Why?

Lower emissions
Reduce costs
Tackle climate change









What is Upcycle your waste (UYW)?

- Upcycle Your Waste is a free program to support and train SMEs in the circular economy and upcycling of waste
- Support for SMEs in pilot areas for upcycling and sharing of waste and turning it into a valuable resource



What are the benefits?

- 1) Free program and training
- 2) Reduce costs directly and indirectly
- 3) Step-by-step approach and support
- 4) Widen tender opportunities by improving your
- 5) Support local development
- 6) Enhance your business network

Why?

Minimise your waste and reduce pollution Improve your waste management Minimise costs

How do I get involved?

- Access the free circular economy and upcycling training courses <u>here</u>
- Register your interest in joining an upcycling network or participating in our pilots by emailing us at lowcarbon@kent.gov.uk



What does upcycling mean?

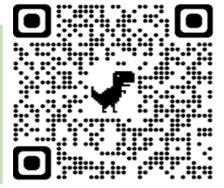
Upcycling is the process of reusing old materials and waste and transforming it into something more valuable or of a higher quality.

Examples of upcycling include using materials from plastic bottles to make new shoes or reclaimed wood to make quality furniture.

What are KCC doing?

- Creating upcycling networks and bringing businesses together to share waste
- Building platforms to tender for and find information about waste across Kent
- Running upcycling pilots across multiple towns
- Promoting the UYW training Academy

https://lowcarbonkent.com/upcycle-yourwaste/











What is Blueprint?

 BLUEPRINT aims to initiate the new policies, strategies and approaches required by local authorities to unlock sustainable and inclusive growth opportunities through the transition to a circular economy.



What are KCC doing?

- A range of activities across Kent and Medway including Kent Coffee Cups recycling, Kent Clothes Swap, Swale Sisters (sustainable period/period poverty project), Flat Recycling Working Group, Swale Bike Project, Fox's Waste Adventure and the Low Carbon Ambassadors Programme
- Collaborating with <u>partners</u> across the South and East Coasts of England and the North Coast of France
- Promoting the circular economy business directory and examples of good practise across Kent

Why?

Reduce our dependence on raw materials

Help economic growth

Reduce emissions

How do I get involved?

Contact us at lowcarbon@kent.gov.uk to get involved in our projects or visit https://projectblueprint.eu/



What is the circular economy?

A change to the model in which resources are extracted, made into products, and then become waste. A circular economy reduces material use, redesigns materials to be less resource intensive, and recaptures "waste" as a resource to manufacture new materials and products.

What are the benefits?

- 1) A new BLUEPRINT Model
- 2) A local authority monitoring and evaluation framework <u>service</u>
- 3) A local authority <u>training</u> programme and network
- 4) A <u>training programme</u> to develop skills and employability
- 5) A <u>networking hub</u> for social innovation
- 6) A series of behaviour change <u>campaigns</u>
- 7) Support local development
- 8) Enhance your business network

https://lowcarbonkent.com/blueprint/













What is Inn2Power?

- Inn2POWER is an extended five-year Interreg project of partners from the leading offshore wind clusters in the North Sea Region – including United Kingdom, Germany, Belgium and the Netherlands.
- The aim is to expand the capacity for innovation and to improve access to the offshore wind industry for small and medium enterprises (SMEs) by connecting offshore wind businesses in the North Sea Region.



Who is it for?

- 1. SMEs entering the wind or hydrogen supply chain/industry
- 2. SMEs facing innovation challenges in the wind and hydrogen supply chain
- 3. SMEs entering new markets



How can it help SMEs?

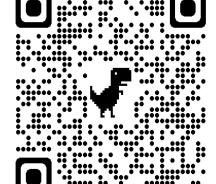
- Support growth in national and international markets
- Provides a <u>Company Directory</u>, an online address book for the offshore wind and green hydrogen industry in Europe which could:
 - Showcase your own capabilities to a large international network
 - Help expand your network and get in contact with suppliers, partners and new clients across Europe
- Improve knowledge, skills and availability of qualified staff
- Provide easy access to <u>test and</u> demonstration facilities

Why?

Economic development in the North Sea Region (NSR)

Support and attract Kent SMEs into the fast-emerging wind and hydrogen supply chains just off our coastline

https://lowcar bonkent.com/ inn2power/



How do I get involved?

- 1. Contact us at lowcarbon@kent.gov.uk
- 2. Visit Inn2POWER, Interreg VB North Sea Region Pogramme







District Street Lighting Proposed LED Upgrade



OPTIONS

Option 1 - Do nothing, the council continues to maintain and replace the assets as and when necessary.

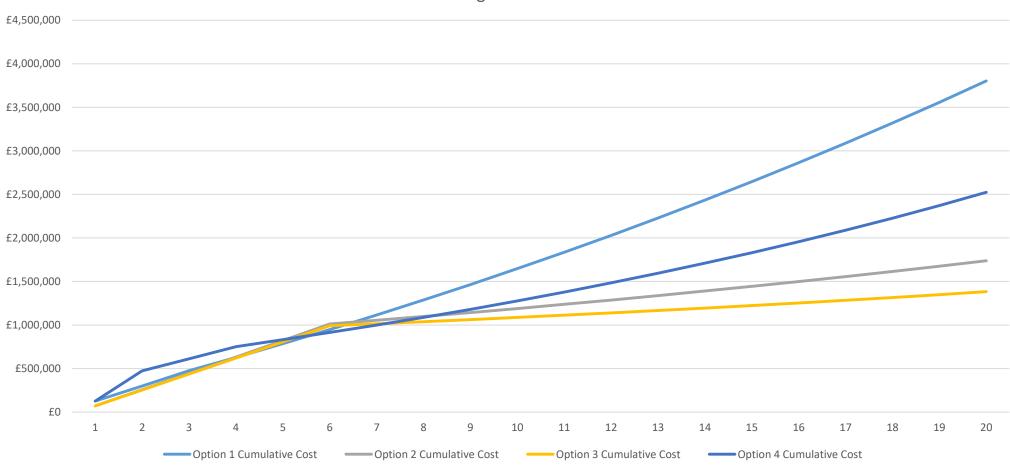
Option 2 - Upgrade and keep all lights, FHDC would upgrade all of its lights to KCC Specification, but keep and maintain them itself

Option 3 – Upgrade all and transfer where possible, FHDC would upgrade all street lights and transfer all adoptable assets to KCC

Option 4 – Upgrade transferable assets and transfer, leave others. FHDC would upgrade only the transferable assets and transfer all adoptable assets to KCC.

COST MODEL

Streetlights Cost Model



SURVEY

- CLT commissioned survey to establish redundant assets, and lights that could potentially be adopted by KCC
- Survey work completed in July 2021 on 1084 highway lights



SURVEY FINDINGS

Asset	Quantity	
Columns available for upgrade for KCC adoption	340	
Remaining assets not suitable for adoption but can be LED upgraded for easier maintenance and energy savings	723	
Columns to be permanently disconnected/removed from this project	21	



Projected Costs

- Total Project Cost- £815,034
- Proposal:
 - ➤ that Climate Change Reserve funds the LED conversion costs + commuted sum + 50% of project management costs = £478,370
 - ➤ Remaining costs for repairs to assets & replacements plus 50% of project management costs totalling £336,665 to be met from available capital resources. This may impact upon the council's future capital investment plans.
 - >CLT/Cabinet to consider

CARBON EMISSIONS SAVINGS

Lamp Model	Number of lamps	Fixture Wattage	Carbon Footprint
High Pressure Sodium (current)	1084	90	169,999 Kg
LED Model (Proposed)	1084	18	34,000 Kg
Carbon Savings / Year			135,999 Kg

Project Timescales

- Report to Cabinet in October 2021
- Order sent to supplier in November 2021
- Lead time for parts & delivery- February 2022
- Programme start date- March 2022
- KCC adoptions expected completion April 2022
- Retained assets start May 2022
- Completion December 2022

Questions?



Minutes from Full Council – 25 November 2020 Motion on notice

1. Councillor Miss Susan Carey, Conservative Group, set out her motion, which related to the council's Carbon Action Plan, as set out in the agenda.

Proposed by Councillor Miss Carey, Seconded by Councillor Hills;

That the Council takes the following action:

- That the Carbon Action Plan include commitments to adopt the following policies:
 - the Kent & Medway Energy & Low Emissions Strategy.
 - the Kent Biodiversity Strategy.
 - Kent's Plan Bee; and
 - an improved recycling target to benefit from the incentives in the new waste contract.
 - More opportunity for those in flats and houses in multiple occupation to recycle.
- That the plan considers:
 - a district version of the Climate Change Risk Assessment using the Climate Change Committee's methodology.
 - an Adaptation Plan to address the identified risks.
 - a 20% Biodiversity Net Gain policy for all new development in the district.
 - a 25% Biodiversity Net Gain policy for Otterpool Park.
 - Options for where the district can improve natural capital such as wildlife corridors, tiny forests, pocket parks etc.
 - Options for investment in renewable energy within the district.
 - Switching the council's vehicles to Low Emission Vehicles.
 - Increased enforcement against flytipping with more Op Assist interventions with Kent Police.
- That the council's action plan for Net Zero pays particular attention to how best to retrofit existing housing stock, that new housing is built to standards that do not require retrofitting to be carbon neutral and that ways are examined to improve air quality including an examination of the effects of bonfires and how these can be minimised.

Proposed by Councillor Whybrow, Seconded by Councillor Treloar; and

RESOLVED:

That the motion on notice be amended as follows:

That these suggestions be referred to the next meeting of the Climate and Ecological Emergency Working Group so that the Working Group can consider them and make recommendations to Cabinet.

Councillor Miss Carey, with the consent of Councillor Hills and the meeting, agreed to accept the amendment to form the substantive motion which was then open to debate and put to the vote.

(Voting figures: 29 for, 0 against, 0 abstentions).

Decarbonising F&HDC Social Housing stock

Update on social housing decarbonisation fund

30 Aug 2022



Social Housing Decarbonisation Fund

Addresses the corporate service ambition of quality homes

- £2m grant from Dept of Business, Energy and Industrial Strategy (BEIS) – social housing decarbonisation fund (SHDF); supported by
- £1m from F&HDC funds.
- 15% of capital to support admin and resources costs

FHDC Delivery targets

- 125 homes to EPC Band C with fabric measures ready for low carbon heating
- Programme period 1st July, 2022 31st March 2023
- New parallel, mandatory PAS2035 process tailoring works to individual homes
- Reduce: average energy use from c150kWh/m2/pa to 90kWh/m2/pa; remove condensation & damp
- Prepare for low carbon heating installation later



Estimated Saving on heating fuel use from more efficient 125 homes:

- 254 tonnes CO₂ per annum,
- 919,000 kWh heating energy per annum

Heating type by home

- 62 oil/lpg; & 53 inefficient electricity

Wave 1

Resources in place

Lead: Andy Blaszkowicz

Internal Team:

Team Advisors:

• External: PAS2035 Assessor, Designer & Coordinator,

Installer

Status

- Procurement of 3 installers plus PAS2035 in progress, direct award through Fusion21; Current PAS assessments 'at risk' by Vinci
- as the demonstrator final site planning visit
- Tenant engagement: pilot of 50 sites; 18 complete, 32 appointments made
- Tenant knowledge share: pack & RLO ready
- Preparing wider communications plan through media, website and CI-Lab



Key delivery risks identified

- Procurement and delivery by 31/3/23
- Delivery resource overload
- New contract terms for installers
- Materials and labour cost escalation

Delivery Oversight

- Installer contracts formation, delays
- Independent PAS Co-Ordinator procured
- Tenant engagement plan (100% acceptance)
- Ross House design completed

Wave 2 – Next steps 2022

Outline criteria issued by BEIS – detailed confirmation expected in 19th Sept 22 for 8 weeks

Some significant changes from wave 1

- 50% matched funding requirement
- Additional resources available for digitization
- Wider pool of homes (incl: sheltered, EPC Band D homes)
- 2-year project, scale is important
- Fabric-led, but low carbon heating may be included

F&HDC – next actions

- Initial targets c800 homes refinement in progress
- Initial grant bid c£10.0m PLUS £ 10.0m matched funds
- Considering Multiple Installers (resilience)
- Engaged with BEIS bid support team

Preparing

- Sept 2022 Cabinet paper, led by Housing
- Considering potential 'at risk' PAS2035 Design, pre award



Bid Summary

- c£20m bid value includes Administration at 15%
- Re-procure 3 installers and PAS network
- Encourage local contractors to obtain Trustmark
- Store materials locally

Bid Strategy

- Use the new stock condition and EPC survey
- Use the resources & experience from wave 1
- Include renewable heating systems
- Recognise scale and mass-impact



Any Questions

Thank you





Minutes

Climate and Ecological Emergency Working Group

Held at: Remote meeting

Date Monday, 13 December 2021

Present Councillors Gary Fuller, Anthony Hills,

Connor McConville* and Lesley Whybrow (Chair)

Apologies for Absence Councillor Ian Meyers

Officers Present:



Others Present: None

(* joined the meeting from minute number 4)

1. Declarations of interest

There were no declarations of interest.

2. Minutes

The minutes of the meeting held on 9 September 2021 were agreed. The Chair's signature will be added electronically.

Prior to moving onto the main agenda items, Councillor Tony Hills, mentioned lamp post EV charging points. KCC had encountered technical issues with proposed installation. Councillor Hills will update members further about this issue.

3. UK 100 Membership

The briefing note provided information on UK100, a network of local authorities who have pledged to take action on climate change.

The Working Group was therefore asked to provide a recommendation to the Leader on whether to join the UK100 network.

The Chair asked members and it was unanimously agreed that recommendation is given to the Leader to join this network.

Councillor Connor McConville joined the meeting.

4. Proposed Green Business Grant Scheme

The report put forward a proposal for a green business grant scheme to support businesses that are located, or seeking to locate in the district, with implementing carbon reduction measures.

, presented the report, members commented as follows:

- It was noted the Dover District Council concentrate on small businesses, however as the Folkestone & Hythe district does not contain many large businesses, a limit has not been applied.
- Impact of funding against carbon reduction? advised this would be considered, ie value for money and carbon reduction criteria.
- Any data availability from Dover District Council and Tonbridge & Malling Borough Council on their grant schemes?
 will return to members with further information.

Members thanked for the report.

It was suggested, and agreed by all members, that the recommendation to Cabinet includes reference to the working group's agreement to this proposal.

5. **District Wide Strategy**

The report outlined the proposed structure for the District-wide Carbon Plan and proposal for consultation in response to the Climate & Ecological Emergency Declaration Resolution; to develop a strategy for Folkestone & Hythe District Council to play a leadership role in community, public and business partnerships for our Carbon Neutral 2030 commitment throughout the district.

, presented the report and pointed out the priority areas consisting of five pillars.

Turning to the four appendices in the report, members were asked to comment,

Appendix 1 – District Wide Carbon Action Plan – Draft Proposed Structure.

- Ensure a clear project plan and outcome.
- What effect can the Council have? Ensure close working with KCC to reduce car usage; use of public right of ways (PROWS) as potential cycle paths; community transport.

- Policy updates, for example planning policies, how can these be improved? Design codes, the Council has applied to be part of the Government's pilot scheme, funding may be available.
- Transport KCC are updating their Local Transport Plan to incorporate green credentials, as a Council we could influence this.
- Ecology and biodiversity references.

Appendix 2 – District-wide Carbon Plan – Draft Proposed Engagement Strategy.

spoke about this proposal and how a steering group of stakeholders would collaborate and discuss the drive to net zero carbon. The suggested name was the 'Carbon Innovation Lab' and the proposal drew on experience of a similar approach at the London Borough of Hounslow, which had proved successful. It would be an informal, self-elected forum which would be chaired by the Council. There may be a need for the group to split into Task & Finish Groups.

Members raised the following points:

- Steering group selection? Details will be looked at, also need to consider the level of interest and who wants to become engaged, ie schools, charities, green industry businesses.
- Frequency? Possibly quarterly with the Council preparing agendas and minutes.
- Numbers? Possibly 20 to 30 attendees with half a dozen taking an active role.
- A suggestion that the Council should support the group, rather than lead it.
- Ensure the report to Cabinet captures the views of the working group.

Appendix 3 – District Wide Carbon Plan – Proposed Draft Project Plan and Timetable.

said this is a high level plan incorporating a formal consultation. Communications are key.

Appendix 4 – District Wide Carbon Plan – Draft Proposed High Level Actions

Members considered this a good starting point with the idea to identify where emissions originate from and ask the Steering Group to decide on the actions required.

The Chair asked about the budget, looking at consultation costs, physical staff resources will be needed especially if the Council considers working with schools.

Further actions subsequent to this meeting – redraft strategy taking on board the working group's comments; draw up a list of participants; and present to Cabinet for approval.

6. Briefing Note on the Government's 'Net Zero Strategy: Build Back Greener'

The report summarised the Government's recently published Net Zero Strategy, 'Build Back Greener', for the Working Group's information. It provided a snapshot to members of the published document.

Members referred to the document as highly aspirational and thanked officers for the briefing.

7. Update on the Carbon Action Plan

gave members a progress report on the Carbon Action Plan, which included:

- Mandatory training now complete for all officers and members.
- Climate impact statement on Cabinet reports six month trial continues.
- Climate Change Champions making good progress with new ideas and regular updates.
- New waste bins in the Civic Centre to further ensure efficient waste streams.

Members suggested that a facts and figures update would be useful compared to six months ago, maybe presented as an infograph to show progress and further understanding. Also, a suggestion for possible internal allocated funding to take ideas forward and encourage innovation, which could then be promoted through comms.

8. Future of the Working Group

Members' suggestions and comments follow:

- Large amount of hard work undertaken by the working group.
- Suggest continuing regular working group meetings and also six monthly all member briefings.
- Ensure meetings are flexible to ensure regular member attendance or appoint substitutes. Terms of reference will need to be checked with regard to substitutes.
- Climate Change budget ensure value for money.
- Keep momentum of ideas coming forward to the working group.
 Councillor Hills suggested; adaptation of changing environment; more resilience and planning; widening of drainage systems on Romney Marsh; working closely with Environment Agency; surface water flooding and flood resistance.

The Chair, Cllr Whybrow referred to a publication entitled 'Natural Solutions to Climate Change in Kent' produced by KCC. Cllr Hills will endeavour to provide a link to this resource to members.

Cllr Whybrow will also provide links to the Southern Water presentation, held at a meeting of the Kent Flood Risk Management Committee in November, and the Net Zero Carbon toolkit produced by Cotswold District Council.

All members joined in congratulating Cllr Whybrow on chairing this working group, ensuring cross-party teamwork. Officers were also recognised for their knowledge and hard work.

Private Sector Housing Energy Efficiency Initiatives Update

September 2021



- Approximately 50,000 residential properties
- Approximately 45,000 in the private sector
- 9,000 homes private rented sector (PRS)
- Private Sector Housing work to deal with poor housing conditions
- Promote energy efficiency in PRS and owner occupied homes
- Range of partnership initiatives



Kent Wide Warm Homes Initiative

- KCC partnership with districts
- Services delivered by Aran Services Ltd
- Funded through Energy Provider ECO levy funding
- Targeted at low income households
- People with long-term illnesses/disability
- Insulation
- Energy efficient boilers
- FHDC has assisted with targeting
- Approximately 70 households assisted since April



- Winter Warmth Grants
 - Targeted at vulnerable households
 - Over 65 years of age
 - Funding through the Better Care Initiative
 - Aim to prevent hospital admission through ill health
 - Measures on average £10K
 - Insulation and energy efficient boilers
 - Approximately 50 grants provided since 2015



Disabled Facilities Grants

- Grants of up to £30K to adapt the homes of vulnerable people/low incomes – assessment by OTA
- Enabling them to live independently in their homes
- Where energy efficiency shortfalls identified works are extended
- New insulation/energy efficient boilers
- 5-10 cases each year

Joint Working with Private Sector landlords

- Awareness raising
- Sign posting
- Where necessary enforcement



New Funding Streams – Local Authority Delivery Scheme 2

- Government funding delivered through South East Energy Hub
- Works Contractor Happy Energy (Private contractor)
- £350K targeted at F & H District
- Targeting low income households < £30K
- Landlords required to make a 30% contribution to any works
- Properties with an EPC of D and below
- Average spend per property £10K
- Working with Happy Energy to target low income househelds
- Non-zero carbon works insulation/gas boilers
- Spend by 31 March 2022



- Works to date energy efficiency given available funding
- LADS 3 due to be announced later this year
- Hopefully focus on Zero Carbon measures
- Air sources heat pumps in addition to insulation/Innovations
- Due to have a longer spending period
- More significant funding
- Ongoing internal working to respond to bidding opportunities
- Further support from South East Energy HUB
- Support from our in-house Carbon Advisor



Private Sector Housing

Any questions



To:	Climate and Ecological	Emergency	/ Working Group

Date: 13 December 2021

From:

SUBJECT: PROPOSED GREEN BUSINESS GRANT SCHEME

SUMMARY: This report puts forward a proposal for a green business grant scheme

to support businesses that are located, or are seeking to locate in, the

district with implementing carbon reduction measures.

1. INTRODUCTION

- 1.1 Folkestone and Hythe District Council has committed to reducing its own carbon footprint to a net zero target by 2030. The F&HDC Carbon Action Plan advocates that the council be an influencer of change within the district and proposes to support local communities, organisations and businesses in the implementation of measures designed to reduce the CO2 footprint to net zero by 2030 in the district as a whole.
- 1.2 In February, the council agreed a budget to support the Carbon Action Plan which included allocating £5 million to a Climate Change Reserve.
- 1.3 The UK's low-carbon economy is worth more than £200bn, four times the size of the manufacturing sector. The low-carbon sector grew by 7.4% during the financial year 2018-19 to 2019-20 and, while this contracted by -9% over the period of the pandemic, it is expected to bounce back in the post-Covid recovery. More than 75,000 businesses, from wind turbine manufacturers to recycling plants, employ more than 1.2m people in the green economy, so it is important therefore that we support this sector and the economic growth opportunities it presents for the district.
- 1.4 There are a number of business grant schemes available across Kent & Medway, with some available to businesses in the district and a summary of these is provided below.
 - Clean Growth Funding –this UK-wide scheme is run by BEIS. Provides financial support for innovations that reduce greenhouse gas emissions or improve resource efficiency across power, transport, industry, buildings, waste and water.
 - LoCASE –this KCC-run ERDF project provides grants £1,000 £10,000 (40% total
 project cost) to any SME to improve energy efficiency or produce goods or services in
 a more environmentally sustainable way and to LCEGS firms to further develop their
 business.
 - Green Recovery Voucher Scheme –KCC's C-Care Interreg programme provides business grants for sectors hard-hit by the pandemic to develop new business models to respond market changes and ensure a green, inclusive and sustainable economic recovery.
 - Upcycle Your Waste this KCC-run Interreg project provides SMEs with support to turn company waste into a valuable resource. SMEs are taken through a step-by-step process to maximize profit from business waste, and given tools to improve general knowledge on circular economy, the value of waste, waste legislation and upcycling solutions.
 - I-Construct available to construction and built environment sector SMEs in the SE LEP area to access new business opportunities and new ways of doing business (such as offsite construction, renewable energy, digital technology) to improve their

- profitability and sustainability, and overcome barriers to innovation. The support includes business mentoring, grant funding of up to £25,000 and networking opportunities via physical and virtual forums.
- South East New Energy project supports local enterprises (private and social) and
 other organisations in preparing and implementing "Net Zero Carbon" action plans,
 reducing emissions, and in the innovation and development of low carbon products,
 technologies and services. For SMEs the project can help with: Developing and
 commercialising low carbon products, technologies and services; Growing and
 developing the business to take advantage of rapidly growing 'green' market sectors;
 and Retrofiting affordable low/zero carbon homes.
- Tonbridge & Malling Green Grant scheme TMBC provides grants up to £8,000 for local businesses in the district operating in the green economy to develop new ideas and grants up to £5,000 for businesses in the food production, tourism and hospitality, distribution and logistics, construction and independent retail sector to reduce their carbon footprint. For both types, grants are available for up to 40% of the total cost and a LoCASE grant is eligible at match funding.
- Dover Green Energy Grant DDC provides grants up to £10,000 to local businesses (with up to 10 employees) in the district for up to 50% of the total project costs. This grant is available for items such as insulation and draft proofing, solar panels and solar thermal, upgraded windows and LED lighting (subject to planning conditions).

2. PROPOSED SCHEME

- 2.1 It is proposed that Folkestone & Hythe High Green Business Grant Scheme Fund will be for businesses currently located or seeking to establish new premises in the district that are in the LCEGS sector and looking to develop new products or services that will help others to reduce their carbon footprint. The definition of the LCEGS sector is as defined by KCC and it is estimated that there are around 600 businesses employing about 4000 in 2018 in the Folkestone & Hythe district¹.
- 2.2 The grant scheme will also be available to any other business currently located or seeking to establish new premises in the district that is looking to:
 - invest in more energy efficient equipment and machinery which improves the carbon footprint; or
 - undertake energy audits to identify where the business can make carbon savings.
- 2.3 The scheme will normally provide a grants of up to £10,000, but up to £25,000 in exceptional circumstances. Grants are required to cover up to 40% of the total project costs, with the remaining 60% coming from other grant schemes (such as LoCASE) or from the company's own resources, including bank loans.
- 2.4 A single business will be normally eligible for a single grant award. However, where a grant is provided for an Energy Audit, a further grant to undertake further investment based on the outcome of the audit will be considered on a case by case basis.
- 2.5 It is proposed that £250,000 of the Climate Change Reserve is allocated for the Folkestone & Hythe Green Business Grant scheme and that these funds made available until 31st March 2024 or until the funds are allocated.
- 2.6 The grant scheme will be advertised on the Folkestone & Hythe and Folkestone. Works websites and an electronic application form will be made available for applications (see

¹ https://www.kent.gov.uk/ data/assets/pdf file/0017/102149/Business-environmental-statistics.pdf

Appendix 1). The scheme will also be promoted through direct emails to local businesses, through social media and through other means of communication available from working closely with the Communications team and other external organisations.

- 2.7 The scheme will be administered by the Economic Development Team who will be responsible for assessing applications against an agreed criteria.
- 2.8 The cost of administering the scheme by the ED team will be borne from the funding allocated to this scheme over its duration.

3. PROPOSED APPLICATION PROCESS

- 3.1 Grant applications from businesses will be made via an online application form and the criteria for assessing applications will include:
 - Eligibility of business
 - The nature and timing of the proposed works/project
 - Size of grant required
 - Match funding source
 - Impact of the project on the Carbon Footprint of the business
 - Value for money size of grant versus impact
 - · Likelihood of further investment by the business to reduce Carbon Footprint further
- 3.2 Guidance will be provided on the type of project that will be supported by the scheme and the information required support the application, such as how to estimate any carbon savings. Further to any grant being awarded, the council will follow-up with checks to determine what carbon savings have been achieved,
- 3.3 The Grant scheme could be launched at the beginning of the 2022/23 financial year, if Cabinet approval is granted, and this could serve as a 'quick win' for the council to demonstrate its firm commitment to the addressing the climate emergency. The scheme will then run until either 31st March 2024 or until the funds are allocated.
- 3.4 Applications will be considered on a first come first served basis and assessed according to criteria set out in paragraph 3.1 above. Applications will be assessed by the Economic Development team in conjunction with the Low Carbon Senior Specialist
- 3.5 Final decisions on individual applications will be made by the Leader of the Council in collaboration with the Lead Cabinet Member for the District Economy, Lead Cabinet Member for the Environment and a Ward Member determined by the location or proposed location of the business.

Appendix 1: Folkestone & Hythe Green Business Grant Scheme Application Form

	BUSIN	NESS DETAIL	S
Name of applicant			
telephone:			
email address:			
Position within business:			
Business name			
Business address			
Is this the address where	YES/NO	If NO, please	give address:
the project will be			
undertaken?			
What is your business		Sole Trader	YES/NO
legal status?	Limi	ted Company	YES/NO
		ited Liability	YES/NO
		ership (LLP)	YES/NO
	Other (p	lease specify)	
If relevant, are you a		Parent	YES/NO
'parent' or 'single'		Single	YES/NO
company?			
Date business established			
(If incorporated, please			
state date of incorporation)			
Type of business (if			
registered with Companies			
House, please indicate your			
registered SIC code/s)			
Total Employment			
(if relevant, please indicate			
FT/PT split):			
Business turnover (£):	2019/20		
	2020/21		
Please provide the following	where applicab	ole:	
Company Registration			
Number and/or Charity			
Reference Number			
VAT Registration Number			
Business website address			
(if available)			
Have you received funding	YES/NO	If Yes, plea	se provide details including date,
from Central Government		amount an	d awarding body
or Local Government over			
the last 3 years?			

	PROJ	ECT DETAILS			
Project description:					
		I ED I : L :	1	D 1. D 5	
Please tick if the project		LED Lighting		Draught Proofing	
includes		Lighting sensors/ controls		Double/ Triple Glazing	
any of the following		Efficient boiler replacement		Variable Speed Drives	
		Efficient Air Conditioning		Solar PV	
		Heating/ Cooling controls		Wind, Biomass or Hydro	
	Pipew	vork/ valve/ cylinder insulation		Employee engagement	
		Roof/ Wall Insulation		Waste Management	
		Energy Audits		Other (Please detail below)	
Has an energy audit previously	YES/NO	If NO, is this	YE	S/NO	
been undertaken for your		something that you			
business?		would be interested			
		in receiving funding			
		towards?			
Please outline the expected					
carbon savings of this project					
to your business.	YES/NO	If VEC places			
Do you require any permissions (such as planning, licenses or	I ES/NO	If YES, please whether these			
building control) before you		permissions have			
can deliver this project?		already obtained or			
can denver this project.		explain permissions			
		are required and			
		when you expect to			
		secure these			
Total Project Cost (£)					
F&H Green Business Grant					
sought (£) (Note: potential					
award is up to a maximum of					
40% of total project cost)					
Sources of match funding					
(Note: please indicate whether					
any of this is from other grant scheme such as LoCASE)					
Please state the environmental					
benefits expected from project					
Please state the economic					
benefits for your business that					
are expected from this project					
(such as greater efficiencies and					
cost savings, or new market					
opportunities)					
What is the expected start date					
for this project?					
When do you expect to					
complete the project?					

	DECLARATION			
	s my organisation or any person who has powers of			
representation, decision or control in the organisation has not been convicted anywhere in				
•	List of Mandatory and Discretionary Exclusions			
document.				
I confirm that in the last 5 years, my	organisation has not been subject to formal			
investigation which resulted in a pro				
	relevant policies and procedures in place to prevent			
	on of offences covered by the Criminal Finances Act			
2017 from my organisation supply cl	hains			
I confirm that I have read the requir	rements for the Green Business Grants Scheme and			
am authorised to submit this applica				
<u>-</u>	I declare that my business meets the criteria for the grant I am applying for, and the			
	blete and accurate. If any circumstances change, I will			
notify the council of this change immediately.				
I confirm that, including the paymen	nt of this grant, my business will not breach State			
subsidy regulations	or viiis gr wiii, iii, s wsiiisess			
I confirm that this business is engage	ed in business activity and is not in			
• '	ent or has a Striking-Off Notice made against it			
Name of person making				
declaration				
Signature				
Position in the business				
BANK DET	TAILS FOR RECEIPT OF GRANT			
Name of Bank or Building Society				
Account Holders Name				
Account Number				
Sort Code				

To: Climate and Ecological Emergency Working Group

Date: 13 December 2021

From: Dr Katharine Harvey, Chief Economic Development Officer

SUBJECT: PROPOSED GREEN BUSINESS GRANT SCHEME

SUMMARY: This report puts forward a proposal for a green business grant scheme

to support businesses that are located, or are seeking to locate in, the

district with implementing carbon reduction measures.

1. INTRODUCTION

- 1.1 Folkestone and Hythe District Council has committed to reducing its own carbon footprint to a net zero target by 2030. The F&HDC Carbon Action Plan advocates that the council be an influencer of change within the district and proposes to support local communities, organisations and businesses in the implementation of measures designed to reduce the CO2 footprint to net zero by 2030 in the district as a whole.
- 1.2 In February, the council agreed a budget to support the Carbon Action Plan which included allocating £5 million to a Climate Change Reserve.
- 1.3 The UK's low-carbon economy is worth more than £200bn, four times the size of the manufacturing sector. The low-carbon sector grew by 7.4% during the financial year 2018-19 to 2019-20 and, while this contracted by -9% over the period of the pandemic, it is expected to bounce back in the post-Covid recovery. More than 75,000 businesses, from wind turbine manufacturers to recycling plants, employ more than 1.2m people in the green economy, so it is important therefore that we support this sector and the economic growth opportunities it presents for the district.
- 1.4 There are a number of business grant schemes available across Kent & Medway, with some available to businesses in the district and a summary of these is provided below.
 - Clean Growth Funding –this UK-wide scheme is run by BEIS. Provides financial support for innovations that reduce greenhouse gas emissions or improve resource efficiency across power, transport, industry, buildings, waste and water.
 - LoCASE –this KCC-run ERDF project provides grants £1,000 £10,000 (40% total
 project cost) to any SME to improve energy efficiency or produce goods or services in
 a more environmentally sustainable way and to LCEGS firms to further develop their
 business.
 - Green Recovery Voucher Scheme –KCC's C-Care Interreg programme provides business grants for sectors hard-hit by the pandemic to develop new business models to respond market changes and ensure a green, inclusive and sustainable economic recovery.
 - Upcycle Your Waste this KCC-run Interreg project provides SMEs with support to turn company waste into a valuable resource. SMEs are taken through a step-by-step process to maximize profit from business waste, and given tools to improve general knowledge on circular economy, the value of waste, waste legislation and upcycling solutions.
 - I-Construct available to construction and built environment sector SMEs in the SE LEP area to access new business opportunities and new ways of doing business (such as offsite construction, renewable energy, digital technology) to improve their

- profitability and sustainability, and overcome barriers to innovation. The support includes business mentoring, grant funding of up to £25,000 and networking opportunities via physical and virtual forums.
- South East New Energy project supports local enterprises (private and social) and
 other organisations in preparing and implementing "Net Zero Carbon" action plans,
 reducing emissions, and in the innovation and development of low carbon products,
 technologies and services. For SMEs the project can help with: Developing and
 commercialising low carbon products, technologies and services; Growing and
 developing the business to take advantage of rapidly growing 'green' market sectors;
 and Retrofiting affordable low/zero carbon homes.
- Tonbridge & Malling Green Grant scheme TMBC provides grants up to £8,000 for local businesses in the district operating in the green economy to develop new ideas and grants up to £5,000 for businesses in the food production, tourism and hospitality, distribution and logistics, construction and independent retail sector to reduce their carbon footprint. For both types, grants are available for up to 40% of the total cost and a LoCASE grant is eligible at match funding.
- Dover Green Energy Grant DDC provides grants up to £10,000 to local businesses (with up to 10 employees) in the district for up to 50% of the total project costs. This grant is available for items such as insulation and draft proofing, solar panels and solar thermal, upgraded windows and LED lighting (subject to planning conditions).

2. PROPOSED SCHEME

- 2.1 It is proposed that Folkestone & Hythe High Green Business Grant Scheme Fund will be for businesses currently located or seeking to establish new premises in the district that are in the LCEGS sector and looking to develop new products or services that will help others to reduce their carbon footprint. The definition of the LCEGS sector is as defined by KCC and it is estimated that there are around 600 businesses employing about 4000 in 2018 in the Folkestone & Hythe district¹.
- 2.2 The grant scheme will also be available to any other business currently located or seeking to establish new premises in the district that is looking to:
 - invest in more energy efficient equipment and machinery which improves the carbon footprint; or
 - undertake energy audits to identify where the business can make carbon savings.
- 2.3 The scheme will normally provide a grants of up to £10,000, but up to £25,000 in exceptional circumstances. Grants are required to cover up to 40% of the total project costs, with the remaining 60% coming from other grant schemes (such as LoCASE) or from the company's own resources, including bank loans.
- 2.4 A single business will be normally eligible for a single grant award. However, where a grant is provided for an Energy Audit, a further grant to undertake further investment based on the outcome of the audit will be considered on a case by case basis.
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- 2.6 The grant scheme will be advertised on the Folkestone & Hythe and Folkestone. Works websites and an electronic application form will be made available for applications (see

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- 2.7 The scheme will be administered by the Economic Development Team who will be responsible for assessing applications against an agreed criteria.
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Name of applicant			
telephone:			
email address:			
Position within business:			
Business name			
Business address			
Is this the address where	YES/NO	If NO, please	give address:
the project will be			
undertaken?			
What is your business		Sole Trader	YES/NO
legal status?	Limi	ted Company	YES/NO
		ited Liability	YES/NO
		ership (LLP)	YES/NO
	Other (p	lease specify)	
If relevant, are you a		Parent	YES/NO
'parent' or 'single'		Single	YES/NO
company?			
Date business established			
(If incorporated, please			
state date of incorporation)			
Type of business (if			
registered with Companies			
House, please indicate your			
registered SIC code/s)			
Total Employment			
(if relevant, please indicate			
FT/PT split):			
Business turnover (£):	2019/20		
	2020/21		
Please provide the following	where applicab	ole:	
Company Registration			
Number and/or Charity			
Reference Number			
VAT Registration Number			
Business website address			
(if available)			
Have you received funding	YES/NO	If Yes, plea	se provide details including date,
from Central Government		amount an	d awarding body
or Local Government over			
the last 3 years?			

	PROJ	ECT DETAILS			
Project description:					
		I ED I : L :	1	D 1. D 5	
Please tick if the project		LED Lighting		Draught Proofing	
includes		Lighting sensors/ controls		Double/ Triple Glazing	
any of the following		Efficient boiler replacement		Variable Speed Drives	
		Efficient Air Conditioning		Solar PV	
		Heating/ Cooling controls		Wind, Biomass or Hydro	
	Pipew	vork/ valve/ cylinder insulation		Employee engagement	
		Roof/ Wall Insulation		Waste Management	
		Energy Audits		Other (Please detail below)	
Has an energy audit previously	YES/NO	If NO, is this	YE	S/NO	
been undertaken for your		something that you			
business?		would be interested			
		in receiving funding			
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Please outline the expected					
carbon savings of this project					
to your business.	YES/NO	If VEC places			
Do you require any permissions (such as planning, licenses or	I ES/NO	If YES, please whether these			
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Sources of match funding					
(Note: please indicate whether					
any of this is from other grant scheme such as LoCASE)					
Please state the environmental					
benefits expected from project					
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subsidy regulations	or viiis gr wiii, iii, s wsiiisess			
I confirm that this business is engage	ed in business activity and is not in			
• '	ent or has a Striking-Off Notice made against it			
Name of person making				
declaration				
Signature				
Position in the business				
BANK DET	TAILS FOR RECEIPT OF GRANT			
Name of Bank or Building Society				
Account Holders Name				
Account Number				
Sort Code				

Carbon Action Plan Update

Climate & Ecological Emergency Working Group 7 September 2022

Folkestone

Carbon Action Plan (CAP) 2021

- Focus emissions from council's estate and operations
- Emissions quantified by LASER Energy 1,536 tCO₂e at 2018/19
- Includes scope 1, scope 2 and some scope 3 emissions
- Sets out 33 actions over short, medium and long term
- Focus on six key areas: energy; behaviour change; transport; water; contracts; and biodiversity/green space



Issues with Carbon Action Plan 2021

- Useful starting point for action
- High-level actions aspirational but not quantifiable in terms of tonnes of carbon equivalent reductions
- Changes in estate and potential implications for operational boundary
- No interim targets or performance indicators



Review of Carbon Reduction Plan (CRP)

- Tendered for review of 2021 Carbon Action Plan and production of Carbon Reduction Plan
- Consultant appointed Carbon Descent
- Similar studies undertaken e.g. Greater London and London Boroughs
- Inception meeting held 6 September 2022



Proposed output with timeline

Output	Deliverables
Stage 1: Review of CAP 2021 Project inception to 3 months	 An assessment of progress to date Changes in scope – estate and operations Quantification of the likely carbon trajectory Quantification of any likely under-performance Identification of any limitations or uncertainties Presentation of the key findings to the Climate and Ecological Emergency Working Group



Proposed output with timeline

Project Stage	Deliverables
Stage 2: Production of Carbon Reduction Plan (CRP) 3 months to 6 months	 Detailed actions to accompany 2021 CAP, including estimated technology roll out and deployment times, with indicative capital spend profiles and monitoring metrics Detailed action plans covering any additional actions or key technology opportunities, not already in the CAP Analysis of the potential carbon reductions and calculation of likely carbon trajectory to 2030 Advice on offsetting residual emissions Advice on measurement and verification actions A list of non-technology actions (e.g. internal policy changes, operational procedures etc.) to achieve net zero targets A presentation of the key findings to the Climate & Ecological Emergency Working Group.

Questions?

