

COUNCIL MEETING

AGENDA

17th March 2020

**Shire Hall
Cambridge**

GUIDANCE NOTES FOR VISITORS - SHIRE HALL COMMITTEE ROOMS

Please read these notes for your own safety.

The County Council will endeavour to ensure that you come to no harm whilst in our buildings, but **you** also have a responsibility to ensure that you do not put yourself or others at risk.

SECURITY

All visitors must report to main reception to sign in and will be handed a visitor badge which must be worn at all times whilst in the building.

Please do not forget to sign out at reception and return your badge when you leave. The visitor book is used as a register in case of emergency building evacuation.

FIRE/EMERGENCY EVACUATION SIGNAL

This is a continuously sounding alarm.

If it sounds - vacate the building immediately following the signs for emergency escape routes and fire exits. Go straight to the assembly point at the front of the building. (Notices with diagrams are available in each of the Committee Rooms.)

DO NOT STOP TO COLLECT PERSONAL BELONGINGS

DO NOT ATTEMPT TO USE THE LIFT

DO NOT RE-ENTER THE BUILDING UNTIL AUTHORISED TO DO SO

If you see a fire - activate the nearest emergency fire alarm or alert the nearest member of staff.

*[*Please note that the alarm is tested every Wednesday morning.]*

FIRST AID

If you feel unwell or need first aid, please contact main reception or the nearest member of staff.

DISABLED ACCESS

Please contact the person named at the bottom of the Agenda for details.

FACILITIES FOR HEARING IMPAIRED

The Council Chamber is fitted with a standard loop hearing system. The other Shire Hall Committee Rooms are fitted with an infra-red loop hearing system. Neckloop receivers for those who require assistance with their hearing in these rooms are available on loan from the Shire Hall main reception on the ground floor. Guidance on their use will be provided by reception staff.

TOILETS

Access to visitors' toilets are from the corridor to the left of main reception [gentlemen] and disabled [unisex] and on the first floor landing [ladies].

SMOKING

The Council operates a **NO SMOKING** policy in all areas of the Shire Hall site.

CAMBRIDGESHIRE COUNTY COUNCIL

NOTICE OF MEETING

The meeting of the County Council will be held at Shire Hall, Castle Hill, Cambridge on Tuesday 17th March 2020 at 10.30a.m.

A G E N D A

Prayers led by Father John Minh, Our Lady of Lourdes, Cambourne

Apologies for Absence

1. Minutes – 11th February 2020 (previously circulated)
[available at [County Council meeting 11/02/2020](#)]
2. Chairman's Announcements (oral)
3. Report of the County Returning Officer (oral)

To report that Councillor Peter McDonald was elected to fill the vacancy in the Duxford Electoral Division in the by-election held on 27th February 2020.
4. Declarations of Interests (oral)

[Guidance for Councillors on declaring interests is available at <http://tinyurl.com/ccccc-conduct-code>]
5. Public Question Time (oral)

To receive and respond to questions from members of the public in accordance with Council Procedure Rule 9.3.
6. Petitions (oral)

To receive petitions from the public in accordance with Council Procedure Rule 9.4.
7. Pay Policy Statement 2020-21 and Gender Pay Gap Reporting (pages 12-24)
8. Updated Draft Climate Change and Environment Strategy (pages 25-124)

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|-----|---|-----------------|
| 9. | Committees - Allocation of seats and substitutes to political groups in accordance with the political balance rules | (to be tabled) |
| 10. | Appointments to Outside Organisations | (pages 125-127) |
| 11. | Motions submitted under Council Procedure Rule 10 | |

a) Motion from Councillor Steve Tierney

This Council understands that there is a proposal to build an Incinerator Facility in Wisbech.

Incinerators can be wasteful. They can burn much of what is otherwise recyclable and their demand for fuel can sometimes result in a reduction in recycling due to their need to bid for more and more waste at a specific calorific value to feed the 24 hour combustion process. This means that it is possible for incineration to lead to a reduction in recycling and can discourage efforts to preserve resources. This is contrary to the waste hierarchy that seeks to avoid the production of waste in the first instance, followed by re-use and recycling ahead of any disposal methods.

Waste Incineration is not a truly renewable source of energy. Incinerator companies are marketing “waste-to-energy” as a source of renewable energy. But unlike other renewables the fuel does not come from infinite natural processes. On the contrary, it is sourced from finite resources.

Burning waste produces emissions. Burning waste has to be carefully controlled and even the most advanced technologies cannot guarantee the capture of all particulate matter (fine pollutants), so there is still the chance that air, soil and water can be contaminated, with some of the pollutants having the potential to end up entering the food chain.

Burning waste often creates less employment opportunities than recycling. Incinerators offer relatively few jobs when compared to recycling. The large footprint of a huge Incinerator could clearly produce more jobs as a regular manufacturing space. Other than at the construction phase, the idea that the Incinerator is a valuable job creator for local people is questionable.

The World is embracing Zero Waste, and Incineration should be seen as a backwards step. “Waste-to-energy” is often described as a good way to extract energy from resources, but if the waste burnt is capable of being recycled it works against the circular economy, and against the fundamental principles of the waste hierarchy. For

those that are concerned about Climate Change, this proposal could therefore contribute to Climate Change, both from the facility itself and the necessary road mileage required to source the necessary feedstock to run it – all at a time when this Council has declared a climate emergency.

Wisbech Roads will be heavily affected. An Incinerator of the size proposed is likely to create hundreds of additional large lorry journeys daily creating significant additional congestion and wear and tear on already busy roads.

Wisbech Rail is under threat. Wisbech's long held hope to re-open its rail line has been championed by the Mayor of Cambridgeshire and Peterborough, the local MP and all local Councils. Millions of pounds have been invested to get to the current point. The proposed location of the Incinerator limits the potential options for a new rail station and may cut off part of the potential route it could take.

In 2019, Wisbech Town Council's motion to oppose the Incinerator project met with nearly unanimous support, as did the February 2020 Fenland District Council motion. An original local campaign opposing the Incinerator has since been joined by a second Campaign doing the same thing. Rallies, public meetings and large campaigns have taken place, and many Environmental Groups are opposed to incineration due to the issues already discussed. The local public are overwhelmingly opposed to the building of an Incinerator in Wisbech.

The Incinerator proposal is of such a large size that it bypasses the usual Planning route through local Councils and instead will be decided directly at Government level. This means the County Council will be a statutory consultee, but will not be the decision maker in this instance.

It is important that local people see that the elected councillors of Cambridgeshire County Council understand the strength of public opinion against the Incinerator and that they are willing to stand up and be counted in the campaign to try and prevent it ever happening.

This Council states that:

1. We do not support the construction of an incinerator in Wisbech or anywhere else in Cambridgeshire.
2. We will use all legal powers and avenues available to us to oppose any plans to build any Incinerators in Cambridgeshire.

3. We will write to the Secretary of State to make clear our opposition to these plans and the use of incineration in general.

[The Monitoring Officer advises that the motion relates to a matter for the Council to determine and that the motion is therefore in order as drafted]

b) Motion from Councillor Lucy Nethsingha

This Council notes:

- There has been a recognition by UK Governments since 2011 that the funding for Adult Social Care requires review. The Dilnot report received broad support from across the political spectrum, but while all political parties expressed the wish to tackle the issue progress was blocked by Conservatives in government.
- That a green paper on funding for Adult Social Care was expected in 2017, but that no green paper has yet been published.
- That in 2018, having waited for a full year for the Government to publish a green paper, the Local Government Association published its own consultation on Adult Social Care funding, with cross party agreement from the local government sector.
- That following wide consultation the LGA made 14 recommendations to Government, and that in July 2019 the LGA, a cross party organisation, said this about the situation of Adult Social Care funding:

"We desperately need solutions for the longer-term and the continued delay in the absence of the Government's green paper, matters. Another year of inaction has passed, leaving the system creaking under further, unsustainable pressure. More importantly, this continues to impact everyone with care and support needs, preventing them from living their life to the full."

This Council asks that:

- the Leader of the Council write to the Secretary of State for Health and Social Care to express concern that despite the current Prime Minister having said that the Government had "oven ready" proposals on Adult Social Care, there is still no news on either a white paper, or any new policy, on the long term funding of Adult Social Care. We would ask the

Leader of the Council to request an urgent response from the Secretary of State for Health and Social Care, Matt Hancock on whether this government intends to continue to leave the funding of Adult Social Care to be covered by annual above inflation increases in Council Tax, and whether there will be any change to the level of savings at which Social Care charges are no longer made, a level which was recognised in 2011 as too low, and which now leaves many older people unable to leave any of their savings for their children.

[The Monitoring Officer advises that the motion relates to a matter for the Council to determine and that the motion is therefore in order as drafted]

c) Motion from Councillor Jocelynn Scutt

On 15th October 2019, the Full Council delegated to Suffolk County Council the determination as to the application that Castle Mound and the grassed forecourt of Shire Hall (as set out in the plan below) be declared a town & village green (the application). Suffolk County Council has advised it will advertise for submissions in relation to that application.

The application is made to provide an additional layer of protection to the public's access to the Mound and to the grassed forecourt and is designed to ensure that as far as possible that access can be preserved in perpetuity. The Mound is registered under the Ancient Monuments and Archaeological Areas Act 1979 ('the Act'). This does not provide for public access in perpetuity and the public access that is covered by the heritage listing can be affected if the land is sold or otherwise passes into private hands.

Originally the plan to dispose of Shire Hall was open to include the site as a whole. That included the possibility of sale or lease. As it proved, the plan now is (as it is understood) to lease Shire Hall and associated buildings only. However there is no guarantee that at some time in the future the site as a whole will not be disposed of whether by lease or by sale.

Further, the grassed forecourt in front of Shire Hall is not, apart from a small curtilage at the foot of Castle Mound, covered by the Act. There is, therefore, no heritage protection for public access to this area.

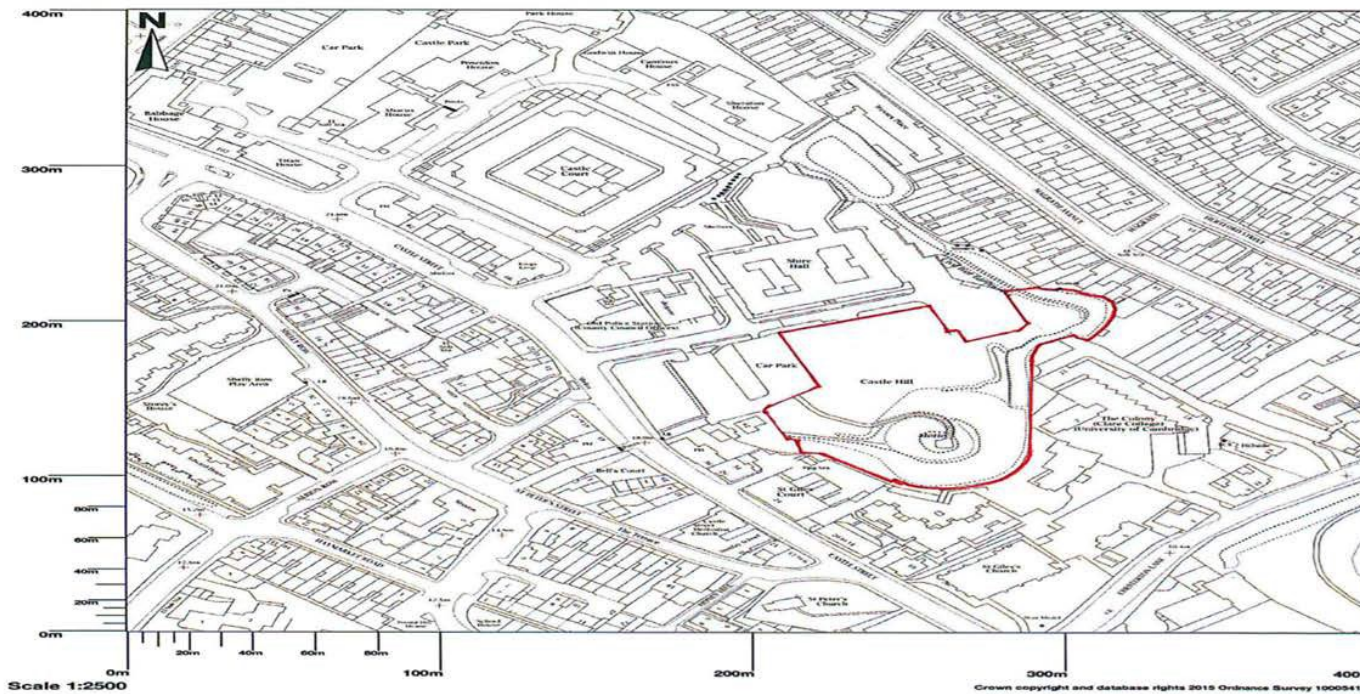
It is vital that access to Castle Mound and the grassed forecourt be preserved in perpetuity. As the many submissions already lodged with Suffolk County Council

evidence, the public are vitally concerned to ensure that public access is maintained and preserved in perpetuity so that all residents of Cambridge and Cambridgeshire, their families, guests, visitors and others are able to retain their access and that this be assured in perpetuity.

Therefore this Full Council will lodge with Suffolk County Council upon the advertisement of the town & village green application calling for objections and submissions a submission stating its full support of the application.

[The Monitoring Officer advises that the motion relates to a matter for the Council to determine and that the motion is therefore in order as drafted]

Castle Hill Cambridge



d) Motion from Councillor Lorna Dupré

This council notes

- the spread of novel coronavirus COVID-19, including several cases in the United Kingdom;
- the effectiveness of basic protective measures as recommended by the World Health Organisation;
- the responsibilities of this council in the field of public health.

This council recognises its responsibility to promote recommended public health measures to enable residents of Cambridgeshire to protect themselves and each other from coronavirus, and instructs officers to make this information available prominently on the home page of the council's web site and through other media.

[The Monitoring Officer advises that the motion relates to a matter for the Council to determine and that the motion is therefore in order as drafted]

e) Motion from Councillor Peter McDonald

This Council

- recognises the critical importance to the county of Cambridgeshire of farming and food production;
- deeply regrets the thinking of some Government advisors that the UK has no need of an active farming and food production sector; and
- calls on the Chief Executive to write to the Secretary of State for the Department for Environment, Food and Rural Affairs (DEFRA) to offer this Council's full support for Cambridgeshire's farming and food production industry.

[The Monitoring Officer advises that the motion relates to a matter for the Council to determine and that the motion is therefore in order as drafted]

12. Questions:

- (a) **Cambridgeshire and Peterborough Combined Authority Overview and Scrutiny Committee**
(Council Procedure Rule 9.1)

(pages 128-133)

(b) **Questions on Fire Authority Issues** (pages 134-137)

Report of the Cambridgeshire and Peterborough Fire Authority

(c) **Written Questions** (Council Procedure Rule 9.2) (oral)

To note responses to written questions from Councillors submitted under Council Procedure Rule 9.2.

13. **Exclusion of Press and Public** (oral)

That the press and public be excluded from the meeting during the consideration of the following report on the grounds that it is likely to involve the disclosure of exempt information under Paragraphs 1 and 3 of Part 1 of Schedule 12A of the Local Government Act 1972, as amended, and that it would not be in the public interest for this information to be disclosed as it refers to information relating to any individual, and information relating to the financial or business affairs of any particular person (including the authority holding that information).

14. **The Future Operating and Financial Model for LGSS Services** (circulated separately)

Dated 9th March 2020



Fiona McMillan
Monitoring Officer

The County Council is committed to open government and members of the public are welcome to attend this meeting. It supports the principle of transparency and encourages filming, recording and taking photographs at meetings that are open to the public. It also welcomes the use of social networking and micro-blogging websites (such as Twitter and Facebook) to communicate with people about what is happening, as it happens. These arrangements operate in accordance with a protocol agreed by the Chairman of the Council and political Group Leaders which can be accessed via the following link or made available on request:
<https://tinyurl.com/Filming-and-Recording>

The Council cannot provide car parking on the Shire Hall site so you will need to use nearby public car parks. Details of other transport options are available on the Council's website at: <http://tinyurl.com/ccs-carpark>

For more information about this meeting, including access arrangements and facilities for people with disabilities, please contact Michelle Rowe at the County Council's Democratic Services on Cambridge (01223) 699180 or by email at: michelle.rowe@cambridgeshire.gov.uk

PAY POLICY STATEMENT 2020-21 AND GENDER PAY GAP REPORTING

To: Full Council

Date: 17th March 2020

From: Chief Executive

Purpose: The purpose of this report is to review the data due to be published on senior employee remuneration and the gender pay gap to ensure compliance with:

- The Local Government Transparency Code 2015
- Chapter 8 of the Localism Act 2011.
- Equality Act 2010 (Gender Pay Gap Information) Regulations 2017

Recommendations: Council is asked to approve the Chief Officer Pay Policy Statement 2020/21 (Appendix 1) and the Gender Pay Gap Report 2020 (Appendix 3).

<i>Officer contact:</i>		<i>Member contact</i>	
Name:	Martin Cox	Name:	Councillor Joshua Schumann
Post:	HR Director (LGSS)	Portfolio	Chairman of the Staffing and Appeals Committee
e-mail:	MCox@northamptonshire.gov.uk	e-mail:	joshua.schumann@cambridgeshire.gov.uk
Tel:	07921 092743	Tel:	01223 706398

1.0 BACKGROUND

- 1.1 In February 2015, the Secretary of State for Communities and Local Government issued The Local Government Transparency Code 2015. The code sets out the key principles in making local authorities more transparent and accountable to local people. The Council has been proactive in its compliance with this code.
- 1.2 In addition, under the Localism Act 2011, Local Authorities are required to prepare a Chief Officer Pay Policy Statement for each financial year. This policy statement must be approved by a resolution of the authority, i.e. full Council, and is required to be published by 31 March. The Council's policy outlined in **Appendix One** has been updated but not fundamentally changed from last year.
- 1.3 The Equality Act 2010 was recently updated to include new regulations on the reporting of gender pay gap. The new legislation means we are required by law to publish a number of calculations that show the difference between the average earnings of men and women in our Council; it does not involve publishing individual employees' data. The data used for the calculations is the Council's pay data as of 31st March 2019.

2.0 CURRENT POSITION

- 2.1 In accordance with the Local Government Transparency Code 2015, we publish on the Council's website:
 - The names of employees paid £150,000 and above.
 - The post title, team, grade, salary range, (in £5000 brackets) and salary ceiling point for the top 3 tiers of the organisation, along with details of whether the appointments are permanent or temporary.
 - The post title, grade and salary range of employees earning £50,000 and above.
 - The 'pay multiple' – the ratio between the highest paid salary and the median salary of the authority's workforce.
 - Details of vacancies via the jobs portal.
- 2.2 This year is the third year that we are required to publish Gender Pay Gap data on the Government portal. In addition to this, we publish a summary of the data on the Council's website.

3.0 SENIOR OFFICER PAY DATA

- 3.1 The senior manager pay data is provided in **Appendix Two**. The data illustrates employees' total remuneration taking into account their earnings including additional payments i.e. market factor supplements and acting up allowances.
- 3.2 There are currently two posts in the organisation that are paid more than £150,000. These are:
 - Chief Executive Gillian Beasley with a salary of £173,596. This post is shared with Peterborough City Council on a 50/50 basis therefore

Cambridgeshire pay 50% of this salary although Gillian is not directly employed by Cambridgeshire County Council.

- Rachel Stopard the Chief Executive Greater Cambridge Partnership (GCP) with a salary of £167,244 (this is made up of basic salary and a market factor payment). The Greater Cambridge Partnership is an independently operated entity. The Partner Authorities jointly support GCP with the majority of GCP funding coming from a central government grant.

- 3.3 There are 29 posts in Tier 1 to 3 of the organisation (excluding posts paid below £50,000). This compares to 30 in the previous year. In addition to the Chief Executive, 19 posts in Tiers 1 to 3 are shared with Peterborough City Council. This is an increase of 5 shared posts at this level.
- 3.4 There are currently 128 officers earning £50,000 or above, 40 of which are in shared roles with other Councils. This is an increase from 118 posts the previous year. 25 posts at this level are now shared with Peterborough City Council, this compares to 11 shared roles in the previous year. 15 posts paid over £50,000 are part of LGSS Shared Services with costs being shared between the partner Councils. It should be noted that although annual salaries increase year on year with a cost of living uplift, the £50,000 threshold outlined within the regulations has not changed.
- 3.5 The current mean salary for the organisation is £30,049 this compares to a mean salary of £29,288 in the previous year. The increase in the mean salary is accounted for by national changes in the NJC pay structure. These changes took effect from 1st April 2019 and resulted in larger pay increases for the bottom grades of the NJC pay scale, increasing the pay for our lowest paid employees.
- 3.6 The ratio of the Chief Executive's salary to the median salary in the organisation is 1:6 based on a median salary of £27,905. The ratio in the previous year was 1:7. The change in this ratio is influenced by an increase in the organisations median salary from £26,470 to £27,905. This change is due to the increased value of the bottom grades on the NJC pay scale. The Chief Executives salary has remain unchanged from the previous year.

4.0 CHIEF OFFICER PAY POLICY STATEMENT

- 4.1 A copy of the Chief Officer Pay Policy Statement is provided in **Appendix One**. This has been updated to reflect changes in job titles and responsibilities.

5.0 GENDER PAY GAP REPORT

- 5.1 Gender pay reporting is used to assess the levels of gender equality in the workplace and the balance of male and female employees at different levels of the Council. A copy of the Gender Pay Gap Report is provided in **Appendix Three**.
- 5.2 The data shows the Council's mean gender pay gap is 8% against a national public sector picture of 15.7%. Last year our mean gender pay gap was 13%.

- 5.3 The Council's median gender pay gap is 9% against a national public sector median pay gap of 16.8%. Last year our median gender pay gap was 19%.
- 5.4 For the past two years, a full review into the gender pay gap has been carried out. Consideration has been paid to the gender pay gap within different grades and professions of the workforce, the performance appraisal process, recruitment and selection practices and also within apprenticeships.
- 5.5 It is acknowledged that the reduction in the mean and median pay gap reported this year is in part due to the closure of the Council's Catering and Cleaning Service. However, as outlined in the most recent gender pay gap review there is also a considerable amount of work that has been completed, and will continue to take place to reduce the pay gap.
- 5.6 The Gender Pay Gap will continue to be monitored throughout the year, with Committee being advised on progress during the year.

6.0 STAFFING AND APPEALS COMMITTEE

- 6.1 Staffing and Appeals Committee met on 18 February 2020 where it agreed to approve and refer the Chief Officer Pay Policy Statement 2020/21 (Appendix 1) and the Gender Pay Gap Report 2020 (Appendix 3) to full Council.

Source Documents	Location
The Local Government Transparency Code 2015 Chief Officer Pay Policy Statement Gender Pay Gap Report Staffing and Appeals Committee – 18 February 2020	Martin Cox HR Director, LGSS Cambridgeshire County Council Box No: OCT 1106 Shire Hall Cambridge CB3 0AP Staffing and Appeals Committee meeting 18/02/2020

Chief Officer Pay Policy Statement – 2020/2021

Effective from 1st April 2020

1. Introduction

Cambridgeshire County Council is committed to operating consistent, transparent and equitable pay arrangements for employees and is committed to ensuring equal pay in employment.

This Chief Officer Pay Policy Statement fulfils the Council's statutory requirements under Chapter 8 of the Localism Act 2011 ("the Act") and was agreed by full Council in March 2020. The Chief Officer Pay Policy applies to all Statutory and Non-Statutory Chief Officers, (including Deputies), of Cambridgeshire County Council.

In accordance with the Government's Code of Recommended Practice for Local Authorities on Data Transparency, the Council publishes information on all employees earning £50,000 or above.

2. Scope

This Statement details the pay policy and practice in relation to all Statutory and Non-Statutory Chief Officers, (including Deputies) as defined under our constitution.

3. Basic Pay Determination

The pay grade and the terms and conditions that are applied to each post are determined through the process of HAY job evaluation. This is an analytical scheme, which measures the relative size of jobs across the organisation. The key principles underlying our application of job evaluation are:

- Consistently applied across the authority to ensure fairness.
- Applied by appropriately trained and experienced employees.
- Quality assured to ensure that standards are maintained.
- Open and transparent and accessible for employees and their representatives.
- Considers the relative size of jobs and not the postholders or pay grades.
- Wholly dependent on job role, function and accountability.

4. Chief Officer Pay (Corporate Leadership Team)

Pay Scale

The pay scale for the Corporate Leadership Team is available on our website.

Staffing and Appeals Committee

The Staffing and Appeals Committee determines, on behalf of full Council, application of the pay policy regarding the remuneration of Statutory and Non Statutory Chief Officers (including Deputies), of the organisation. The Staffing and Appeals Committee comprises 8 members of the Council.

When determining application of the pay policy, the Committee is advised by the Head of Paid Service and LGSS HR Director (or his/her nominees). The Committee may, having sought the advice of the above, choose to be advised by an external independent advisor as appropriate.

Pay Award

There is no automatic cost of living increase. The Staffing and Appeals Committee, in consultation with the Chief Executive, determines the level of increase if any, to be applied to the published pay rates for Chief Officers, by reference to our performance against Key Measurable Targets and overall affordability given the prevailing budget decision. In addition, the national award is used as a benchmark for the cost of living award. Any such recommendation is reported to the Staffing and Appeals Committee.

Flexibility for Non-Consolidated Payments

The Staffing and Appeals Committee has the flexibility to award one off non-consolidated performance awards. These are applied in exceptional circumstances only, where individuals have performed above and beyond their job role. Again this will be dependent on clear performance criteria and evidenced outcomes as well as affordability.

Any non-consolidated performance award will be a one-off temporary award for a maximum of one year and based on the development points within each Director Pay grade boundaries and will not exceed the "Absolute Ceiling" of these pay and grade boundaries.

Individual Salary Progression

There is no automatic progression through the development points. Personal development in role may be recognised by the award of discretionary consolidated pay movements each year, in accordance with the locally agreed step values, through the pay/development points.

Application of individual development points will be determined each year by the Chief Executive, taking into consideration the individual's performance, as evidenced by the Performance Appraisal and Development Programme (PADP) rating and overall affordability given our prevailing budget position.

Awards may be considered only on completion of Personal Development Plans and where contribution and competence have been suitably evidenced and assessed via the appraisal scheme. Progression will not go beyond the "Absolute Ceiling" set for each grade.

Acting Up / Partial Acting Up and Honorarium Payments

Where an officer is required to Act-Up into a higher level Chief Officer/Deputy Chief Officer post he/she will normally be remunerated at the bottom of the higher graded post's development point range.

The decision to Act an officer up into a Chief Officer/Deputy Chief Officer post will be within the remit of the Staffing and Appeals Committee. Where a Chief Officer/Deputy Chief Officer is required to take on temporary additional responsibilities the Staffing and Appeals Committee may consider awarding an honorarium payment based on the difference of his/her current salary and the additional partial role he/she is required to carry out. There will be no flexibility to award above the "Absolute Ceiling" for the role.

Any honorarium payments made to the Chief Executive will be subject to Full Council approval as would any payment made to the Returning Officer. In election years, full Council will be asked to agree any payment to be made to the Returning Officer at the same time as agreeing the Pay Policy.

Market Supplement Payments

Where a business case is put forward to pay a market supplement, this will be presented to the Staffing and Appeals Committee advised by the HR Director (or his/her nominees) and Chief Executive for consideration. Any market supplement would be based on a detailed business case that demonstrates some or all of the following:

- Evidence of unsuccessful recruitment campaigns
- Evidence of comparable roles paid at higher levels in benchmark authorities
- Significant evidence of higher than normal turn over/attrition rates
- Significant business continuity/service delivery risks

Any market supplement rate would be temporary for a maximum period of 12 months. Market premiums would be made only in exceptional circumstances and subject to affordability.

Any proposed market supplement payments made to the Chief Executive would be subject to the above and Full Council approval.

5. Pay Equity – The Pay Multiple

The Council monitors the relationship between the remuneration of its Chief Officers and Deputies and the rest of the workforce.

The current ratio of the Chief Executive's FTE salary to the median salary in the organisation is 1:6 based on a median salary of £27,905.

6. Termination of Employment

On ceasing to be employed by the Council, employees will be paid contractual payments due under their contract of employment. Our Redundancy Policy details the conditions under which redundancy payments can be made. We calculate redundancy payments based on an individual's actual pay, length of continuous service and age.

7. Review

This pay policy statement will be reviewed annually and recommended to Full Council for approval. We may by resolution of the Full Council, amend this Pay Policy Statement during the course of the year to which it relates.

		Total Remuneration in £5K bands (except for roles with total remuneration of 150,000 and above)	Bottom of pay grade	Top of the pay grade	Employment Term	Notes
Directorate	Position (post holder details are given for posts with remuneration above £150,000)					
Public Health	Director of Public Health	100,000-104,999	£ 78,304	£ 105,570	Permanent	Shared post with PCC on a 50/50 basis
Public Health	Deputy Director Public Health	80000-84999	£ 68,598	£ 84,932	Permanent	Shared post with PCC on a 50/50 basis
Public Health	Senior Public Health Consultant	70000-74999	£ 78,304	£ 105,570	Permanent	Shared post with PCC on a 50/50 basis
Public Health	Assistant Director Public Health Intelligence	55000-59999	£ 48,039	£ 59,387	Permanent	Shared post with PCC on a 50/50 basis This post has remuneration that is higher than the top of the pay scale for the position due to additional elements of pay received on top of basic salary
Resources	Deputy Chief Executive and Chief Finance Officer	140000-144999	£ 118,317	£ 135,469	Permanent	
Resources	Head of Finance	70000-74999	£ 68,653	£ 74,161	Permanent	
Resources	Strategic Finance Manager	55000-59999	£ 57,738	£ 62,328	Permanent	
Resources	Strategic Finance Manager	55000-59999	£ 57,738	£ 62,328	Permanent	
Resources	Strategic Finance Manager	60000-64999	£ 57,738	£ 62,328	Permanent	
Resources	Area Manager Rural	50000-54999	£ 48,302	£ 52,127	Permanent	
Resources	Facilities Manager	50000-54999	£ 48,302	£ 52,127	Permanent	
Resources	Strategic Finance Manager	55000-59999	£ 57,738	£ 62,328	Permanent	
Customer & Digital Services	Director of Customer & Digital Services	105000-109999	£ 104,706	£ 121,859	Permanent	Shared post with PCC on a 50/50 basis
Customer & Digital Services	Service Director, Legal and Governance	95000-99999	£ 94,333	£ 105,783	Permanent	Shared post with PCC on a 50/50 basis
Customer & Digital Services	Emergency Planning Manager	50000-54999	£ 48,302	£ 52,127	Permanent	Shared post with PCC on a 50/50 basis
Customer & Digital Services	Head of Customer Services	55000-59999	£ 57,738	£ 62,328	Permanent	
Customer & Digital Services	Democratic Services Manager	50000-54999	£ 48,302	£ 52,127	Permanent	
Customer & Digital Services	Head of Communications and Information	70000-74999	£ 68,653	£ 74,161	Permanent	Shared post with PCC on a 50/50 basis
Customer & Digital Services	Group Asset Manager	60000-64999	£ 57,738	£ 62,328	Permanent	
Customer & Digital Services	Head of IT & Digital Service	65000-69999	£ 68,653	£ 74,161	Permanent	Shared post with PCC on a 50/50 basis
						The Partner Authorities jointly support GCP. The majority of the GCP funding comes from a central government grant. This post has remuneration that is higher than the top of the pay scale for the position due to additional elements of pay received on top of basic salary
Customer & Digital Services	Chief Executive Greater Cambridge Partnership, Rachel Stopard	167244	£ 125,749	£ 148,626	Permanent	
Customer & Digital Services	Data Protection Officer	55000-59999	£ 57,738	£ 62,328	Permanent	
Customer & Digital Services	Strategic Lead IT Shared Service	90000-94999	£ 85,741	£ 97,192	Permanent	
Customer & Digital Services	Greater Cambridge Partnership Transport Director	115000-119999	£ 104,706	£ 121,859	Permanent	
Customer & Digital Services	Head of Strategy and Programme	65000-69999	£ 68,653	£ 74,161	Permanent	
Customer & Digital Services	Head of Communications	55000-59999	£ 57,738	£ 62,328	Permanent	
Business Improvement	Service Director Business Improvement and Development	120000-124999	£ 118,317	£ 135,469	Permanent	Shared post with PCC on a 50/50 basis
Business Improvement	Head of Transformation	60000-64999	£ 68,653	£ 74,161	Permanent	
Business Improvement	Head of Business Intelligence	65000-69999	£ 68,653	£ 74,161	Permanent	Shared post with PCC on a 50/50 basis
Business Improvement	Transformation Manager	50000-54999	£ 48,302	£ 52,127	Permanent	
Business Improvement	Business Intelligence Manager Research	50000-54999	£ 48,302	£ 52,127	Permanent	
LGSS	Insurance and Risk Manager	50000-54999	£ 48,302	£ 52,127	Permanent	Part of LGSS Shared Service, costs shared with LGSS partners
LGSS	Head of LGSS Business Planning and Finance	60000-64999	£ 68,653	£ 74,161	Permanent	Part of LGSS Shared Service, costs shared with LGSS partners
LGSS	Chief Finance Section 151 Officer (Norwich)	60000-64999	£ 68,653	£ 74,161	Permanent	Part of LGSS Shared Service, costs shared with LGSS partners
LGSS	Infrastructure Support Manager	50000-54999	£ 48,302	£ 52,127	Permanent	Part of LGSS Shared Service, costs shared with LGSS partners
LGSS	Head of HR Advisory Services East	70000-74999	£ 68,653	£ 74,161	Permanent	Part of LGSS Shared Service, costs shared with LGSS partners
LGSS	Strategic Audit Manager	55000-59999	£ 57,738	£ 62,328	Permanent	Part of LGSS Shared Service, costs shared with LGSS partners
LGSS	Commercial Finance Business Partner	60000-64999	£ 57,738	£ 62,328	Permanent	Part of LGSS Shared Service, costs shared with LGSS partners

LGSS	Strategic Audit Manager	65000-69999	£ 57,738	£ 62,328	Permanent	Part of LGSS Shared Service, costs shared with LGSS partners
LGSS	HR Business Partner	50000-54999	£ 48,302	£ 52,127	Permanent	Part of LGSS Shared Service, costs shared with LGSS partners
LGSS	HR Business Partner	50000-54999	£ 48,302	£ 52,127	Permanent	Part of LGSS Shared Service, costs shared with LGSS partners
LGSS	Audit and Risk Manager	50000-54999	£ 48,302	£ 52,127	Permanent	Part of LGSS Shared Service, costs shared with LGSS partners
LGSS	Transformation Programme Manager	50000-54999	£ 48,302	£ 52,127	Permanent	Part of LGSS Shared Service, costs shared with LGSS partners
LGSS	HR Policy and Projects Team Manager (CCC)	50000-54999	£ 57,738	£ 62,328	Permanent	Part of LGSS Shared Service, costs shared with LGSS partners
LGSS	Digital Programme Delivery Manager	50000-54999	£ 48,302	£ 52,127	Permanent	Part of LGSS Shared Service, costs shared with LGSS partners
LGSS	Business Systems Service & Support Manager	50000-54999	£ 48,302	£ 52,127	Permanent	Part of LGSS Shared Service, costs shared with LGSS partners
Place and Economy	Joint Executive Director, Place & Economy	80000-84999	£ 125,749	£ 148,626	Permanent	Shared post with PCC on a 50/50 basis
Place and Economy	Executive Director	130000-134999	£ 125,749	£ 148,626	Permanent	Shared post with PCC on a 50/50 basis
Place and Economy	Business Manager County Planning Minerals and Waste	65000-69999	£ 48,302	£ 52,127	Permanent	Individual currently receiving allowance for additional duties
Place and Economy	Historic Environment Manager	60000-64999	£ 42,742	£ 45,956	Permanent	Individual currently receiving allowance for additional duties
Place and Economy	Assistant Director, Highways	85000-89999	£ 85,741	£ 97,192	Permanent	
Place and Economy	Assistant Director, Infrastructure and Growth	85000-89999	£ 85,741	£ 97,192	Permanent	
Place and Economy	Programme Director Connecting Cambridgeshire	75000-79999	£ 77,171	£ 88,621	Permanent	
Place and Economy	Group Manager Transport Strategy and Funding	55000-59999	£ 57,738	£ 62,328	Permanent	
Place and Economy	Traffic Manager	50000-54999	£ 48,302	£ 52,127	Permanent	
Place and Economy	Business Manager Growth and Development	50000-54999	£ 48,302	£ 52,127	Permanent	
Place and Economy	Commission Manager Community Infrastructure	50000-54999	£ 48,302	£ 52,127	Permanent	
Place and Economy	Commission Manager Waste	55000-59999	£ 48,302	£ 52,127	Permanent	
Place and Economy	Highways Maintenance Manager	50000-54999	£ 48,302	£ 52,127	Permanent	
Place and Economy	Highways Asset Manager	50000-54999	£ 48,302	£ 52,127	Permanent	
Place and Economy	Transport and Infrastructure Strategy Manager	50000-54999	£ 48,302	£ 52,127	Permanent	
Place and Economy	Team Leader Cycling Projects	50000-54999	£ 48,302	£ 52,127	Permanent	
Place and Economy	Team Leader Highway Projects	50000-54999	£ 48,302	£ 52,127	Permanent	
Place and Economy	Transport Assessment Manager	50000-54999	£ 42,742	£ 45,956	Permanent	
Place and Economy	Waste Partnership Manager	50000-54999	£ 48,302	£ 52,127	Permanent	
People and Communities	Service Director Adults	120000-124999	£ 118,317	£ 135,469	Permanent	Shared post with PCC on a 50/50 basis
People and Communities	Service Director	120000-124999	£ 118,317	£ 135,469	Permanent	Shared post with PCC on a 50/50 basis
People and Communities	Director of Education	120000-124999	£ 118,317	£ 135,469	Permanent	Shared post with PCC on a 50/50 basis
People and Communities	Head of Service Early Years	65000-69999	£ 68,653	£ 74,161	Permanent	
People and Communities	Head of Service Schools Intervention	70000-74999	£ 68,653	£ 74,161	Permanent	
People and Communities	Head of Service SEND	60000-64999	£ 68,653	£ 74,161	Permanent	
People and Communities	Assistant Director	90000-94999	£ 85,741	£ 97,192	Permanent	
People and Communities	Assistant Director Housing Communities and Youth	95000-99999	£ 94,333	£ 105,783	Permanent	Shared post with PCC on a 50/50 basis
People and Communities	Head of Service Adults Integration	55000-59999	£ 57,738	£ 62,328	Permanent	Shared post with PCC on a 50/50 basis
People and Communities	Assistant Director Cambridgeshire	90000-94999	£ 94,333	£ 105,783	Permanent	
People and Communities	Head of Adult Safeguarding/Principal Social Worker	65000-69999	£ 68,653	£ 74,161	Permanent	Shared post with PCC on a 50/50 basis
People and Communities	Assistant Director – Education Capital & Place Planning	90000-94999	£ 94,333	£ 105,783	Permanent	Shared post with PCC on a 50/50 basis
People and Communities	Head of Virtual School	55000-59999	£ 57,738	£ 62,328	Permanent	
People and Communities	Senior Adviser Quality Assurance Team	55000-59999	£ 57,738	£ 62,328	Permanent	
People and Communities	Safeguarding Manager	50000-54999	£ 48,302	£ 52,127	Permanent	
People and Communities	Education ICT Manager	55000-59999	£ 57,738	£ 62,328	Permanent	
People and Communities	Head of Cambridgeshire Music	50000-54999	£ 48,302	£ 52,127	Permanent	
People and Communities	Manager Grafham Water Centre	50000-54999	£ 48,302	£ 52,127	Permanent	
People and Communities	Service Manager	50000-54999	£ 48,302	£ 52,127	Permanent	
People and Communities	Early Years Sector Development Manager	50000-54999	£ 48,302	£ 52,127	Permanent	
People and Communities	Lead Mathematics Adviser	50000-54999	£ 48,302	£ 52,127	Permanent	
People and Communities	Primary Adviser	55000-59999	£ 57,738	£ 62,328	Permanent	
People and Communities	Education Adviser	60000-64999	£ 57,738	£ 62,328	Permanent	
People and Communities	Primary Adviser	55000-59999	£ 57,738	£ 62,328	Permanent	
People and Communities	Head of Service Operations	50000-54999	£ 68,653	£ 74,161	Permanent	
People and Communities	Operational Lead, Provider Services	50000-54999	£ 48,302	£ 52,127	Permanent	
People and Communities	Continuing Healthcare Manager	50000-54999	£ 48,302	£ 52,127	Permanent	Shared post with PCC on a 50/50 basis

People and Communities	Strengthening Communities Service Manager	50000-54999	£ 48,302	£ 52,127	Permanent	
People and Communities	Principal Child and Family Social Worker	50000-54999	£ 48,302	£ 52,127	Permanent	
People and Communities	Partnerships and Service Development Manager	50000-54999	£ 48,302	£ 52,127	Permanent	
People and Communities	County Alternative Education Manager	50000-54999	£ 48,302	£ 52,127	Permanent	
People and Communities	Head of Adults Commissioning	65000-69999	£ 68,653	£ 74,161	Permanent	
People and Communities	Lead Service Manager Integration and Practice	55000-59999	£ 57,738	£ 62,328	Permanent	
People and Communities	Manager Sensory Support Team 0-25 years	55000-59999	£ 41,065	£ 114,060	Permanent	
People and Communities	Service Manager Safeguarding	50000-54999	£ 48,302	£ 52,127	Permanent	
People and Communities	Head of Youth Support	65000-69999	£ 68,653	£ 74,161	Permanent	Shared post with PCC on a 50/50 basis
People and Communities	Head of Mental Health	70000-74999	£ 68,653	£ 74,161	Permanent	
People and Communities	Head of Service Transfers of Care	65000-69999	£ 68,653	£ 74,161	Permanent	Shared post with PCC on a 50/50 basis
People and Communities	Lead Service Manager Operations	55000-59999	£ 57,738	£ 62,328	Permanent	
People and Communities	Strategic Education Place Planning Manager	55000-59999	£ 57,738	£ 62,328	Permanent	Shared post with PCC on a 50/50 basis
People and Communities	Senior Adviser- Intervention and Safeguarding	50000-54999	£ 57,738	£ 62,328	Permanent	
People and Communities	Assistant Director Corporate Parenting and Specialist Services	95000-99999	£ 94,333	£ 105,783	Permanent	Shared post with PCC on a 50/50 basis
People and Communities	Commercial Manager	50000-54999	£ 48,302	£ 52,127	Permanent	
People and Communities	Education Health Safety and Wellbeing Adviser	50000-54999	£ 48,302	£ 52,127	Permanent	
People and Communities	Education Adviser	50000-54999	£ 48,302	£ 52,127	Permanent	
People and Communities	Head of Service Countywide and LAC	70000-74999	£ 68,653	£ 74,161	Permanent	
People and Communities	Head of Service Early Help North	70000-74999	£ 68,653	£ 74,161	Permanent	
People and Communities	Head of Service Early Help South	70000-74999	£ 68,653	£ 74,161	Permanent	
People and Communities	Head of Service Safeguarding South	65000-69999	£ 68,653	£ 74,161	Permanent	
People and Communities	Permanency Practice Development Manager	50000-54999	£ 48,302	£ 52,127	Permanent	
People and Communities	Service Manager Reablement City and South	50000-54999	£ 48,302	£ 52,127	Permanent	
People and Communities	Head of Disability	65000-69999	£ 68,653	£ 74,161	Permanent	
People and Communities	Senior Educational Psychologist ASC, SLCN	55000-59999	£ 46,607	£ 62,849	Permanent	
People and Communities	Educational Psychologist	55000-59999	£ 37,175	£ 55,040	Permanent	
People and Communities	Operations Manager Education ICT	50000-54999	£ 48,302	£ 52,127	Permanent	
People and Communities	Youth Offending Service Manager	50000-54999	£ 48,302	£ 52,127	Permanent	
People and Communities	Head of Pilgrim PRU	50000-54999	£ 41,065	£ 114,060	Permanent	
People and Communities	District Manager Safeguarding	50000-54999	£ 48,302	£ 52,127	Permanent	
People and Communities	Service Manager, Children in Care	50000-54999	£ 48,302	£ 52,127	Permanent	
People and Communities	Educational Psychologist	50000-54999	£ 37,175	£ 55,040	Permanent	
People and Communities	Lead Corporate Parenting Manager	55000-59999	£ 57,738	£ 62,328	Permanent	
People and Communities	Partnerships and Developing Practice Officer	50000-54999	£ 48,302	£ 52,127	Fixed Term	
People and Communities	Team Manager, Emergency Duty Team	50000-54999	£ 42,742	£ 45,956	Permanent	

Note: There is no overlap between the salary points on the pay spine.

The employees' current range above illustrates the £5,000 range that their salary falls within and does not take account of the grade starting point or ceiling.

Gender Pay Gap Report

Published March 2020

Cambridgeshire County Council is an employer required by law to carry out Gender Pay Reporting under the Equality Act 2010 (Gender Pay Gap Information) Regulations 2017. This involves carrying out calculations that show the difference between the average earnings of men and women in our Council; it will not involve publishing individual employees' data. The data used for the calculations is the Council's pay data as of 31st March 2019.

We are required to publish the results on a government gender pay gap website, and in addition we publish the high level results on the Cambridgeshire County Council website alongside our pay and transparency data.

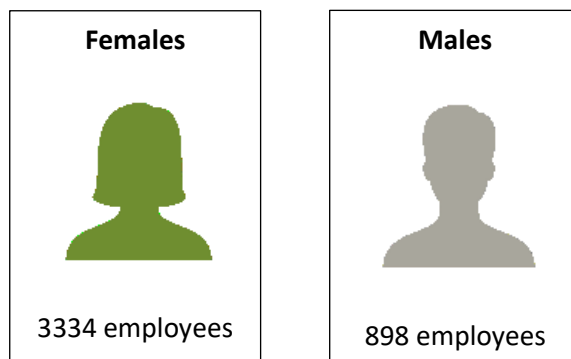
Gender pay reporting is used to assess:

- the levels of gender equality in our workplace
- the balance of male and female employees at different levels

Few employers in Cambridgeshire can boast the breadth and variety of roles we enjoy at Cambridgeshire County Council. With over 4000 employees, we are one of the biggest employers in the County, with a diverse workforce to be proud of.

We are committed to equality within our workforce, and our flexibility, working practices and wide range of roles ensure that we encourage and support women to come to work for us, and develop their long-term career to stay with us.

Our Workforce Profile



Action We Are Taking

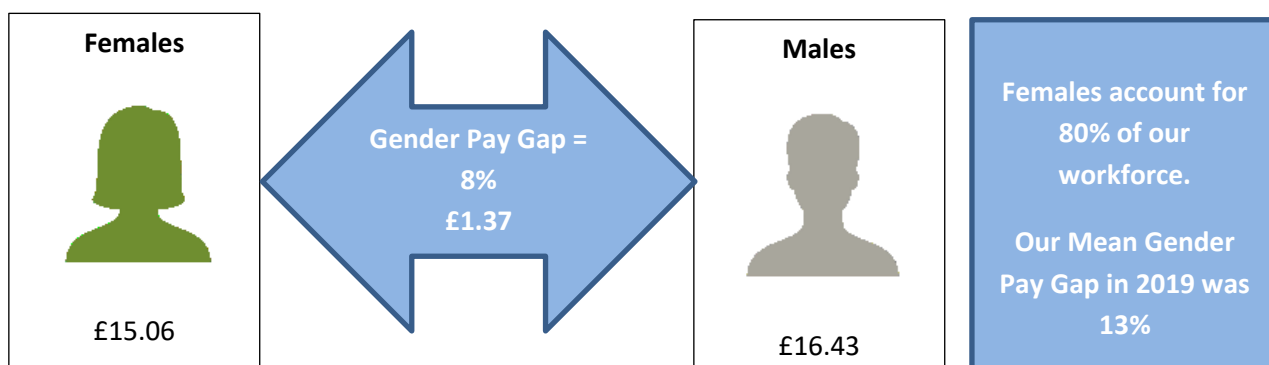
Our current workforce data tells us that the council is attracting and retaining women and we have a fairly representative number of female employees across all four pay quartiles. The council has a fair and equitable pay policy in place and promotes flexible working practices. All jobs in the council are evaluated using the Hay methodology to ensure we have equal pay for male and female employees carrying out the same work.

We undertake a full review and audit into our gender pay gap every year. This includes analysis of quantitative data including starters and leavers, workforce and recent staff survey results as well as qualitative data gained through talking to our employees.

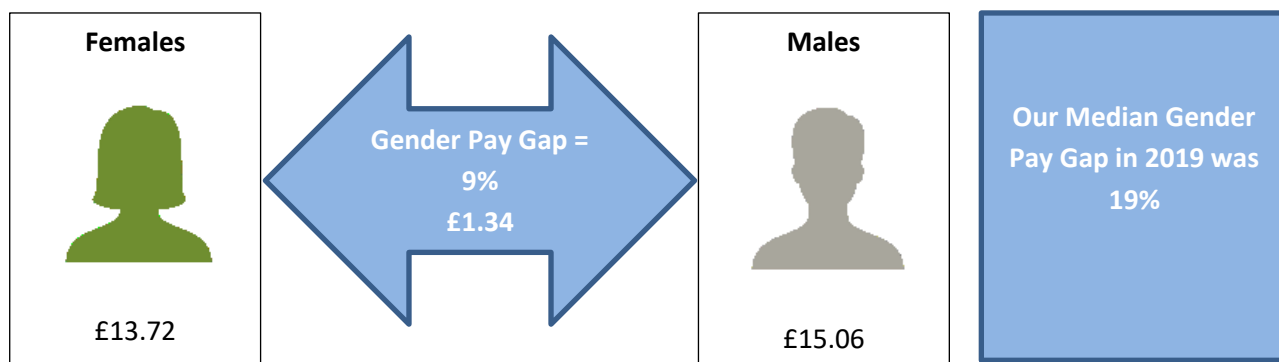
The analysis and research undertaken as a result of these reviews emphasise that there is no quick win or simple solution to reduce a gender pay gap in the workforce. The only way to reduce our gender pay gap is to take a long term view of resourcing, developing and engaging our workforce, and the following table summarises the current actions that we are taking to reduce our pay gap.

Theme:	Action and Review Date:
Improve development opportunities for female employees We do not have a problem attracting and retaining our female workforce. However, our next steps are to invest in developing and empowering our female employees to encourage them to move into more senior roles.	<ul style="list-style-type: none"> Develop clear career pathways for female employees. (March 2021) Managers and leaders need to be trained in how to spot talent and encourage employees to develop. (December 2020) Employees will be encouraged to take sideways moves as well as promotional roles to broaden their knowledge. (December 2020) Our recruitment and selection training will be updated with an emphasis on this. We will promote and encourage managers to attend this training. (December 2020) Analysis is required to identify hard to fill and traditionally male dominated roles to encourage greater diversity in these posts. (December 2020) Implement a suite of development initiatives to empower female employees. For example coaching, mentoring and skills development. Females will be more confident in recognising their value and skilled in negotiating their development opportunities and package. (March 2021)
Engagement Female employees are more likely to need to be encouraged to apply for new posts or development opportunities rather than apply for opportunities themselves.	<ul style="list-style-type: none"> Increased communication from female senior leaders (for example blogs Q&A sessions) to provide increased visibility of female leaders and role model career growth. (September 2020) Create professional networking groups for all employees working full and part time. (September 2020)
Recruitment and selection We need to improve how we attract and retain females into roles where they are less represented.	<ul style="list-style-type: none"> Review of recruitment processes to ensure there is no gender bias post shortlisting. (December 2020) Review of sample job descriptions/adverts to ensure there is no subtle gender bias. (December 2020)
Working Practices Flexible working practices will improve retention of our staff and allow employees with non-work responsibilities (i.e. family commitments, studying) to continue to progress through the council without compromising their work/life balance.	<ul style="list-style-type: none"> Have an agreed definition of flexible and agile working, endorsed by the Chief Executive, that is workable through all management tiers, subject to service needs. (April 2020) As part of the Cambs2020 programme a programme of training will be rolled out across all teams to support improved flexible and agile working. Managers will need to understand how to flex individual working practices to manage the impact on the team. (April 2021) Managers to consider working practices and how they could be made more flexible. For example review purpose, duration and frequency of meetings and consider how the use of IT for example could facilitate flexible working for employees. (April 2021) The impact of career breaks will be analysed to determine whether there is any long term impact on employees returning to work following a break. (April 2021)

Mean Gender Pay Gap in Hourly Pay



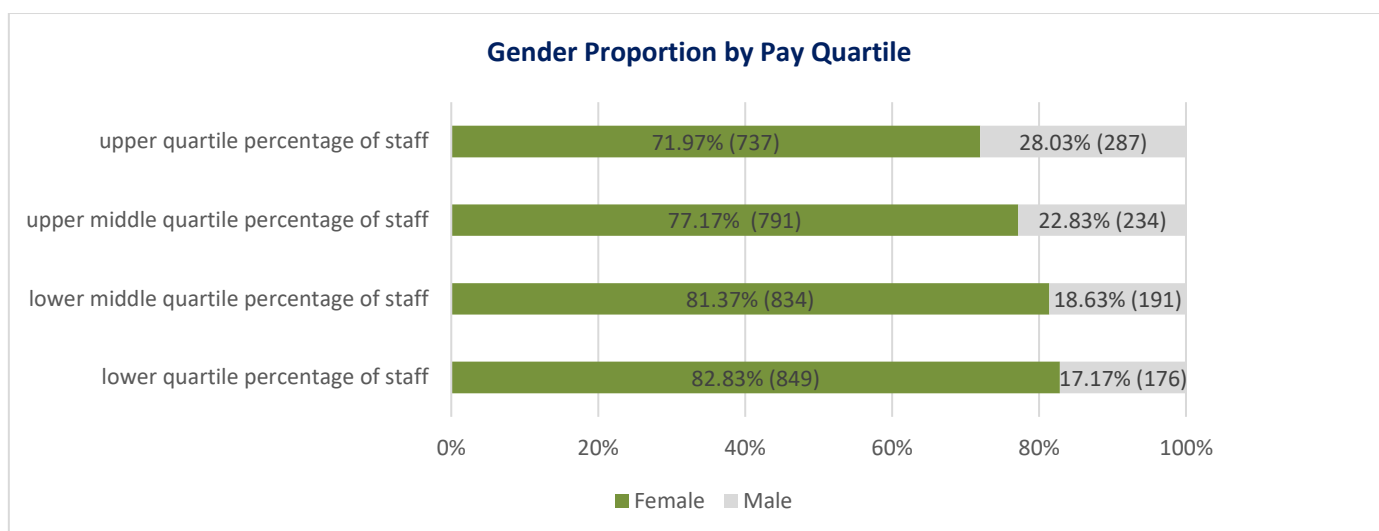
Median Gender Pay Gap in Hourly Pay



Mean, Median and Proportion of Males and Females Receiving a Bonus Payment

Cambridgeshire County Council does not operate a bonus payment scheme, and therefore has no bonus payment gender pay gap.

Proportion of Males and Females in Each Pay Quartile



The graph above outlines the gender split by pay quartile and illustrates the quartile split by percentage and employee numbers. The lower quartile range relates to hourly rates of up to £10.80. The lower middle quartile is hourly rates of £10.80 - £13.72. The upper middle quartile is hourly rates of £13.72 – £18.35. The upper quartile relates to hourly rates of £18.35 and above. Please note that these figures exclude employees on reduced pay such as absence/maternity and adoption leave/career breaks, and therefore does not correspond to the total headcount figure.

Further analysis of the data demonstrates that females are fairly evenly spread across the pay quartiles, whereas males are more highly represented in the upper two quartiles. This distribution explains the higher median hourly rate for males. It's pleasing to report that in 3 of the 4 quartiles, a more positive gender proportion is reported this year.

Next Steps

The challenge in our Council, as it is nationally, is to eliminate any gender pay gap. We will continue to work on initiatives to reduce our gender pay gap including further mid-year analysis and reporting.

UPDATED DRAFT CLIMATE CHANGE AND ENVIRONMENT STRATEGY

To: Council

Meeting Date: 17th March 2020

From: Steve Cox, Executive Director for Place and Economy

Purpose: To share the Draft Climate Change and Environment Strategy, action plan and carbon footprint.

Recommendation: Full Council is asked to approve:

- The updated draft Climate Change and Environment Strategy as Council policy
- The updated action plan that accompanies the Strategy
- Publication of the Council's first Annual Carbon footprint Report

<i>Officer contact:</i>		<i>Member contact:</i>	
Name:	Sheryl French	Name:	Councillor Steve Count
Post:	Programme Director	Chairman:	General Purposes Committee
Email:	Sheryl.French@cambridgeshire.gov.uk	Email:	Steve.count@cambridgeshire.gov.uk
Tel:	01223 728552	Tel:	01223 706398

1. BACKGROUND

- 1.1. In May 2019, Councillor Steve Count proposed an Environment Motion to Full Council and as a result, the Council declared a Climate Emergency. The motion was passed unanimously, and committed the Council to the development of a Climate Change and Environment Strategy and Action Plan. It recognised that our natural and built environment is the most precious inheritance for which we act as caretakers for the next generation and that society is facing global challenges of population growth, climate change and equalisation of living standards not faced before at this scale.
- 1.2. A draft Strategy and Action plan was approved for public consultation by Full Council in December 2019. The consultation ran from 20th December 2019 – 31st January 2020. The consultation received 438 responses across business, local authorities, parish councils, community groups, governmental organisations and individuals.
- 1.3. The consultation results were shared with Members on the 25th February 2020 at a seminar. The presentation included participation data, views on our priorities and key themes that emerged from the feedback for inclusion in the strategy including clean growth, public transport, water, waste and the urgency to act now to bring carbon emissions reductions. The revised strategy can be found in **Appendix A**.
- 1.4. The development of the draft Strategy and action plan has been supported by a cross-departmental Officer Steering Group and guided by a politically representative, Member Advisory Group.

2. MAIN ISSUES

- 2.1 *Governance and Resourcing.* In February 2020, the County Council budget for 2020/21 was approved including a £16 million fund to support the implementation of near-term targets set out in the Climate Change and Environment Strategy plus 1.5 FTE posts to support the delivery and reporting on key areas of strategy implementation. Also approved at February Full Council was the inclusion of a fourth corporate objective on Climate Change and associated updates to the Council's Strategic Framework, Medium Term Finance Strategy and Capital Strategy. Please see sections 2.8, 2.9 and 6.6 of the strategy document.
- 2.2 *Consolidation and Rationalisation of Priority Areas.* The consultation draft included a long list of priority areas with some overlap between priorities pointed out in the feedback. The priorities have been condensed to five priority areas under each of the key technical themes reflecting where the council can lead and where it will look to collaborate.

	Previous Version Priority Areas	New Version Priority Areas
Mitigation	<ul style="list-style-type: none"> • Nearly zero energy buildings • Transport (control) • Transport (collaborate) • Waste Management • Afforestation and Land Use • Peatland • Commercial and Industrial buildings • Domestic Buildings 	<ul style="list-style-type: none"> • Energy efficient, low carbon buildings • Low carbon transport • Waste Management • Afforestation and Land Use • Peatland
Adaptation	<ul style="list-style-type: none"> • Water availability • Resilient infrastructure • Resilient Economy • Green & Blue infrastructure • Climate change risk strategies • The Council's assets • Flood Risk • Highways Management • Impacts on Vulnerable people 	<ul style="list-style-type: none"> • Resilience of our services and supporting vulnerable people • Resilient highways and infrastructure • Flood risk • Water availability • Green and blue infrastructure development
Natural Capital	<ul style="list-style-type: none"> • Habitat restoration • Land management for nature • Biosecurity • Engagement with tenant farmers • Reducing plastic pollution • Peatland • Green space • Work with the agricultural sector • Air pollution 	<ul style="list-style-type: none"> • Reducing waste and tackling plastic pollution • Air pollution • Green spaces, habitats and land management • Peatland • Water management

- 2.3 *Strengthening of Adaptation Priorities.* The consultation highlighted a need to strengthen our action on adaptation, particularly regarding water. Water related challenges including: flood risk, water availability/scarcity and watercourse conservation featured highly. The existing priority on flood risk management has been strengthened and new priorities for water availability and water management (to encompass watercourse conservation) have been added.
- 2.4 *Updated Corporate Carbon Footprint.* The Corporate Carbon Footprint presented to Full Council in December has been updated with new data on the carbon emissions from the purchasing of goods and services. This is predominantly data on capital construction projects. As a result, the council's carbon footprint has increased to 202,508 tonnes CO₂e (gross). Data collection mechanisms are now being developed to continue to improve the certainty on our footprint. Please see **Appendix B**.
- 2.5 *Action Plan Updates.* The action plan, attached as **Appendix C** has also been improved to reflect feedback from the consultation. It contains some specific actions, for example the development of a Tree Strategy to guide the Council's afforestation priority but also broader areas for action where the detail still needs to be worked

through. This document is dynamic and will be regularly reviewed to reflect greater detail as it emerges.

Source Documents	Location
Approval to take draft Climate Change and Environment Strategy and Action Plan to Public Consultation	https://tinyurl.com/t5xezhb
Approval of Environmental Fund in 2020/21 Budget and 4th Corporate Priority	https://tinyurl.com/rhjc9cu



Climate Change and Environment Strategy



2020 – 2025

Published March 2020

Foreword

Human driven Climate Change is the greatest environmental challenge of our time and of any time before. Driven by human activities, our climate is changing at an unprecedented pace and scale that threatens all life on Earth. There is an urgent need for stronger and more integrated action.

I put forward an Environment Motion in May 2019 to Full Council. As a result the Council declared a Climate and Environment Emergency which has set us on a pathway to securing a sustainable future for our County and its residents. Our strategy is focussed on reducing greenhouse gas emissions, so that climate impacts will be less severe and biodiversity improved for future generations.

We must build on the good things we already do on the environment. We are proud of our work on renewable energy, flood risk, plastic pollution, efforts to increase modal shift and creating new green spaces, but more is needed. We must strengthen our policies across all areas of our work and find new financing mechanisms to support rapid and sustained change in how we do things. It is vital we work alongside and communicate with our communities about the actions we must take. Tackling Climate Change requires everyone, our citizens, all levels of government and businesses, to work in the same direction whilst protecting and caring for the most vulnerable in our society.

Over the last two decades, the UK has led the world in demonstrating that cutting our emissions does not mean sacrificing standards of living for everyone. Since 1990, UK emissions have fallen by more than 40%, while our economy has grown by two thirds. Our vision for Cambridgeshire as a whole, is to deliver net-zero carbon emissions by 2050 in partnership with all stakeholders. For the first time this year, we developed carbon footprints for Cambridgeshire and our own organisation. Young researchers from Cambridge University's Science and Policy Exchange (CUSPE) developed the County-wide footprint which informs our strategy. We are proud to tell you that since our solar park near Soham went live generating clean electricity in 2017 and buying only green electricity for our buildings and streetlighting, we have saved 28,452 tonnes of greenhouse gas emissions.

It is our intention that by 2025 all buildings that are both owned and occupied by the Council will be heated without fossil fuels, and all the Council's car and van fleet will be electric.

In addition, we pledge to:

- Reduce the Council's carbon footprint on by 50% on 2018-19 levels, by 2023 on scopes 1 & 2;
- Adapt our services to manage the impacts of Climate Change to benefit service users
- Improve air quality, increase biodiversity and natural capital across our estate and wildlife sites;
- Work with our supply chain to deliver 50% reduction on our 'scope 3' carbon emissions by 2030;
- Develop all Council strategies to include policies to tackle Climate Change and enhance our natural capital;
- Collaborate with Cambridgeshire businesses, residents and the public sector to deliver our ambitious targets, and net-zero carbon by 2050
- Work with Government, partners and stakeholders to support the 10,000 homes dependent on oil for heating and hot water in Cambridgeshire to switch to 100% clean energy by 2050



[SIGNATURE]

Councillor Steve Count, Leader

Executive Summary

The Council declared a Climate and Environment Emergency in May 2019, which was passed unanimously, and committed us to the development of a Climate Change and Environment Strategy and Action Plan.

Our vision is to deliver net-zero carbon emissions for Cambridgeshire by 2050, in partnership with all stakeholders, whilst supporting our communities and Cambridgeshire's biodiversity and environmental assets to adapt and flourish as our climate changes.

The purpose of this strategy is to provide a clear statement of the Council's Climate Change and environmental objectives and to set out how the Council will meet environmental sustainability and Climate Change challenges. The Strategy is for Cambridgeshire *County Council* and focusses primarily on what the Council itself can achieve. However, tackling Climate Change, adapting to its ongoing impacts and protecting and enhancing our natural capital is bigger than any one organisation. So the Strategy also identifies how we must work with public and private sector partners and communities across the county to support the transformation needed to tackle these challenges together.

This Strategy has been developed around three key themes:

- Quantifying our carbon footprints to inform and deliver Climate Change **mitigation** through efforts to reduce or prevent carbon emissions;
- **Adaptation** to cope with the existing and future impacts of Climate Change;
- Enhancing and conserving **natural capital** such as wildlife, plants, air, water and soils.

Our priority areas for the Climate Change **mitigation** theme (reducing our carbon footprint) are:

- Energy efficient, low carbon buildings – improving energy efficiency and installing low carbon heating.
- Low carbon transport – prioritising walking, cycling and public transport, and supporting the uptake of electric vehicles.
- Waste management strategies to reduce carbon,
- Afforestation – planting trees
- Peatland - developing understanding and management best practice

Our priority areas for the Climate Change **adaptation** theme are:

- Resilience of our services and buildings, effective Climate Change risk management strategies across all services, and supporting vulnerable people in severe weather or temperatures.
- Resilient infrastructure and highways;
- Flood risk;
- Water availability;
- Green and Blue Infrastructure.

Our priority areas for the **natural capital** theme are:

- Reducing waste and tackling plastic pollution;
- Air pollution;
- Green spaces, restoring and/or creating natural habitats, and land management, including more tree planting and continued environmental stewardship as part of rural estate management.
- Peatland;
- Water management.

Seven targets have been identified in the Action Plan. Targets 1 to 5 are for the County Council to deliver, which are reflected in the pledge above, and targets 6 and 7 will be in collaboration with partners and communities.

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1 Introduction

1.1 Why have we declared a Climate and Environment Emergency?

In May 2019, Cambridgeshire County Council declared a climate and environment emergency, and committed to the development of this Climate Change and Environment Strategy.

It recognised that our natural, historic and built environment is the most precious inheritance for which we act as caretakers for the next generation, and that society is facing global challenges of population growth, Climate Change and equalisation of living standards not before faced at this scale. It is a highly time sensitive problem; every day action is delayed it becomes more likely we will pass irreversible environmental tipping points.

Human driven climate change is one of the most complex issues facing us today. It poses significant risk to our health, economy and environment, and endangers the wellbeing of future generations. Air borne, water and land pollution is also a global environmental concern. It involves many dimensions – science, economics, society, politics and moral and ethical questions – and is a global problem, felt on local scales, that will be around for decades and centuries to come.

People of all ages, all walks of life and all social and economic backgrounds in Cambridgeshire are becoming increasingly concerned they will leave or inherit an environment that is irreparably damaged, forcing others to live with the consequences of the decisions we make today. Carbon dioxide, the greenhouse gas that has driven recent changes in our climate, lingers in the atmosphere for hundreds of years, and the planet (especially the oceans) takes a while to respond. Even if we stopped emitting all greenhouse gases today, Climate Change will continue to affect future generations.

All governments (national, regional and local) have a duty to limit the negative impacts of environmental change by cutting carbon emissions, protecting biodiversity and reducing pollution. The necessity of reaching net-zero was enshrined in UK law on 27th June 2019, with a target requiring the UK to bring all greenhouse gas emission to net-zero by 2050.

1.2 Sustainable development in a resource constrained world

The United Nations General Assembly approved 17 global goals in 2015, to achieve a more sustainable future for everyone (more than 9 billion people worldwide) by 2030. The sustainable development goals (SDG's) include specific goals on Climate Change, life on land and life in water, but also cover wider societal needs such as jobs, economic development, infrastructure, health, poverty and education.

Fundamental to sustainable development is resource efficiency. Achieving a future, free from major global conflict over resources, can only be achieved through equitable distribution of natural resources and their conservation. Quality of life for everyone is possible, if developed countries significantly reduce consumption and improve resource efficiency to keep within one planet's resources rather than the 3, 4 or 5 planets' worth of some countries. For developed countries, this will require investment into new technical innovations, upgrading infrastructure to reduce future resource consumption, promoting nature and making cleaner and greener lifestyle choices as part of our policy making.

1.3 The impacts of Climate Change

Climate Change is already occurring, and it is known that human activities contribute significantly to the increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level.

The International Panel on Climate Change (IPCC) estimates that human activities have already caused 1°C warming above pre-industrial levels (1). If temperatures increase at the current rate, warming is likely to reach 1.5°C between 2030 and 2052, leading to regional scale changes to climate, including dramatic increases in the frequency and intensity of flood or drought events across the world including the UK. These risks are set to increase should warming reach 2°C, and the longer that temperatures remain high, the harder it becomes to reverse the damage.

Please see section 10.1 for further information on the impacts of Climate Change.

1.4 Population and growth

Global population in 2019 is estimated by the United Nations (UN) to be at 7.8 billion with 55% of people living in urban areas. By 2050, this will increase and forecasts suggest our planet must support 9.7 billion people and 69% of people living in urban areas. A significant proportion of this population growth, close to 90%, will be across Africa and Asia. For the UK, by 2050 more than 25% of our population will be over 65. This is due to a combination of declining fertility rates and people living longer. This is really important when we are planning for growth.

Greenhouse Gas Emissions (GHG) must reduce for existing population and growth cannot add to the problem.

'One planet living' must design out waste, reduce consumption and improve resource efficiency. The Government published its Clean Growth Strategy in 2018. For Cambridgeshire this means we need to plan and invest in local, clean energy for buildings, new mass transport systems and zero carbon goods and services to reduce carbon emissions to net-zero by 2050. It also means that as part of clean growth, investment in regeneration and renewal of existing buildings and infrastructure is supported, along with improved energy efficiency and zero waste. Our future growth success will be measured by the energy intensity of new developments driving innovation into building design, consumption patterns and infrastructure provision.

Clean growth covers more than buildings and infrastructure. It covers everything we do including new agricultural and land management practices. Reducing carbon emissions and pollutants, whilst improving productivity and supporting biodiversity is a priority - our natural assets such as peatland and trees are also some of our biggest opportunities to store carbon. ALL this and reducing waste!

The Quality Charter for Growth is a good example of collaboration between Local Authorities. Developed in 2010, this charter guides better quality developments across Cambridgeshire, and is supported by an expert Quality Panel for Cambridgeshire. The Panel assesses schemes against the four 'C's of the Quality Charter: community, connectivity, climate and character, within the context of the adopted planning policy framework. The aim was to drive sustainable development in Cambridgeshire to achieve better places for people to live and call home. The Quality Charter offers us opportunity to redefine and understand clean growth in the context of net-zero by 2050 and to use it to bring the changes we need.

Detailed analysis of the different types of environmental assets can be found in section 10.4.

1.5 Imperatives for action

Reaching and sustaining net-zero global human-made CO₂ emissions, and reducing net emissions from other greenhouse gases, can "halt human driven climate change" within decades if we act at all levels and across all sectors to mitigate carbon emissions and plan for impacts that we already know will happen. There are three clear imperatives for action, as outlined by the Global Commission for Adaptation (2) which will directly impact our ability to serve our communities in the most effective way.

1.5.1 The Human Imperative

Climate Change exacerbates existing challenges to our services and the communities we serve. Increasing frequencies of heatwaves, and flooding and its contamination of water supplies, pose a particular threat for our most vulnerable residents. Climate refugees, people displaced from their homes as a result of the impacts of Climate Change, are likely to bring increased pressure on our social care delivery by 2050. It also puts an unfair burden on future generations who will have to cope with the challenges we are leaving them.

1.5.2 The Environmental Imperative

The natural environment is our first line of defence against extreme environmental events such as floods, droughts and heatwaves. A thriving natural environment is fundamental to effective and lasting adaptation, as well as contributing to mitigation. Yet one in four species is facing extinction, about a quarter of all ice-free land is now subject to degradation, and ocean temperatures and acidity are rising. Climate Change will bring adverse effects on our natural environment everywhere. We must protect and work with nature to build resilience and reduce climate risks at all scales before the damage has gone too far.

1.5.3 The Economic Imperative

Mitigation and adaptation are now in our strong economic self-interest: the cost of doing nothing far outweighs the cost of taking positive action now. The Global Commission on Adaptation has demonstrated that the overall rate of return on investments in improved resilience is high, with benefit-cost ratios ranging from 2:1 to 10:1, and in some cases even higher (2). Introducing climate adaptation considerations into our financial decision making will have commercial benefit to our economy in the long run.

1.6 Building on the work we already do

Cambridgeshire County Council has a history of leading work on environmental improvements and more recently tackling Climate Change at the local level. Over the years much has been achieved.

However, there is an urgent need for stronger and more integrated action. This is a challenge we have not faced before. We must build on the good things we already do, strengthen our policies across all areas of our work to tackle Climate Change and environmental degradation, and find new solutions and financing mechanisms to bring rapid and sustained change in how we do things. Most importantly of all, we and our partners must talk to and be guided by our communities about the actions we must take to bring about the change that is needed.

Table 1 Work the Council and its partners are already doing through its environmental and related strategies

Corporate Energy Strategy	<ul style="list-style-type: none">Reducing carbon emissions, improving energy efficiency and investing in renewable energy projects to displace fossil fuels
Plastics Strategy	<ul style="list-style-type: none">To eliminate avoidable single use plastics to protect the biodiversity of our local freshwater systems, oceans and marine life
Natural Cambridgeshire Local Nature Partnership	<ul style="list-style-type: none">Managing and protecting our County wildlife sites and their biodiversity

Joint Municipal Waste Management Strategy	<ul style="list-style-type: none"> • Taking measures to reduce waste and employ best environmental options for the waste that we are responsible for, taking account of carbon and greenhouse gas outputs • Advocating responsible approaches to waste for residents and businesses within the Cambridgeshire area.
Highways Asset Management Strategy	<ul style="list-style-type: none"> • Traffic management to minimise congestion and vehicle idling • Busway and public transport improvements to promote a shift towards mass-transit options
Minerals and Waste Management Plan	<ul style="list-style-type: none"> • Ensuring all planning proposals take account of Climate Change and the need to reduce carbon emissions, whilst exploring opportunities to use decentralised and renewable or low carbon energy
Local Flood Risk Management Strategy	<ul style="list-style-type: none"> • Supplementary planning guidance to improve land use planning embedding approaches that minimises flood risk, reduce water consumption and improve biodiversity • Supporting better natural management of flooding and improved community resilience to flood risk from Climate Change

What is the Council already doing to Mitigate and Adapt to climate change and enhance Natural Capital?

ADAPTATION

DOMESTIC

Working with communities to develop Flood Action Plans to prepare for and act in the event of a flood
Providing guidance for developers for improving sustainable drainage within their projects to increase flood resilience as well nature benefits

COMMERCIAL & INDUSTRIAL

Minerals and Waste applications are reviewed for their potential to provide benefits for flood risk and biodiversity

WASTE MANAGEMENT

Landfill sites are carefully designed and managed to minimise the risk of flooding. When closed, they are capped and restored to prevent water entrance and prevent leachate escape

AGRICULTURE

Tenant farmers share grain storage to reduce fossil fuel usage per tonne of crop, and to minimise vehicle movements as orders are taken only from a central store

TRANSPORTATION

Flood warning systems have been installed on the highway to warn motorists and trigger closures of flood affected roads

LAND USE

Natural Flood Management projects to develop catchment wide flood management to promote natural processes

MITIGATION

TRANSPORTATION

Traffic management to reduce congestion
Busway and public transport improvements
Increasing the amount of recycled materials used in road surfacing
Trialling bio-fuel for maintenance vehicles

COMMERCIAL & INDUSTRIAL

£11.8m investment into renewable energy and energy efficiency on county assets and schools
12MW Triangle Solar Farm, Soham
Pipeline of solar projects totalling 42MW under development

DOMESTIC

Working with Swaffham Prior Community Land Trust to move the village off oil and onto renewable heat. Expected to save 29,445 tonnes CO₂e over 30 years
Helping Parish Councils apply for residential EV chargepoint funding

WASTE MANAGEMENT

Diverting waste from landfill via improved recycling and re-use
Capturing gas emitted from landfills and using to generate electricity
Incentivising Districts and City Councils to collect recyclable materials

AGRICULTURE

Planted over 250,000 trees in small woodlands across the rural estate
Encourage our farm tenants to join agri-environment schemes to reduce their carbon impacts c.60% of tenants have either a basic or higher level scheme

LAND USE

Coordinating the Local Nature Partnership (LNP) which includes projects such as the Great Fen Project (Wildlife Trust) and Wicken Fen (National Trust) to restore and manage peatland as a carbon sink

NATURAL CAPITAL

Working with developers to create greenspace through 'preservation in situ' schemes to protect the historic and natural environment

Agree sustainable Travel Plans for new developments to improve air and water quality

Supporting Natural Cambridgeshire's vision to Double Nature by seeking ways to increase green spaces and biodiversity

Working with communities to create "Friends Groups" who volunteer to help maintain nature reserves and promote their importance

Encouraging our farm tenants to join agri-environment schemes to promote biodiversity

Working with the Local Nature Partnership to maintain and manage nature reserves for the benefit of biodiversity and people

Review of mineral site plans to ensure suitable restoration and seek opportunities for biodiversity and green infrastructure benefits

2 About Our Strategy

2.1 Our vision for 2050

Our vision is to deliver net-zero carbon emissions for Cambridgeshire by 2050 in partnership with all stakeholders, whilst supporting our communities and Cambridgeshire's biodiversity and environmental assets to adapt and flourish as our climate changes.

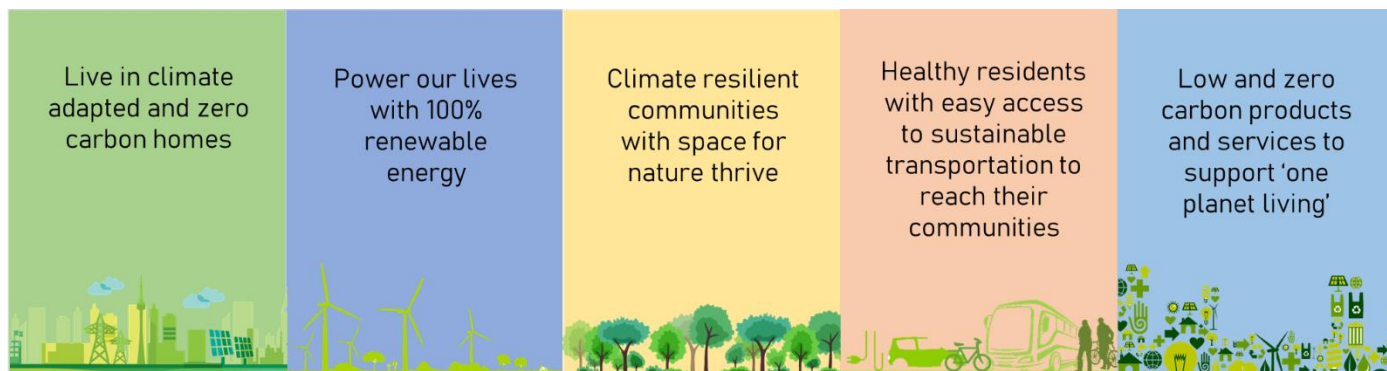


Figure 1 Cambridgeshire County Council's Vision for 2050

2.2 Purpose of the strategy

The purpose of the strategy is to provide a clear statement of the Council's Climate Change and environmental objectives and to set out how we will meet environmental sustainability and Climate Change challenges. It describes how we will get our own house in order and how working together with our public sector partners and our communities will support the transformation needed across Cambridgeshire and beyond to tackle these challenges.

Our Objectives are to:

- Reduce greenhouse gas emissions to mitigate the impacts of human-made Climate Change
- Support our communities and biodiversity to adapt to a changing climate
- Improve Cambridgeshire and Peterborough's Natural Capital¹ for future generations
- Empower Cambridgeshire communities and businesses to buy-into and support the delivery of the Strategy vision
- Work with our public sector partners to join up policies and strategies across different levels of government to deliver net-zero carbon by 2050
- Deliver our UK100 pledge for 100% clean energy for our communities by 2050

2.3 Our approach

To deliver the vision and objectives of the Strategy we will engage with Officers, Members, partners, businesses and our communities to build a shared understanding of the challenges and grow our collective knowledge, capacity and skills to create the place we want for our children's future. This includes:

- Identifying the carbon footprint for the whole of Cambridgeshire and Peterborough and placing our organisational carbon footprint within this broader context;
- Developing carbon targets and tracking carbon emissions reductions for the Council's operational footprint and the broader impact of its activities and policies;

¹ Natural Capital: elements of nature that directly or indirectly produce value to people, including ecosystems, species, freshwater, land, minerals, the air and oceans.

- Co-designing an action plan with our staff, communities and partners that shows how we are going to deliver our Strategy, where we will lead or where we must support others to lead;
- Demonstrating leadership and setting a good example, through using our numerous statutory responsibilities and duties such as planning and regulation, highways and public transport, waste treatment and disposal, delivery of major infrastructure projects, education, social and other services to bring forward positive change;
- Financing the delivery of the Strategy and Action Plan and providing a framework for the Council to inform its budget setting and delivery of its [corporate priorities for the people of Cambridgeshire](#).

2.4 Key themes for our strategy and action plan

This Strategy is built upon a number of key themes, technical, organisational and engagement aspects to provide the context and how we work with partners and our community.

Three themes:

1. Quantifying our carbon footprints to inform and deliver Climate Change **mitigation** through efforts to reduce or prevent carbon emissions;
2. **Adaptation** to cope with the existing and future impacts of Climate Change;
3. Enhancing and conserving **natural capital** such as wildlife, plants, air, water and soils.

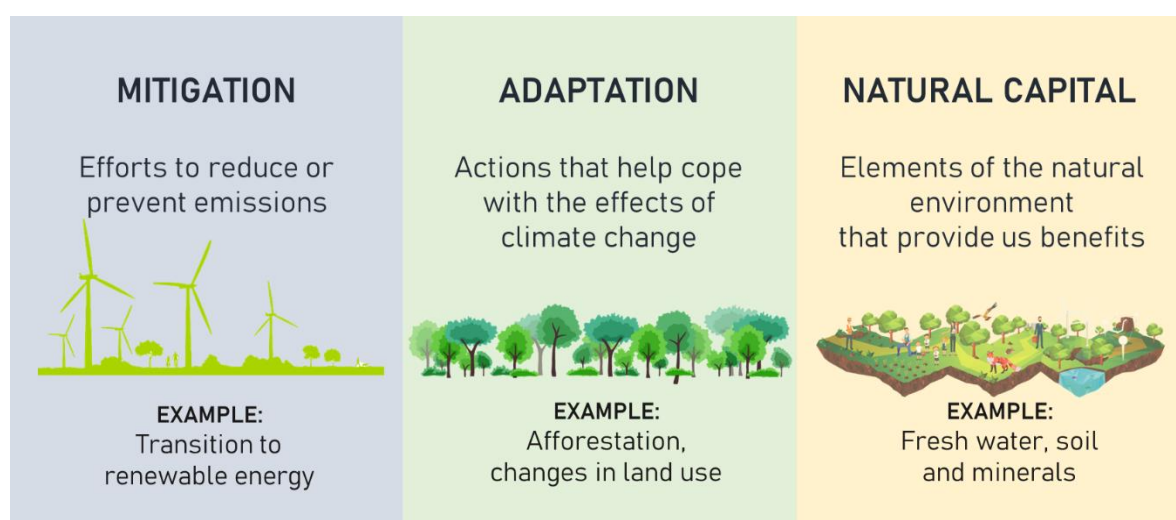


Figure 2 Mitigation, adaptation and natural capital

Mitigation of carbon emissions addresses the causes of Climate Change. It describes those actions which reduce, prevent or capture greenhouse gas emissions. A strong strategy must be informed by robust evidence. The current carbon footprints of both the County Council itself as an organisation, and that of the entire geographical area of Cambridgeshire will inform our action planning as well as the views of our communities. See chapter 3.

Adaptation consists of those actions that enable us to deal with the effects of Climate Change, such as flood risk management in response to heavier more frequent rainfall. The adaptation actions the council can take are discussed in Chapter 4.

Natural capital comprises our 'stock' of waters, land, air, species, minerals and oceans. This stock underpins our economy by producing value for people, both directly and indirectly. Goods provided by natural capital include clean air and water, food, energy, wildlife, recreation and protection from hazards (3). Improving our natural capital addresses how to enhance our existing nature reserves, improve biodiversity and tackle air, land and water pollution to keep our planet healthy for all species. See Chapter 5.

2.5 Our priority areas

We have identified several priority areas, for each of the three key themes. Some of these are areas where we can lead, and others will require collaboration with partner organisations and wider communities. All of our priority areas are set out in more detail in chapters 3, 4 and 5.

Our Priority Areas For Mitigation	Our Priority Areas For Adaptation	Our Priority Areas For Natural Capital
<ul style="list-style-type: none"> • Energy efficient, low carbon buildings • Low carbon transport • Waste management • Afforestation and land use • Peatland 	<ul style="list-style-type: none"> • Resilience of our services and supporting vulnerable people • Resilient infrastructure and highways • Flood risk • Water availability • Green and Blue Infrastructure 	<ul style="list-style-type: none"> • Reducing waste and tackling plastic pollution • Air pollution • Green spaces, habitats and land management • Peatland • Water management

Several of these priority areas overlap, as shown in Figure 3.

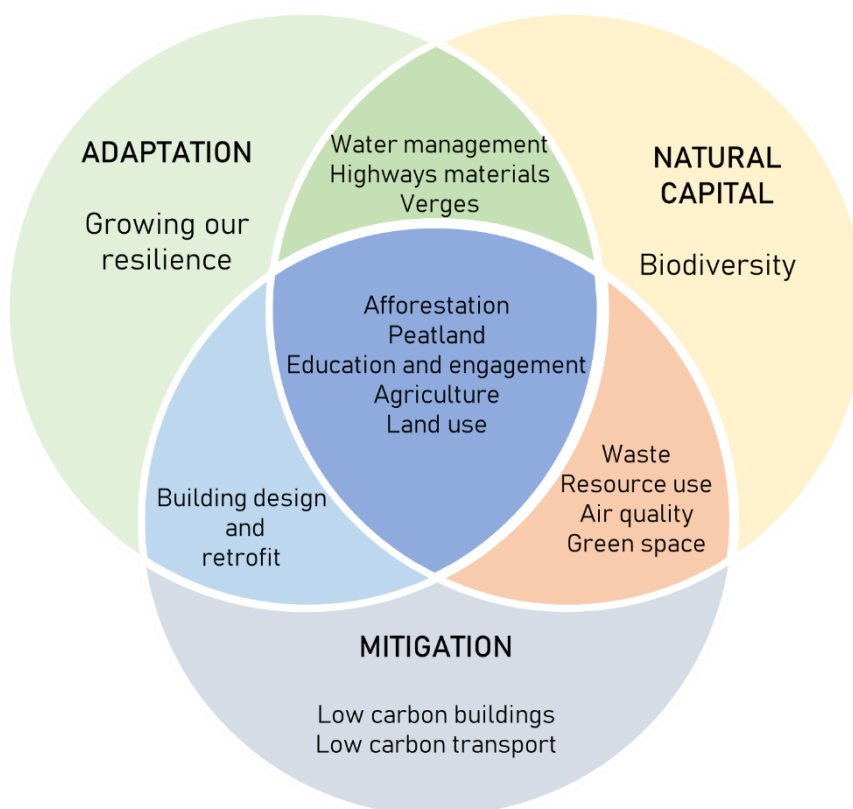


Figure 3 Overlap of the priority areas identified

2.6 Levels of control and influence

This is a strategy for Cambridgeshire *County Council* (rather than the county of Cambridgeshire) and identifies how we must work with our public and private sector partners and communities across Cambridgeshire. As part of its strategy, the Council recognises what is under its direct control (where we can show leadership) and wider influence, as shown in Figure 4.

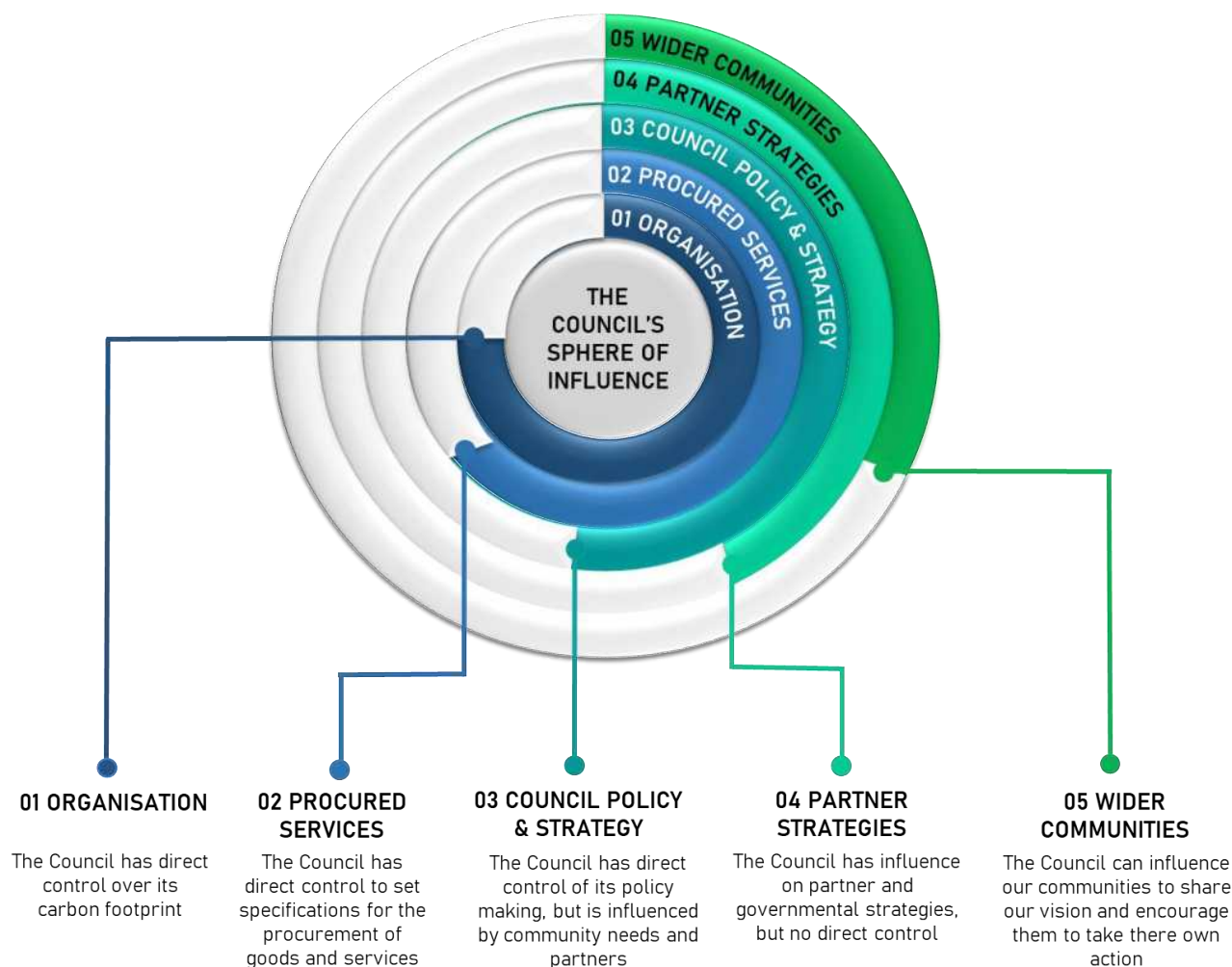


Figure 4 Defining our control (opportunities for leadership) over different causes and consequences of Climate Change.

2.7 Our targets

The Council has set seven targets (Table 2). The first five targets focus on how the Council will lead on how it runs its business and manages its assets. The last two targets reflect the Government's carbon budgeting process for 2030 and 2050 – these two can only be achieved in collaboration with our partners and our communities. The target setting has been informed by two carbon footprints developed during 2019 as set out in section 3.

The targets will be reviewed in 2023 to check progress and reset. It is clear that the next 10 years are the most important to deliver GHG reductions to keep global temperature rise within 1.5 degree warming. Every effort will be made to exceed targets. The next three years could be transformational as the journey to low carbon through planning and policy change starts and direct actions to minimise GHG emissions gets underway.

Table 2 Targets set within the Strategy, under which sit the actions in the Action Plan. The targets flow from blue (most control) to green (collaborative), in line with figure 3 above

Reduce the Council's organisational net carbon footprint for our buildings and transport assets ('scopes 1 and 2') by 50% by 2023 compared to 2018 levels
All Council departments to implement measures to ensure their services are adapted to Climate Change in line with the National Adaptation Programme recommendations by 2030
Deliver a net 20% increase in biodiversity (<i>"net-gain"</i>) across all Council property, land projects and wildlife sites by 2030
Reduce the Council's emissions from purchased goods and services ('scope 3') emissions by 50.4% by 2030
100% of Council strategies include policies that tackle Climate Change and provide natural capital enhancement by 2023
By 2023, sign up to a shared target with partners and the community to deliver 50.4% greenhouse gas emissions reductions by 2030 in tonnes/CO ₂ per annum for Cambridgeshire based on the 2018 baseline
Deliver Government's net-zero-carbon target for Cambridgeshire by 2050

2.8 Governance of the strategy

In February 2020, Cambridgeshire County Council approved a fourth corporate objective to deliver net-zero carbon emissions for Cambridgeshire by 2050 and created a Fund of £16 million to deliver its near term targets including getting its own house in order. The Council's Strategic Framework (SF), Medium Term Finance Strategy (MTFS) and Capital Strategy (CS) have all been updated to reflect the importance of this new objective, putting this strategy at the heart of all that we do.

Overseeing the delivery of the Council's Strategy ambitions, it is our intention to create a new 'Environment' Committee to help drive change and deliver a greener and better future. One of the remits of this committee will be to oversee the Environment Fund to ensure it delivers our targets and wider climate commitments set out in our action plan.

Every year we will publish our 'Annual Carbon Footprint Report', the first of which accompanies this strategy and every year we will report progress against our targets.

Looking outwards, Cambridgeshire County Council has supported proposals to setup an independent Cambridgeshire and Peterborough Climate Commission. The local commission will look to scrutinise progress with carbon reductions across Cambridgeshire in line with government's carbon budgets and identify key areas of research to guide Cambridgeshire in its decarbonisation ambitions. The Commission will hold all sectors to account on their journey to net-zero and ensure adaptation and climate risk are part of our green DNA.

2.9 Financing climate and environmental change

All governments (national, regional and local) have a duty to limit the negative impacts of environmental change by cutting carbon emissions, protecting biodiversity and reducing pollution.

The challenging financial and resource pressures we face as a County Council, is common to many Local Authorities. This cannot be used an excuse for not finding new ways of living, working and sharing low carbon lifestyles to prevent runaway climate change.

Responding to Climate Change has traditionally been seen as the realm of Government policy. There is growing recognition that the financial system, including the insurance sector, has a major contribution to help drive investment into low carbon infrastructure and manage climate related risks.

In 2017 the UK Government set up an independent Green Finance Taskforce (GFT) to review how to finance our commitments to both the 2015 Paris Agreement on Climate Change and UN Sustainable Development Goals. The scale of investment needed to keep temperatures within the 1.5/2°C trajectory requires a fundamental reorganisation of our finance systems and a rethink of how our economy works.

The GFT made 10 recommendations (4), now reflected into the UK's Green Financing Strategy (5). Climate risk management is key. Financial institutions have been slow to price climate risk into long term financial thinking partly due to uncertainty of when and where negative impacts arise but also as a result of short time horizons in investment decision-making, miss-education and a lack of good available data. This has resulted in an under-allocation of capital for climate related risk, with insurance risk from climate impacts (Figure 5) becoming increasingly untenable. There are significant opportunities for growth and development of 'climate smart' finance as society and the economy move to being both low carbon and more resilient to a changing climate

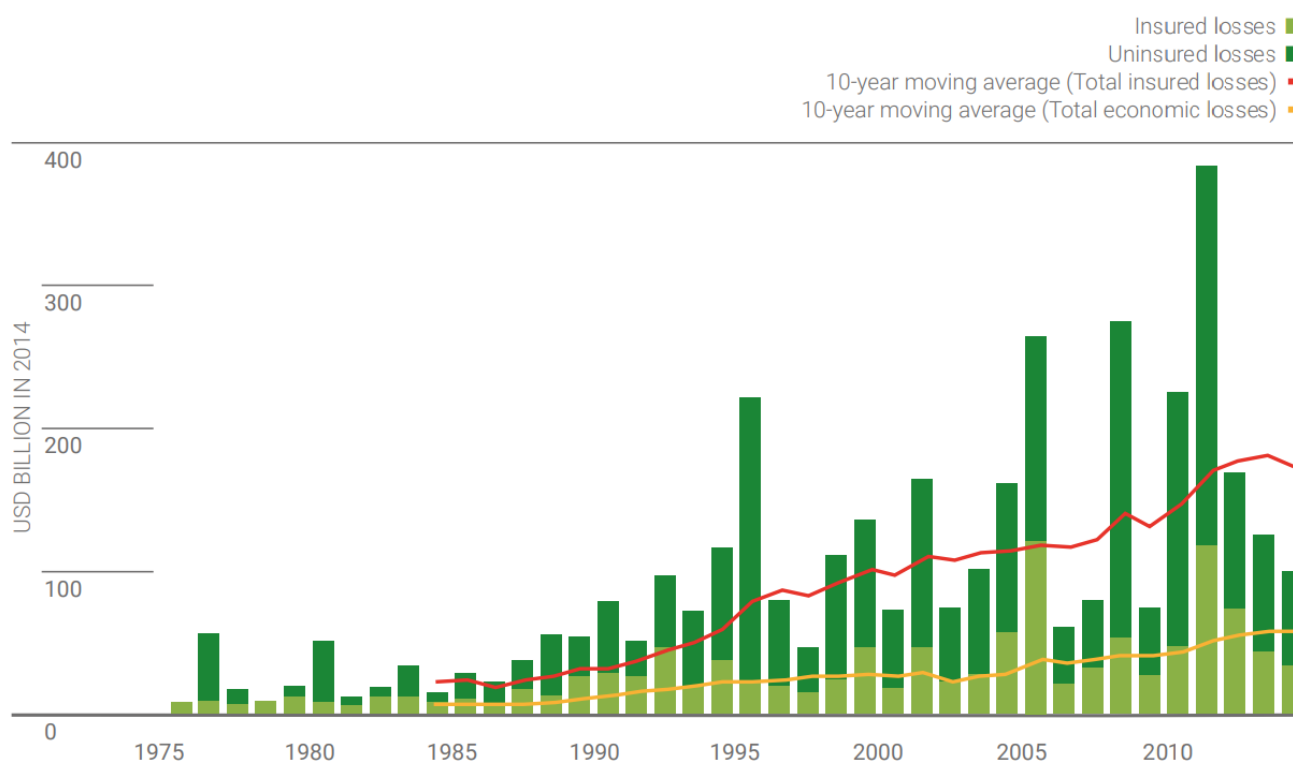


Figure 5 Increase in global insurance loss volumes volatility of catastrophic events. Source: Swiss Re Institute and Cat Perils

The taskforce also identified a need to align UK infrastructure planning with the Clean Growth Strategy and 25 Year Environment Plan. To support local place making, it recommended setting up local development finance funds to support Clean Growth Regeneration Zones and public bodies' pension providers to deliver place-based low carbon investments to drive change.

In the UK Green Finance Strategy three key themes will shape the financing framework for clean growth (Figure 6). These are: Greening Finance; Financing Green; and Capturing the opportunity.

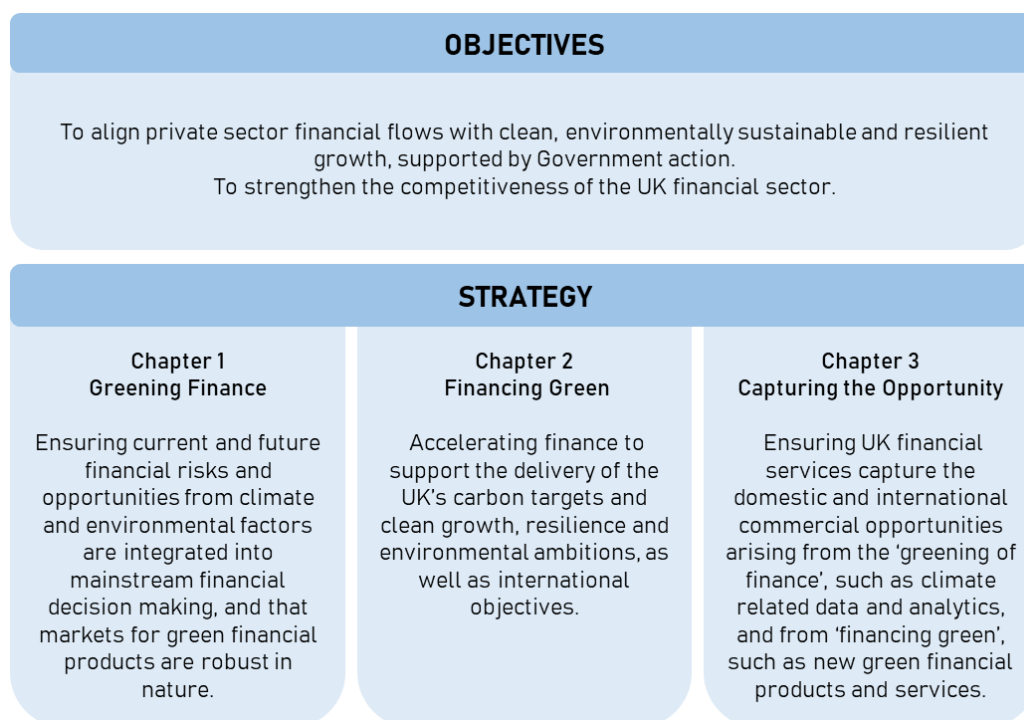


Figure 6 The Strategy and objectives underlying the UK's Green Finance Strategy. Adapted from UK Green Finance Strategy, p7.

2.9.1 Greening finance for the Council

Greening Finance

The Council and its Local Authority partners, together, are well placed to drive emission reductions and improve resilience through their policy functions on land, buildings, water, waste and transport. These policy functions can embed low carbon measures into strategic plans such as social care, transport, and waste, to deliver clean growth and drive market change. Defra's 25 Year Environment Plan also provides the impetus to make better decisions on land use and its development to reflect the level of current and future flood risk that can impact people, the environment and the economy.

Environmental, social and governance (ESG) are the three central factors in measuring the sustainability and societal impact of an investment in a company or business. These criteria help to better determine the future financial performance of companies (return and risk) and there is an increasing focus on these factors in the private sector.

Natural capital plays a major role managing climate risk and storing carbon. Cambridgeshire's Local Nature Partnership has a vision to 'Double Nature' and is developing an Investment Plan to seek new public/private partnerships to invest in its natural capital to drive 'value'. In light of the increasing appetite for ESG, Councils may also be able to attract new funds to support the 'Doubling Nature' vision and look to capture funding through green (or ESG) bonds offering a social return. Opportunities are also expected from the Agriculture and Environment Bills e.g. Environmental Land Management Schemes (ELMS), biodiversity and environmental net gain can also deliver the vision.

Financing Green

The Council approved a budget of £16 million in February 2020 to support carbon emissions reductions on Council assets and to build resilience for local oil dependent communities. This builds on the £22 million already invested into schools, a solar PV park and energy improvements in its office buildings. A commitment of a further £56 million into the development of large energy projects

up to 2023/24 has also been supported to reduce carbon emissions, generate renewable energy for local businesses and support electric vehicle charging.

Capturing the Opportunity

Since 2014 the Council has been building its internal capacity to develop and deliver clean energy projects to address local market barriers. It is using a number of green finance models to facilitate these projects and is keen to build on this work to secure deeper and faster change to benefit its communities.

The Council has access to a number of funding streams which can support investment into green energy technologies and skills development, principally falling into three categories:

- **Capital Investment:** The Council is able to borrow from the Public Works Loan Board and Municipal Bonds Agency, amongst other lenders, for capital investment projects
- **Grant Funding:** Local Authorities can submit bids for Government and other funding streams for projects which meet the eligibility criteria of a number of clean energy programmes
- **Transformation Funding:** The Council can invest reserve funding into projects which generate longer term savings or income streams for the Council

Local Authorities and Local Enterprise Partnerships are also exploring community based ownership approaches whereby communities develop and own projects in partnership with public sector organisations, contributing funding and sharing in the financial returns generated. The Council has utilised these funding streams to implement the following models for energy investment:

- **Invest to save:** Capital investment into energy measures to save money on energy bills. For example, £11million has been invested into Cambridgeshire's schools which will be fully repaid, whilst also helping 55 Cambridgeshire schools reduce energy bills by £750,000 each year – so they can spend more on educating children.
- **Innovations/future market model:** Investment in pioneering innovation in low carbon technology, renewable energy community projects, and new business models to shape the market for a net-zero carbon 2050. We have two projects under development, [St Ives Park and Ride Smart Energy Project](#) and working with [Swaffham Prior Community Land Trust](#) to take the village off oil onto renewable heat and hot water.
- **Income Generation model:** **We have already had much success in this area, such as the £10million which was invested into [Triangle Solar Farm](#) , which generates approximately £1million gross revenue per annum.** We will continue to prioritise environmental projects that deliver a net surplus, through all mechanisms at our disposal. Just one example would be a capital loan designed to bring forward projects to generate a profit (over the project lifetime) and hence contribute to carbon reduction and generate income for services.
- **Capacity and skills building:** Investment to build new skills for the future. For example, the Council secured a grant for the [Mobilising Local Energy Investment Project funded by Intelligent Energy Europe](#) for £1 million to build the capacity of staff and politicians to develop and invest in energy projects. We now have £22 million of investments in Cambridgeshire and a £56 million pipeline of investment.

3 Mitigating Climate Change

3.1 What is Climate Change mitigation?

Mitigation can mean using new technologies and renewable energies; making older equipment more energy efficient; reducing consumption and waste; or changing management practices or consumer behaviour, to reduce or prevent emission of greenhouse gases. It is undertaken to limit the magnitude or rate of long-term Climate Change due to human emissions of greenhouse gases.

It is important to understand that the sooner mitigation of carbon emissions occurs, the greater the overall reduction of carbon emissions generated by 2050. For example, if you reduce 20 tonnes of annual CO₂ in 2020, this reduces the cumulative impact of 600 tonnes by 2050.

'Net-zero Carbon' means the reduction of greenhouse gas emissions to the lowest possible level and any remaining emissions, offset through carbon removal methods such as tree planting or carbon capture and storage, so we have net-zero emissions to the atmosphere. This does not mean that high levels of offsetting will get us to net-zero, as the scale of emissions is so large. For the UK as a whole, the net-zero target legally must be reached by the end of 2050.

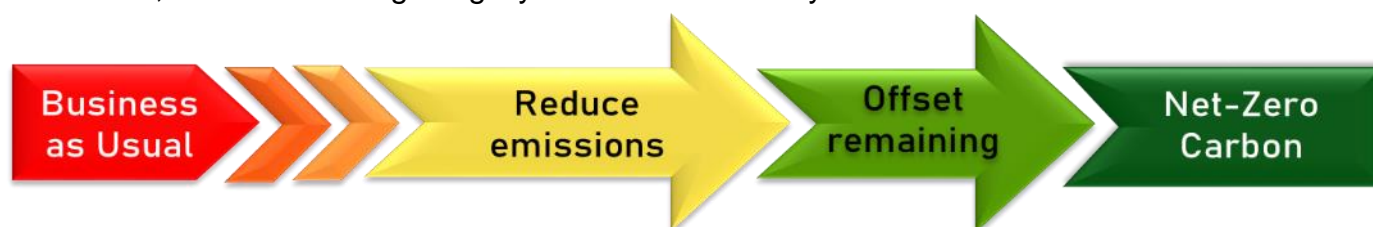


Figure 7 Pathway to Net-zero Carbon

There are a number of ways to mitigate Climate Change; some of these are detailed in section 10.2.

3.2 Current carbon footprints

3.2.1 Cambridgeshire's carbon footprint

In 2019, Cambridgeshire County Council's annual collaboration with the Cambridge University Science and Policy Exchange (CUSPE) brought a team of researchers together to develop an evidence base of current carbon emissions for Cambridgeshire and Peterborough, improving on the 'CO₂-only' data published by the department for Business Energy and Industrial strategy to provide a more accurate carbon footprint for the area.

The Council adopted the CUSPE report as an evidence base for its Climate Change and environment Strategy in October 2019.

This report found that **Cambridgeshire and**

Peterborough communities together produced 6.1 million tonnes of carbon dioxide equivalent (CO₂e) in 2017. The breakdown of this is shown in Figure 8.²

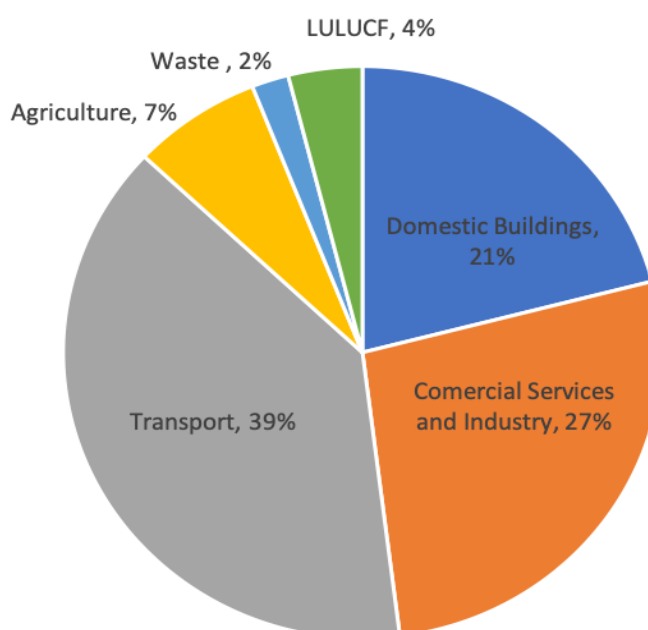


Figure 8 Breakdown of Cambridgeshire and Peterborough GHG emissions by source, 2017.

² LULUCF = Land use, land use change and forestry

The research team also modelled two scenarios projecting future emissions to 2050, presented as: “business as usual” and “net-zero emissions by 2050” (Figure 9). The difference between the two scenarios highlights the policy gap to reach Government’s ambition of net-zero carbon by 2050.

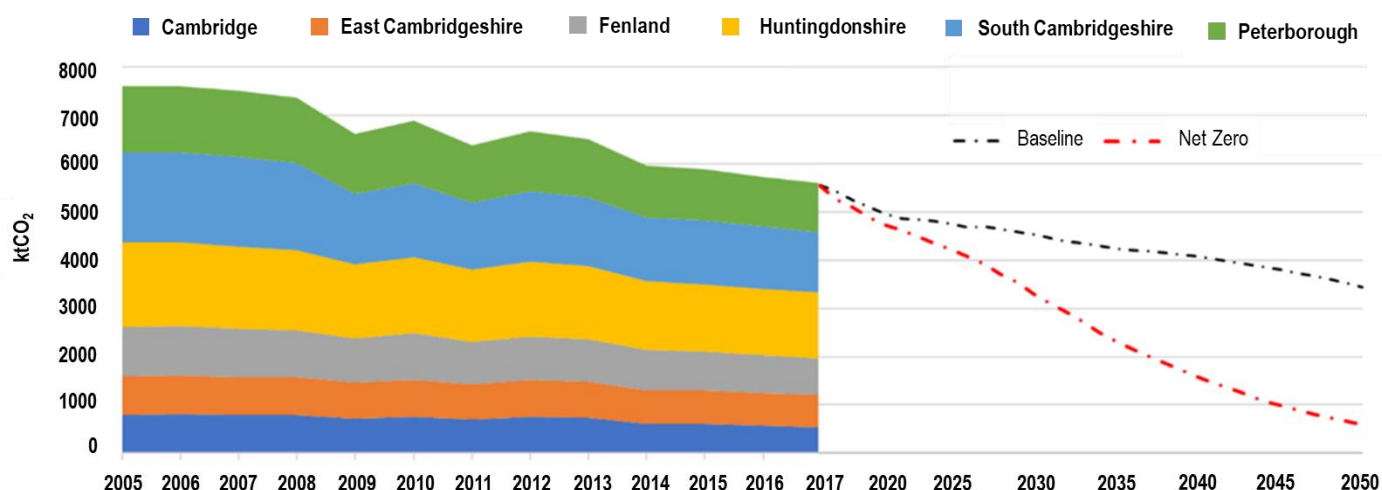


Figure 9 GHG Emissions Pathways to 2050

To achieve the ambitious reduction scenario, the report highlighted the key areas the Council and its partners should consider incorporating into new policy, including:

- Decarbonisation of heat and improvements to the energy efficiency of the housing stock;
- Implementation of low carbon heating and carbon capture and storage in commercial and industrial buildings;
- All cars, vans, buses and motorcycles and most HGVs to be electric, as well as shifting more transport away from cars to walking, cycling and public transport;
- A significant reduction of food waste, reduction of demand for red meat and dairy by 20%, and increased fertiliser efficiency, breeding measures, and livestock food additives;
- Deployment of carbon capture and storage on waste sites, increasing capture of landfill and compost gas emissions and electrification of waste transport;
- Extensive afforestation;
- Further research on peatland emissions and work with experts to find the best solution to ameliorate the current impact of our peatland areas.

The full report from the CUSPE team can be viewed [online](#) (6).

3.2.2 The County Council’s carbon footprint

Cambridgeshire County Council has calculated the carbon footprint of its own operations for the financial year 2018-19, in line with the UK Government’s Environmental Reporting Guidelines for Voluntary Greenhouse Gas Reporting (7). We are unable to compare this to previous years as we did not collect the same data.

Scope 1 (direct) and scope 2 (purchased electricity) emissions amounted to **7,711 tonnes CO₂e** (gross). This includes emissions from gas and oil for heating our buildings, electricity for our buildings and street lighting etc., emissions from fleet vehicles, and fugitive emissions from air conditioning units.

Our **Net** GHG emissions for scopes 1 and 2, after taking into account purchasing of 100% renewable electricity, were **1,985 tonnes CO₂e**. The breakdown of this is shown in Figure 10, with the largest share coming from gas to heat our buildings.

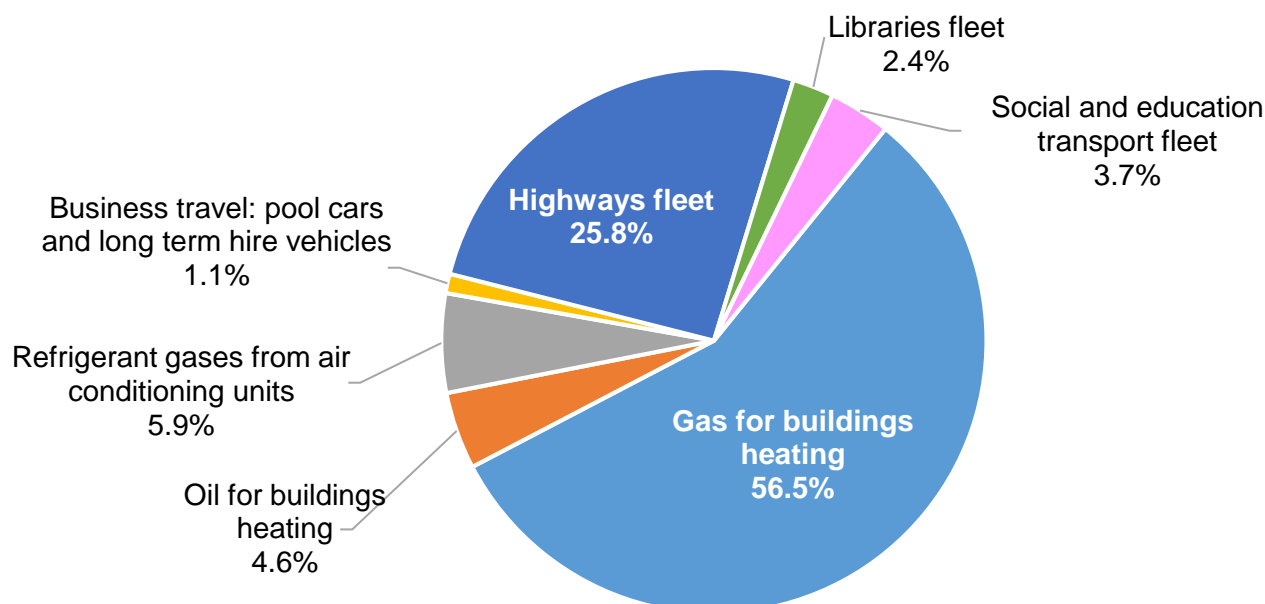


Figure 10 CCC Scopes 1&2 net GHG emissions, 2018-19, by source

If we also include those indirect emissions by third parties (scope 3) for which we have data, this increases to **203,665 tonnes** (gross) CO₂e, of which Scope 3 emissions are 96% of the total. A breakdown of the sources of emissions from all scopes is shown in Figure 11.

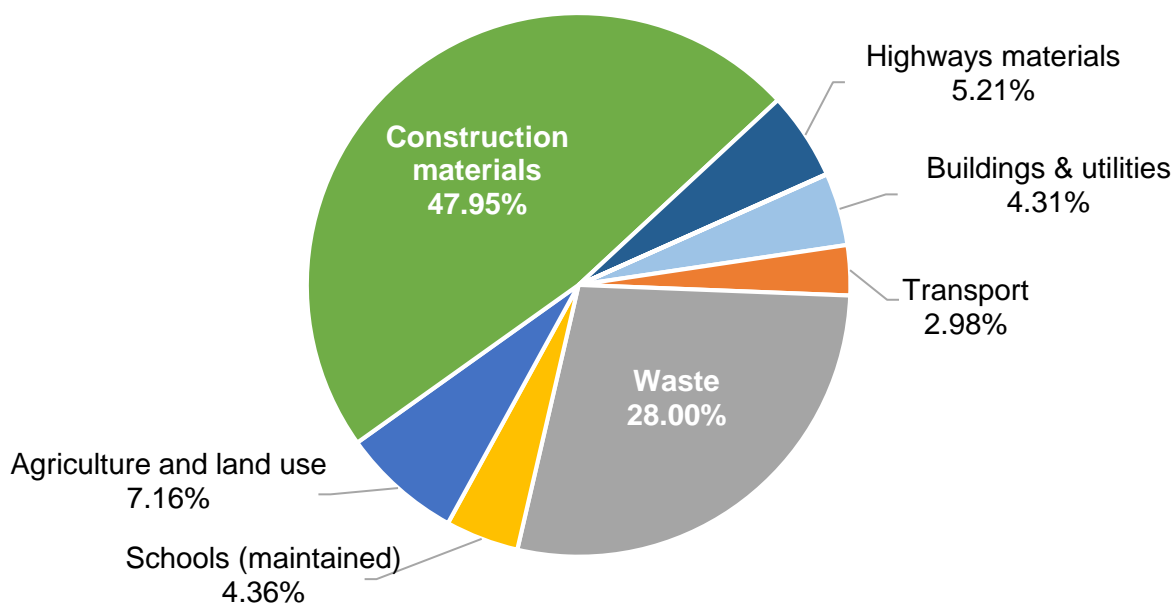


Figure 11 CCC total known (all scopes) gross GHG emissions, 2018-19, by source

These scope 3 (indirect) emissions include transport emissions from vehicles not under Council control (such as employee's own cars or contractors' travel), emissions from County waste disposal and treatment, emissions from Local Authority maintained schools' energy usage, agricultural emissions from the County Farms estate, and emissions from purchased goods and services, such as materials for construction works (which account for the largest share).

The greatest certainty and accuracy of the carbon footprint is in the Scopes 1 and 2 data. Scope 3 data often lies with other organisations and so more of it is estimated.

Deducting the emissions that can be offset through our renewable electricity generation assets (including our 12MW solar farm in Soham) and for purchasing 100% renewable electricity, gave a reduction of -9,484 tonnes CO₂e.

A more detailed breakdown and full analysis of the Council's carbon footprint can be found in our *Carbon Footprint Annual Report 2018-19*.

3.3 Our priority areas for mitigation

Priority areas have been identified based on where the council can have the greatest impact. Many of these areas will have significant co-benefits to our communities such as to health through reducing air pollution, or to communities through better transport connections.

3.3.1 Energy efficient, low carbon buildings

Leadership: The Council has over 200 buildings (including offices, libraries, community centres and others), and Cambridgeshire has a schools portfolio of 260 buildings (including 138 Council-maintained schools) plus new schools being built. It is a priority for the Council to design and build new buildings to higher policy standards that deliver net-zero carbon by 2050. It must also consider higher standards for construction, and greater emphasis on carbon lifecycles for new and existing buildings.

We will bring forward new opportunities for installing ground source and/or air source heat pumps (see section 10.2) to replace gas or oil heating in our buildings. We will also look to substantially improve the energy efficiency of our existing buildings as a priority, for example through replacing old lighting with efficient LEDs.

Collaboration: We will work with local business to support decarbonisation of commercial and industrial buildings and operations and look to good-practice to drive this priority (Figure 12).

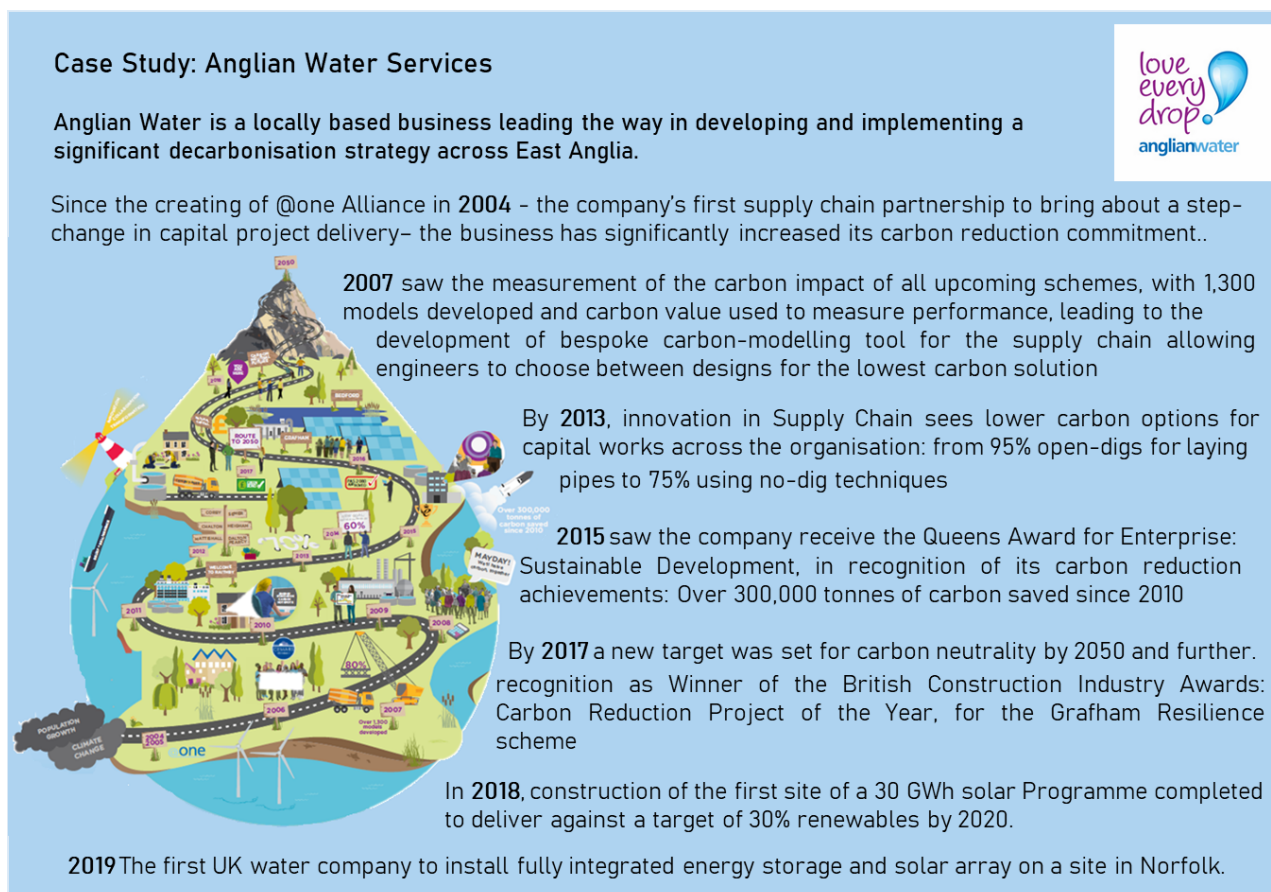


Figure 12 Case Study: Anglian Water Services Ltd.

We will develop circular economy principles such as reuse, repair, refurbishment, remanufacturing and recycling to create a closed-loop system, minimising the use of resource inputs and the creation of waste, pollution and carbon emissions.

Collaboration: Domestic Buildings

The Planning System and Building Regulations are key mechanisms for delivering improvements to new homes standards. Facilitating growth is a shared accountability across Local Government with district councils having responsibility for local plans and the Combined Authority for the non-statutory spatial plan.

A key role for the County Council is to support the 10,000 existing homes in Cambridgeshire dependent on oil to shift onto renewable energy. This can be achieved through supporting communities to develop community heat projects, accessing grants to develop business cases, assembling professional teams to support projects and using the Council's land assets to host or facilitate energy centres.

3.3.2 Low carbon transport

Leadership: As managers of the local highways network, how we prioritise walking, cycling and public transport ahead of the private car to minimise carbon emissions and improve air quality, must be further developed, making use of the travel hierarchy (Figure 13). A shift to more sustainable travel modes is paramount.

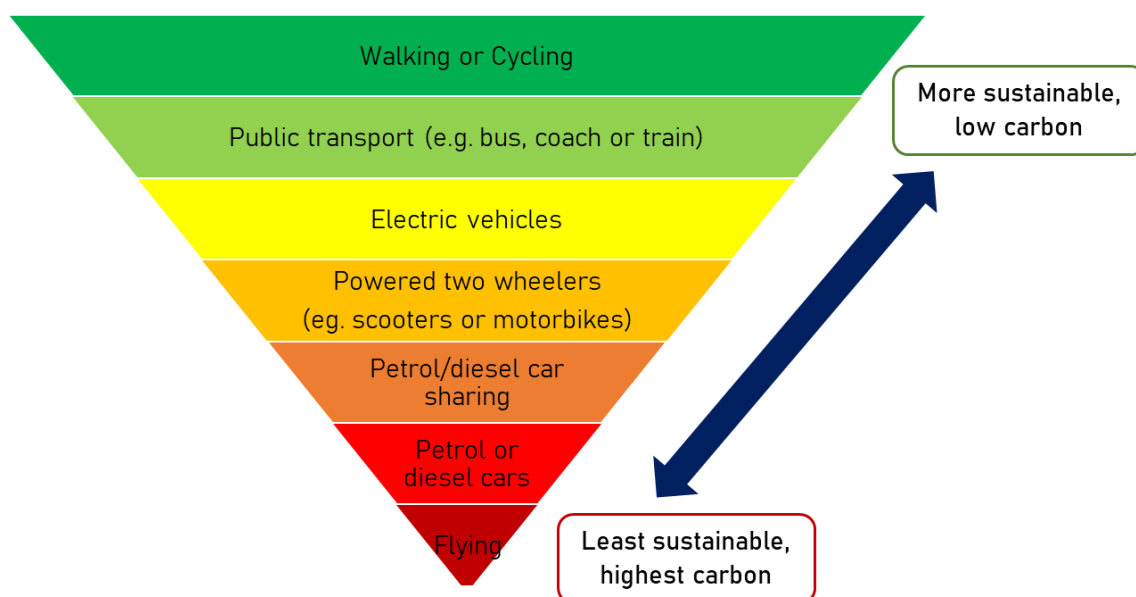


Figure 13 Travel Hierarchy

We must also make more use of this hierarchy in our own operations, planning for minimising travel, and switching essential travel to more sustainable methods wherever possible.

Our 'transport network' has many assets along with the Council's offices and rural estate – so the plan will include EV charging at Council offices for staff and visitors, EV pool cars, and use of our assets to contribute to a credible EV charging infrastructure accessible to all.

Active network management systems must allow all communities, both urban and rural, to access alternatives such as autonomous vehicles and charging infrastructure for a range of transport options including electric vehicles and electric bikes, to reduce carbon emissions.

Bringing Innovation to public transport

Several innovative projects are already underway to develop new approaches to mass-transit in Cambridgeshire.

- In collaboration with Stagecoach, the Greater Cambridge Partnership is currently trialling electric buses on the network
- Smart Cambridge is trialling autonomous vehicles on the southern section of the existing guided busway. If successful, self-driving vehicles could be rolled-out elsewhere around Greater Cambridge, for example, to link some of the science and business campuses to each other or to rural travel hub
- The Cambridgeshire and Peterborough Combined Authority is developing Cambridgeshire



Smart Cambridge's autonomous vehicle

Autonomous Metro (CAM) – an electrified new public transport system for the county. It will provide the transformational change required to the area's under pressure transport network, while also fulfilling the ambitions for sustainable clean growth.

Collaboration: Responsibility for transport sits across a wide range of organisations in Cambridgeshire (Figure 14).

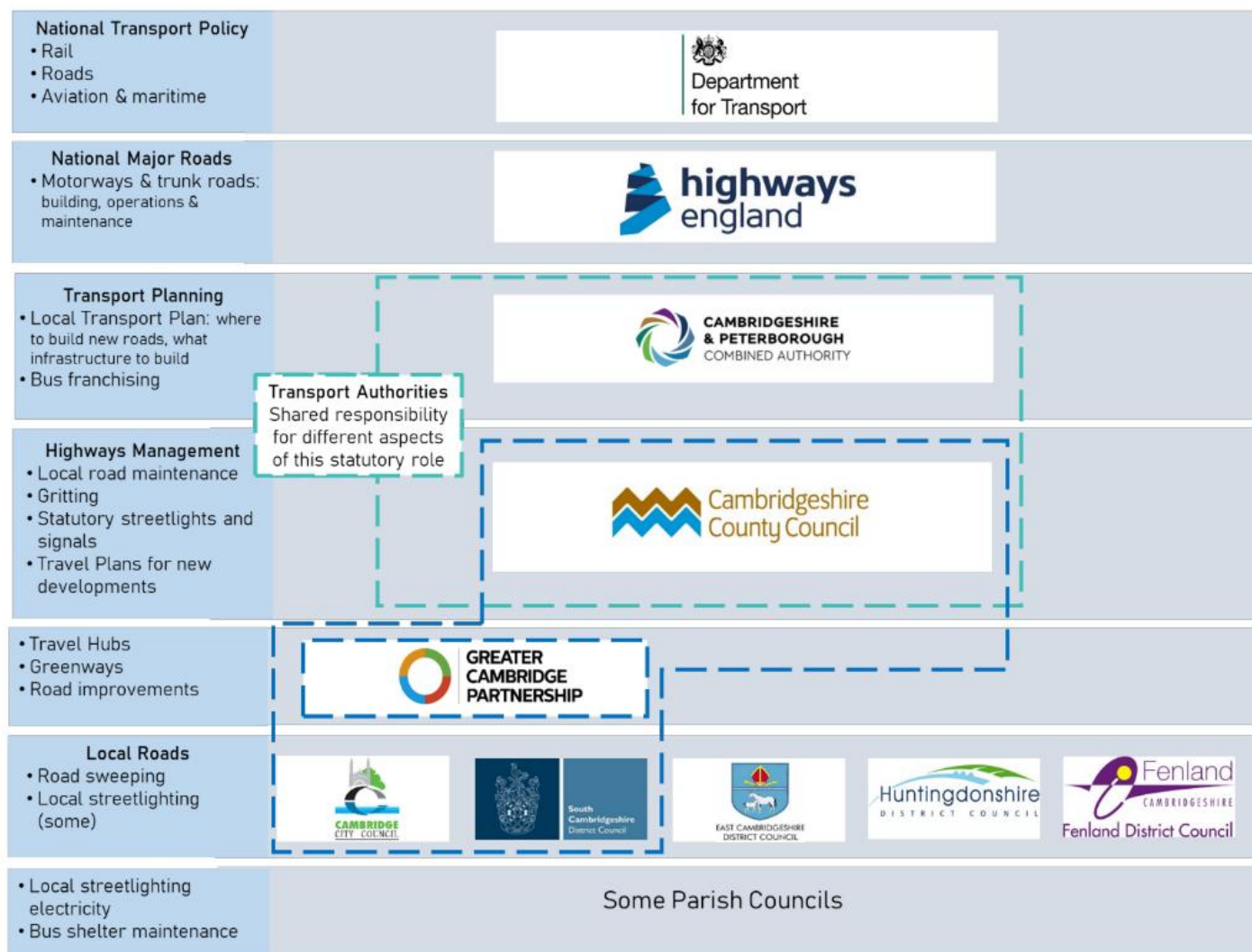


Figure 14 Responsibility for transport across Cambridgeshire sits with a number of different organisations

It is important that at the local level there is alignment between the different organisations as to what needs to be achieved to deliver a sustainable transport system, what this looks like for public transport and active travel options. The dual tasks of reaching net-zero by 2050 and living within the resources of one planet, will require significantly greater investment into mass transit, public transport and active travel solutions.

The Greater Cambridge Greater Peterborough Combined Authority has the responsibility for the development of the Local Transport Plan and is leading the development of a County-wide Electric Vehicle Infrastructure Plan. This plan sets the context within which our transport system in Cambridgeshire will develop. The County Council, as a statutory consultee to this plan will prioritise active travel (walking and cycling), public transport and mass-transit solutions such as the CAM (metro) to reduce carbon emissions, in line with the travel hierarchy in Figure 13.

The Council will also use its highways network, transport and building assets to facilitate, with other local partners and businesses, the implementation of EV charging infrastructure by planning and installing these on our assets along with other low carbon transport technologies as they come forward.

3.3.3 Waste management

Leadership: The County Council is the statutory waste authority. We have a waste PFI contract with Amey that includes landfill reduction targets. Some of the targets relate to reducing the volume of garden and food waste that is landfilled, and reducing the residual waste landfilled by processing it through a Mechanical Biological Treatment Plant (MBT) to save emissions. The PFI contract also includes targets to increase the levels of recycling at the Household Recycling Centres (HRCs).

In future the government may introduce specific recycling targets for the County Council and Peterborough City Council. We will also need to reduce carbon emissions reductions from transporting waste if we are to deliver net-zero carbon emissions by 2050. The Environment Bill sets out the legislative framework for increasing the capture of recyclable materials and the move away from a make, use and dispose economy to a circular economy where all waste becomes a feedstock for manufacturing to ensure valuable natural resources are used as efficiently as possible. Local closed loop recycling solutions and bringing forward new technology for carbon capture and storage from landfill and composting operations will help reduce the carbon impact of waste management

Circular economy principles are key to resource efficiency. Our aim is to deal with Cambridgeshire's waste in Cambridgeshire, through keeping products, equipment and infrastructure in use for longer, reducing the transport of waste where feasible, improving the productivity of these resources and attracting increased opportunities for waste remanufacturing locally to repurpose waste into new products.

Please also see section 5.4.4 for how waste is also a priority area in the Natural Capital theme.

3.3.4 Afforestation and land use

Leadership: The County Council is a major landowner across all four rural districts which presents a potential opportunity to plant new woods and create wildlife habitats that link up in places, for the long term. Planting woodlands and forests can play a role in the offsetting of carbon emissions and provide for biodiversity enhancement. Some areas of the county will not be suitable for woodland but alternative land uses such as grassland, hedges and wetlands could be more appropriate in some locations.

The Council is already developing clean energy projects on its rural estate. A 12MW solar farm started producing renewable energy in 2017 and provides enough electricity for approximately 3000 homes. Currently in the pipeline a further solar park is under development that can supply the

equivalent of 8-10,000 homes. When choosing sites for energy projects, we prefer to use grade 3 agricultural or land that is at risk of flooding and of lower agricultural value.

3.3.5 Peatland

Leadership and Collaboration: Between 60 – 80% of wasted peatland in the UK is located within Cambridgeshire. The CUSPE Net- Zero by 2050 report highlighted that Cambridgeshire's peatland is producing around 5.5 million tonnes CO₂e per annum (6). This is almost the equivalent of all other emissions from all other sectors across Cambridgeshire put together. Peatland degradation is an international challenge and Cambridgeshire is well placed to host international and national research projects. The Council can use its extensive land holdings to work with the scientific community to trial innovative projects as well as build on the work of The Wildlife Trust at Great Fen, The National Trust at Wicken Fen and collaborate with the Agri-businesses to find solutions of international interest.

4 Adapting to Climate Change

4.1 What is adaptation, and why is it needed?

Adaptation is the process of adjusting to Climate Change and its effects, and to seek to moderate harm or exploit any beneficial opportunities of Climate Change (8). Historically, Climate Change adaptation has received far less attention than mitigation (8). Scientists have identified lags in the time it takes for our climate to respond to greenhouse gas emissions and some aspects of our climate are only now responding to greenhouse gas emissions from previous decades. Therefore, even with mitigation, the impacts of Climate Change will continue to exist into the foreseeable future. The term 'locked-in' can be used to describe those impacts which society will definitely face in the next century.

Most importantly, we cannot ignore the Climate Change risks we are facing globally and locally including flooding, hurricanes, bush fires – all natural hazards and risks faced every year. Adaptation actions taken today to manage these risks will have benefits long into the future.

In July 2019, Cambridgeshire was the hottest place in the UK reaching an all-time record high temperature of 38.1°C. The latest UK Climate Projections (UKCP18) suggest that the UK climate will continue to warm over the rest of this century, and on average, rainfall is expected to increase in winter and decrease in summer, though individual years may not conform to this pattern. This will result in, on average, hotter and drier summers, and warmer and wetter winters. These anticipated seasonal changes means we will see an increased risk of summer heat waves and drought, and an increased risk of winter storms and flooding.

Sea levels around the UK have increased and will continue increasing according to the latest Climate Change projections. By 2100, sea level on the coast near London, for example, is expected to rise by 29 to 70 cm under a low emissions scenario and by 53 to 115 cm under a high emissions scenario. Even if net-zero is achieved globally, our climate will continue to warm in the short term, and sea level will continue to rise for centuries. We must plan for this reality. For a low lying region of East Anglia and Cambridgeshire a sea level rise of this magnitude will bring significant changes to the places we live and work and higher economic costs if we don't adapt.

The Committee for Climate Change's recent evaluation of the second UK National Adaptation Programme (July 2019) identified that priority must be given to adaptation, as many areas are not prepared for even a 2°C rise in global temperature, let alone more extreme levels of warming (9).

4.2 What adaptation measures are already happening?

Some sectors such as the water sector, are making detailed plans for dealing with a range of future water availability scenarios and looking to reduce consumption and water leaks. The Environment Agency is in the process of developing an ambitious flood and coastal erosion risk management strategy which has the potential to form an overarching national strategy for flooding, with clear objectives and targets.

The finance sector, led by FTSE 100 companies and the insurance sector, are making significant progress towards better assessment and disclosure of the physical risks from Climate Change. Their focus to date has been on only a 2°C global temperature rise and not the 4°C relevant for adaptation risks, but it's a start. Infrastructures such as road, energy and rail are developing long term plans to improve resilience, identifying where key vulnerabilities lie and what needs protection.

Managing the impact of Climate Change is about risk management. The more we can do today through our plans and policies to adapt infrastructure, homes, our natural environment, business and people to the reality of a different climate, the better future quality of life for everyone, especially vulnerable people.

Leaving adaptation responses solely to local communities and individual organisations without a strategic plan, will not manage the risks from Climate Change in the most economical way. Individuals can build resilience in their own homes and buildings but as individual businesses, organisations or the public, they cannot take adaptation actions at a scale that is effective and efficient, and that accounts for social costs and benefits.

The National Committee for Climate Change has developed a risk matrix (Figure 15) to identify progress in managing Climate Change adaptation risks across different sectors (9). For Cambridgeshire, it will be important to review its vulnerability and exposure to climate change to prioritise actions it now needs to take to build infrastructure resilience. The risk table scores each adaptation priority on the quality of its plan; higher numbers are better and the x-axis scores each adaptation priority on the extent to which progress is being made in managing vulnerability and exposure to Climate Change risks. The result is a numerical score (1 to 9). The higher the score the better management is in place.

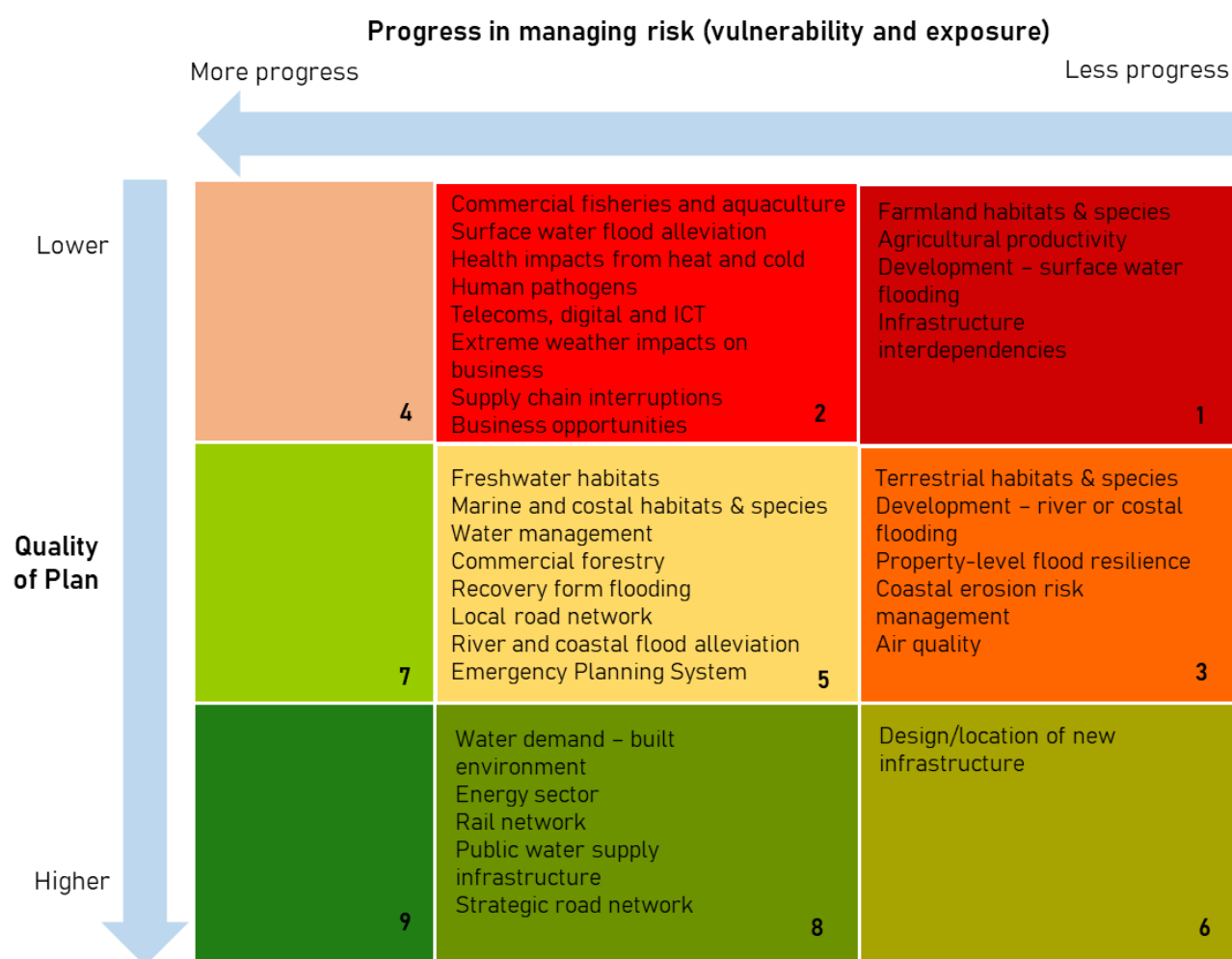


Figure 15 Adaptation progress risk matrix taken from: Committee for Climate Change, Progress in preparing for climate change report, 2019 Report to Parliament

4.3 Cambridgeshire's ability to adapt to Climate Change

The types of adaptation measures that will help manage key risks associated with infrastructure, people and health, buildings and finance are described in Figure 16 and section 10.3. The Council will develop plans to address the different areas of adaptation it can lead and collaborate with partners, businesses and the community in areas where they are best leading. Climate Change adaptation measures can be incorporated into both existing and new infrastructure.

Buildings and infrastructure can be adapted to become more resilient to flooding, heat waves, drought and air pollution. For example, incorporation of water and green spaces into developments can provide urban cooling whilst also providing opportunities for water storage. This can allow us to adapt to both heat waves and flooding. Furthermore, planting of trees, where appropriate, provides shading locally to adapt to higher temperatures and also provides adaptation to flooding by increasing rainwater interception. The introduction of more green spaces to towns and cities also encourages more rainfall to be absorbed into the ground, which recharges groundwater supplies and aquifers, allowing adaptation to Climate Change related droughts.

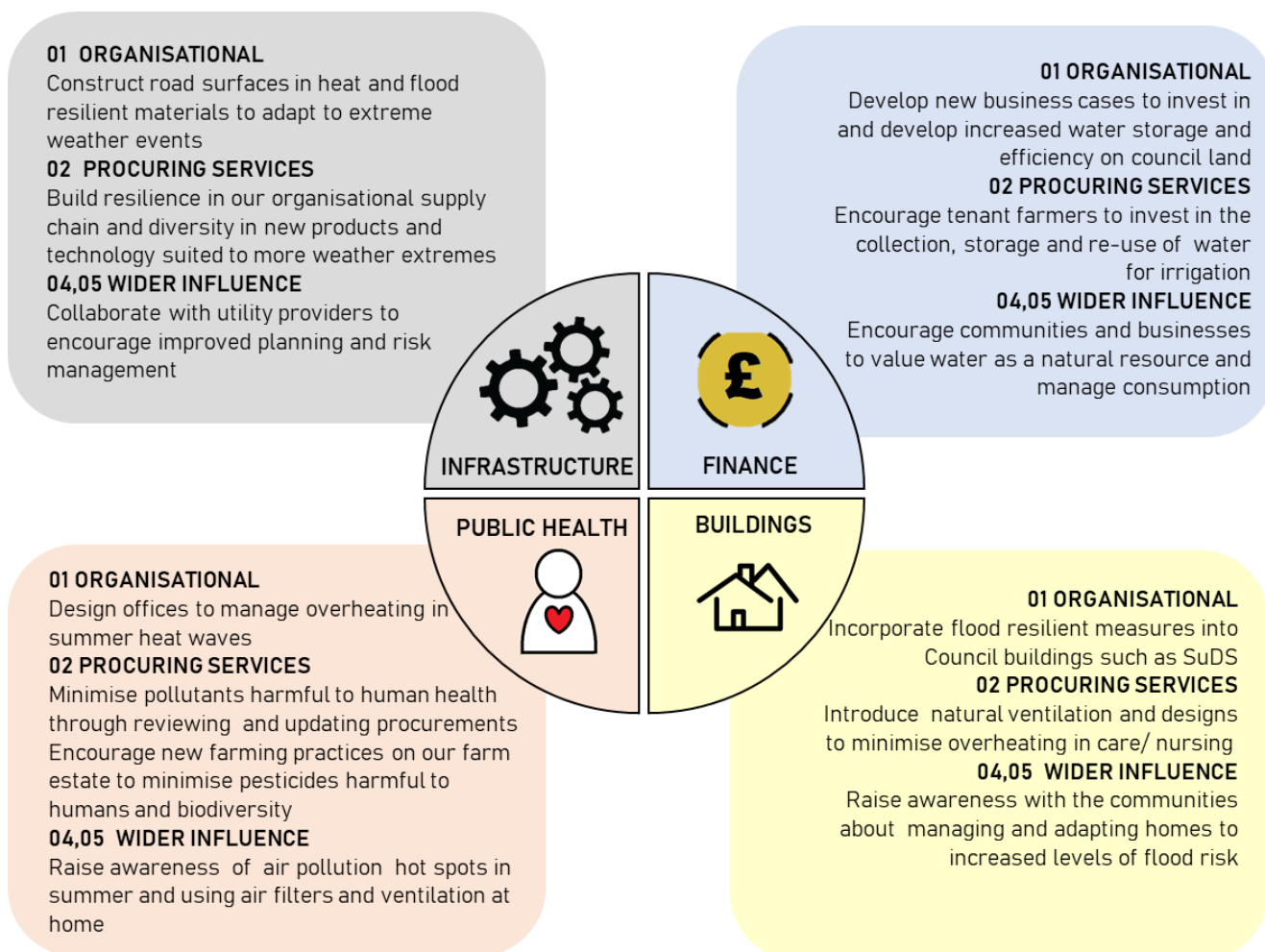


Figure 16 Types of adaptation measures that will help manage key risks

4.4 Our priority areas for adaptation

The Council has statutory responsibility for a number of important functions. For example, it is the Lead Local Flood Authority for Cambridgeshire, the Highways Authority (designing and maintaining our roads, cycle and walking assets) and the Planning Authority for Minerals & Waste. Importantly, the council also cares for the vulnerable, supports the education of young people, and manages a large rural estate, over 200 buildings and a number of nature reserves.

4.4.1 Resilience of our services and supporting vulnerable people

Leadership: As a Council we need to design effective plans and Climate Change risk strategies across all the Council's services. This will highlight the interdependencies between services, the scale of impact and the actions which can provide multi-benefits. Indicators and suitable data collection mechanisms need to be established to be able to report progress and support national adaptation programmes.

Vulnerable people will feel the impacts of severe weather, such as increasing temperatures or flood risk, more strongly than others. Our care services, covering Public Health, Social Care and Emergency Planning must be tuned into climate risk and what this means for service delivery, including care home provision. Action will be needed to prevent the vulnerable in our communities becoming more susceptible to the impacts of Climate Change and strong ties with local communities will be essential to support elderly and vulnerable residents when they need them most in extreme weather events

Supporting staff to continue to work and deliver services when extreme weather events occur is also a priority. The Council employs more than 4000 people and it will be important that our own Council buildings and land holdings are resilient to the impacts of Climate Change, such as ability to withstand intense storms and be resilient to heat and flood risk to ensure continuity of service.

Water security is an emerging problem across Cambridgeshire. To be resilient we will need to manage water consumption within our Council estate and consider retrofit of water conservation measures, such as rainwater harvesting and greywater re-use, and encourage farm tenants to store water for irrigation. Storing water is also a means to help flooding, drought, peatland and the creation of natural habitats.

4.4.2 Resilient highways and infrastructure

Leadership: Our extensive highways network must be reviewed to ensure resilience to climate risks and it is likely that we will need to trial new road surfacing that better manages heat and flooding.

Maintaining our roads and pavements could also move towards new management methods – ones that minimise damage to biodiversity allowing it to flourish and better management so that roadside verge management improves and enhances biodiversity. In some places, generating renewable energy to support local street lights may be useful to develop especially as we move to significantly higher levels of resource efficiency.

Working with our contractors

The council has a £900 million Highways contract with Skanska, which commenced summer 2017.

We are currently collaborating on the development of a carbon management plan to reduce emissions, and bring forward greater network resilience to climate change.

Collaboration: Nationally 41% of transport and utility infrastructure and 10% of roads are in areas at risk of flooding (10). The Council needs to work with its partners to ensure that adaptation to the effects of Climate Change is a key priority for existing infrastructure and where new infrastructure is planned, ensure resilience and climate proofing is factored into designs and construction. This applies to all infrastructure but in particular electricity, heating, water and transport must deliver robust standards.

The interdependence of Infrastructure must also be examined when assessing climate- risk and adaptive solutions. For example a shift from liquid fuels (petrol/diesel) for vehicles reduces the local impacts on air and water (highways runoff) pollution in a hotter climate and reduces risks from issues with liquid fuel supply and distribution. However supply and distribution disruption risks are moved to electricity networks. Or, if the Council adapts to weather conditions which make travelling more challenging and chooses digital solutions to manage this problem, the risk from loss of Wi-Fi or poor internet speeds can impact service delivery.

The Council is one of a number of partners in the future *Fens Flood Risk Management* project being co-ordinated by the Environment Agency. The project, currently in phase 1 of 3 (Figure 17), aims to develop a plan for future flood risk in the Great Ouse Fen area. The aim is to develop a long-term action plan to manage and adapt critical flood risk infrastructure in the Fens which accounts for Climate Change impacts such as sea level rise, volatile weather patterns and growth scenarios.

The key flood risk management infrastructure in the Fens is ageing. A new risk management system will be needed that is affordable and provides resilience into the future. The focus is currently on the development of a shared understanding across all partners and the community of the functioning of the Great Ouse Tidal River system in its management and distribution of water in this area is essential.



Figure 17 Stages of the Fen Flood Risk Project

Later stages of the project, will involve working cross-sector (tourism, agriculture, conservation, flood management etc.) to develop a high level strategy and action plan based on an agreed approach to the future of the Fens. To give you some idea of the project scale, it is equivalent to the original plan to develop the Thames Barrier in London.

4.4.3 Flood risk

Leadership: Greater innovation and adaptive approaches will be needed to enable the County to cope with unpredictable weather events. Significant investment is required to improve the situation from today's flood risk levels. The County's Local Flood Risk Management Strategy will be updated in 2020 and will support the long term objectives set out in the new National Flood and Coastal Erosion Risk Management (FCERM) Strategy (due summer 2020) and the National Planning Policy Framework.

Collaboration: Longer-term, a strategic approach should be taken to adapt to potentially significant increased flood risk. The Council will work with partners including the Environment Agency, Anglian Water, District Councils and the Internal Drainage Boards to take a coordinated and collaborative approach to flood risk management. We will work with communities to consider how flood risk management can be better managed locally, to deliver alleviation projects for high risk areas where possible, and to develop flood groups and local flood resilience plans. Projects are likely to include property level resilience (PLR) projects, or where catchments are suited to this approach, Natural Flood Management (NFM) schemes.

The Council will encourage cross-county partnerships to improve and adapt water management policy and practices. In 2016, the District Councils adopted a Flood and Water Supplementary Planning Document (SPD), which is a material consideration when determining planning applications and supports the implementation of Local Plan flood risk and water related policies. The Council will work with local planning authorities to update the SPD to ensure its effectiveness as new Local Plan policies develop.

4.4.4 Water availability

Collaboration: Cambridgeshire is a water scarce region and subject to increasing drought. By the 2050's, there is predicted to be a shortfall of 5-17% in the amount of water required to meet demand (11). The Council will support partners like our Local Planning Authorities, tenant farmers and Water Resources East (WRE)³ to consider suitable actions to manage this risk.

There are some areas of the County where water supplies for growth will be predicated on reducing water waste in existing communities. This may mean that policy trade-offs nationally will be needed

³ The county council has joined the Strategic Advisory Group for Water Resources East. WRE's mission is to work in partnership to safe guard a sustainable supply of water for the East of England, resilient to future challenges and enabling the area's communities, environment and economy to reach their full potential.

such as improved resilience versus keeping water bills low. The demand for water resources to support growth could place our region's natural capital at risk, if appropriate adaptive plans are not developed that conserve water quality, aquatic habitat and biodiversity.

4.4.5 Green and blue infrastructure development

Collaboration: Well designed and located multi-functional Green Infrastructure can deliver a wide range of environmental services and make a significant contribution to both Climate Change adaptation and to improving our natural capital. Maximising the creation, co-benefits and longevity of multi-functional green and blue (water) infrastructure to reduce our vulnerability and exposure to Climate Change is essential.

The Council has previously had a leading role in encouraging development of a Green Infrastructure strategy across the County and we encourage continued leadership and support for these plans and policies.

We will work with partners to deliver a local response to the 25-year Environment Plan, for example:

- 'Doubling Nature' (11) with the Natural Cambridgeshire LNP;
- Develop a 25-year strategy for the sustainable management of existing and future parks and open spaces through the Future Parks Accelerator project. This is a joint project with all of the councils in the Peterborough and Cambridgeshire area;
- work with our tenant farmers on getting the best for our farms and our environment through the Environmental Land Management Scheme (ELMS) and;
- Work with other flood and water management partners to ensure joined up flood and water management. Multi-functional green and blue spaces can provide a huge range of benefits including recreation, temperature control, habitat, flood storage, water resources and water quality improvements.

The "Doubling Nature" Vision

Natural Cambridgeshire's Vision is that by doubling the area of rich wildlife habitats and natural green-space, Cambridgeshire and Peterborough will become a world-class environment where nature and people thrive, and businesses prosper.

To achieve this step-change, the aim is to, by 2050, double the area of wildlife rich habitats and green-space from 8.5% to 17%.

Note: Some of the priority areas in the *Natural Capital* theme are also connected to this priority area.

5 Conserving and Enhancing Natural Capital

5.1 What is natural capital?

Natural capital is our ‘stock’ of water, land, air, species, minerals and oceans. Our environment provides numerous benefits to humanity (also known as ecosystems services), many of which are fundamental to our lives (Figure 18). It enables the food we eat to grow and plants for medicines – providing for us to live. It also offers shelter from widespread disease, clean air to breathe and water. This is referred to as the ‘regulating’ services or benefits we get from nature. We also derive cultural, mental health and wellbeing benefits.

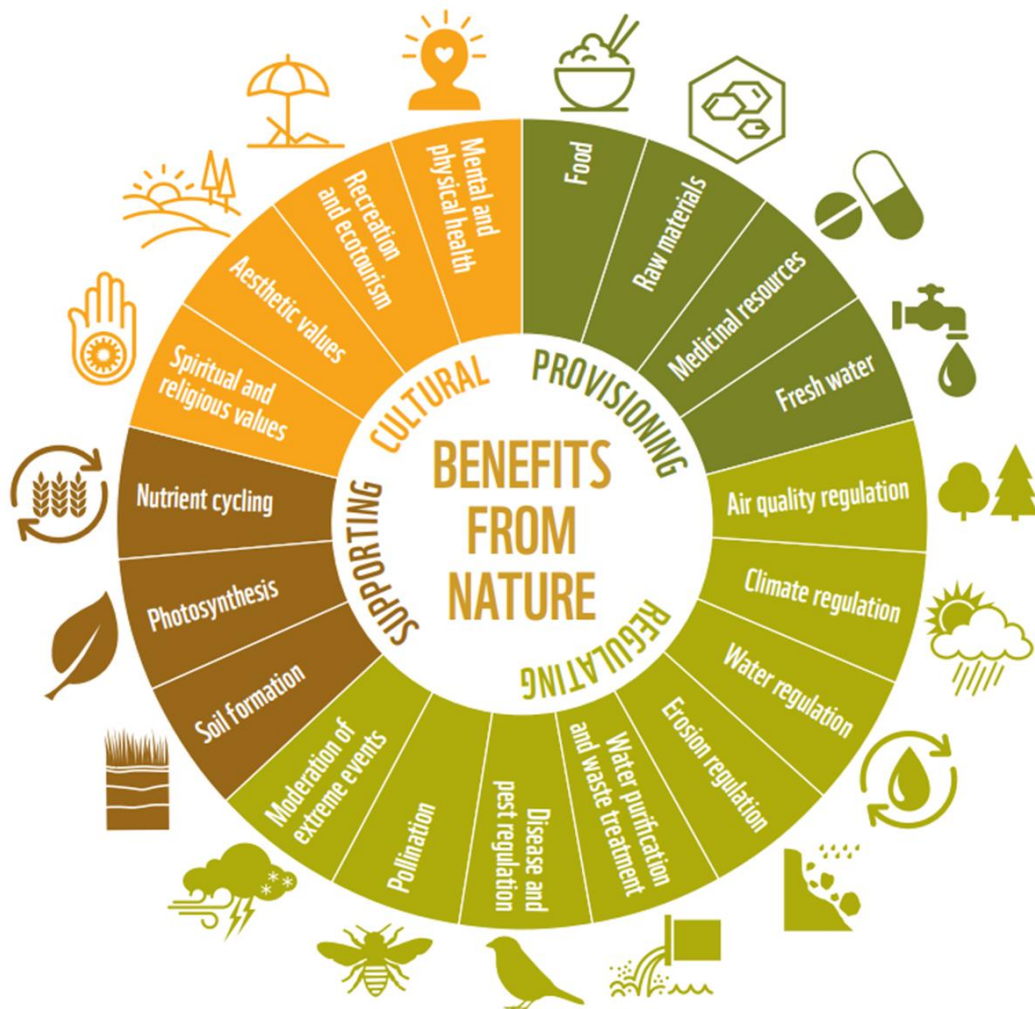


Figure 18 Benefits from nature, adapted from Millennium Ecosystem Assessment, 2005

Our reliance on the environment for these services is important for quality of life. Damaging our natural benefits beyond recovery and repair will mean a diminished quality of life for future generations.

“We are the first generation that has a clear picture of the value of nature and the enormous impact we have on it. We may also be the last that can act to reverse this trend.”

Living Planet report, 2018: Aiming higher

From the natural capital stock, goods and services are produced, including clean air and water, food and pollination, energy, wildlife, recreation and protection from hazards, (Figure 19), (3). These services provide economic, social, environmental, cultural, and well-being benefits.

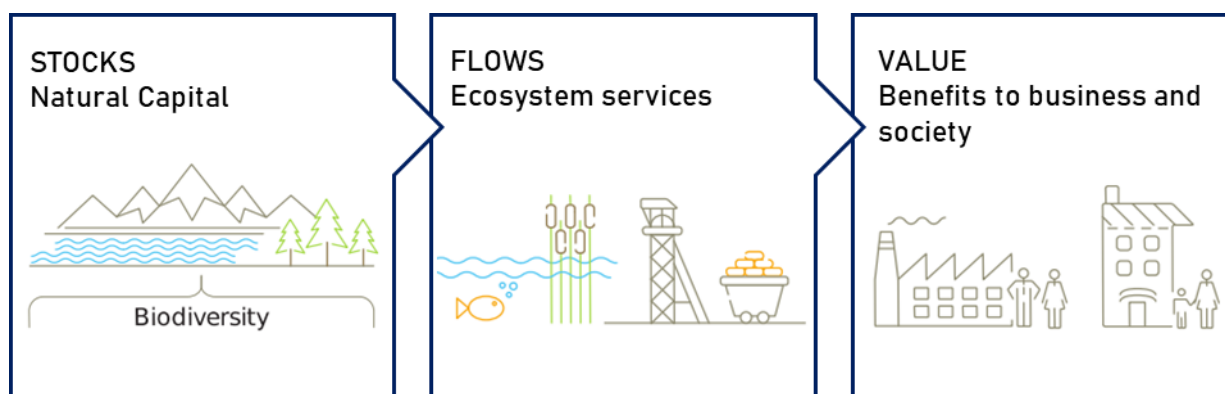


Figure 19 Process of valuing natural capital. Taken from Parliamentary Postnote 542 December 2016: *Natural Capital: an overview*

Biodiversity, our flora and fauna, is an essential component of natural capital stocks and an indicator of the stocks' condition and resilience. It provides benefits directly to people, for example, the pollination of plants to produce seeds. This benefits society primarily through food provision, and has a global economic value of approximately £120 billion and within the UK alone in the region of £690 million each year (9)

The UK government published 'A Green Future: Our 25 Year Plan to Improve the Environment' recognising that natural capital is crucial in the formation of all parts of society's wealth and will either directly or indirectly impact value to individuals. Natural capital needs to be protected but also expanded to sustain forecast population growth.

There are a range of established methodologies now available to value these benefits and quantify these financially to allow for incorporation into decision making. By providing a financial value to our ecosystems it can demonstrate to decision makers the full cost of exploiting our environment for short term gain rather than enhancing and protecting it.

Currently, the UK consumes resources equivalent to three planet earths - this is not sustainable. Our environment takes time to replenish itself. The most recent financial crisis in 2008, has shown what happens when individuals and organisations live beyond our means. Credit based consumption becomes dangerous when it outstrips our ability to build up financial reserves, and in the same way, so our economic growth is put at risk when our natural capital cannot replenish.

5.2 Natural capital components and how they are being impacted

Now is a critical time to act. If growth over the next five to ten years takes advantage of our rich natural capital without supporting its recovery - degradation of local, regional or even global ecosystems is inevitable. The drivers of natural capital degradation have been established through rigorous research, with our consumption-based culture driving many of the threats facing our environment (Figure 20).

All of these could have major impacts on the world economy and there is increasing evidence that we are already experiencing some of these. Natural capital has been used for 'free' for so long, and it is now important that it becomes valued in our financial and economic modelling to protect it for the benefit of all.

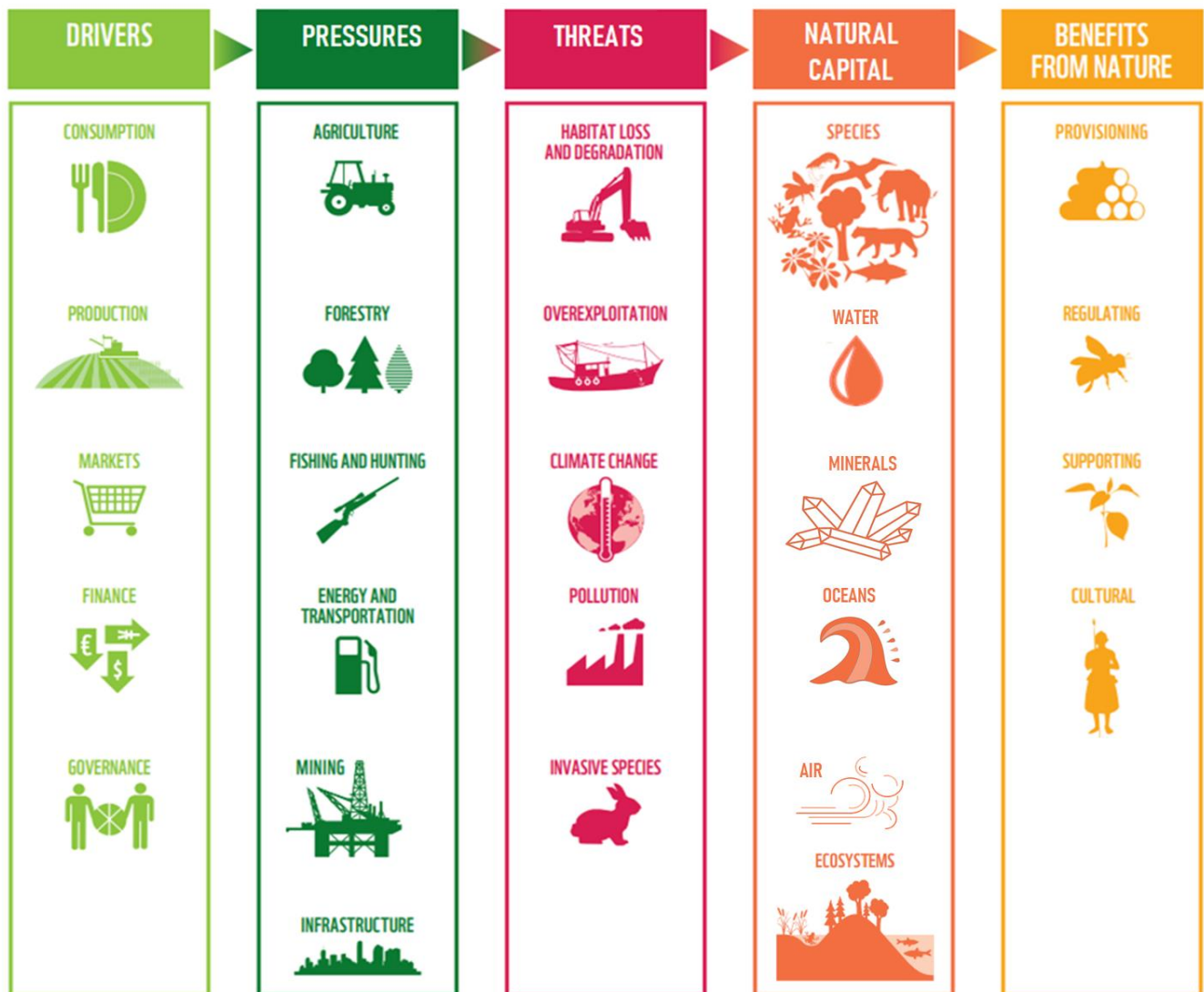


Figure 20 Threats to nature and the drivers and pressures behind them. Adapted from Living Planet Report, 2018

Examples of how this could play out include:

- The agricultural sector will suffer from the changing and more erratic weather patterns;
- Declining numbers of bees reduces pollination activity resulting in less future seed stores;
- Fish stocks are expected to decline due to rising temperature of the oceans;
- Sea level rise impacts coastal communities leading to increased migration;
- Industry and energy sectors will have to deal with reduced water availability, higher temperatures and changing agricultural productivity;
- The transport, insurance, infrastructure, real estate, and tourism sectors all have to deal with rising temperatures, more erratic rainfall patterns and higher probabilities of extreme weather events and corresponding damages;
- Insufficient tree re-growth could reduce our stock of building materials and carbon storage.

5.2.1 Climate Change and natural capital

Climate Change impacts species and ecosystems, and therefore the services they provide, in many ways. Changes in prevailing weather conditions (temperature, precipitation, seasonality) directly affect ecosystem processes as well as species survival, encourage the spread of pathogens, and disrupt the timing of life cycle events. There are many lines of evidence that show that species are already being affected by Climate Change (12). With the damage to this natural capital come impacts on the services they provide us, and the development of feedback loops which exacerbate both the cause and effects of this damage.

The effects of Climate Change (including increased heat, drought, flood risk, sea level rise, and increased air pollution) create significant risks for the natural environment, including:

- Damage to crops from severe weather/lack of water;
- Loss of top soils due to floods;
- Changing temperatures impacting wildlife through changes to habitat and food chains;
- Damage to historic buildings from air pollution.

5.2.2 Air pollution

Clean air is one of our natural capital 'stocks' but air pollutants generated by a mixture of natural and human-made processes are creating health and environmental damage. Having clean air to breathe is the basic building block in creating a healthy environment for everyone. Our wildlife is also significantly impacted by poor air quality, reducing new growth and vulnerable species not thriving.

The main challenge is the production of particulates and nitrogen dioxide (NO₂) resulting from the combustion of fossil fuels, causing unacceptable impacts on health. Particulates, when inhaled can lodge deeply in the lungs and exacerbate existing respiratory problems, whilst NO₂ can increase asthma impacts in children. Small particulates from traffic also contribute to indoor air pollution, where people spend most of their time and receive most of their exposure to air pollutants.

In January 2019, Government published its [Clean Air Strategy](#). This recognised that air pollution is the top environmental risk to human health in the UK and the fourth greatest threat after cancer, heart disease and obesity. The Clean Air Strategy recognises the following main air pollution risks including:

- **Transport emissions** from the production of particulates and nitrogen dioxide (NO₂) resulting from the combustion of fossil fuels and ground level Ozone is a harmful air pollutant and potent greenhouse gas (not to be confused with the ozone layer).
- **Industrial emissions** come from burning fossil fuels, use of solvents and account for 3% of UK particulate matter (PM_{2.5}) emissions.
- **Agricultural practice** emits ammonia (NH₃) released from manure and slurry, through the use of manmade nitrogenous fertiliser. Ammonia affects human health when it binds with other gases to form fine particulate nitrogen oxides (NO_x).
- **Heating homes** through the burning of wood and coal in open fires and stoves makes up 38% (the largest share) of the UK's primary emissions of fine particulate matter (PM_{2.5}⁴). Harmful sulphur dioxide (SO₂) is also emitted by coal burned in open fires.
- **Toxic household products** used for cleaning and other processes contain non-methane volatile organic compounds (NMVOCs). NMVOCs come from a wide variety of chemicals that are found in carpets, upholstery, paint, cleaning, fragrance, and personal care products.

5.2.3 Water pollution

Polluting our rivers and oceans from single-use plastics and agricultural run-off poses a significant threat to aquatic and marine-life and reduces the ability of our oceans to nurture and restock itself. In July 2019, the Council developed a plastics strategy and action plan to make a difference on this issue. An estimated 79% of all plastic waste ever created is still in our environment and needing to be cleaned up. Waterways become clogged with plastic pollution, preventing natural functioning of the systems and harming wildlife when consumed.

⁴ PM_{2.5} = particles of ≤2.5µm diameter particles which are 200 times smaller than a grain of sand. PM is not a single pollutant; it is made up from a huge variety of chemical compounds and materials.

Fertiliser run-off from agriculture, can cause oxygen levels in waterways to diminish such that flora and fauna cannot survive. Ammonia pollution (from animals or fertilisers) causes significant and widespread impacts on our flora, and waterways are particularly at risk.

5.2.4 Population growth and development

To achieve sustainable clean growth, as described in 1.4, it is important that everyone takes action to conserve and enhance our natural capital. Reducing consumption and improving resource efficiency will bring benefits to our natural capital as there will be more space for nature. Cambridgeshire's clean growth approach can bring opportunities to natural capital through:

- Restoring local historic environments;
- Provision of increased green spaces for people and nature;
- Increasing tree planting to assist with shade/urban cooling, air quality and biodiversity;
- Shifting from cars to more active travel choices such as walking, cycling and mass transport solutions.

5.3 The Council's role in conserving and enhancing natural capital

The Council is a land and asset owner, as well as having responsibilities for mineral and waste planning and other policy. This places us in a strong position to maintain and enhance natural capital in many ways. Greater detail can be found in section 10.5.

5.3.1 Landowner and guardian for the future

The Council owns seven Local Nature Reserves as well as a large farming estate, some woodland, highways land and other land. Managing the impacts of Climate Change and growth will mean the planting of more trees and hedgerows (whilst recognising that some areas are not suitable for tree-planting), using a mix of location-appropriate species that complement Cambridgeshire's natural habitats while also thriving under different weather patterns. More planting will also help store excess water at times of excessive rainfall, helping to manage flood risk. Through the Council's rural estate, its land forms part of some of these important wildlife sites and we must support our partners in the careful management of these sites. The County is a partner to the Natural Cambridgeshire LNP and Cambridgeshire & Peterborough Biodiversity Group.

Over and above this key opportunity for conservation action, Cambridgeshire is home to a number of nationally and internationally important wildlife and historic sites. It has a number of Sites of Scientific Interest (SSSI) including Devil's Dyke, Cherry Hinton Chalk Pits, Thriplow Peat Holes, Upware South Pit, Whittlesford- Thriplow-Hummocky Fields, Cam Washes and Grafham Water. It also hosts three Ramsar sites; the Nene Washes, Great Ouse Washes and Chippenham Fen, as well as a number of Special Areas of Conservation (SACs) including Eversden and Wimpole Woods and Fenland SAC. Through our partnerships we can help to maintain these valuable sites in positive conservation status.

5.3.2 Policy maker

While the Council owns a number of designated and non-designated heritage assets, many of which can be managed to create a better environment for residents and for heritage itself, we also have a key role in advising on environmental stewardship schemes to help landowners to extract the best environmental and heritage related outcomes from sites. We advise on planning applications and work closely with developers to maximise the potential for open spaces in developments by use of 'preservation in situ' schemes that create greenspace to protect the historic environment

Our role in development and enforcement of the County Minerals and Waste Plan provides a key opportunity to design and implement policies to create new habitats as well as deliver strategic flood water storage as a restoration option. Similarly our role as the Lead Local Flood Authority for Cambridgeshire, entails close working with our District and City Councils to seek sustainable

drainage systems and the protection of water resources for new developments. Availability of water is a major challenge for Cambridgeshire, the driest part of the country, likely to face water shortages ahead of other areas. Tackling this issue is important and we must look to support our partners with leading roles on this issue.

As the local managers of the highways network, the County Council manages protected roadside verges and maintains Rights of Way that supports green infrastructure and biodiversity.

5.4 Our Priority areas for natural capital

There are some areas that the Council can lead but many areas in natural capital enhancement that others lead and we will look to support their efforts.

5.4.1 Reducing waste and tackling plastic pollution

Waste crime such as illegal dumping of domestic and business waste is an increasing challenge, with incidences increasing in scale and impact nationally. Illegal waste activity costs the UK economy around £600 million every year, and a 2019 a review into serious and organised waste crime found that the lack of digital record-keeping is being exploited by organised criminals who mislabel waste to avoid landfill tax or illegally export it. Once dumped, this waste makes its way into our environment as a key source of pollution and also undermines the public's view of our waste management and recycling schemes, as they question whether their recycling will be illegally stored or dumped outside the United Kingdom by rogue operators leading to environmental pollution.

Leadership: As the Waste Disposal Authority, the Council has a duty of care to ensure the waste we deal with is sent to authorised reproprocessors and does not contribute to pollution. We work with our local authority partners, who collect household waste and take it to our waste contractor Amey. The Council has a duty of care over this waste when it arrives with our contractors and there is effective collaboration between our contractors, the Environment Agency and ourselves to ensure where Cambridgeshire waste ends up is a transparent process and not a polluting hazard to our natural world.

One of the most important mechanisms at the Council's disposal to reduce waste, cut single use plastics from service delivery and ensure waste can support a circular economy, is through our procurement of goods and services. The Council spends more than £450 million per annum on its supply chain to deliver services. Our promise for our environment is to specify better, more sustainable options for service delivery, replacing single use plastics (where appropriate) and promote the concept of a circular economy within our service delivery. Our Plastics Strategy highlights much of the work we are already doing and actions we are undertaking right now to reduce use of unnecessary single-use plastics within the Council.

Recycling performance in Cambridgeshire is already good. Recycling rates are amongst the best in the Country, however there is always room for improvement. Building confidence in the recycling services offered, and encouraging our communities to minimise the generation of waste and maximising recycling is key and we will continue to provide waste education services for our schools and communities.

Developing a Local Circular Economy

In partnership with RECAP, University of Cambridge and Charpak Ltd (a local company who manufacture rigid plastic packaging), the UK's first Localised Circular Economy is being developed. The Cambridgeshire-wide programme has been running since January 2019.

The initiative takes plastic waste collected throughout Cambridgeshire, and following use, the packaging is sorted, recycled, cleaned and re-manufactured into plastic for new products for another use, again and again.

The project will analyse this initiative as part of a wider study to assess creative circular economy approaches to eliminate plastic waste.

We will work to improve the transparency of our recycling system and tracking of recycled materials and help to create and shape the market for greater levels of remanufacturing in Cambridgeshire and improve public confidence in our recycling services.

Collaboration: The Environment Agency is responsible for the enforcement of waste management legislation and operates a “Duty of Care” system for waste, whereby materials sent for recycling to waste sorting and processing facilities can be followed to their end point. Significant investment is already underway to develop an improved, more technologically advanced system, and the Council is supportive of such improvements.

Nationally, work is underway to identify and embed the Circular Economy Principles and support local areas to do the same. Principles such as “polluter pays” will be applied to packaging and material producers who will be made responsible for the collection, recycling and re-use of the materials they put on the market. These are expected to be enshrined within the Environment Bill coming before Parliament in early 2020 and will be a significant step forward for waste management and pollution reduction

5.4.2 Air pollution

Currently, there are seven Air Quality Management Areas (AQMA) in Cambridgeshire. These are primarily urban based and focussed around transport emissions and include measurement and monitoring of key identified pollutants for reporting annually to DEFRA. Each has an action plan describing the problem and measures to tackle the problem. Under the Clean Air Strategy and the inclusion of additional air quality impacts such as from agriculture, traffic growth (if not mitigated) and homes on solid fuel, together with the likely new objective on PM2.5, the number of air quality management areas could increase and broaden and is likely to include rural areas with intense agricultural practices and communities dependent on oil.

Leadership: In December 2019, the Council supported an Air Quality Motion to improve air quality across Cambridgeshire and identified a range of actions. The Council, using its current powers, will draw up designs and consult on plans to (i) deny access to bus lanes by end of 2021 to buses that are not electric or clean and (ii) review for pre-registered electric vehicles and two wheeled electric vehicles access to bus lanes.

It is also the Council’s intention to continue to improve cycling across Cambridgeshire, develop a tree strategy to support planting on highways assets and near schools to mitigate air pollution and to also lobby government for improved initiatives and grants to help pilot imaginative projects, such as Swaffham Prior which is looking to take a whole village off oil and onto renewable energy.

Collaboration: There are three joint working arrangements in place to address air quality across Cambridgeshire. These include:

- *Health and Wellbeing Board* – The Cambridgeshire Health and Wellbeing Board published a detailed Joint Strategic Needs Assessment on Transport and Health in 2015, with air pollution as one of three themes. The CCC Public Health Team reviews and signs off the district council air quality annual status reports. It is also expected that the JSNA and the Health and Wellbeing Strategy are taken into account in local plan making.
- The “*Cambridgeshire and Peterborough Pollution Prevention Group*”: air quality leads from each of the District/City Councils meet to discuss and progress air quality issues across the County, this group has representation from CCC Public Health and Place and Economy.
- *Cambridge Air Quality Action Plan Steering Group* – jointly chaired by the City and County, with representation from Greater Cambridge Partnership (GCP) and Cambridgeshire and Peterborough Combined Authority (CPCA).

The Council is keen to collaborate with partners to tackle air pollution. It is working with the Mayor and the Greater Cambridge Partnership to deliver the CAM metro and will continue to expand the

transport hub network, where you can leave your car and get on public transport to travel into Cambridge, Peterborough or other main centres and also develop plans for last mile delivery.

Critically, collaboration will be needed to for the planning of new developments to ensure air quality is at the heart of new developments. This will go hand in hand with planning for zero carbon development and a key next phase of work is to understand how to design local plan policies to deliver the nature and air quality benefits.

5.4.3 Green spaces, habitats and land management

Leadership: Habitat restoration through enhanced planning policy. This requires mineral and waste management restoration proposals to reflect strategic and local objectives for countryside enhancement, green infrastructure and greenhouse gas emissions. Emphasis will be placed on restoring habitats and species that have been displaced or degraded through quarry activity, and the implementation of robust restoration ecology approaches to re-establish lost ecosystem dynamics.

Leadership: Land management. We need to shift our land and asset management approach to place greater emphasis on positive environmental outcomes. This will include support for additional tree planting on our rural estate (where appropriate) and managing our road verges better for biodiversity.

We can also enhance the natural environment through Council owned Local Nature Reserves, as well as continuation of participations in Governmental environmental stewardship schemes through the new Environment Land Managements Scheme (ELMs). Sustainable soil management policy on the rural estate will be established using emerging natural capital based soil metrics and management approaches to measure and evaluate the approaches supported.

Leadership: Biosecurity Changing climate is aiding the spread of plant and animal disease and invasive species across the UK. Ash dieback (*Hymenoscyphus fraxineus*), for example, has been prolific in recent years and is projected to kill up to 95% to ash trees across the UK, changing our landscape forever and threatening many species which rely on it. The cost to society of this disease is predicted to be in the region of £15 million (13). Similarly the spread of the highly invasive Japanese Knotweed (*Fallopia japonica*) has been an ongoing challenge for the last 35 years. This species is spreading as the UK's climate becomes milder, and emerging research suggests it reduces soil's capacity to sequester carbon.

We will pro-actively manage our rural estates and assets to improve the speed of identification disease symptoms and invasive species, and enhance our management approach to dealing these challenges. We will ensure all tenant farmers are able to react speedily to any disease or invasive event, and that biosecurity measures are incorporated in planning applications where relevant.

Collaboration with our tenant farmers: We will engage with our tenant farmers through government policy changes and new guidelines. We will aid our tenant farmers to keep informed of these changes, particularly where new subsidies may provide an opportunity to hasten "greening" of our estate and encouraging more sustainable agricultural practices.

We will also work with our tenant farmers to develop best routes to aid reductions in impacts from pesticides, herbicides and nitrogenous fertilisers on our land while ensuring that that crops are produced sustainably and profitably. For example, ammonia escape from slurry stores can be reduced through the use of store covers, or the use of metaldehyde for slug control could be replaced with alternative chemicals that are easier to remove from drinking water (as demonstrated through the Anglian Water trial with Cambridgeshire farmers located near to Grafham Water).

Collaboration: Doubling Nature. Cambridgeshire has one of the smallest percentage of land managed for nature in the country. Currently only 8.5% of the county is covered by natural or green

spaces. Doubling the county's natural and green spaces by 2050 will “*secure access to high quality natural green spaces within 300m of everyone's home*”. Nature Cambridgeshire, the Cambridgeshire and Peterborough Local Nature Partnership, is a partnership with district councils, the County Council, the Cambridgeshire and Peterborough Combined Authority, Natural England, the Environment Agency, the National Farmers Union and a number of others to reach the ‘Doubling Nature’ target of 17% natural and green space coverage.

5.4.4 Peatland

Collaboration: Cambridgeshire's fen peatlands are among the UK's most diverse habitats for wildlife, but much have been lost to drainage and agriculture practices (14). These habitats rely on a delicate balance of water volume and quality to maintain their diverse range for flora and fauna many of which are internationally recognised.

Nationally, peatland research and restoration has focused on upland systems. With its extensive lowland systems with complex human-nature interactions, and rich research and technological communities, Cambridgeshire is well placed to take the lead in developing and implementing new sustainable management practices for the benefit of communities and nature.

Already there are projects such as Wicken Fen (the National Trust) and the Greater Fen Project (Wildlife Trust) working to conserve and re-wet our peatlands. This work must continue and extend to include agri-tech and other farming interests to find solutions to the carbon footprint.

5.4.5 Water management

Collaboration: Holistic water management is essential to ensure efficient and long-lasting mechanisms are put in place. One example is the management of chalk rivers and streams, recognised as a priority habitat under the UK Biodiversity Action Plan. While England's chalk rivers are ecologically important, they also have very high cultural and economic value leading them to have many demands placed on them from abstraction, irrigation, fisheries management, energy provision and navigation.

In Cambridgeshire, water companies, the Environment Agency and communities are seeking ways to best manage the cumulative impacts of groundwater abstractions on flows in chalk streams under low flow stress, to supply a growing Greater Cambridge area with drinking water. Management is complex because natural groundwater levels vary significantly from year to year, and are susceptible to dry periods and drought. Over abstraction can cause ecological impacts, but large scale reduction in abstraction from current levels could also lead to an increase in local groundwater flooding, as well as increasing environmental impacts from development of alternative sources for public water supplies.

Note: This priority area is also linked to the *Water availability* and *Green and Blue Infrastructure* priorities in the *Adaptation* theme.

6 Tackling Climate Change and Environmental Challenges Together

6.1 Collaboration is essential

Tackling Climate Change, adapting to its ongoing impacts and protecting and enhancing our natural capital is bigger than any one organisation. Success will only happen if we all choose to work together and share responsibility for changes in the way we live and work. Aligning our endeavours will allow us to make changes as fast as possible and at the least cost. This means policies and strategies across Government at all levels must be complementary and that we use the power of the market and people to bring forward new working practices, technological and other innovations and that society reacts positively to this shared responsibility.

Looking back to the past it's important to learn lessons but we must also recognise that no previous generations have experienced the choices that we must now make today to stop human-driven Climate Change. It is a new path for all of us which we need to create together. It must use resources sustainably, respect our natural capital and flourish without degrading the environments we so rely on. The scenario of runaway Climate Change is a bleak prospect for everyone, not just in the UK but globally, as faster sea level rises will damage coastal communities and cities, desertification will force mass migrations across continents and flooding will be commonplace.

6.2 Working with our local Authority and public sector partners

All but one of the Cambridgeshire Local Authorities declared a climate emergency during 2019, making commitments to reduce carbon emissions. Building consensus on carbon footprints and aligning methodologies for calculating carbon reductions has started between the Local Authorities. The CUSPE evidence base provides a consistent carbon footprint across Cambridgeshire but it will require individual authorities to dig deeper to really understand emissions in their patch and to share this widely.

Carbon reporting will become commonplace. It is important we develop this as a transparent process and where possible use the same accounting methodology to make comparisons easier. The Council and Cambridge University are both using the same methodology to calculate their organisational footprint, the Green House Gas Protocol promoted by Government. It will be important that we all understand what is meant when one Council pledges to deliver net-zero carbon by 2030 for its organisation whilst another pledges net-zero carbon by 2050 for the whole of Cambridgeshire. Delivering net-zero by 2030 for an organisation is much easier than net-zero for a community by 2050 and we must ensure communities understand this nuance.

Across Cambridgeshire our Local Authority and public sector partners are on the same journey as us. There is a growing body of experience and climate projects we must share and learn from. To deliver the carbon emissions savings and to prevent runaway Climate Change, the faster and quicker we act now, the better everyone will be. Allowing others to lead on their strengths and create a learning environment for everyone will bring success. Some of the great things already happening include Peterborough City Council developing a carbon management plan for its highways service, South Cambridgeshire District Council investing in local green infrastructure, East Cambs District Council is developing new Environment Supplementary Planning Guidance, Cambridge City Council is implementing EV charging infrastructure for taxis and the Greater Cambridge Greater Peterborough Combined Authority is setting up a Climate Commission with Cambridge University.

6.3 Collaborating with our communities

There are a number of ways that the Council can work with communities. We are in a unique position to bring together a wide range of different people and organisations to act in a unified way on Climate Change.

Building awareness of the impacts of Climate Change and how households can adapt to hotter summers and wetter winters including increased flood risk.

Supporting Parish Councils, Community Land Trusts and other organisations to shift rural communities off oil onto renewables by using our land assets where possible to build and operate community energy centres to benefit communities. Neighbourhood Plans are a key opportunity for local communities to plan for local renewable energy and EV charging infrastructure. Undertaking community carbon footprints could help inform Neighbourhood Plans as this will provide the scale of local energy provision that needs to be planned for locally. Parish Councils can also be supported to access procurements for specialist energy services to design and construct projects and work with our in-house team to identify grants and share best practice from existing projects.

Engaging with young people is vital. Many schools have developed eco-councils. Working with head teachers, schools and eco-councils we will look to develop the idea of school Climate Change and environment strategies and link these to future skills provision, improving careers advice and guidance and building behavioural change.

Creating a sustainable future and quality of life for young people must involve the voices of, and engagement with young people. Current and future generations are inheriting a changing climate as a result of fossil fuel combustion worldwide and will experience even greater impacts of more extreme weather in their everyday lives, to that which we are experiencing today. The infrastructure developed now: housing, transport, energy and digital, will shape the way young people live their lives.

Education, from early year's provision through to schools, colleges and universities, is working hard to equip young people with the knowledge and skills on Climate Change impacts and preparing them for their future responsibilities. Tomorrow's decision makers, engineers and technologists already exist and it will be important to bring their new ideas and ambitions into the infrastructure we are designing and decisions we are taking now. Planning the transition from today's workforce to the future workforce needs development, ensuring the skills and knowledge are in place to make a successful and happy succession.

The **business community** can be a powerful force for change through product innovation, corporate social responsibility and core values of a business that support sustainable development. For example, energy efficiency improvements of 'white goods products' has reduced carbon emissions. On the other hand if robust governmental regulation and policy is not delivered, damaging practice such as the recent car emissions cheating scandal can also emerge. Our work with the business community will come through a number of mechanisms. We procure £450 million of services per annum which we will look to specify with strong environmental principles and carbon footprints. We will link with Member organisations such as Cambridge Cleantech, Agritech businesses, Cambridge Ahead, the Chamber of Commerce, Cambridge Network, the Business Board and small business organisations working across Fenland to start conversations on climate risk and the business opportunities ahead.

Individuals are highly influential of the 'market' and the provision of goods and services by businesses. For example, fast fashion is driven by consumer choices bringing significant carbon impact and waste challenges for society.

Cambridgeshire has strong networks of established **Community Groups**. Many of these groups deliver services to our community, while others address specific local issues. More recently, Climate Groups are setting up, for example, Cambridgeshire Climate Emergency. This groups is looking to build capacity in the community to take climate action, share experience of projects across communities and train individuals in the community to undertake carbon foot printing. Linking into and supporting our community groups to take positive action is important. As part of Cambridgeshire's place making responsibilities, the public sector are developing a new way of working with its communities. This initiative is called 'Think Communities'. The aim is to use this new programme to collaborate on emissions reductions and adaptation to Climate Change impacts within communities. The details of this are still being worked through, however, it is essential that the Council helps build community climate capacity and harnesses the energy and ideas of local people to make change happen at scale.

6.4 Cultural change

All products and services that are accessed or bought have a carbon footprint through the use of resources (extraction from the ground for example), production of goods (energy to make the clothes or smart phones), distribution of these goods (energy for transportation), and then ultimately the treatment and disposal of the waste. Efforts to reduce or change consumption can impact positively on our carbon footprint and this comes from new consumer choices and political interventions. Positive examples of these changes includes consumers choosing to avoid single use plastics to minimise polluting our oceans, and the shift towards LED lighting. Initially, LED lighting was not favoured by consumers but is now culturally accepted and in widespread use.

Fossil fuel consumption has been widely promoted by successive Governments and the market, in its drive to prosperity and economic growth. Until recently, policy instruments were developed without fully taking into account the impacts of fossil fuel consumption on Climate Change. Although the scientific evidence on the causes and impacts of Climate Change has been known for some time, there has been a delay in societal acceptance of the urgent need for change. The transition to a low carbon society wrestles with difficult trade-offs between competing priorities whilst policy begins to align across all sectors and all levels of government in a shared ambition to reach net-zero by 2050. In some cases it may take regulation and/or fiscal incentives to bring about cultural change, for example the 5p plastic bag charge.

Young people are worried that homes built now will continue to be inefficient and reliant on fossil fuels, where they need to be affordable with clean energy, smartly managing energy for efficiency and warmth whilst minimising waste. Public transport is also a particular concern for young people. It can offer opportunities to meet friends and work but people in rural areas don't have sufficient access to this, pushing them towards driving cars, often older and inefficient and more polluting models.

Broadly, the interaction between politics and consumer choices is changing our culture from one which did not consider its carbon or polluting impacts to one of greater knowledge and more discerning choices. We need to keep building on these changes together, learning from each other and sharing responsibility.

Figure 21 charts the journey we are making as a society to tackle Climate Change.

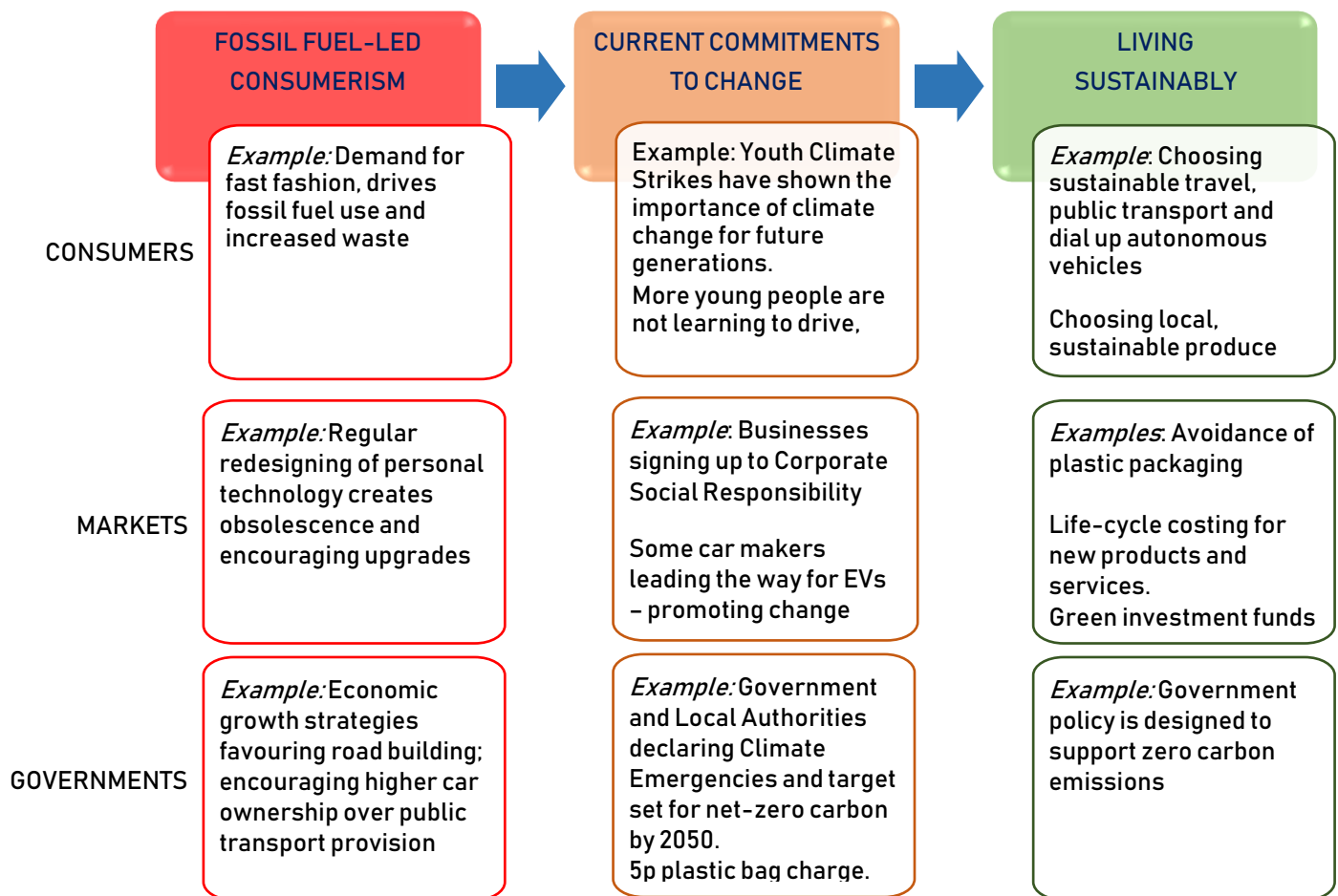


Figure 21 Cultural Change – consumer, market and political change

6.5 Public consultation and engagement

A draft Climate and Environment Strategy was consulted on during December 2019 - January 2020. The results of the consultation have initiated changes to the strategy to reflect these comments. Engagement must continue even once the Strategy is approved and published as we all need to upskill and learn from each other.

Our sincere thanks to everyone that completed our questionnaire and submitted comments on the strategy. We now understand better what is wanted from us and will use this to inform our journey over the next few years. The plan is to review the strategy during 2024/25 unless there is an urgent need to update earlier. Our focus will now be on carbon reduction projects, new policy making for zero carbon and climate risk management. We will be in a different place in 5 years.

The consultation results can be found [here](#).

7 Implementation

Accompanying this document is an Action Plan. This describes the actions we will take to achieve our targets. The action plan will be a live document on our website and will be subject to change as new ideas and projects emerge and projects complete.

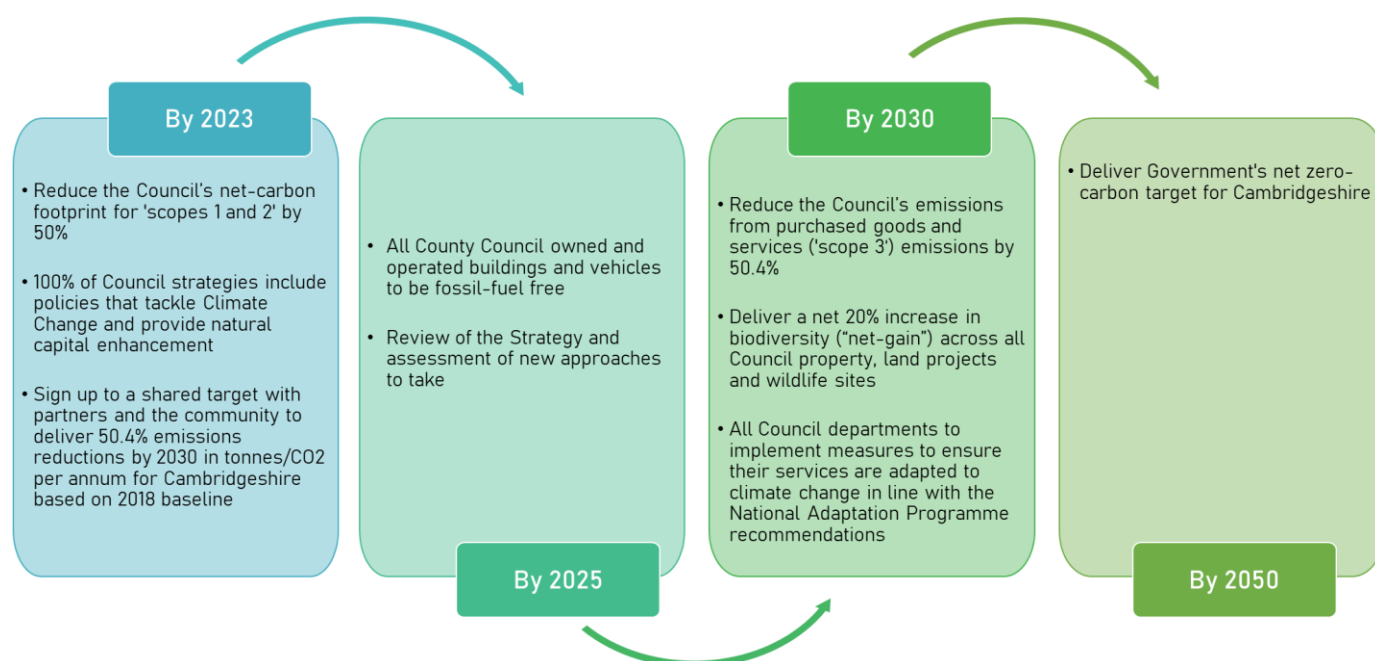
Resource and Funding

In February 2020, a fund of £16 million to deliver the near term targets, including getting our own house in order, was established. This will, over the next 5 years, provide:

- £15m to shift all buildings that are both owned and occupied by the council off gas or oil heating system
- £500k to support project development and design for oil dependent schools and communities to move to more renewable sources of energy
- £200k to bring forward electric infrastructure so the council can move to electric vehicles for its small van and pool cars fleet.
- £300k to be made available to support further schemes as they are developed.

The Council has also committed funding to support 1.5 FTE new positions dedicated to bringing forward the actions outlined: a Climate Change Officer (full time) and Energy Project Officer (0.5 time). These roles will work corporately but will sit within the Energy Investment Unit.

Timeline for Delivery



8 Glossary

Expression	Meaning
Adaptation	Methods to lower the risks posed by the consequences of Climate Change by improving resilience.
Carbon	Used as abbreviation for carbon dioxide or carbon dioxide equivalent.
Carbon Budget	An amount of carbon dioxide that a country, company, or organization has agreed is the largest it will produce in a particular period of time.
Carbon capture and storage (CCS)	The process of capturing and storing carbon dioxide before it is released into the atmosphere or used in other industrial processes. Current technology can capture up to 90% of carbon released by burning fossil fuels in electricity generation and industrial processes such as cement production.
Carbon dioxide equivalent (CO ₂ e)	A standard unit for measuring carbon footprints. It express the impact of each different greenhouse gas in terms of the amount of CO ₂ that would create the same amount of warming, using global warming potentials.
Carbon offset	A reduction in emissions of carbon dioxide or other greenhouse gases in order to compensate for emissions made elsewhere. This reduction could be through minimising emissions or capturing emissions. Offsets are measured in tonnes of carbon dioxide-equivalent.
Circular Economy Principle	An economy in which resources are kept in use for as long as possible, extract the maximum value from them whilst in use, then recover and regenerate products and materials at the end of each service life.
CO ₂	Carbon dioxide
EV	Electric Vehicle
Global Warming Potential (GWP)	A measure of how efficient a chemical is at trapping heat in the atmosphere relative to carbon dioxide. For example, methane has a GWP of 34 and nitrous oxide has a GWP of 298 (6). By definition, CO ₂ has a GWP value of 1. Quantities of GHGs are multiplied by their GWP to give results in units of carbon dioxide equivalent (CO ₂ e).
Green House Gas (GHG)	Any gas that absorbs heat and then emits it. These gases prevent heat from leaving the Earth's atmosphere, driving the warming of the planet. Common gases include: carbon dioxide, water vapour and methane.
Green/Blue Infrastructure	A network of multi-functional green space and other green features (or water), urban and rural, which can deliver quality of life and environmental benefits for communities.
Heritage Asset	A building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest. Heritage asset includes designated heritage assets and assets identified by the local planning authority (including local listing).
Historic Environment	All aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged, and landscaped and planted or managed flora.

Kt	kilotonne = 1000 metric tonnes
LULUCF	Land Use, Land use change and forestry. Category within the Green House Gas Protocol.
Low carbon technology	Methods of generating energy that produce little to no carbon dioxide. These tend to be technologies that do not rely on combustion of fossil fuels.
Mitigation	Methods to reduce or prevent greenhouse gases entering the atmosphere. This can include carbon capture and storage.
Natural Capital	Natural assets, such as fresh water, minerals and biodiversity which confer a benefit to humans. These benefits are expressed in terms of their monetary value.
Net-zero	Achieving an overall balance between emissions produced and emissions taken out of the atmosphere. This can take place on different scales and is often achieved through offsetting.
Peat	The remains of wetland plants and animals that build-up in more or less permanently saturated conditions, and represents an important store of carbon. Peat soils in England have been accumulating carbon since the retreat of the last glaciers approximately 10,000 years ago.
Resilience	The ability to anticipate, prepare for, and respond to hazardous events, trends, or disturbances related to climate. Improving climate resilience involves assessing how Climate Change will create new, or alter current, climate-related risks, and taking steps to better cope with these risks.
Site of Special Scientific Interest (SSSI)	Sites protected because they have important special flora, fauna, or geological or physiographical features. Land is classed as an SSSI following a legal process that judges it to have one or a combination of these features.
Carbon sequestration	The long-term removal and storage of carbon dioxide from the atmosphere to reduce atmospheric concentrations.
Wasted peatland	A technical term for deep peat that has been substantially degraded following years of drainage and cultivation so that the peat is now more dominated by underlying mineral material (14).

9 References

1. **Intergovernmental Panel on Climate Change.** *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change.* Geneva : World Meteorological Organization, 2018.
2. **Global Commission on Adaptation.** *Adapt Now: A Global Call for Leadership on Climate Resilience.* Rotterdam : Global Commission on Climate Change, 2019.
3. **Natural Capital Committee.** Natural Capital. [Online] [Cited: 11 11 2019.] <http://www.naturalcapitalcommittee.org/natural-capital/>.
4. **HM Government.** *Green Finance Strategy: Transforming Finance for a Greener Future.* London : HM Government, 2019.
5. **Weber, James, et al.** *Net-zero Cambridgeshire. What actions must Cambridgeshire County Council take to reach net-zero carbon emissions by 2050?* s.l. : Cambridgeshire County Council / CUSPE, October 2019.
6. **Intergovernmental Panel on Climate Change.** *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change.* Geneva : IPCC, 2014.
7. **Committee on Climate Change.** *Progress in preparing for climate change: 2019 Report to Parliament.* 2019.
8. **Environment Agency.** *Draft National Flood and Coastal Erosion Risk Management Strategy for England.* s.l. : <https://consult.environment-agency.gov.uk/fcrm/national-strategy-public/>, 2019.
9. **Natural Cambridgeshire.** Doubling Nature. *Natural Cambridgeshire.* [Online] 2019. [Cited:] <https://naturalcambridgeshire.org.uk/wp-content/uploads/2019/07/Doubling-Nature-LR.pdf>.
10. *Accelerating extinction risk from climate change.* . **Urban, M.C.** 6234, pp.571-573., s.l. : Science, 2015, Vol. 348.
11. **Woodland Trust.** Ash Dieback. [Online] 2019. [Cited: 29 11 2019.] <https://www.woodlandtrust.org.uk/trees-woods-and-wildlife/tree-pests-and-diseases/key-tree-pests-and-diseases/ash-dieback/>.
12. **Natural England.** *England's Peatlands: Carbon Storage and Green House Gases.* 2010.
13. **UKCIP.** *A Changing Clumate for Business.* [Online] 2010. [Cited: 10 10 2019.]
14. **University of Leeds.** *A Brief Guide to the Benefits of urban Green Spaces .* [Online] 2015. [Cited: 10 10 2019.] https://leaf.leeds.ac.uk/wp-content/uploads/2015/10/LEAF_benefits_of_urban_green_space_2015_upd.pdf.
15. **Climate UK.** *A Summary of Climate Change Risks for the East of England .* [Online] 2012. [Cited: 10 10 2019.] www.greensuffolk.org/assets/Greenest-County/Adaptation/General/Summary-of-climate-change-risks-to-East-of-England.pdf.
16. **World Health Organisation.** *Health and Sustainable Development – Air Pollution.* . [Online] 2019. [Cited: 10 10 2019.] www.who.int/sustainable-development/transport/health-risks/air-pollution/en/.
17. **European Commission.** *Air Pollution and Climate Change.* s.l. : Eurpoean Commission, 2010

18. *Public health benefits of strategies to reduce greenhouse-gas emissions: health implications of short-lived greenhouse pollutants.* . **Smith KR, Jerrett M, Anderson HR, Burnett RT, Stone V, Derwent R, Atkinson RW, Cohen A, Shonkoff SB, Krewski D, Pope CA 3rd, Thun MJ, Thurston G.** 9707, s.l. : Lancet, 2019, Vol. 374. 10.1016/S0140-6736(09)61716-5.
19. **Asthma UK.** Air Pollution Affects Asthma. *Asthma UK.* [Online] 2019. [Cited: 10 10 2019.] www.asthma.org.uk/support-us/campaigns/our-policy-work/air-pollution-affects-asthma.
20. *Influences of Environmental Chemicals on Atopic Dermatitis.* **Kim, Kwangmi.** 2 , s.l. : Toxicological Research, 2015, Vol. 31. 10.5487/TR.2015.31.2.089.
21. *Effectiveness of green infrastructure for improvement of air quality in urban street canyons.* **Pugh, T.A., MacKenzie, A.R., Whyatt, J.D. and Hewitt, C.N.** 14, s.l. : Environmental science & technology, 2012, Vol. 46.
22. *Improving local air quality in cities: to tree or not to tree?* **Vos, P.E., Maiheu, B., Vankerkom, J. and Janssen, S.** s.l. : Environmental Pollution, 183, 2013, Vol. 183.
23. **State of Nature Partnership.** *State of Nature: Report 2019.* 2019.
24. *The implications of projected climate change for freshwater resources and their management.* . **Kundzewicz, Z., Mata, L., Arnell, N., Döll, P., Jimenez, B., Miller, K., Oki, T., Şen, Z. And Shiklomanov, I.** 1, s.l. : Hydrological Sciences Journal, 2008, Vol. 53.
25. *Impact of Population Growth and Climate Change on the Freshwater Resources of Lamu Island, Kenya.* . **Okello, C., Tomasello, B., Greggio, N., Wambiji, N. and Antonellini, M.** . 12, s.l. : Water, 2015, Vol. 7.
26. **ICCT.** *Real – World Exhaust Emissions from Modern Diesel Cars. A meta-analysis of pems emissions data from eu (euro 6) and us (tier 2 bin 5/ulev ii) diesel passenger cars.* . s.l. : ICCT, 2014.
27. **Committee on Climate Change.** *Net-zero: The UK's contribution to stopping global warming.* London : Committee on Climate Change, 2019.
28. **IUCN National Committee United Kingdom.** UK Peatland Strategy 2018-2014. [Online] 2018. [Cited: 14 10 2019.] <https://portals.iucn.org/library/sites/library/files/documents/2018-015-En.pdf>.
29. **Parliamentary Office of Science and Technology.** *Natural Capital: An Overview (POSTnote 542 December 2016).* London : Houses of Parliament, 2016.
30. **Centre for Food Security/Universty of Reading.** Sustainable Pollination Services for UK Crops: A BBSRC Funded Study. [Online] 2018. [Cited: 15 11 2019.] https://www.reading.ac.uk/web/files/food-security/cfs_case_studies_-_sustainable_pollination_services.pdf.
31. **World Health Organization.** *Ecosystems and Human Wellbeing: Health synthesis. A Report of the Millennium Ecosystem Assessment.* s.l. : World Health Organisation, 2005.
32. **TEEB.** *The Economics of Ecosystems and Biodiversity: Mainstreaming the Economics of Nature: A Synthesis of the Approach, Conclusions and Recommendations of TEEB.* 2010.
33. *The tragedy of ecosystem services.* **Lant, CL., Ruhl, JB. and Kraft, SE.:** BioScience, 2008, Vol. 58.
34. **Recycle Now.** Plastic Planet. Recycle Now. . [Online] 2019. [Cited: 02 12 2019.] <https://www.recyclenow.com/plastic-planet>
35. **Department of Environmental Protection.** *Health & Environmental Effect of Air Pollution.* Boston : Department of Environmental Protection, 2018.

10 Appendices

10.1 Appendix 1: Impacts of climate change

Climate change has many impacts. These will be released by the Council in a variety of different ways. The table below summarises some of these.






Impact	Description	Possible Impacts for the Council
Flood Risk	Projected increases in extreme rainfall will bring increased risk of flooding (8). The nature of surface water rainfall means that many areas will be affected by increased flooding. Runoff from compacted or impermeable areas will increase and water will accumulate in low spots. As temperatures increase more and sea levels rise areas like the Fens will become more under threat.	<p>Infrastructure: Disruption to transport links (15) could affect staff travel to work and access to parts of the County for meetings. Disruption to travel could disrupt Council response processes by restricting access to some parts of the County. There may be increased risk of power outages associated with flooding and thunderstorms, which could cause disruptions to transport, logistics and processes.</p> <p>Finance: Increased costs of flood related damage and flood investigations. Increased costs of providing flood resilient infrastructure to existing buildings. Increased social costs associated with providing support for people suffering from emotional issues associated with flooding and uncertainty.</p> <p>People and health: Council employees may suffer from increased stress or mental health problems associated with flooding of their homes or the uncertainty associated with increased flood risk.</p> <p>Property: Council buildings and property may be damaged by flooding if located within flood risk areas. Designated heritage assets could become damaged through water ingress.</p>
Heat Waves	Climate change is projected to bring an increase in warm temperature extremes and it is very likely that heat waves will occur more frequently and last longer (8). Cambridgeshire is one of the warmer parts of the country, so could be significantly impacted by these changes. Cities will be impacted more than rural areas (16).	<p>Infrastructure: Disruption to transport links could affect staff travel to work and meetings at various council buildings. Disruption to travel could also disrupt Council response processes by restricting access to some parts of the County.</p> <p>Finance: Increased costs associated with summer cooling (17) in Council buildings. Increased costs associated with installation of air conditioning and heat resilient infrastructure.</p> <p>People and health: Working conditions may become unsuitable for staff which could impact employee concentration and performance (15).</p> <p>Property: Office spaces may become unsuitable to work in during heat wave conditions. This will have implications on the design, construction and maintenance of existing and new office space.</p>
Drought	With increased temperatures extremes and more frequent and longer lasting heat waves will mean increased water restrictions in Europe (8). Cambridgeshire is already one	<p>Infrastructure: Roads can be affected under drought conditions and subject to cracking.</p> <p>Finance: Increased water costs for office buildings. Increased social costs as more people fall below the poverty line as a result of increased food and water costs.</p>

	<p>of the driest counties in England so could be significantly impacted by this. The frequency of drought is likely to increase in presently dry regions by the end of the 21st century (8).</p>	<p>People and health: Employees may be emotionally or physically impacted by reduced food and water availability and increased costs associated with this.</p> <p>Property: Reduced water availability in the environment would affect council farms (irrigation restrictions) and nature reserves (natural water reserves) as well as other council business use. It may also impact archaeology through dewatering of the ground.</p>
Sea Level Rise (SLR)	<p>Rising global temperatures are causing polar ice to melt and oceans to expand, resulting in global sea level rise. Global sea levels rose by circa 0.19 metres between 1901 and 2010 (8). Cambridgeshire is one of the most low-lying counties in England so could be significantly impacted by sea level rise in tidal and fen areas. It is anticipated that the East of England could experience a dramatic sea level rise of up to 0.54 metres by 2100 under a high greenhouse gas emission scenario (17).</p>	<p>Infrastructure: Transport links may be impacted by SLR in low-lying parts of the county. SLR could restrict or prevent access to low-lying parts of the County, disrupting access for social care, flood risk management and other service provision.</p> <p>Finance: Costs of re-locating Council buildings, infrastructure and Council housing away from high risk areas and provision of SLR resilient infrastructure. Council farms could become unproductive for current agriculture processes.</p> <p>People and health: Council staff and communities in low-lying regions may be emotionally affected by the uncertainty surrounding sea level rise and re-location. Increased pressure on social care to provide increased support.</p> <p>Property: Council buildings in low-lying parts of the County may become inaccessible under a high risk scenario and require relocation.</p>
Air pollution	<p>Transport is a major source of short-lived greenhouse gas pollutants, which can result in direct damage to human health (18). Road transport (particularly diesel traffic) is a significant contributor to air pollution such as particulate matter (PM) and ground-level ozone (O₃) (18). Rising temperatures are also projected to increase levels of ozone (19), as are other greenhouse gases such as carbon monoxide, methane and nitrogen oxides (20). Short-lived greenhouse pollution can also cause acid rain (20). Air pollutants have been linked to health conditions such as asthma (21) and eczema (22).</p>	<p>Infrastructure: Ground level ozone could create a risk of damage to infrastructure, ecosystem services and functions. This could in turn influence agricultural productivity and water supply.</p> <p>Finance: Increased social costs associated with providing support to people impacted by pollution related health impacts. Increased costs associated with repair of council buildings impacted by acid rain.</p> <p>People and health: Poor air quality can pose a risk to employee health issues such which could lead to more sick days. Air pollution has been associated with the development and worsening of asthma and can also make people who already have asthma more sensitive to asthma triggers (21). Air pollutants have also been associated with health implications such as eczema (22). Urban air pollution can increase risk of cardiovascular, respiratory diseases and cancer (18). Council staff travelling for or to work may be particularly impacted by air pollution from vehicles.</p> <p>Property: Ozone pollution can cause acid rain (20) which could cause damage to Council buildings. Indoor air pollution could increase mould and damp in office space.</p>

10.2Appendix 2: Climate change mitigation measures

Climate Change mitigation measures can be incorporated into both existing and new infrastructure to reduce carbon emissions and improve energy efficiency. There are a number of ways to do this, and the following table describes some of these measures.

Table 3 Methods to mitigate carbon emissions

RENEWABLE ENERGY AND STORAGE	Mitigation Measure	How does this mitigate carbon emissions?	Description
	Solar Panels  ©michiganradio	Reduces fossil fuel usage for electricity and heating (if electric).	Sunlight is absorbed by the photovoltaic panels and is used to generate electricity.
	Solar Thermal  ©Greentech Media	Reduces fossil fuel usage for water heating.	Heat from the sun is used to warm water running in pipes through the panel. Depending on the temperature the water reaches, the temperature can be "topped up" using conventional methods.
	Battery Energy Storage  ©Greentech Media	Enables intermittent renewable energy sources to become viable alternatives to fossil fuels.	Stores electricity for use at times when generation is low.
	Air Source Heat Pump  ©burtonwright	Reduces or removes fossil fuel usage for heating.	Air is used to heat liquid refrigerant. The pump uses electricity to compress the refrigerant to increase its temperature then condenses it back to release stored heat. This heat is sent to radiators and stored as hot water.
	Ground Source Heat Pump  ©Homebuilding & Renovation	Reduces or removes fossil fuel usage for heating.	Coils or pipes containing refrigerant are buried in the ground. Heat from the ground is used to warm the refrigerant and an electric heat pump is used to raise this temperature further. This heat is transferred from the refrigerant via a heat exchanger in the building to providing hot water and heating.

Hydrogen



©National Grid

Reduces or removes fossil fuel usage for heating.

Hydrogen, produced through electrolysis of water using solar or renewable energy, or, produced using natural gas but using carbon capture and storage, is being considered heating homes.

Planning



National Planning Policy Framework

Presented to Parliament
by the Secretary of State for Housing, Communities and Local Government
by Command of Her Majesty
February 2019

Enables standard requirements for mitigation actions within developments.

The Planning System in England is 'plan-led.' The Plan contains policies that set out what development is needed where – either by identifying specific sites or general types of site. When a planning application is submitted, it is tested against those policies to see whether or not it should be approved.

Building Regulations



Can be set to reduce energy demand of homes (e.g. through energy efficiency measures below) and incorporate renewable energy generation.

These are statutory minimum standards for design, construction and alterations to virtually every building.

Passive House



©Magnetitite

Little to no domestic heating requirements.

Homes designed to combine ultra-low energy consumption with consistently good air quality. They are built with superinsulation, low-volume heat recovery ventilation systems and tightly controlled rates of air infiltration, which combine to make sure the building's carbon footprint is as small as possible. These types of buildings do not require conventional heating systems.

Fabric First/Insulation



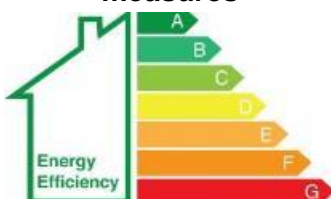
©MyBuilder.com

Reduces heat loss from buildings, reducing heating requirements.

Materials used to reduce heat loss from buildings – these can be built into new builds or retrofit. It can come in many forms specific to the area being insulated including:

- Pipe insulation
- Roof insulation
- Wall insulation

Other energy efficiency measures



©Base Energy

Reduce energy consumption, thereby reducing emissions from generation.

Various methods to reduce energy consumption. eg. LED Lighting and double glazing

District Heating/Heat Networks



©Energy Saving Trust

Facilitates low carbon heating.

Groups of co-located (eg a village or town) buildings sharing the same heating source. They are directly connected via insulated pipes to a local renewable heating source, such as a ground source heat pump. This enables faster transition to renewables.

Active transport eg. Cycling, walking



©The Independent

Zero carbon.

Avoids travel by vehicles.

Car Sharing/Car Clubs



©Pacific Rent-A-Car

Reduces the number of vehicles on the road.

Car sharing is the sharing of car journeys so that more than one person travels in a car, and prevents the need for others to have to drive to a location themselves.

Car clubs are a model of car rental where people rent cars for short periods of time, often by the hour.

Public Transport



©intelligenttransport.com

Reduces the number of vehicles on the road.

Public Transport reduces the number of vehicles on the road, but provides far greater benefits than car sharing as more people can use the same vehicle.

Electric Vehicles and Chargepoints



©Rolec

Removes combustion of fossil fuels as the direct source of energy.

Electric vehicles (EVs) do not rely on the internal combustion engine (ICE) burning petrol or diesel to function. Instead they contain batteries which charge on electricity, removing their carbon emissions as well as reducing air quality impacts.

If the electricity comes from renewable sources, use of these vehicles is carbon free.



©Electrek

Hydrogen Vehicles



©intelligenttransport.com





Removes combustion of fossil fuels as the direct source of energy.

For larger vehicles, Hydrogen could be used as a fuel source. This is where Hydrogen is electrolysed to produce electricity. Water vapour is the only by-product emitted from the exhaust.

10.3 Appendix 4: Adaptation measures

Climate Change adaptation measures can be incorporated into both existing and new infrastructure to reduce the effects of Climate Change. This is done by improving our resilience to the changes that are anticipated to come forward over the coming years. There are a number of ways to do this, and the following table describes some of these measures.

Table 4 Methods to adapt to Climate Change impacts

Adaptive measure	What change does this adapt to?	Description
Rainwater harvesting/ water butts  ©SusDrain 2019	Flood and drought	Rainwater is collected in water butts and used as a non-potable water resources such as toilet flushing. Harvested water can also be used for gardening and small-scale infrastructure.
Grey water harvesting  © The Green Age	Flood and drought	Wastewater from baths, showers, washing machines, dishwashers and sinks can be re-used for portable water sources.
Sustainable Drainage Systems (SuDS)  ©SusDrain 2012	Flood, heat waves and drought	SuDS mimic nature and manage rainfall at the source. They slow the flow of surface water and treat it before it enters watercourses. They provide areas to store water at the surface and allow green and blue infrastructure to be incorporated into urban spaces.
Property Level Resilience (PLR)  ©Flood Protection Solutions	Flood	Protective measures installed in existing homes and buildings to offer protection from flooding. This is best suited for existing buildings located in high flood risk areas which are expected to be impacted most by high intensity flooding and sea level rise associated with Climate Change.

Green space and low level vegetation



©Cambridge Independent

Flood, drought, heat waves

Can be incorporated into both new and existing developments. Areas of green space can be used as flood storage providing adaptation to flooding. They also allow water to be absorbed into the ground, recharging drinking water supplies to provide adaptation to drought.

Tree planting



©Cambridge City Council

Air pollution, flood, heat waves and drought

Trees provide shading and urban cooling to allow adaptation to increased temperatures and heat waves. They provide adaptation to increased rainfall and flooding by intercepting rainfall. The interception of rainfall allows more water to be absorbed into the ground providing groundwater recharge and thus adaptation to drought. Trees can improve air quality by removing particles and gases from the air.

Resilient building design



©Building Green

Heat waves, flooding, sea level rise, air pollution, drought

Buildings designed better to adapt to changing temperatures through installation of energy efficient air conditioning, window shading and tinting. Buildings can also be designed with air pollution filters, ventilation to reduce indoor air pollution. Green walls can be a successful air pollution adaptation measure in city areas, as planting of large trees along narrow streets can obstruct wind flow, limiting their ability to absorb pollutants. Buildings can be designed with floor levels above the projected flood or sea level to adapt to flooding and sea level rise. Buildings can also be adapted to include water re-use/ recycle measures and water saving features such as automatic taps to adapt to drought.

Locating services



©The Independent

Flooding, sea level rise

Infrastructure services such as power supplies, property and transport links should be located in areas at less risk of flooding and sea level rise.

10.4 Appendix 5: Natural capital components and impacts

Natural capital will be impacted in Cambridgeshire primarily through Growth and Climate Change.

Table 5 summary of potential ways growth and Climate Change may affect natural capital

Natural capital component	Example of benefit	Potential impacts within Cambridgeshire
Flora / Fauna	Flora and Fauna provides us with numerous benefits such as: <ul style="list-style-type: none"> • Clean water • Clean air • Food (pollination) • Timber • Flood protection • Recreation (accessible green space/rights of way) 	Climate Change (23): <ul style="list-style-type: none"> • Severe or altered weather patterns causing damage to habitats and species • Earlier onset of seasonal events, resulting in disruption of ecosystem, with early migrations & mismatch of predator-prey relationships • Species distributions shifting northwards in response to warmer temperatures, resulting in loss of species at edge of their range but increase in southern / continental species (e.g. Great Green Bush Cricket), including new risks to local biodiversity, agriculture and health • Summer drought result in significant impact on tree species, leading to changes in woodland structure and timber production • Higher temperatures are not suitable for crops grown within Cambridgeshire, impacting food security • Milder winters lead to increased microorganisms and insect populations which can adversely affect health and agriculture
		Growth <ul style="list-style-type: none"> • Increased demand for food with a possible increase in the intensity of agricultural practices • Increased agricultural practices may reduce carbon storage and soil stability • Increased population may result in an increase in demand for, and an adverse impact on, existing green spaces and sensitive habitats and species • Fragmentation and isolation of habitats reducing ability for species to move through the landscape & adapt to Climate Change • Increase in light, air and water pollution affecting quality of habitat and species populations and their resilience to Climate Change
Water	Fresh water is required for: <ul style="list-style-type: none"> • Drinking • Cooking • Cleaning • Irrigation (e.g. Farming) • Industrial uses e.g. Cooling • Wetland habitats 	Climate Change (24): <ul style="list-style-type: none"> • Impacts on hydrological processes, including changes in temperature, evaporation and precipitation. Impacting the availability of water resources • Increased drought conditions through the reduction in surface water and groundwater resources • Increase in the demand for water resources to grow crops and to maintain important protected habitats • Increased flood risk especially in terms of sudden and intense thundery showers

		<p>Growth (25):</p> <ul style="list-style-type: none"> • Demand for water will increase which may cause environmental damage to surface water and groundwater • Increasing concentrations of pollutants in water bodies • Increases in impermeable areas leading to increased flood risk
Clean Air	Air provides the oxygen we need to breath.	<p>Climate Change</p> <ul style="list-style-type: none"> • Higher summer temperatures will increase potential for more atmospheric pollution • These pollutants include nitrogen oxides, particles, carbon monoxide and hydrocarbons • Air pollutants can travel great distances and cause harmful effects from a far • Pollutants being emitted into the atmosphere will have an impact on human health • Also impacting the surrounding natural environment
		<p>Growth</p> <ul style="list-style-type: none"> • Exponential growth expected will result in a heavy reliance upon the use of fossil fuels to provide energy • There is a correlation between growth and the number of cars on the roads • This will in turn will reduce the quality of the air (26)
Historic Environment	<p>Education/ understanding history of Cambridgeshire</p> <p>Provides our sense of community, identity and culture</p>	<p>Climate Change</p> <ul style="list-style-type: none"> • Impacting preservation of the historic environment • Impacting the historic built environment (pollution) • Rise in water levels in fenland environments • Changes in agricultural practice rising from Climate Change • Impacts on land use viability refocussing development areas <p>Cambridgeshire has adapted to changing environments, with rising and falling water levels in fenland environments influencing human interactions with those area. We can see these actions through the historic environment.</p> <p>Studying paleo-environments can help understand reactions to and environmental changes arising from Climate Change. It also helps understand the nature and development of the peat deposits, the management of which is intrinsic to managing the county's carbon footprint.</p>
		<p>Growth</p> <ul style="list-style-type: none"> • Demand for land on new developments could lead to greater pressure on heritage assets

Green Infrastructure	Provides multi-functional uses (e.g. recreational, cultural experiences) <ul style="list-style-type: none"> • Clean water • Clean air • Food (pollination) • Timber • Flood protection • Recreation (accessible green space/rights of way) 	Climate Change <ul style="list-style-type: none"> • Increased demand for green spaces due to increasing air temperature • Changes in water availability may cause damage Growth <ul style="list-style-type: none"> • Increase in formal green spaces • Reduction in natural green spaces
Minerals	Minerals provide raw material to build infrastructure and property.	Climate Change: <ul style="list-style-type: none"> • Increased sea level rises could lead to mineral sites not being accessible and therefore capable of being worked • Increased water table could result in areas of the mineral resource being unable, or uneconomic, to be worked Growth: <ul style="list-style-type: none"> • reduce the raw materials available for building / infrastructure through either the use of the mineral, or through sterilisation of the reserve by alternative development such as housing • Population increase may lead to intensification of agriculture which could in turn stop the underlying mineral being worked
Soils	High quality soils are essential for agriculture, carbon storage and habitat	Climate Change: <ul style="list-style-type: none"> • Reducing in soil quality for agriculture/flora/fauna • Decay of peat land • Reduction in carbon storage Growth: <ul style="list-style-type: none"> • Population increase may lead to intensification of agriculture which in turn may lead to increased use of pesticides and/or loss of natural habitat • Reduction in habitat for species

10.5 Appendix 6: How the Council can approach natural capital conservation

The Councils can play a role in protecting Natural Capital through a variety of approaches.

Table 6 Summary of ways in which the council can protect Cambridgeshire's Natural Capital.

Biodiversity	
Influences	How can the council respond to these changes?
01 Organisation, 02 Procured Services	<p>Continue to maintain and enhance Council owned Local Nature Reserve assets, the following actions will be taken against Climate Change and Growth:</p> <ul style="list-style-type: none"> • Store water for re-use • Plant more trees that are capable of thriving under predicted changes to weather patterns • Promote Natural Flood Risk Management • Provide new/improve new greenspaces to accommodate population increase • Restore or create natural habitats that have been used for quarrying , prioritising species of conservation concern and providing complimentary habitat for international sites that are degrading due to changes in weather patterns (e.g. flooding of ground nesting birds) • Planning policy and in the determination of planning applications • landowner of agricultural land, including managing SSSIs • highways and Rights of Way maintenance, including management of Protected Road Verges
04 Partner Strategies	<p>The council can collaborate through:</p> <ul style="list-style-type: none"> • Partnership working with the Local Nature Partnership and Cambridgeshire & Peterborough Biodiversity Group • Biodiversity Net Gain • Future Parks Accelerator • Greenspaces Management • Local Nature Partnership incentives
04 Wider Communities	<p>Working closely with other organisations and developers to help create, promote, conserve and enhance biodiversity as natural capital.</p> <ul style="list-style-type: none"> • Decision made by the general public (e.g. fly tipping) • Decision made by the general public (e.g. fly tipping) • Farmers – agricultural intensification, including removal of habitats (e.g. removing hedgerows) and air, water and soil pollution (e.g. pesticides and herbicides) • National infrastructure projects resulting in significant land take and severance of the local habitats • Water abstraction causing very low summer flows

Green Infrastructure (leisure and recreation space etc.)	
Influences	How can the council respond to these changes?
01 Organisation, 03 Council Policy & Strategy	<ul style="list-style-type: none"> • planning policy which requires mineral and waste management restoration proposals to reflect strategic and local objectives for countryside enhancement and green infrastructure
04 Partner Strategies,	<ul style="list-style-type: none"> • Work with partners to design and implement green infrastructure through planning policy

Water	
Influences	How can the council respond to these changes?
01 Organisation	Work towards higher efficiency of water usage in the county council's offices and other owned buildings. Introducing new incentives (both behavioural and implementing new technologies).
02 Procured Services, 03 Council Policy & Strategy	The council has a direct influence through: <ul style="list-style-type: none"> Working with suppliers / contractors regarding use of water and the water footprint in making our products. Implementing SuDS features in new developments Planning policy which seeks to protect water resources, and to deliver strategic flood water storage bodies through the restoration of mineral sites.
05 Wider Communities	The way that our farmers abstract water and use it for irrigation.

Clean Air	
03 Council Policy & Strategy	<ul style="list-style-type: none"> planning policy which requires mineral and waste management development to minimise greenhouse gas emissions Setting Public Health policy to incorporate adaptive measures to air pollution
04 Partner Strategies	<ul style="list-style-type: none"> Working with partners to incorporate air quality measures into transport Plans

Historic Environment	
01 Organisation	The Council owns numerous designated and non-designated heritage assets, many of which can be managed to create a better environment for residents and for the historic environment itself.
03, Council Policy & Strategy, 04 Partner Strategies	<ul style="list-style-type: none"> planning policy, and in the determination of planning applications, seeking in the first instance to avoid harm to the historic environment Advising on environmental stewardship schemes to help landowners to extract the best environmental and heritage asset related outcomes from sites on their holdings Working with developers to maximise the potential for open spaces in developments by use of 'preservation in situ' schemes that create greenspace to protect the historic environment
05 Wider communities	The Council is a leader in the management of the historic environment across the county and acts as an exemplar to others. Other organisations and individuals come to us for advice and guidance.

Mineral	
03 Council Policy & Strategy Direct Influence Wider influence	<p>Continue to maintain leadership through adopted mineral planning policy to address:</p> <ul style="list-style-type: none"> • Climate Change, • Soil preservation, • Restoration, • Aftercare, • Biodiversity benefits • Historic environment • Sustainable transport options etc. <p>To allow full consideration of such matters ahead of mineral planning decisions being made.</p> <ul style="list-style-type: none"> • Planning application decisions • Mineral site restoration plans and S106 legal agreements securing long term maintenance requirements • Net gain requirement through the National Planning Policy Framework • Negotiation with developers with regard to the extent of biodiversity gains within a scheme • Consideration of the proposals in line with adopted mineral planning policy • Allocating sites for the provision of mineral to meet the County's needs, including sand and gravel, and brickclay • Encouraging the production and use of secondary and recycled aggregates in preference to virgin minerals

Soil	
03 Council Policy & Strategy, 04 Partner Strategies Direct Influence	<p>The Development Plan, which includes planning policy documents adopted by both the County Council and the City / District Councils, provide policies to preserve agricultural soils in relation to Climate Change.</p> <p>The council has a direct influence through:</p> <ul style="list-style-type: none"> • Planning policy and in the determination of planning applications • Minerals and waste site restoration and aftercare plans which can reduce the erosion of, and conserve, valuable high quality soils e.g. through the creation of lowland wet grassland



Carbon Footprint Annual Report 2018-19

Version 2, published March 2020



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1 Introduction

1.1 What is a carbon footprint?

A carbon footprint is a measure of the greenhouse gases (GHGs) emitted into the atmosphere from sources in a specified region or organisation. It usually includes all relevant greenhouse gases, the most common of which is carbon dioxide (CO₂). Emissions of other GHGs such as methane (CH₄) or nitrous oxide (N₂O), are measured in 'carbon dioxide equivalent' (CO₂e), which takes into account the different global warming potential (GWP) of different gases. Quantities of GHGs are multiplied by their GWP to give results in units of carbon dioxide equivalent (CO₂e).

A number of gases contribute to climate change. The Kyoto Protocol – the international agreement addressing climate change - covers seven main GHGs: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF₆) and Nitrogen Trifluoride (NF₃).

Different activities emit different gases, for example, burning fossil fuels releases carbon dioxide, methane and nitrous oxide into the atmosphere. The biggest source of greenhouse gas emissions in the UK is transport, closely followed by energy supply. Fluorinated gases ("F-gases") are a range of man-made compounds (including HFCs, PFCs, SF₆ and NF₃) used in a variety of industries including refrigeration, air-conditioning and the manufacture of cosmetics, pharmaceuticals, electronics and aluminium. F-gases are extremely potent greenhouse gases with some having GWPs of several thousand or more¹.

Nationwide, emissions of CO₂ make up 81% of GHG emissions, with the remainder from methane (11%), nitrous oxide (4%) and fluorinated gases (3%), when weighted by GWP (1), as shown in Figure 1.

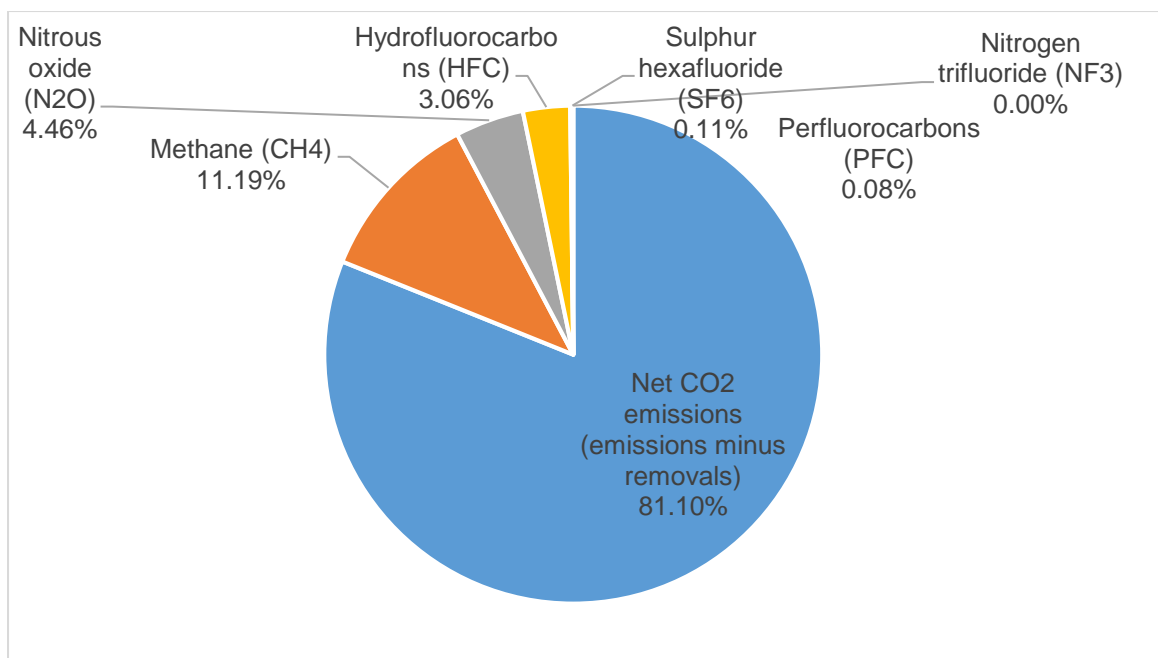


Figure 1: UK-wide Greenhouse Gas Emissions, 2017, by type of gas (tonnes CO₂e)

This report examines both the carbon footprint of the geographical area of Cambridgeshire as a whole, and that of Cambridgeshire County Council as an organisation.

¹ BEIS. (2019). Greenhouse Gas Reporting Conversion Factors

1.2 Scopes

Emissions-releasing activities are classified into three groups known as scopes. These are defined in the GHG Protocol Corporate Standard, and are described in Table 1 below.

Table 1: Scopes

Scope	Application to organisational carbon footprints	Application to geographical area carbon footprints
Scope 1 (Direct)	Emissions that occur directly from sites or assets owned or controlled by the organisation (e.g. gas boilers at own premises, fleet vehicles).	Emissions that occur within the boundary of the area being reported (e.g. houses, offices, factories, and roads within the County).
Scope 2 (Energy indirect)	Emissions from purchased electricity, heat or steam.	Emissions from electricity that is used within the area being reported.
Scope 3 (Other indirect)	Emissions that occur due to the organisation's activities / products / services, but at assets not owned or controlled by that organisation (e.g. travel in employee-owned vehicles or public transport, purchased goods and services).	Emissions from imported goods or services – i.e. used within the area being reported, but produced elsewhere.

Activities in all three scopes have been included in this report. However, Scope 3 emissions are more difficult to account for, because the required data often lies with other organisations. As a result, there is a higher degree of estimation in the scope 3 categories.

Carbon dioxide produced from biologically-sequestered carbon, e.g. from the combustion of biomass for electricity and / or heat generation, is not included in either scopes 1, 2, or 3. This is because the carbon dioxide would have been emitted anyway when the plants - from which the biomass is derived - decayed naturally at the end of their life. However, two other GHGs – nitrous oxide and methane – are commonly emitted when biomass is combusted. These would not be emitted during natural decay and any nitrous oxide or methane emissions from biomass / biofuel consumption is included in the emissions under the three scopes. This is the approach generally taken in international accounting standards.

More detail on the scopes and methodology used to calculate the Council's carbon footprint can be found in section 3.4.

2 Cambridgeshire's Carbon Footprint

The carbon footprint of Cambridgeshire (county) comprises all GHG emissions that occur in the county – this includes commercial and industrial sources, domestic homes, transport, agriculture, waste and land use.

There are a number of ways to identify the carbon footprint of the geographical area. We have used three methodologies, each of which have different merits:

- CO₂ emissions by local authority area, data published by BEIS
- The SCATTER tool
- Research by the Cambridge University Science and Policy Exchange (CUSPE)

Each of these three methods is discussed below.

2.1 BEIS CO₂ Emissions Data for Cambridgeshire

The Government Department for Business, Energy and Industrial Strategy (BEIS) currently publishes detailed data at a local authority (district) level, on emissions of carbon dioxide (2), but does not provide data at a local authority level on emissions of other greenhouse gases. Carbon dioxide (CO₂) emissions account for 81% of nationwide GHG emissions. 2017 is the most recent year of data.

The trend in Cambridgeshire is reflective of the national trend: emissions slowly and steadily declining over the last few years, due mainly to the decarbonisation of the electricity grid. See Figure 2 below.

Emissions from agriculture and waste are not included in these figures because they primarily produce methane and this data is for CO₂ only.

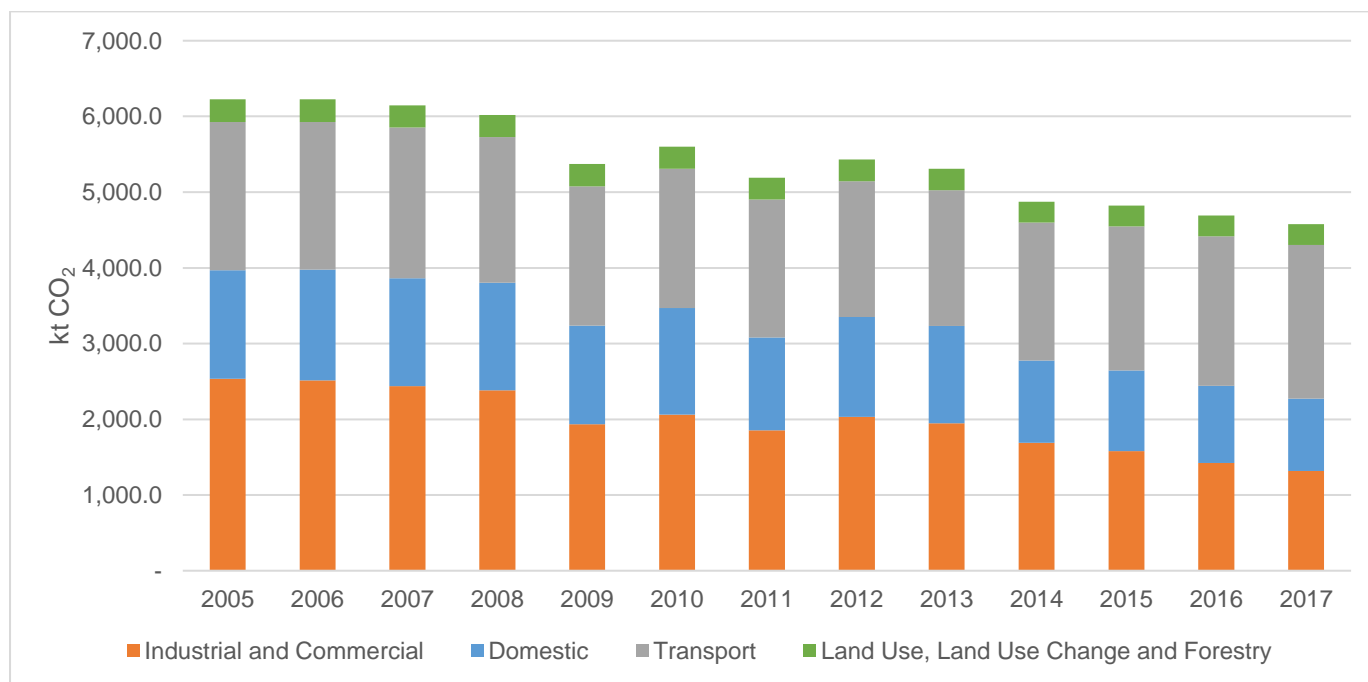


Figure 2: Cambridgeshire CO₂ emissions, 2005 to 2017

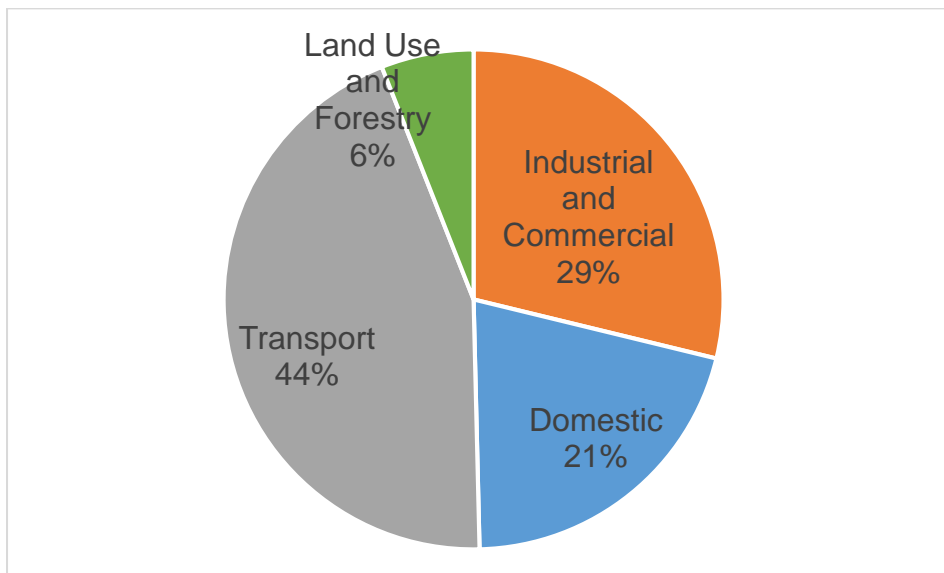


Figure 3: Cambridgeshire county CO₂ emissions, 2017, by source

2.2 SCATTER Tool Emissions Inventory

SCATTER (3) is a free tool developed by a collaboration between Anthesis Group, Nottingham City Council, BEIS, Greater Manchester Combined Authority and the Tyndall Centre for Climate Research at the University of Manchester. The tool generates a GHG emissions inventory for local authority areas, using a standardised methodology aligned to international reporting frameworks.

This data includes a much wider range of emissions sources and includes some indirect emissions as well as direct emissions. A graph showing the emissions data for Cambridgeshire is below in Figure 4. Like other methodologies, it does not include most indirect emissions from imported food or other goods, although it does include some scope 3 emissions.

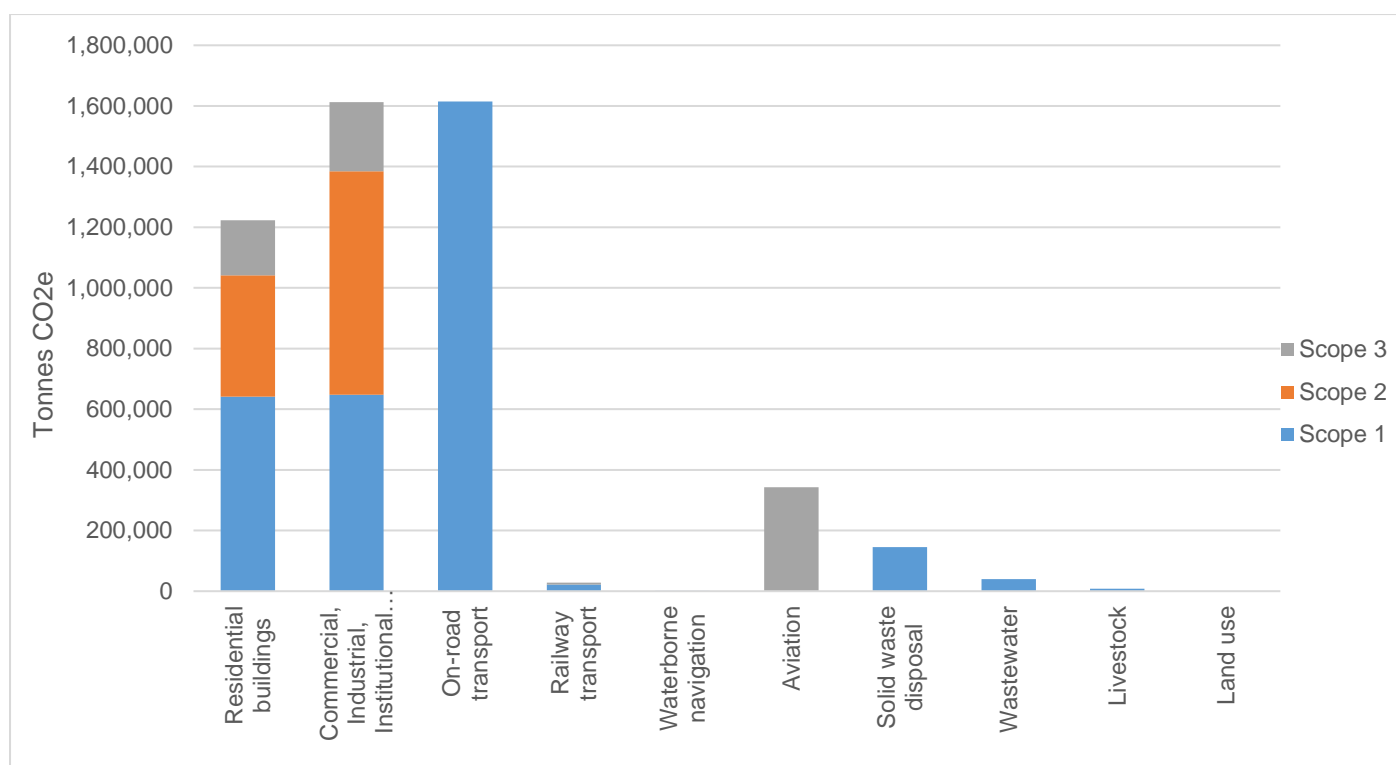


Figure 4 Cambridgeshire GHG emissions data from SCATTER

2.3 CUSPE Carbon Footprint Project

In 2019, Cambridgeshire County Council's annual collaboration with the Cambridge University Science and Policy Exchange (CUSPE) brought a team of researchers together to develop an evidence base of current carbon emissions for Cambridgeshire and Peterborough, improving on the 'CO₂-only' data published by the department for Business Energy and Industrial strategy, to provide a more accurate carbon footprint for the area.

The Council adopted the CUSPE team's report (4) as an evidence base for its Climate Change and Environment Strategy in October 2019. This report found that Cambridgeshire and Peterborough communities together produced **6.1 million tonnes** of carbon dioxide equivalent (CO₂e) in 2017. The breakdown of this is shown in Figure 5 below.

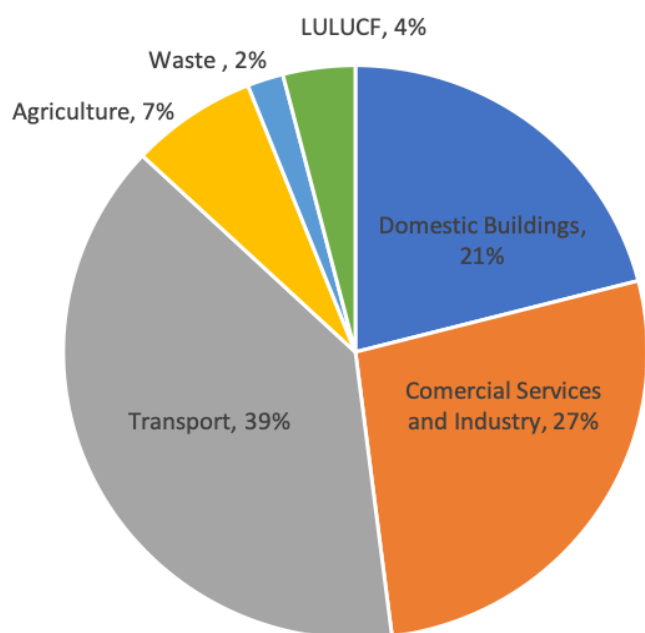


Figure 5: Breakdown of Cambridgeshire and Peterborough GHG emissions by source, 2017.

As well as looking at current emissions, the CUSPE research team also modelled two scenarios projecting future emissions up to 2050; presented as: "business as usual" and "net zero emissions by 2050".

If Cambridgeshire and Peterborough communities continue with 'Business as Usual', annual emissions could reduce to 3.5 Mt CO₂e by 2050. Implementing an ambitious decarbonisation strategy could deliver annual emissions reduced to 0.6 Mt CO₂e by 2050. The difference between the two scenarios highlights the growing policy gap to reach government's ambition of net zero carbon by 2050. This is illustrated in Figure 6 below.

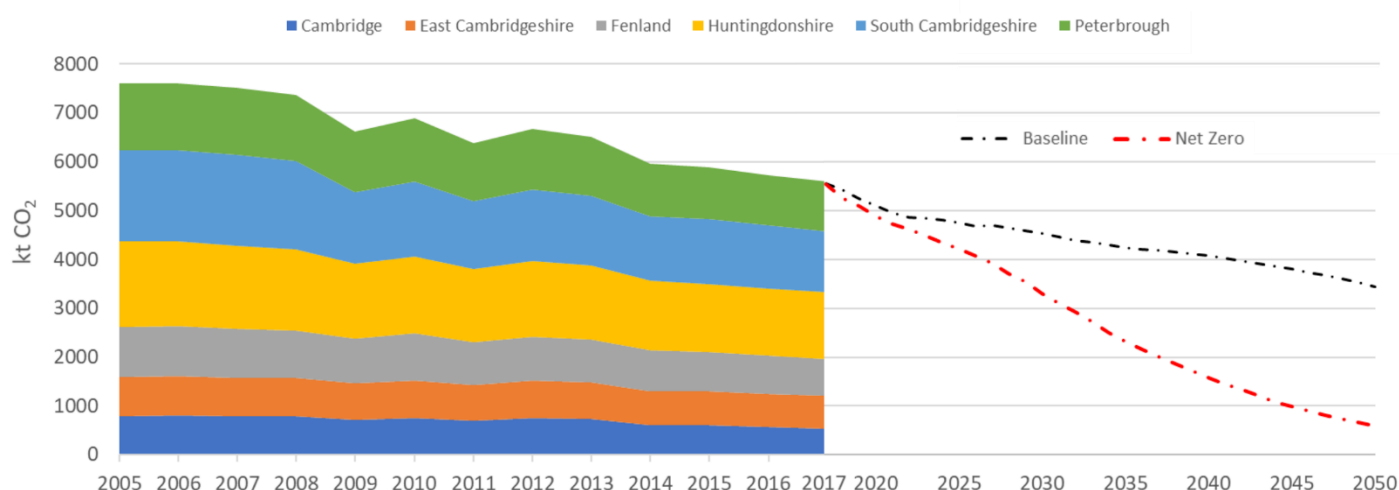


Figure 6: 'Business as usual' vs 'net zero' scenarios pathways to 2050.

The CUSPE GHG emissions data differ from the SCATTER GHG emissions data in a few key ways:

- CUSPE data includes both Cambridgeshire and Peterborough. SCATTER covers all local authority areas in the UK but we have extracted the data for Cambridgeshire only.
- SCATTER includes more sources of emissions – for example, aviation, railway transport, and some scope 3 (indirect) emissions.
- Some small differences in methodology.

The CUSPE report provides an emissions baseline against which Cambridgeshire and Peterborough communities can measure their performance. In order to achieve net zero, Cambridgeshire and Peterborough communities must build on the existing support for climate action and consider the emissions impact of every future policy decision, from social care to transport, and from buildings to waste.

A summary of the findings from the CUSPE team's research follows (highlighted blue):

Cambridgeshire and Peterborough communities produced **6.1 million tonnes** of carbon dioxide equivalent (CO₂e) in 2017. The challenge is to reduce this to net-zero by 2050.

If Cambridgeshire and Peterborough communities continue with 'Business as Usual' projections, emissions could reduce to 3.5 million tonnes (Mt) of CO₂e by 2050. Implementing an ambitious decarbonisation strategy could deliver emissions reductions to 0.6 Mt CO₂e by 2050. In order to deliver net-zero carbon emissions, Cambridgeshire and Peterborough communities will need to offset the residual emissions through a mix of afforestation, bioenergy with carbon capture and storage (CCS), direct air capture with CCS, demand reductions, peatland restoration and future unknown technologies.

Transport accounts for 39% of emissions in Cambridgeshire and Peterborough and emissions have stayed constant for the last 10 years. An ambitious strategy that requires 100% of cars, LGVs, buses and motorcycles as well as 91% of HGVs to be electric by 2050 would reduce transport emissions from 2500 kilotonnes (kt) CO₂e to 81 kt CO₂e. Electrification of vehicles is not the only solution to decarbonising transport, and other measures that encourage shifting transport away from cars to walking, cycling and public transport must also be included.

Commercial Services and Industrial emissions account for 27% of current emissions in Cambridgeshire and Peterborough, and have decreased from 2543 kt in 2005 to 1538 kt in 2017. The lowest emissions which could be achieved through an ambitious abatement strategy are 137 kt

CO₂e. Implementation of low carbon heating and carbon capture and storage are vital for achieving this reduction.

Domestic homes contribute 21% of current Cambridgeshire and Peterborough emissions, arising from energy used for heating and appliances. To deliver ambitious decarbonisation of heat and improvements to the energy efficiency of the housing stock, domestic emissions could fall by 91% by 2050. This would require swift roll out of low-carbon heating technologies, including hybrid heat pumps and district heating, as well as energy saving measures such as improved insulation.

Agriculture currently contributes 405.5 kt CO₂e per year, or 7% of Cambridgeshire and Peterborough's emissions, but much of the emissions in agriculture are difficult to abate. In the 2050 ambitious scenario, emissions are projected to be 239 kt CO₂, which is 40% of total residual emissions. Achieving the 2050 ambitious scenario involves a significant reduction of food waste, reduction of demand for red meat and dairy by 20%, and on farm measures such as increased fertiliser efficiency, breeding measures, and livestock food additives.

Waste management contributes around 2% of current Cambridgeshire and Peterborough emissions (107 kt CO₂e) with emissions from the Waterbeach landfill and compost sites and Peterborough energy recovery facility. In an ambitious scenario, net emissions would be 29 kt CO₂e. Deployment of carbon capture storage, increasing capture of landfill and compost gas emissions and electrification of waste transport are considered and identified as priorities.

Afforestation as a means to reduce Cambridgeshire and Peterborough's net emissions has been explored extensively in this report. Land use, land use change and forestry (LULUCF) currently account for 4% of emissions. Abatement costs and total CO₂ sequestration were calculated for various scenarios. Afforestation has the potential to play a role in helping to achieve net zero and the scale of afforestation required is calculated.

Peatland emissions are not currently counted in the emissions inventory, but could significantly affect Cambridgeshire's reported emissions - increasing them by as much as 90%. Whilst this is technically just a change in accounting, it does highlight the need for further research on peatland emissions and to prioritise the restoration and preservation of the area's peatland. In time and with the correct investment, peatland has the potential to change from a net emissions source to a net sink.

The CUSPE report provides an emissions baseline against which Cambridgeshire and Peterborough communities can measure their performance. In order to achieve net zero, Cambridgeshire and Peterborough communities must build on the existing support for climate action and implement a range of actions to reduce emissions.

The full report (4) was presented to Cambridgeshire County Council's General Purposes Committee in October 2019, where members unanimously voted to accept the CUSPE research report and its use as part of the evidence base to inform the development of the Council's Climate Change and Environment strategy and Action Plan.

3 Cambridgeshire County Council's Carbon Footprint

3.1 County Council Emissions: Key findings

The carbon footprint of Cambridgeshire County Council (as an organisation) comprises emissions that occur as a result of the Council's own operations. We have calculated the carbon footprint of the County Council's own operations for the financial year 1 April 2018 to 31 March 2019.

The Council's own carbon footprint has been calculated in line with the UK Government's Environmental Reporting Guidelines for Voluntary Greenhouse Gas Reporting (5). For further details on the methodology please see section 3.4 below. We are unable to compare this to previous years as we did not collect the same data. In future we will compare emissions data to this year's data.

Scopes 1 and 2

We found that our scopes 1 (direct) and 2 (purchased electricity) emissions amounted to **7,711 tonnes CO₂e** (gross). This includes emissions from gas and oil for heating our buildings, electricity for our buildings and street lighting etc., emissions from fleet vehicles, and fugitive emissions from air conditioning units. The breakdown of this is shown in Figure 7. The largest share was for purchased electricity. This shows gross emissions, before any reductions or offsets.

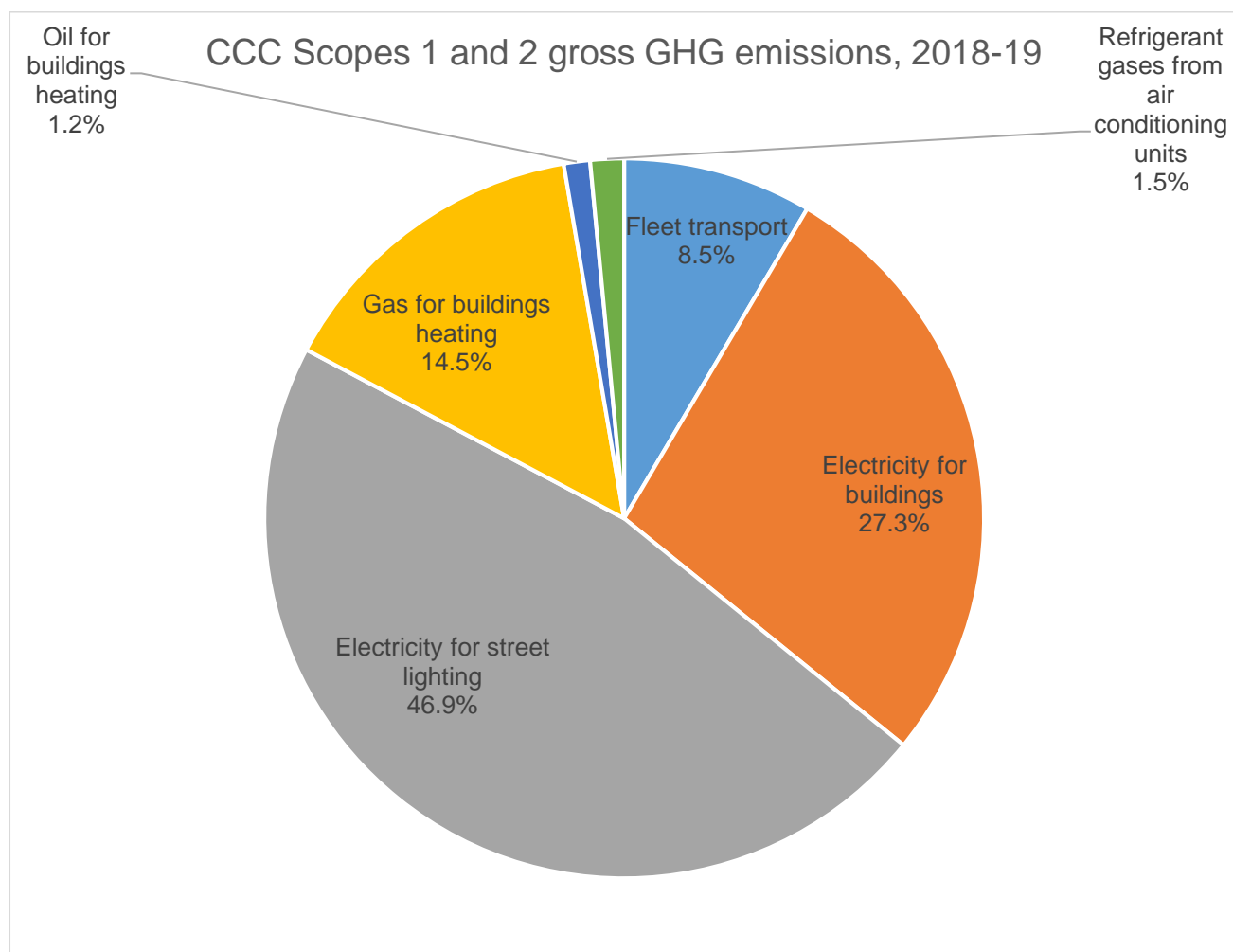


Figure 7: CCC Scopes 1 and 2 gross emissions sources

Net GHG emissions for scopes 1 and 2, after taking into account purchasing of 100% renewable electricity, were **1,985 tonnes CO₂e**. The breakdown of this is shown in Figure 8 below, with the largest share coming from gas to heat our buildings.

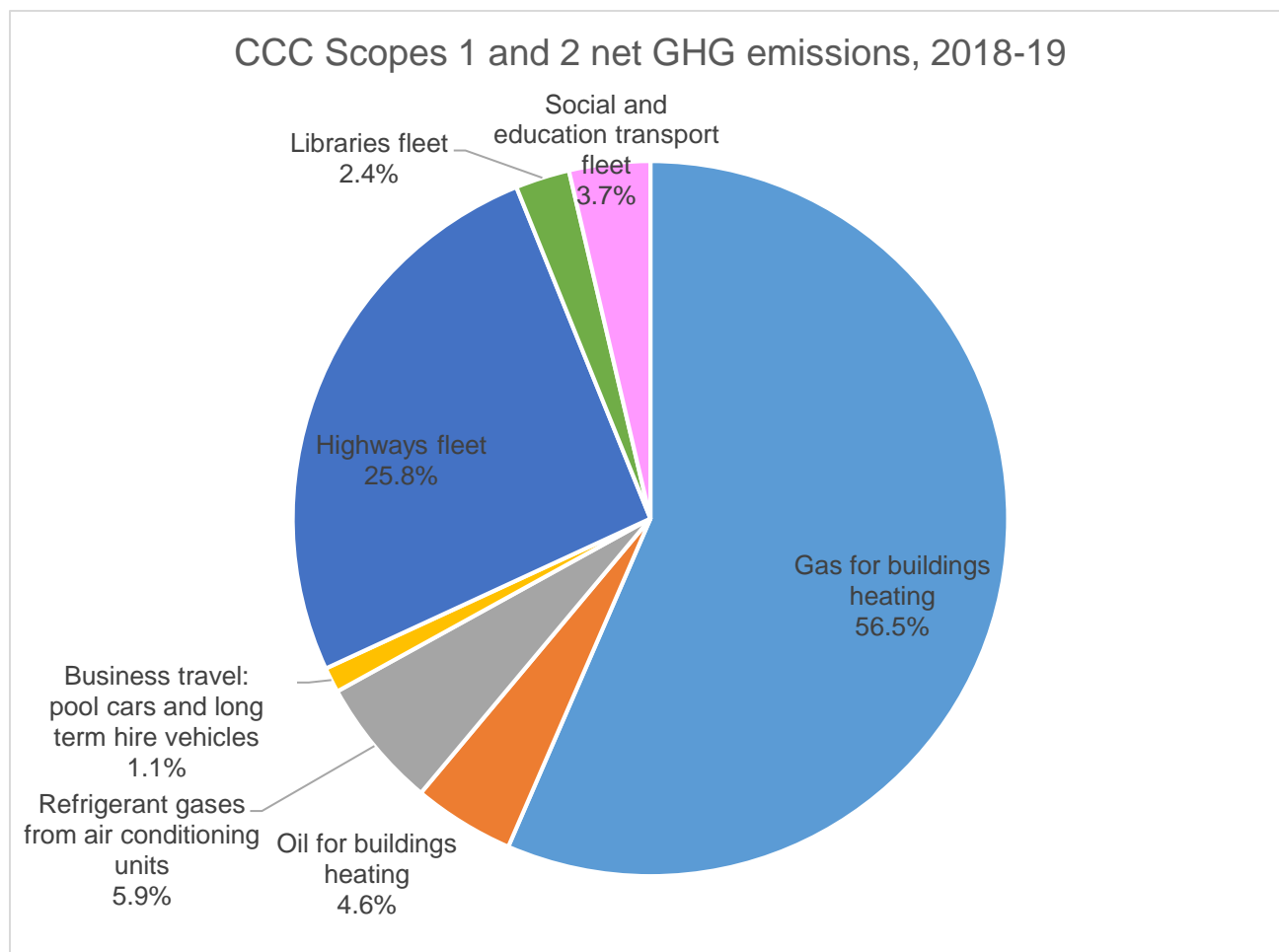


Figure 8: CCC Scopes 1 and 2 Net emissions sources

All 3 Scopes

By also including those ‘scope 3’ (indirect) emissions sources for which we have data, the total amounted to **203,665 tonnes** gross CO₂e. The breakdown of all these known emissions sources is shown in Figure 9 **Error! Reference source not found.** and there is also a more detailed breakdown in Table 2 on page 13.

The vast majority (96% or **195,954 tonnes** CO₂e) of gross emissions were scope 3 (indirect) which includes transport emissions from vehicles not under Council control (such as employee’s own cars or contractors’ travel), emissions from county waste disposal and treatment, emissions from Local Authority maintained schools’ energy usage, agricultural emissions from the County Farms estate, and emissions associated with purchased goods and services, such as capital construction works.

Importantly, some additional emissions associated with purchased goods and services are not included, because we do not have the relevant data to calculate these. However, this could potentially account for additional unknown scope 3 emissions of up to 160,000 tonnes CO₂e. Our action plan will include steps to identify more of this data in future.

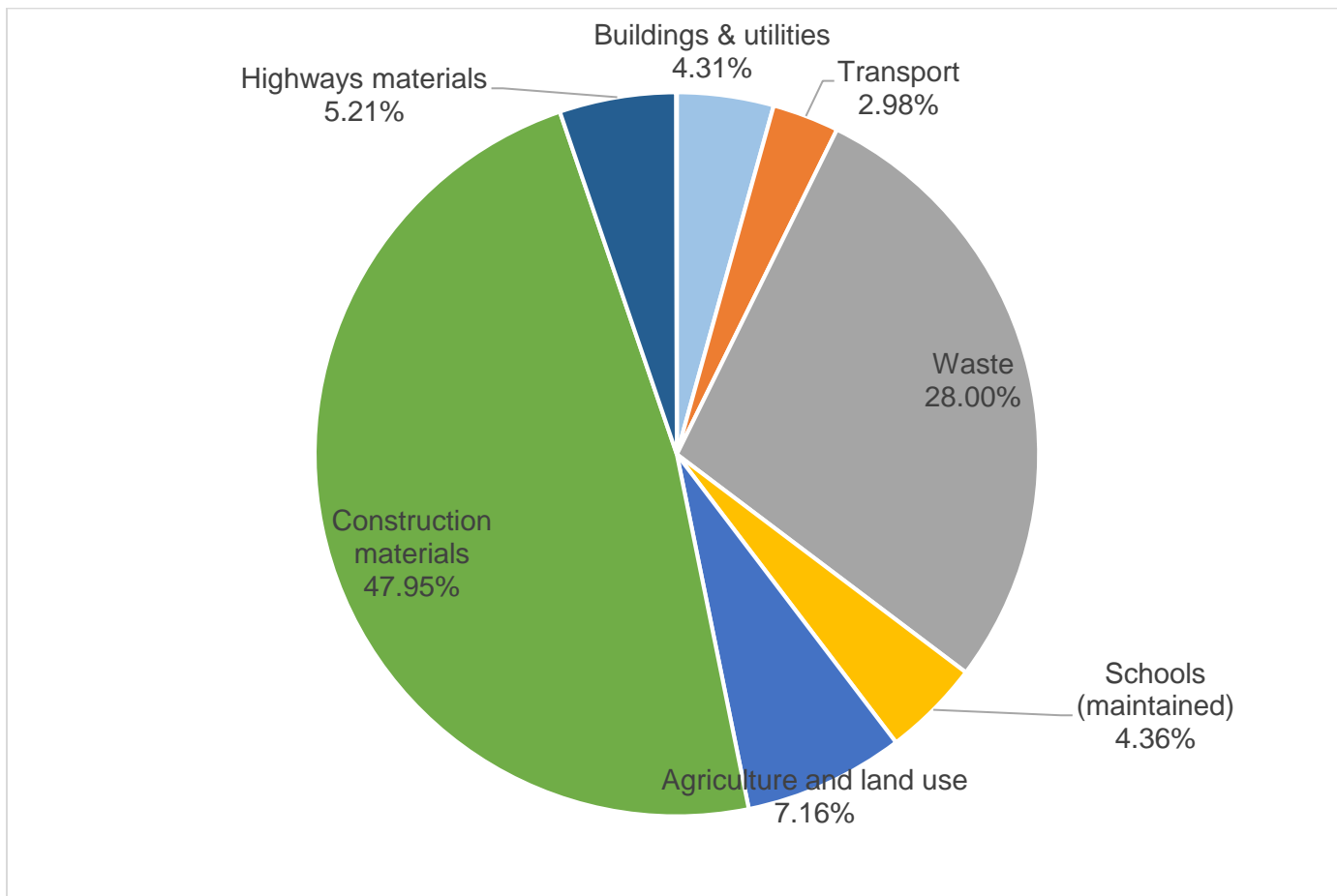


Figure 9: CCC Carbon footprint 2018-19, by source

A full list of what has been included and what is excluded, together with reasons for exclusions, is in section 3.4.1 below.

Net GHG emissions for all scopes, after deducting the emissions offset through our renewable electricity generation assets and for purchasing 100% renewable electricity, were **194,181 tonnes CO₂e**.

3.2 Breakdown and Analysis of the Council's Carbon Footprint

Table 2: Cambridgeshire County Council Greenhouse Gas emissions 2018-19, breakdown by source and scope

Greenhouse Gas Emissions (Tonnes CO ₂ e)	Scope 1 (Direct)	Scope 2 (Electricity indirect)	Scope 3 (Other indirect)	Total (Tonnes CO ₂ e)
Buildings & utilities	1,329	5,726	1,732	8,787
Electricity for CCC buildings & sites	0	2,108	519	2,108
Electricity for street lighting	0	3,617	891	3,617
Gas for CCC buildings	1,121	0	156	1,121
Oil for CCC buildings	91	0	19	91
Refrigerant gases (from air con units)	117	0	0	117
Water supply and sewerage treatment	0	0	147	147
Transport	655	0	5,406	6,061
Highways services vehicles	511	0	121	632
Social and education transport	73	0	362	435
Libraries	49	0	12	60
Business travel (pool cars & long term hires)	23	0	143	166
Subsidised public bus routes	0	0	658	658
Employee commuting (estimated)	0	0	2,954	2,954
Waste contractor transport	0	0	1,156	1,156
Schools (maintained)	0	0	8,881	8,881
Electricity	0	0	3,696	3,696
Gas	0	0	4,602	4,602
Oil	0	0	562	562
LPG	0	0	21	21
Waste	0	0	57,028	57,028
Asbestos disposal	0	0	Less than 1	Less than 1
CCC site waste	0	0	135	135
County waste disposal and treatment	0	0	56,893	56,893
Agriculture and land use	0	0	14,585	14,585
Agriculture (estimated)	0	0	14,585	14,585
<i>Land use, land use change and forestry</i>	<i>0</i>	<i>0</i>	<i>Unknown</i>	<i>Unknown</i>
Purchased Goods and Services	0	0	108,322	108,322
Construction materials for building works (estimated)	0	0	97,655	97,655
Materials for highways resurfacing, transport infrastructure projects etc. (estimated)	0	0	10,616	10,616
Paper	0	0	51	51
<i>All other purchased goods and services</i>	<i>0</i>	<i>0</i>	<i>Unknown</i>	<i>Unknown</i>
Total (Gross)	1,985	5,726	195,954	203,665
Reductions	0	-5,726	-3,758	-9,484
100% renewable electricity tariff	0	-5,726	0	-5,726
Electricity generation at solar farm	0	0	-3,758	-3,758
Net Total	1,985	0	192,196	194,181

3.2.1 Buildings and utilities

Buildings and utilities account for **8,787 tonnes CO₂e**, and are also responsible for 92% of all scope 1 and 2 emissions.

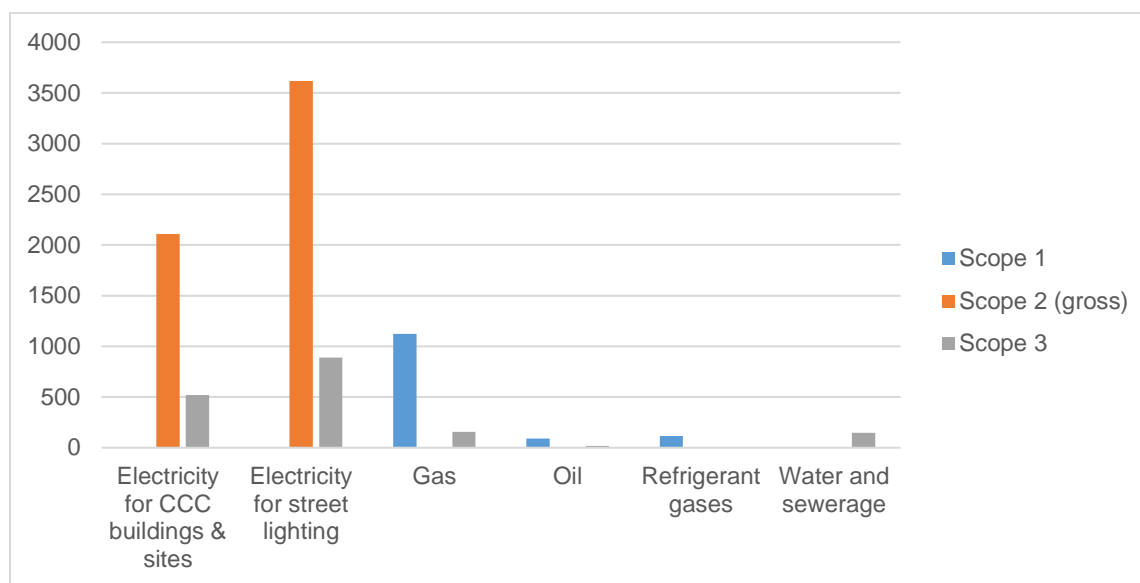


Figure 10: CCC Gross GHG Emissions from buildings and utilities, 2018-19

The biggest source of *gross* greenhouse gas emissions within the buildings and utilities category is electricity usage, accounting for 5,725 tonnes CO₂e in scope 2 (2,108 tonnes for buildings and 3,617 tonnes for street lighting). It also accounts for another 488 tonnes for transmission and distribution losses, and 922 tonnes for 'well to tank' (WTT) in scope 3. The Council purchased **20,227,819 kWh of electricity** in 2018-19, 63% of which was for street lighting.

However, the 5,725 tonnes gross CO₂e for scope 2 is offset to zero in the *net* emissions by purchasing 100% renewable electricity through our supply contract.

The next biggest source of GHG emissions related to buildings and utilities is gas, which accounts for 1,121 tonnes CO₂e, plus 156 tonnes for 'well-to-tank' emissions, and is used to heat the majority of our buildings. The Council purchased **6,096,030 kWh of mains gas** in 2018-19.

Oil, although more carbon intensive than gas, accounts for only 91 tonnes CO₂e, (plus 19 tonnes for WTT) because there were only four CCC sites that use oil. These used **368,632 kWh of heating oil** in 2018-19.



Figure 11: Grafham Water Outdoor Education Centre, one of CCC's buildings

Water and sewerage services for our buildings accounts for 147 tonnes CO₂e, based on an estimated annual water consumption of 150,000 cubic metres, 90% of which is assumed to return to the sewers.

Finally, leakage of refrigerant gases from air conditioning units is estimated at 117 tonnes CO₂e.

This section does not include school buildings, which have been counted separately.

3.2.2 Transport

Transport accounts for **6,061 tonnes CO₂e**, including 655 tonnes (33%) of scope 1 emissions. The majority of transport emissions are scope 3 because they are from vehicles not under the control of the Council.

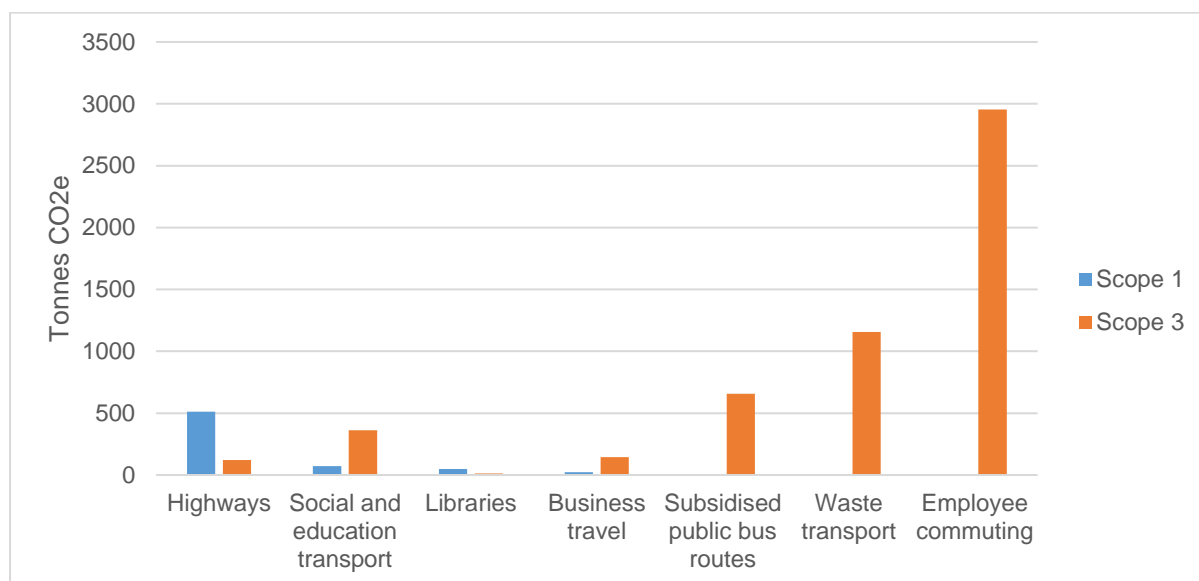


Figure 12: CCC GHG Emissions from Transport, 2018-19

Of the scope 1 (direct) transport emissions, the largest share was from our **Highways services**, accounting for 511 tonnes CO₂e. This is based on 181,485 litres of diesel and 6,569 litres of petrol used across the highways fleet, plus 48,968 miles driven in vans².

Also in scope 1 transport is the **social and education transport fleet**, which used 26,725 litres of diesel and 1,147 litres of petrol in 2018-19, leading to 73 tonnes CO₂e emissions.

Our mobile **libraries** used 8,529 litres of diesel, and the library delivery vans travelled 59,250 miles, in total causing 49 tonnes CO₂e.

Our **pool cars** for business travel drove 71,342 miles, leading to 17 tonnes CO₂e, and we also used 2,038 litres of diesel in **vans on long term hire** (5 tonnes CO₂e).

Each of these scope 1 categories will also have further emissions in scope 3 for 'well to tank'.

Scope 3 transport also covers vehicles not under the Council's control. The largest part of the transport section is the scope 3 (indirect) from our 3,655 **employees commuting from home to work**, which has been estimated at 2,954 tonnes CO₂e. According to the 2018 staff travel survey,



Figure 13: Some of CCC's Highways gritting fleet

² Transport emissions are calculated based on a mixture of fuel consumption (where known) and mileage (where fuel consumption unknown). For more details, see sections 3.4 and 3.4.1.

59% of commuting journeys (equating to 78% of miles) were made by car or motorbike (including car sharing), with 14% of journeys (18% of miles) by public transport. 4% of commuting journeys were walked and 9% cycled. This estimate is based on 215 responses to the survey and has been extrapolated based on the total number employees and assuming an average of 47 weeks worked per year. However, the relatively small sample size of the survey responses means that this is only a rough estimate.

Scope 3 **business travel** accounted for 142 tonnes CO₂e. This includes emissions associated with business travel in employees' own vehicles (139,744 miles in 2018-19) and travel by public transport (trains, buses and taxis), flight and hotel stays. Some of these journeys are estimated due to incomplete data.

Waste transport by our waste management contractor Amey accounted for 1,156 tonnes CO₂e. This includes travel for servicing the containers at our nine Household Recycling Centres, and bulk haulage of waste from the waste transfer stations at Alconbury and March to treatment sites such as Waterbeach. (It does not include household waste collection, which is the responsibility of the City/District Councils.)

Although the Cambridgeshire and Peterborough Combined Authority is the Transport Authority responsible for provision of public transport, they have delegated this responsibility back to Cambridgeshire County Council for 2018-19. We have therefore included the transport undertaken by passengers on those **public bus routes** which are subsidised by the Transport Authority, as a Scope 3 emissions source here, accounting for 658 tonnes CO₂e. There were 381,620 such passenger journeys in 2018-19, across over 50 bus routes. It is important to note that had these passenger journeys been made by car, total emissions would have been much higher (although outside of the Council's total).

Other social and education transport (including volunteers driving, some contracted out social care journeys and **home to school transport** by bus and taxi) accounted for 362 tonnes CO₂e. Some of these journeys are estimated.

Travel by contractors other than those mentioned above was not included due to not having access to this data.

3.2.3 Maintained schools

Schools emissions (which are all scope 3) for the 138 Local Authority maintained schools in Cambridgeshire account for 8,881 tonnes CO₂e. The largest share of this is 4,041 tonnes CO₂e from **21,965,533 kWh of mains gas**, followed by 2,966 tonnes CO₂e from **10,478,618 kWh of electricity**, 1,140 tonnes CO₂e for 'well to tank' emissions, 465 tonnes CO₂e from **183,442 litres of heating oil** and 253 tonnes CO₂e for electricity transmission and distribution.

We do not currently have any data for schools' water and sewerage services or air conditioning gases in schools. There are also a few schools for which we do not have gas or oil data.

Academy schools are not included in these figures since these are not under the Council's control.

3.2.4 Waste

Waste accounts for the second largest share (28%) of our known emissions, at 57,028 tonnes CO₂e.

The vast majority of this (estimated at 56,893 tonnes CO₂e) is due to the Council's statutory responsibility as the Waste Authority for **treatment and disposal of waste** from Cambridgeshire residents. In 2018-19 there were 322,551 tonnes of waste collected from both the household kerbside collections and the Council's 9 Household Waste Recycling Centres. Of that, 143,119 tonnes (44%) went to landfill, whilst the remainder was either composted or recycled. Note that waste collection is the responsibility of the City and District Councils, therefore transport of waste is not included in these figures, whereas treatment and disposal is the responsibility of the County Council and is included.

The remainder of the waste category is from the waste generated at the Council's own sites (220 tonnes of general waste, 222 tonnes mixed recycling and 62 tonnes of confidential waste paper, together accounting for 135 tonnes CO₂e emissions), and a very small contribution from our specialist asbestos disposal contractors.

3.2.5 Agriculture and land use

Agricultural emissions from the County Farms estate are estimated at 14,525 tonnes CO₂e, or 7.2% of all known emissions in the Council's total carbon footprint. The vast majority of the County Farms estate is cropland, with a small area allocated to livestock.

Other emissions from land use, land use change and GHG removals from forestry have not been included.

3.2.6 Purchased goods and services

The largest share (53%, or an estimated 108,322 tonnes CO₂e) of our carbon footprint is from purchased goods and services. Of that, the majority (97,655 tonnes) is from **materials for construction or building works**. This comprises of emissions associated with extraction/mining, production/manufacture and transportation of materials to the point of purchase. The majority of constructions works was building of new schools. Other works include renovations and maintenance works to our assets.

Materials for **Highways** work, including resurfacing schemes and highways services works, contributed an estimated 10,616 tonnes CO₂e.

The purchase of approximately 53 tonnes of **paper** in the year accounted for 51 tonnes CO₂e.

Emissions from other purchased goods and services are unknown. This includes:

- Social care provision (other than our own buildings and staff travel);
- Legal, consultancy, insurance, pensions, investments, banking, telecommunications, post and other business services (other than our own buildings and staff travel);
- Education services;
- Office machinery, IT equipment, furniture and the like;
- Food and drink;
- Other goods and services not mentioned elsewhere.

Since the emissions data for these goods and services lies with other organisations it is more difficult to collect the relevant data. However, we hope to improve this in future.

3.3 Reducing our carbon footprint

There are two reasons for the difference between gross and net emissions; a reduction of 9,484 tonnes CO₂e.

Firstly, because we buy electricity generated from 100% renewable sources, although the gross emissions for electricity (based on grid-average carbon intensity) are 5,726 tonnes CO₂e, the net emissions (based on the supplier fuel mix for the tariff we purchase) are zero.

Secondly, our 12MW solar farm in Soham generated enough electricity to offset 3,758 tonnes CO₂e in 2018-19, which is enough to power more than 3000 homes.

Cambridgeshire County Council also already has several other key measures in place to reduce our gross carbon footprint and help mitigate against climate change. These include a range of energy efficiency projects across our property portfolio, such as on-site renewable generation assets (rooftop solar PV), Building Energy Management Systems (BEMS), and installation of LED lighting.

Without these projects, the Council's carbon footprint would have been higher. However, we recognise that there is more work to do. This is set out in our Climate Change and Environment Strategy and Action Plan (published March 2020).

3.4 Methodology

The Council's own carbon footprint has been calculated in line with the UK Government's Environmental Reporting Guidelines for Voluntary Greenhouse Gas Reporting³, which is based on internationally-recognised standards from the World Resources Institute and World Business Council for Sustainable Development: the GHG Protocol Corporate Accounting and Reporting Standard, and the GHG Protocol Scope 3 standard.

Broadly, the methodology used was as follows:

1. Collect data on all activities under Cambridgeshire County Council control that emit GHGs (e.g. energy used, miles travelled, materials purchased). Actual data has been used wherever it is available.
2. Assumptions and estimates are only used where actual data was not available. Some activities have been excluded in cases where there was no data available and no basis upon which to estimate. Where this is the case, this is clearly stated below.
3. Convert data to metric tonnes of carbon dioxide equivalent (CO₂e), to calculate gross emissions using appropriate carbon conversion factors.
4. Note actions taken to reduce emissions (e.g. green energy tariff, solar generation), then also report net emissions.

The reporting period is the financial year 1 April 2018 to 31 March 2019.

The carbon conversion factors used for this reporting period are the 2018 UK Government published carbon conversion factors⁴, except where there is no appropriate emissions factor given, or a more accurate conversion factor is available.

³ [2019 Environmental Reporting Guidelines](#), Chapter 3

⁴ [2018 Carbon Conversion Factors](#)

3.4.1 Boundary of Reporting, and Data Sources

All activities under the operational control of Cambridgeshire County Council are in scope, including those outsourced to third parties in cases where the overall control or responsibility still lies with the County Council.

A complete list of emissions sources included is shown below in Table 3.

Table 3: CCC Emissions Sources Included

Area	Activity	Methodology / Data source	Accuracy / Confidence level
Buildings and utilities	Gas burned for heating and hot water at CCC-controlled buildings	Usage data from utility bills	High
Buildings and utilities	Oil burned for heating and hot water at CCC-controlled buildings	Usage data from utility bills	High
Buildings and utilities	Electricity used at CCC-controlled buildings	Usage data from utility bills	High
Buildings and utilities	Electricity used for CCC street lighting, traffic signals and similar	Usage data from utility bills	High
Buildings and utilities	Refrigerant gases leakage from air conditioning units in CCC-controlled buildings	Based on industry average leakage rates applied to CCC list of A/C units, type of refrigerant gas and capacity.	Medium
Buildings and utilities	Water supply and wastewater collection and treatment	Usage data from utility bills. Some of this is estimated.	Medium
Buildings maintained schools	Gas burned for heating and hot water at Cambridgeshire schools, where purchased through ESPO.	Gas usage data. Some schools will not have gas data because they do not use any gas, for example those with oil heating. A small number of schools we do not have data for.	Medium
Buildings maintained schools	Electricity used at Cambridgeshire schools, where purchased through ESPO.	Electricity usage data.	High
Buildings maintained schools	Oil and LPG used for heating at some Cambridgeshire schools.	Heating fuels usage data provided by the schools.	Medium
Transport	Travel in CCC pool cars. Travel in hire cars.	Data from a combination of mileage reports for pool cars and invoices for hire cars. Based on miles travelled and type of car where known.	Medium

Area	Activity	Methodology / Data source	Accuracy / Confidence level
Transport	Social and education transport in own fleet. Social and education transport by volunteer drivers.	Data from a combination of fuel card reports for some vehicles and estimated mileage for others. Fuel consumption data and type of fuel is used where known. Actual mileage records used if no fuel usage data available. Estimated mileage used if neither fuel usage nor actual mileage available.	Medium
Transport	CCC-provided home to school transport	Estimated based on pupil numbers and modes of travel to school.	Medium
Transport	Highways maintenance vehicles. Gritting fleet. Streetworks team vans.	Data from fuel usage (covering most highways vehicles) and estimated mileage for others (mileage used only where fuel usage is unknown).	High
Transport	Mobile libraries and library delivery vans	Data from fuel usage (for mobile libraries) and mileage for library delivery vans.	Medium
Transport	Employee travel on CCC business in own vehicles	Data from miles claimed on employee expenses system.	High
Transport	Travel by public transport incl flights, trains, buses and taxis, where known	Currently only have partial data on this. Some train and bus travel estimated from spend.	Low
Transport	Hotel stays on CCC business	Currently only have partial data on this. Estimated from spend.	Low
Transport	Subsidised public bus routes	Responsibility of the C&P Combined Authority, delegated back to CCC. Estimated based on routes and passenger numbers data. Total route distance calculated from maps and assumed that average passenger travels 50% of total route distance.	Medium
Transport	Employee home to work commuting	Estimated based on staff travel survey in October 2018. 215 employees provided detailed information on their modes of travel and distance travelled for one week. Assumed this was representative of all employees and based on a typical week. Extrapolated to all employees and assumed working 47 weeks per year.	Low
Transport	Waste transport	Data provided by Amey on litres of diesel used. Based on Jan-Dec 2019.	High
Waste	Waste produced from CCC sites – general waste, recycling and confidential paper waste	Data from waste transfer notes / invoices.	High

Area	Activity	Methodology / Data source	Accuracy / Confidence level
Waste	Disposal / treatment of Cambridgeshire waste (as the statutory waste authority)	Based on waste volumes collected by all the City and District Councils in Cambridgeshire, and from all of the Household Waste Recycling Centres in Cambridgeshire, and proportions of waste recycled, composted and landfilled. Landfill gas emissions modelled using same method as CUSPE report (4), applied to updated data set.	Medium
Agriculture and land use	County farms / rural estates land use	Estimated based on area of land used for livestock, number of cattle, number of sheep, and area of land used for crops, with UK average GHG emissions rates for these uses (based on UK GHG inventory) applied.	Low
Purchased goods and services	Construction and buildings works	Inventory of each material used and quantity (tonnes) data from project information and/or capital works contractors (where available). Materials used multiplied by the relevant conversion factors for each material. This data was available for around half of the total spend on capital works, with the remaining spend assumed to have a similar composition of materials and emissions estimated on a pro rata basis.	Medium
Purchased goods and services	Highways works	Inventory of each material used and quantity (tonnes) data from project information and/or capital works contractors (where available). Materials used multiplied by the relevant conversion factors for each material. One contractor (Skanska) provided their own carbon footprint report for the works they did on our behalf. This data was available for around half of the total spend on highways works, with the remaining spend assumed to have a similar composition of materials and emissions estimated on a pro rata basis.	Medium
Purchased goods and services	Paper	Quantity of paper purchased estimated based on spend and cost of paper, and carbon conversion factor applied.	Medium

3.4.2 Exclusions

The following activities have been excluded from this carbon footprint calculation:

Table 4: Exclusions

Area	Activity	Reason for exclusion
Buildings and utilities	Diesel used for on-site generators	No data currently available. Unable to estimate. Expect this to be very low.
Buildings and utilities	Energy used at sites outside of CCC control e.g. space in a shared building, third party premises, and CCC-owned sites let to commercial or private tenants.	We do not have access to this data.

Area	Activity	Reason for exclusion
Buildings and utilities	Biomass	There are currently no biomass facilities at any CCC sites or maintained schools.
Schools	Gas used at those schools that do not purchase energy through ESPO.	We do not have access to this data.
Schools	Electricity used at those schools that do not purchase energy through ESPO	We do not have access to this data.
Schools	Oil and other heating fuel data for some schools	We only hold partial data for heating fuels used at schools.
Schools	All data for Academy schools.	These schools are outside of Council control.
Transport	Travel by public transport other than that included in scope above.	We do not have access to this data.
Transport	Other travel by third parties, contractors and suppliers (where not mentioned in scope)	We do not have access to this data.
Waste	Other waste streams from CCC sites not mentioned in scope above e.g. batteries, WEEE, skip waste, green waste.	We do not have access to this data.
Waste	Construction waste from CCC capital projects	We do not have access to this data.
Waste	Collection and transport of Cambridgeshire waste	This is not CCC's responsibility.
Waste	Transport, disposal and treatment of private / third party commercial waste	This is not CCC's responsibility.
Purchased goods and services	All other goods and services purchased by CCC not accounted for elsewhere	Only spend data available. No accurate method available to convert spend to emissions.
All	All other activities not mentioned in scope above.	No known GHG emissions other than those already listed.

4 Glossary

Expression	Meaning
Carbon	Used as abbreviation for carbon dioxide or carbon dioxide equivalent
Carbon Budget	An amount of carbon dioxide that a country, company, or organization has agreed is the largest it will produce in a particular period of time.
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent: A standard unit for measuring carbon footprints. It expresses the impact of each different greenhouse gas in terms of the amount of CO ₂ that would create the same amount of warming, using GWPs.
GHG	Greenhouse gas: a gas that absorbs and emits radiant energy within the thermal infrared range. Greenhouse gases cause the greenhouse effect.
Greenhouse effect	The heating of the earth's surface caused by solar radiation trapped by atmospheric gases (rather like a greenhouse roof).
GWP	Global Warming Potential: this is a measure of how efficient a chemical is at trapping heat in the atmosphere relative to carbon dioxide. For example, methane has a GWP of 34 and nitrous oxide has a GWP of 298 ⁵ . (6) By definition, CO ₂ has a GWP value of 1. Quantities of GHGs are multiplied by their GWP to give results in units of carbon dioxide equivalent (CO ₂ e).
Kt	kilotonne = 1000 metric tonnes
LULUCF	Land Use, Land use change and forestry.
Mitigation	Methods to reduce or prevent greenhouse gases entering the atmosphere.
Net zero	Achieving an overall balance between emissions produced and emissions taken out of the atmosphere. This can take place on different scales and is often achieved through offsetting.
Offset	An action intended to compensate for GHG emissions by an equivalent quantity of reductions elsewhere or removals.
Sequestration	The long-term removal, capture or sequestration of carbon dioxide from the atmosphere to slow or reverse atmospheric CO ₂ pollution and to mitigate or reverse global warming.
WTT – Well to tank	The emissions associated with extracting, refining and transporting fuels to the point of purchase.
Zero carbon	No emissions of GHGs at all

⁵ Fifth Assessment Report of the Intergovernmental Panel on Climate Change

5 References

1. **Department for Business, Energy and Industrial Strategy.** Final UK greenhouse gas emissions national statistics. [Online] 24 04 2019. [Cited: 20 10 2019.] <https://data.gov.uk/dataset/9568363e-57e5-4c33-9e00-31dc528fcc5a/final-uk-greenhouse-gas-emissions-national-statistics>.
2. **Department for Business, Energy and Industrial Strategy.** UK local authority and regional carbon dioxide emissions national statistics: 2005 to 2017. *National Statistics*. [Online] 27 June 2019. <https://www.gov.uk/government/statistics/uk-local-authority-and-regional-carbon-dioxide-emissions-national-statistics-2005-to-2017>.
3. **Anthesis.** Scatter Inventory Summary. *SCATTER*. [Online] 2019. [Cited: 29 10 2019.] <https://scattercities.com/>.
4. **Weber, J., et al.** Net Zero Cambridgeshire. What actions must Cambridgeshire County Council take to reach net zero carbon emissions by 2050? [Online] October 2019. https://cambridgeshire.cmis.uk.com/CCC_live/Document.ashx?czJKcaeAi5tUFL1DTL2UE4zNRBcoShgo=n50fNihP782F1JKAFVjeBMwN1gceCgmEfBXigJISowUZI20hL9YDZA%3d%3d&rUzwRPf%2bZ3zd4E7lkn8Lyw%3d%3d=pwRE6AGJFLDNih225F5QMaQWCtPHwdhUfCZ%2fLUQzgA2uL5jNRG4jdQ%3d%3d&mCTIbCubS.
5. **BEIS & DEFRA.** Environmental Reporting Guidelines: Including Streamlined energy and carbon reporting guidance, March 2019. *Gov.uk*. [Online] 29 03 2019. [Cited: 29 10 2019.] <https://www.gov.uk/government/publications/environmental-reporting-guidelines-including-mandatory-greenhouse-gas-emissions-reporting-guidance>.
6. **Intergovernmental Panel on Climate Change.** *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Geneva : IPCC, 2014.
7. **Committe on Climate Change.** *Net Zero: The UK's contribution to stopping global warming*. London : Committe on Climate Change, 2019.
8. **IUCN National Committee United Kingdom.** UK Peatland Strategy 2018-2014. [Online] 2018. [Cited: 14 10 2019.] <https://portals.iucn.org/library/sites/library/files/documents/2018-015-En.pdf>.
9. **Intergovernmental Panel on Climate Change.** *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change*. Geneva : World Meteorological Organization, 2018.
10. **Department for Business, Energy and Industrial Strategy.** 2017 UK greenhouse gas emissions:final figures - statistical release. *Gov.uk National Statistics*. [Online] 28 March 2019. <https://www.gov.uk/government/statistics/final-uk-greenhouse-gas-emissions-national-statistics-1990-2017>.
11. —. UK Energy Statistics 2018. *National Statistics*. [Online] 28 March 2019. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/791297/Press_Notice_March_2019.pdf.

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Appendix C

Appendix C				KEY THEMES		
Level of control	Related Priority Area (from the Strategy)	Action Area	Actions	MITIGATION	ADAPTATION	NATURAL CAPITAL
TARGET 1: To reduce the Council’s organisational net carbon footprint for scopes 1 and 2 from 1979.28 tonnes per annum in 2018-19 by 50% by 2023.						
TARGET 2: All Council Directorates to implement measures to ensure their services are adapted to climate change in line with the National Adaptation Programme recommendations						
TARGET 3: Deliver 20% biodiversity net gain across all Council property, land projects and wildlife sites						
	MITIGATION: Energy Efficient, low carbon buildings ADAPTATION: Resilience of our services and supporting vulnerable people NATURAL CAPITAL: Green spaces, habitats and land management, Water management	Buildings and utilities	Continue to purchase 100% green electricity for all buildings and street lighting under County Council control.	✓	–	–
			Reduce the use of the electricity Transmission and distribution network through solar photovoltaic (PV) generation on our assets.	✓	–	–
			Increase energy efficiency standards for existing buildings and develop a programme of improvements using 'invest to save' principles to reduce energy consumption by 20% by 2023.	✓	–	–
			Implement plan of property retrofitting to all buildings owned and occupied by the Council - aiming to be fossil fuel free (using renewable heating sources instead of gas or oil) by 2025.	✓	–	–
			Ensure all new Council buildings, extensions and retrofits are designed to the highest energy efficiency standards, incorporating renewable generation where feasible and Electric Vehicle (EV) chargepoint provision. Assessment of all buildings and implementation plan in place by 2023.	✓	–	–
			Improve measurement of refrigerant gases leakage, and replacement of air conditioning equipment with newer models that use gases with lower global warming potential and have lower leakage rates	✓	–	–
			Ensure all new buildings, extensions and retrofits are designed to incorporate measures to boost resilience to severe weather such as investing in new heat resistant /reflective materials, measures to enable staff to cope with extreme heat such as additional shading, and improved drainage design. Assessment of all buildings and implementation plan in place by 2023.	–	✓	–
			Audit properties and maintenance plans to identify opportunities and deliver enhancement to CCC's natural capital (e.g. enhancement of soft landscape for biodiversity)	✓	✓	✓
			Ensure all new buildings, extensions and retrofits are designed to incorporate measures to deliver environmental and biodiversity net gain including management plans, for example appropriate vegetation planting and sustainable drainage systems	–	✓	✓
			Ensure all new buildings are adapted to water scarcity through the use of water saving measures (e.g. rainwater harvesting, greywater harvesting). Assessment of all buildings and implementation plan in place by 2023.		✓	✓
			Ensure all buildings supporting important wildlife (e.g. bat roosts) have positive ecological management plans for their wildlife interest	–	–	✓
			All buildings to have water saving devices	–	✓	✓
			New buildings to consider greywater reuse and include where possible	–	✓	–
			Develop business continuity plans for sites and public buildings that will be subject to unacceptable increases in flood risk or sea level rise. Plan of potential locations in place by 2023.	–	✓	–

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Level of control	Related Priority Area (from the Strategy)	Action Area	Actions	KEY THEMES		
				MITIGATION	ADAPTATION	NATURAL CAPITAL
01 ORGANISATION	MITIGATION: Low Carbon Transport ADAPTATION: Flood risk NATURAL CAPITAL: Green space, habitat and land management	Transport	Investigate opportunities for zero or low emission highways, libraries and other fleet vehicles, including cargobikes	✓	-	-
			Implement replacement of all pool cars and hire cars and vans to only use electric vehicles - aim to complete by 2025.	✓	-	-
			Investigate adding eCargobikes to the pool of vehicles available			
			Scope all Council buildings with car parks for suitability for work-place electric vehicle chargepoints, with chargepoints installed at all suitable sites by 2025	✓	-	-
			Encourage staff to use public transport or cycle where possible to minimise other business travel carbon emissions	✓	-	-
			Review Social and education transport, including consideration for how children can be best accommodated in local schools to reduce the need for education transport	✓	-	-
			Management of highways and other assets for climate change adaptation. E.g. Construct road surfaces with heat and flood resilient materials/designs to adapt to extreme heat and rainfall	-	✓	✓
			Management of highways to deliver environment net gains, including management of verges for biodiversity value & ensure all wildlife sites are in positive conservation management. Assessment of all highways assets and implementation plan in place by 2023. Fully implement by 2030.	-	-	✓
			Ensure all new transport schemes (e.g. cycleways, busways and roads) deliver environmental and biodiversity net gain. Assessment of all highways assets and implementation plan in place by 2023. Fully implement by 2030.	-	✓	✓
	ADAPTATION: Resilience of our services and supporting vulnerable people	Services	Through our Public Health, Social Care and Emergency Planning recovery functions, find ways to help manage the impacts on vulnerable people of severe weather or temperatures, including care homes, to prevent the vulnerable in our communities becoming more susceptible to the impacts of climate change.	-	✓	-
	MITIGATION: Afforestation and Land Use. NATURAL CAPITAL: Green space, habitats and land management	Farm Estate and other Land assets	Management of county council land to deliver environment and biodiversity net gains (e.g. management for wildlife, tree planting and flood storage) to double land for nature by 2030.	✓	-	✓
			Develop a Tree Strategy for the council's land assets to scope capacity for tree planting and appropriate species mosaic.	✓	✓	✓
			All Council services scope their natural capital assets to deliver environmental and biodiversity net gain	-	-	✓
			Ensure all council owned wildlife sites (Local Nature Reserves, County Wildlife Sites and Sites of Special Scientific Interest) are in positive conservation management (e.g. surveyed every 5 years and managed for the benefit of their biodiversity interest) - complete by 2030	-	-	✓
	NATURAL CAPITAL: All	Waste	Develop management and restoration plans for closed landfill sites to create natural habitats	-	✓	✓
			Work with the waste industry to identify disposal options for alternative to single use plastics			✓
	All	Financing change	Reform the annual budget planning process to reduce the Council's carbon footprint and to support wider decarbonisation of service delivery and the communities we support.	✓	✓	✓
			Provide financing solutions for 'climate change mitigation, adaptation and natural capital'	✓	✓	✓

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Level of control	Related Priority Area (from the Strategy)	Action Area	Actions	MITIGATION	ADAPTATION	NATURAL CAPITAL
	All	Organisational learning	Develop compulsory training courses for all staff and training workshops for Members on climate change mitigation, adaptive measures and key environmental policies (e.g. NERC Act - to conserve biodiversity). Target 100% of staff trained by 2023.	✓	✓	✓
			Establish a group of Climate Champions to pilot Carbon Literacy training (https://carbonliteracy.com/) and Natural Capital Protocol decision making framework (https://naturalcapitalcoalition.org/wp-content/uploads/2018/05/NCC_Protocol_WEB_2016-07-12-1.pdf) to test these approaches for improved environmental decision making	✓	✓	✓
			New Staff and Member inductions to include Climate Change and Environmental impacts including carbon footprint impacts and understanding adaptation	✓	✓	✓
			All committee paper templates to be updated to incorporate a requirement for officer clearance of implications of climate change impacts, carbon footprints and adaptation and environmental impacts, to help inform decision making	✓	✓	✓
			Identify mechanisms to improve the data provision for carbon footprinting, such that all data relevant to scope 1 and 2 greenhouse gas emissions is accurately measured and collected	✓	–	–
TARGET 4: To reduce the Council's scope 3 emissions by 50.4% by 2030 (subject to review whilst data collection methods for unknown emissions are set up during 2020/2021 to get a better understanding of total tonnes of CO2e)						
	MITIGATION: All	Purchased goods and services	Work with Cambridge University Science and Policy Exchange (CUSPE) to develop a methodology for calculating the carbon footprint for indirect carbon emissions (scope 3) (estimated 200,000 tonnes CO2e)	✓	–	–
			Work with finance and services to improve data collection to inform the carbon footprint and other environmental impacts	✓	–	✓
	MITIGATION: All	Construction - use of materials	Apply lifecycle analysis to the purchasing of construction goods and services to ensure minimisation of carbon emissions and waste (Please note: calculation currently unknown for construction materials but likely to be significant)	✓	–	✓
	MITIGATION: Waste management	Waste Disposal	Review disposal and treatment mechanisms for waste to identify solutions and their implementation that reduce carbon emissions, support circular economy principles and reduce plastic pollution, in line with the contract timescales. The monitoring and measuring of these reductions will also be required.	✓	–	✓
	MITIGATION: Energy Efficient, Low Carbon buildings	Work with schools	Support maintained schools to retrofit their buildings to improve energy efficiency, offering finance mechanisms to support schools to choose to make these improvements.	✓	–	–
			Lifecycle heating and hot water replacements in schools to be fitted with low carbon solutions, offering energy performance contracts and heat agreements for schools to support this change	✓	–	–
			Encourage all schools to purchase 100% renewable electricity	✓	–	–
	NATURAL CAPITAL: Green spaces, habitats and land management		Support maintained schools to enhance and manage their sites for natural capital, such as SuDS and biodiversity enhancement	–	–	✓
			Work with schools to develop a programme of education, helping schools deliver key messages to children on climate change, and what children (and their families) can do to help.			
			Work with schools to advise and assist them with planting trees on their sites	✓	✓	✓

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Appendix C				KEY THEMES		
Level of control	Related Priority Area (from the Strategy)	Action Area	Actions	MITIGATION	ADAPTATION	NATURAL CAPITAL
02 PROCURED SERVICES	All	Update Procurement processes	100% of renewals of existing tenancies and contracts include carbon reduction targets	✓	-	-
			100% of all new procurements include carbon reduction, adaptation and environmental solutions (including single use plastic reductions)	✓	✓	✓
			Develop training for procurement advisors on climate change, carbon footprint, adaptation and the environment to build awareness and the important role of procurement supporting change	✓	✓	✓
			Update procurement guidance and standard contractual terms to include climate change impacts, mandatory carbon reporting and reporting environmental net gain	✓	✓	✓
			Monitor compliance for climate change and carbon reporting for all new contracts commissioned by the Council and the reasons for any exception requests	✓	-	-
			Commissioning managers to identify key review points for existing contracts and to work with existing contractors to prepare them for carbon and environmental reporting (e.g. biodiversity net gain and reduction of single use plastics)	✓	✓	✓
			Update procurement guidance to favour use of low carbon transport (including cargobikes) over other vehicles when preparing and awarding contracts	✓	-	-
			Monitor the potential impact on service procurements resulting from mandatory inclusion of carbon and environmental impacts into the evaluation of contracts.	✓	-	✓
	MITIGATION: Afforestation and Land Use, Energy efficient, low carbon buildings NATURAL CAPITAL: Green spaces, habitats and land management	Farm tenants	Farm tenancy renewals to require (or where appropriate include) encouragement for carbon reduction measures, adaptation measures (i.e. water reservoirs to use in drought) and positive management of wildlife interest as part of the tenancy arrangements (current estimated baseline: 14585 tonnes CO2e)	✓	✓	✓
			Homes on farm tenancies to be upgraded from oil or gas to low carbon heating solutions	✓	✓	✓
	MITIGATION: Energy efficient, low carbon buildings	Properties let to commercial tenants	Develop business models to upgrade commercial properties and to share in the energy reductions with commercial tenants	✓	-	-

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Appendix C				KEY THEMES		
Level of control	Related Priority Area (from the Strategy)	Action Area	Actions	MITIGATION	ADAPTATION	NATURAL CAPITAL
03 COUNCIL POLICY AND STRATEGY	TARGET 5: 100% of Council strategies include policies that tackle Climate Change and natural capital enhancement by 2023					
	All	Strategy development and updates	For each Council strategy, identify contributions to both the organisational and wider Cambridgeshire carbon footprints, the wider Climate Change and environmental impacts	✓	✓	✓
			Work with staff, Members, partners and service users to identify how best to manage Climate Change and environmental impacts on sector strategies e.g. highways, rural estate, health	✓	✓	✓
			Manage the Council's own estate better for biodiversity and to create new habitats for storing carbon e.g. woodland	✓	✓	✓
			Continue to designate and support non-designated heritage assets, many of which can be managed to create a better environment for residents and for heritage itself.	-	✓	✓
			Design effective plans and climate change risk / adaptation strategies across all the Council's statutory and discretionary services.	-	✓	-
			Apply circular economy principles to our woodland and waste management e.g. using traditional woodland management techniques and the waste generated for local use	✓	✓	✓
			Identify opportunities on County Council assets to trial new technologies, including electrolysis of hydrogen using solar PV and carbon capture and storage mechanisms	✓	-	-
	ADAPTATION: Flood risk, water availability, Green and blue infrastructure development	Planning policy and advice	Update county-wide Flood and Water Supplementary Planning Document (SPD) in conjunction with LPAs to reflect the evolution of national and local planning policies and the need for adaptive measures as explained in the new national Flood and Coastal Erosion Risk Management Strategy	✓	✓	-
	NATURAL CAPITAL: Green spaces, habitats and land management		Build county evidence base to support the development of new policy aiming for a target of 20% biodiversity net gain	-	-	✓
	All	Monitoring and measurement of change	Annual carbon footprint calculations to be published to demonstrate progress	✓	-	-
			Measure progress delivering 20% biodiversity net gain across the Council's estate / land management	-	-	✓
			Set baseline carbon and environmental indicators for every Council strategy and mechanisms to measure and collect data	✓	-	✓
	All	Improving the Council's evidence base for policy making	Continue to collaborate with the Cambridge University Science and Policy Exchange (CUSPE) programme to identify key climate change and environmental challenges for young researchers to provide evidence to inform policy making	✓	✓	✓
	All	Independent advice and guidance to inform policy making	Review outcomes from Citizen Assemblies and consultations run by the County, GCP, CPCA and Local Authority partners on issues relating to climate change and environment and use these findings to inform the Council's policy making or lobbying of government and other agencies	✓	✓	✓
			Work with Cambridgeshire and Peterborough service providers on 'Think Communities' to support training and development of our communities on Climate Change and its impacts to build community resilience	✓	✓	✓

- LIVE_ACTION PLAN

Appendix C				KEY THEMES		
Level of control	Related Priority Area (from the Strategy)	Action Area	Actions	MITIGATION	ADAPTATION	NATURAL CAPITAL
	TARGET 6: To sign up to a shared target with partners and the community by 2023 to deliver 50.4% greenhouse gas emissions reductions by 2030 in tonnes/CO2 per annum for Cambridgeshire based on 2018 baseline					
	MITIGATION: Waste management	Waste Management	Make use of potential waste streams e.g. highways verge harvesting, to improve biodiversity net gain	✓	-	✓
			Work with developers to influence waste collection infrastructure and collection options for new developments.	✓	-	-
			Work with Cambridgeshire District and City councils to develop more sustainable waste management practices.	✓	-	-
			Work with the Cambridgeshire Local Authorities on circular economy principles for waste management and economic development. In particular Cambridgeshire's Waste to be managed within County.	✓	-	✓
	All	Local Growth Plans	Support Cambridgeshire and Peterborough Local Authority Partners to develop local growth plans that include policies to reduce carbon emissions in line with agreed government and local targets, incorporate adaptive measures to the changing climate and deliver positive environmental and biodiversity net gain for green spaces. biodiversity metric established and being used by 2023	✓	✓	✓
			Work with National government, District Councils and developers to push towards 100% of new housing developments delivering climate change mitigation technologies, adaptation design and biodiversity net gain	✓	✓	✓
			Collaborate with the Greater Cambridge and Greater Peterborough Combined Authority on its non-statutory spatial plan to ensure energy, water and electrified transport infrastructure facilitates carbon emissions reductions, supports adaptation measures to climate change impacts and delivers 20% net gain	✓	✓	✓
			Update Cambridgeshire & Peterborough Green Infrastructure Strategy to reflect the Doubling Nature Vision	-	-	✓
	MITIGATION: All	Health and Well Being Strategies	Collaborate with partners in the Cambridgeshire and Peterborough Health and Wellbeing Board and Sustainability and Transformation Partnership to support the reduction of the carbon footprint of health and care services.	✓	-	-
	NATURAL CAPITAL: Air Pollution	Air Quality	Support new community designs that minimise air pollution both internally and externally to improve health outcomes			✓
			Work with partners to encourage commercial fleets – including buses and delivery vehicles in urban areas (where many of the air quality exceedances are) – to move to electric vehicles	✓	-	✓
			Tackle poor air quality around schools, using Regulation 3 applications for new Schools, and through developing a pilot for a “no car zone” around a Cambridge School.	✓	-	✓
			Work with partners to locate, seek funding for and plant (at suitable locations) new hedges and trees, particularly in areas around schools. Investigate the potential for technologically advanced “City Trees” or similar, as well as green walls in appropriate County locations.	✓	-	✓
			Reducing air pollution at source by lobbying government for improved initiatives and for grants to help us pilot imaginative projects	✓	-	✓
			The council will work in partnership to achieve shift to public and active transport to reduce air pollution, through measures to promote walking, cycling and public transport use	✓		✓

- LIVE_ACTION PLAN

Appendix C

Level of control	Related Priority Area (from the Strategy)	Action Area	Actions	KEY THEMES		
				MITIGATION	ADAPTATION	NATURAL CAPITAL
04 PARTNER STRATEGIES	MITIGATION: Low Carbon Transport	Local Transport Planning	Collaborate with the Cambridge and Peterborough Combined Authority on the carbon footprint of transport policy measures to reduce carbon emissions, improve climate change adaptation requirements for transport infrastructure, reduce air and other pollutants by 2050.	✓	✓	✓
			Reducing air pollution through more walking and cycling provision - Continuing to improve the cycle way experience, throughout Cambridgeshire.	✓	-	-
			Reducing air pollution through electric vehicle infrasturcture provision and low emission mass transit. Ideas for consideration include: - Consulting on the use of bus lanes for electric vehicles and motorcycles and scooters. - Accelerate public transport to be early adopters of electric vehicles, by drawing up plans and consulting with stakeholders to deny access to Bus Lanes, with an aspiration to implement from the end of 2021. - Lobby Cambridge City and other district partners to make available premium green licenses for taxis, and lobby the Traffic Commissioner to refuse nongreen bus licenses for those that access Cambridge City centre - Lobby Cambridge City Council to provide free parking for electric vehicles, in their car parks. - Working with partners to develop plans for last mile delivery.	✓	-	✓
			Improving the alternative to the private motor car: - Working with the Mayor and the Greater Cambridge Partnership to deliver the CAM metro. - Continuing to expand the transport hub network, where you can leave your car and get on public transport. (Park and Ride) - Working with partners to sizeably increase the access to railways offer currently available.	✓	-	-
			100% of new transport projects deliver climate change mitigation, adaptation design and biodiversity net gain	✓	✓	✓
			Research options for 'clean hydrogen fuelling' for heavy/large vehicles	✓	-	-
	MITIGATION: Low Carbon Transport	Greater Cambridge City Deal	Support proposals to ensure public transport and active transport is more competitive and attractive than the private car	✓	-	-
			Working with GCP to ensure our communities are aware of options to travel sustainably and encouraged to take these up.	✓	-	✓
			Working with the GCP to deliver new sustainable transport infrastructure to improve journeys made by public transport, walking and cycling	✓	-	✓
			Support the Greater Cambridge Partnership to deliver infrastructure to support the decarbonisation of housing, jobs and transport through collaborations on electricity infrastructure upgrades, electric vehicle charging facilities, low carbon heating solutions and net gain.	✓	-	✓
	MITIGATION: All	Government strategies	Work in partnership with the public and private sector to design, develop and deliver new infrastructure across the Cambridge-Oxford ARC that supports new communities to live net -zero carbon lifestyles.	✓	-	-
			Develop Cambridgeshire case studies and pilot projects that offer solutions and evidence to inform Government clean growth targets and policy challenges	✓	-	-
			Work with the Education Funding Agency and Academy schools to continue to offer finance solutions for energy retrofitting opportunities to support academies to improve energy efficiency and generate renewable energy	✓	-	-
			Work with the Local Resilience Forum to ensure climate change impacts are included on its risk register including specific response measures for key groups	✓	✓	-

- LIVE_ACTION PLAN

Appendix C				KEY THEMES		
Level of control	Related Priority Area (from the Strategy)	Action Area	Actions	MITIGATION	ADAPTATION	NATURAL CAPITAL
	ADAPTATION: Resilient highways and infrastructure, Flood risk, Water availability	Water Management	As Lead Flood Authority, working in partnership with the Environment Agency and other partners, to secure sufficient storage and flood risk management capacity for new and existing buildings and assets on the basis that weather impacts will increase due to human-made climate change	-	✓	-
			Support the Environment Agency, Anglian Water and Cambridge Water to plan for the next 100 years water availability to support Cambridgeshire's people, businesses and biodiversity. For example, plan for water neutrality, significant water reductions in existing assets and for new reservoirs that can create leisure and biodiversity benefits.	-	✓	✓
			Work with Natural England, the NFU, CLA, our tenant farmers and other partners to support measures to improve data collection, soil improvement, research, environmental, social and economic adaptation and reduction of the carbon footprint for our Fen peat landscapes	✓	✓	✓
			Work with partners to understand how the Oxcam Growth Arc Water Cycle Study can best manage water resources, quality and flood risk across the Great Ouse catchment and into Cambridgeshire.		✓	✓
			Work with the Environment Agency to introduce sea level rise (SLR) resilient measures to protect parts of Cambridgeshire at risk	-	✓	-
			Work with partners to develop Natural Flood Management (NFM) projects to allow catchment-wide adaptation to flooding and sea level rise	-	✓	-
			Work with the County's main water suppliers to deliver higher resilience to droughts	-	✓	-
			TARGET 7: Deliver Government's net zero-carbon target for Cambridgeshire by 2050			
	MITIGATION: All, ADAPTATION: All	Cambridgeshire and Peterborough Climate Commission	Work with the Cambridgeshire and Peterborough Climate Change Commission to provide independent advice on setting and meeting carbon budgets and preparing for climate change	✓	✓	-
	All	Communities	Ensure that all communities are able to access information that allows them to understand how they will be impacted by climate change and any adaptive measures they need to take to address this	-	✓	-
			Establish a County Council Climate Change website with a range of education and awareness materials on climate change action, including signposting to existing materials. Use this website as a focal point to keep the public and other organisations aware of the County's climate work and progress on delivering the Strategy.	✓	✓	✓
			Use our Libraries as a focal point of information provision on climate change and environmental matters.	✓	✓	✓
			Signpost communities to funding opportunities to support climate change action e.g. National Lottery climate change fund	✓	✓	-
	MITIGATION: All, NATURAL CAPITAL: Green spaces, habitats and land management	Farming	Collaborate with the National Farmer's Union and others (e.g. agri-tech industry) on ideas and opportunities for carbon, fertiliser and pesticide reductions	✓	-	✓
	MITIGATION: Peatland, NATURAL CAPITAL: Peatland	Commercial and Industrial	Work with Agritech businesses, the Council's rural estate tenants, Cambridgeshire Acre, National Trust and other partners to establish Cambridgeshire as an international model for peatland management to reduce carbon emissions, enhance biodiversity and new economic compensation models . See section 03, line 47	✓	-	✓

- LIVE_ACTION PLAN

Appendix C				KEY THEMES		
Level of control	Related Priority Area (from the Strategy)	Action Area	Actions	MITIGATION	ADAPTATION	NATURAL CAPITAL
05 WIDER COMMUNITIES	MITIGATION: Energy Efficient, Low Carbon Buildings	Domestic Housing	Building on work with the Swaffham Prior Community Land Trust, support other oil based communities to find low carbon heating and hot water solutions to reduce carbon footprints and tackle fuel poverty	√	-	-
			Facilitate residential access to reduced cost renewable energy technology through collective purchasing schemes, such as solar PV with iChoosr	√	-	-
			Encourage residents to reduce water waste through installing technologies that minimise water use and recycle it	√	√	-
			Support communities to develop carbon footprints and encourage neighbourhood plans to include space for energy infrastructure and the inclusion of natural capital solutions such as hedge laying for carbon storage.	√	-	√
			Develop property level demonstrator locations to educate and encourage residents to invest in adaptation and mitigation technologies	√	√	-
	MITIGATION: Waste management	Waste	Encourage residents and businesses to minimise food and other waste to reduce carbon emissions e.g. foodcycle, foodhub	√	-	-
			Encourage residents to repurpose and recycle to avoid the need to buy from new e.g. access or set up repair cafes	√	-	-
			To promote waste awareness & encourage sustainable approaches to waste to local residents and businesses	√	-	-
	MITIGATION: Low carbonTransport	Transport	Provide more active travel choices for individuals through the provision of supportive infrastructure	√	-	-
			Develop a wider range of alternatives to the car, for example encourage initiatives that promote cargobikes within the wider community.	√	-	-
			Provide educational guides on how best to manage and charge your EV to overcome perceptions of running out of power	√	-	-
			Work with District and City Councils, our communities, and businesses to identify suitable locations and deliver EV charging infrastructure to support both urban and rural needs	√	√	-
	ADAPTATION: Green and Blue Infrastructure	Land use change	Work with the Local Nature Partnership on the 'Doubling Nature' project and promote the benefits of blue/green infrastructure for their adaptaiton benefits to communities	-	√	√

CAMBRIDGESHIRE COUNTY COUNCIL

APPOINTMENTS TO OUTSIDE BODIES: COUNTY COUNCIL APPOINTMENTS

NAME OF BODY	MEETINGS PER ANNUM	REPS APPOINTED	REPRESENTATIVE(S)	GUIDANCE CLASSIFICATION	CONTACT DETAILS
Greater Cambridge Partnership Executive Board	Quarterly	1	<p>Chairman of the Economy and Environment Committee – Councillor Ian Bates Deputy Leader of the Council – Councillor Roger Hickford</p> <p>Deputy Leader of the Council – Councillor Roger Hickford (substitute) Chairman of the Economy and Environment Committee – Councillor Ian Bates (substitute)</p>	Other Public Body	<p>Greater Cambridge Partnership, Box SH1317, Shire Hall, Castle Hill, Cambridge, CB3 0AP</p> <p>wilma.wilkie@cambridgeshire.gov.uk</p>
Cambridgeshire and Peterborough Combined Authority	11	1	<p>Leader of the Council – Councillor Steve Count</p> <p>Deputy Leader of the Council – Councillor Roger Hickford (substitute)</p>	Other Public Body	<p>Democratic Services Room 117 Shire Hall Cambridge CB3 0AP</p> <p>richenda.greenhill@cambridgeshire.gov.uk</p>
Cambridgeshire and Peterborough Combined Authority – Overview and Scrutiny Committee	11	2	<p>Councillor David Connor Councillor Jocelyne Scutt</p> <p>Substitutes: Councillor Mac McGuire Councillor Linda Jones</p>	Other Public Body	<p>Susan Hall</p> <p>Cambridgeshire and Peterborough Combined Authority</p> <p>susan.hall@cambridgeshire-ca.gov.uk</p>

NAME OF BODY	MEETINGS PER ANNUM	REPS APPOINTED	REPRESENTATIVE(S)	GUIDANCE CLASSIFICATION	CONTACT DETAILS
Cambridgeshire and Peterborough Combined Authority – Audit and Governance Committee	5	1	Councillor Mark Goldsack Substitute: Councillor David Wells	Other Public Body	Susan Hall Cambridgeshire and Peterborough Combined Authority susan.hall@cambridgeshire-ca.gov.uk
Cambridgeshire and Peterborough Fire Authority	3	13	<ol style="list-style-type: none"> 1. Councillor Barbara Ashwood 2. Councillor Simon Bywater 3. Councillor Ian Gardener 4. Councillor Derek Giles 5. Councillor John Gowing 6. Councillor Linda Harford 7. Councillor Sebastian Kindersley 8. Councillor Mac McGuire 9. Councillor Kevin Reynolds 10. Councillor Terry Rogers 11. Councillor Jocelynne Scutt 12. Councillor Michael Shellens 13. Councillor Mandy Smith 	Other Public Body	Democratic Services Room 117 Shire Hall Cambridge CB3 0AP dawn.cave@cambridgeshire.gov.uk
County Councils' Network Council	3-4	4	<ol style="list-style-type: none"> 1. Councillor Steve Count 2. Councillor Roger Hickford 3. Councillor Lorna Dupré Lucy Nethsingha 4. Councillor Joan Whitehead 	Unincorporated Association	Lisa Wood Local Government House, Smith Square, London, SW1P 3HZ
East of England Local Government Association	1 minimum	1	Leader of the Council – Councillor Steve Count	Unincorporated Association	Ms Celia Tredget West Suffolk House Western Way Bury St Edmunds IP33 3YU

NAME OF BODY	MEETINGS PER ANNUM	REPS APPOINTED	REPRESENTATIVE(S)	GUIDANCE CLASSIFICATION	CONTACT DETAILS
Greater Cambridge Partnership Joint Assembly	Quarterly	3	<p><i>Political proportionality of Cambridgeshire County Council seats on the Assembly shall reflect that amongst the Council's elected members for the divisions within South Cambridgeshire District Council and Cambridge City Council administrative boundaries and that the representatives shall be drawn from those divisions and will be appointed on the nomination of the relevant Group Leaders</i></p> <p>Currently:</p> <ol style="list-style-type: none"> Councillor Noel Kavanagh Councillor John Williams Councillor Tim Wotherspoon 	Other Public Body	<p>Greater Cambridge Partnership, SH1317, Shire Hall, Cambridge, CB3 0AP</p> <p>Wilma.Wilkie@cambridgeshire.gov.uk</p>
Local Government Association National representative body of all Local Authorities	3-4	4	<ol style="list-style-type: none"> Councillor Steve Count Councillor Roger Hickford Councillor Lorna Dupré Lucy Nethsingha Councillor Joan Whitehead 	Unincorporated Association	<p>Fatima de Abreu Member Services Assistant Local Government Association</p>



Agenda Item No.12(a)

Cambridgeshire & Peterborough Combined Authority

Reports from Constituent Council Representatives on the Combined Authority

Meeting	Dates of Meeting	Representative
Overview and Scrutiny Committee	24th February 2020	Councillor D Connor Councillor J Scutt

The above meeting has taken place in February 2020.

Overview and Scrutiny Committee – Monday 24th February 2020

The Overview and Scrutiny Committee met on 24th February 2020, the decision summary is attached as **Appendix 1**.

The agenda and minute of the meeting are on the Combined Authority's website – Link in the appendix

Appendix 1



**CAMBRIDGESHIRE
& PETERBOROUGH**
COMBINED AUTHORITY

JAMES PALMER
CAMBRIDGESHIRE &
PETERBOROUGH MAYOR

OVERVIEW AND SCRUTINY COMMITTEE - Decision Summary

Meeting: 24th February 2020

Agenda/Minutes [Overview and Scrutiny Committee – 24th February 2020](#)

Chair: Cllr Lorna Dupre

Summary of decisions taken at this meeting

Item	Topic	Decision <i>[None of the decisions below are key decisions]</i>
1.	Apologies	Apologies were received from: Cllr D Dew (substituted by Cllr S Corney), Cllr P Heylings (substituted by Cllr P Fane), Cllr M Gehring (substituted by Cllr D Summerbell)
2.	Declaration of Interests	Cllr Fane declared an interest as a Director of Shire Homes, an arm of South Cambridgeshire District Council, which is relevant to the item on Accessible Housing.
3.	Minutes of the last meeting held on 27 January 2020	The minutes of the meeting held on 27 January 2020 were agreed as a correct record.

Item	Topic	Decision <i>[None of the decisions below are key decisions]</i>
		<p>An approach via the governance group of the Centre for Public Scrutiny to potentially lobby government will be made with regard to quoracy, which is set by statute.</p> <p>The Local Government Act, 2000 states members need to be actually present at public meetings rather than attend remotely.</p> <p>With regard to substitute members, changes can be made through constitutional amendment which would need to be agreed by the Combined Authority Board. It was agreed that the Chairman request this change at the March meeting of the Board.</p> <p>The Chairman confirmed an explanation had been received related to the Enterprise Zone figures.</p> <p>AGREED:</p> <p>That the Chairman would request a change to the current substitute members specification in the Constitution of the Combined Authority.</p>
4.	Written Responses from the Combined Authority Board to the Overview & Scrutiny Committee from 29 January 2020	<p>There continues to be a delay to the appointment of a Chairman of the Independent Commission on Climate Change which is scheduled to report its findings 12 months following its establishment in November 2019. Several Members of the Committee expressed their concerns over the delay. A recruitment panel chaired by the Mayor would make the appointment. A further report on the appointments process would be brought to the March meeting of the Overview & Scrutiny Committee regarding progress in appointing a suitable Chairman to the Independent Commission.</p>

Item	Topic	Decision <i>[None of the decisions below are key decisions]</i>
		<p>AGREED:</p> <p>A report be brought to the March meeting of the committee outlining the criteria for appointment of a Chairman of the Commission; candidates that have been approached; any issues there might be in finding a suitable candidate for the role; and the impact on the November 2020 deadline for the report of the Commission.</p>
5.	Public Questions	There were no public questions received.
6.	Trading Companies: Scrutiny of Trading Companies Report	<p>The Committee received the report from Rochelle White, Deputy Monitoring Officer.</p> <p>Shareholder agreements for both Angle Holdings and Angle Development East Ltd. were agreed on 5 September 2019. The Combined Authority is the only shareholder in the companies.</p> <p>Any future changes to decision-making processes will be notified to the Committee prior to being taken to the Combined Authority Board for ratification.</p> <p>O&S Committee Members can have access to Trading Companies meeting minutes with a caveat that exempt papers and items, which may be commercially sensitive, would have to clear the normal processes to be made available.</p> <p>AGREED:</p> <p>The fair tax mark for traded companies was requested, which covers businesses, NGOs and government associations be considered. It was agreed to provide the Committee with a briefing note.</p>

Item	Topic	Decision <i>[None of the decisions below are key decisions]</i>
7.	Combined Authority Forward Plan: February 2020	<p>The Committee requested a future briefing note on the Market Town Masterplans for Huntingdonshire.</p> <p>AGREED:</p> <ul style="list-style-type: none"> a) A progress report be prepared on Community Land Trusts and be presented to the next meeting of the Overview & Scrutiny Committee; b) A report be prepared on the feasibility and timescale of the Wisbech Rail project and be presented to the next meeting of the Overview & Scrutiny Committee.
8.	Accessible Housing Presentation	<p>The Committee agreed that a recommendation to the Housing and Communities Committee in March 2020 will be circulated for approval to Members worded as follows:</p> <p>The Overview & Scrutiny Committee heard evidence that developers routinely complete dwellings which are of lifetime standards and that the additional costs for an accessible dwelling is around £1,500 per unit. Given the CPCA invests significant funds into additional new homes, the Overview & Scrutiny Committee recommend that the Housing and Communities Committee:</p> <ul style="list-style-type: none"> a) Consider whether the Combined Authority should only fund developments that include homes that meet the criteria of creating a lifetime accessible home and minimise CO² emissions; or whether the Combined Authority adopt an approach whereby a percentage of investment funding for additional new homes is allocated to lifetime accessible and CO² reduction homes.

Item	Topic	Decision <i>[None of the decisions below are key decisions]</i>
		<p>b) Collate data on the number of dwellings which the Combined Authority has invested in and plans to invest in, which: a) are accessible dwellings; and b) contribute to CO² emission reduction including quantifiable analysis of the annual direct (gas) and indirect (electricity) emissions from housing in which the combined authority had invested, with an indication of how this fits into local and national 2050 decarbonisation targets.</p>
9.	Committee Meetings: Lead Member Questions and Answers	No comments from the Committee were forthcoming.
10.	Work Programme Report	<p>The Committee received the report which outlined the work programme for the committee.</p> <p>The Committee should produce an Annual Report that be presented to the April meeting prior to being forwarded to the Combined Authority Board.</p> <p>Constituent authorities will nominate representatives to this Committee in May 2020 so there is potential for a hiatus. Therefore, a potential induction and training date with the Audit and Governance Committee would occur on the date provided. This would mean the University of Peterborough Outline Business Case item would need to be rescheduled to either April or June 2020.</p> <p>A proposal to invite the Chairman of the Climate Change Commission, if appointed, to the March meeting was put to the vote and was defeated by seen votes to five.</p>
11.	Date of next meeting	The Committee agreed that the next meeting would be held 23 March 2020 at 11.00 am at Fenland District Council. It was confirmed that the May meeting would take place at Peterborough City Council.

CAMBRIDGESHIRE AND PETERBOROUGH FIRE AUTHORITY UPDATE

TO: Cambridgeshire County Council

FROM: Chairman, Cambridgeshire and Peterborough Fire Authority

DATE: 17 March 2020

1. DRAFT INTEGRATED RISK MANAGEMENT PLAN 2020/24

- 1.1 Council will be aware that central Government places a legal requirement on each fire authority to produce a publicly available Integrated Risk Management Plan (IRMP) covering at least a three year time span. Within Cambridgeshire it represents the output of the IRMP process for both Cambridgeshire and Peterborough. The document reviews the Service's progress to date and highlights initiatives that may be explored to further improve the quality of operational service provision and importantly in balance, further reduce the level of risk in the community.
- 1.2 The IRMP process is supported by the use of risk modelling. This is a process by which performance data over the last five years in key areas of prevention, protection and response is used to assess the likelihood of fires and other related emergencies from occurring; it is termed 'community risk'. This, together with data from other sources such as the national risk register and organisational business delivery risks, is then used to identify the activities required to mitigate risks and maximise opportunities, with measures then set to monitor and improve performance.
- 1.3 The IRMP delivery is broken down in to four areas for management and monitoring purposes in line with strategic aims. These four areas are Community Safety Excellence, Operational Excellence, People and Value for Money.
- 1.4 After an intensive period of wide ranging internal activities for example, risk analysis (internal and external) and staff engagement exercises the draft IRMP for 2020/24 was presented and approved by the Policy and Resources in October 2019 then put out for public and staff consultation. It will be presented, with consultation responses incorporated, for final approval by the Authority at a special meeting scheduled for 30 March 2020. This document and the management of risk through a proactive preventable agenda serves to not only reduce costs associated with reactive response services but also aids in the promotion of prosperous communities.

2. HER MAJESTY'S INSPECTORATE OF CONSTABULARY AND FIRE AND RESCUE SERVICES (HMICFRS)

- 2.1 Council may recall that Cambridgeshire Fire and Rescue Service (CFRS) was inspected by HMICFRS in July 2018 along with 13 other fire and rescue services to assess how effective and efficient the organisation is in its activities to prevent, protect the public against and respond to fires and other emergencies. The inspectors also assessed how well the organisation looks after its workforce. The three areas that were inspected can be summarised as;
- effectiveness - how effective is the Service at keeping people safe and secure from fire and other risks,
 - efficiency - how efficient is the Service at keeping people safe and secure from fire and other risks,
 - people - how well does the organisation look after its people.
- 2.2 Each of the three key areas above also have a total of 11 supporting questions for the inspectors to look at and each one of these is also given a judgement score. There are four possible outcomes in the judgement criteria; outstanding, good (this is where HMICFRS expect every service to be), requires improvement and inadequate (serious or critical failings in policy, practice or performance).
- 2.3 The Service was judged as **good** in all three key areas and across the board in all of the supporting questions – one of only two fire and rescue services in the first tranche of inspections to achieve this and one of only three to get good for how well it looks after its people.
- 2.4 On 15 January 2020 HMICFRS published the State of the Fire and Rescue Service report. The publication provides a summary of the 45 inspections undertaken by the inspectorate in 2018/19. The HM Chief Inspector, Sir Thomas Windsor, also draws conclusions from the first round of inspection findings and makes recommendations for improvements in the sector.
- 2.5 The Authority also received notification in January 2020 that the Home Secretary had agreed to schedule the next round of HMICFRS inspections. Cambridgeshire's inspection will start with a discovery week in late April 2020, followed by an actual inspection week commencing 18 May 2020. Although this is earlier than anticipated the Service has already started to work through how available resources can be best utilised to present progress against the previous inspection recommendations and how the Service currently meets the inspection areas.
- 2.6 It is anticipated, moving forward, that the inspection cycle will be every two years with no additional funding from government to meet the demands it places on an organisation and its people.

3. FIRE AUTHORITY BUDGET 2020/21 and RELATED FINANCIAL MATTERS

- 3.1 At its meeting on 6 February 2020 the Fire Authority considered a report on its budget, reviewed the Budget Book 2020/21 and approved the following recommendations;
- an Authority budget requirement of £30,279,440,
 - an Authority precept of Authority Tax from District Authorities and Peterborough City Authority of £20,907,619,
 - an Authority Tax for each band of property, based on the number of band D equivalent properties notified to the Fire Authority by the District Authorities and Peterborough City Authority (290,021) ranging from Band A at £48.06 to Band H at £144.18,
 - approval of the Prudential and Treasury Indicators as set out in the Budget Book (page 9),
 - approval of the Treasury Management Strategy Statement as set out in the Budget Book (pages 8 to 13),
 - approval of the Capital Programme as detailed in the Budget Book (page 6),
 - approval of the Minimum Revenue Provision Policy Statement as detailed in the Budget Book (page 14).
- 3.2 By way of background, the Draft Revenue Support Grant settlement was received on 21 December 2019 and the draft Authority budget was presented to the Policy and Resources Committee in the same month. The Committee endorsed the proposed budget and associated precept increase of 2%. A consultation process on the recommended council tax increase was undertaken; 765 responses were received of which 78% had indicated support for the proposed increase. The organisation received many positive comments but some respondents also felt strongly that there should be no increase in council tax as a whole.
- 3.3 The budget for 2020/21 has been built to include an additional burden for the Authority associated with the changes to the Firefighter Pension Scheme SCAPE (superannuation contributions adjusted for past experience) rate. Changes have resulted in an increase in the employer contribution rate to 30.2%. Whilst the Treasury has provided the Authority with a Section 31 grant to cover some of this burden, the grant of £1.144m continues to leave the Authority with a gap of £290k; this shortfall will be funded from the Pension Reserve.
- 3.4 Also at its February 2020 meeting, the Authority;
- approved the Pay Policy Statement for 2020/21
 - approved a new management band pay structure for professional support staff, the implementation of which will satisfy the key recommendation of the 2019 equal pay audit report.
 - noted the Service intention to participate in a scheme to reduce council tax fraud. It is anticipated that the scheme, led by Cambridgeshire County Council, will result in significant benefit for all authorities for the upfront

investment. The fire proportion of the investment is currently £10k with an estimated increase in council tax yield of £50k, resulting in a net benefit of £40k; the contribution will be made from the General Reserve.

- 3.5 Full details of the Budget Book and all the above mentioned documents can be found on the CFRS website.

4. PROPERTY PORTFOLIO - HUNTINGDON

- 4.1 The Chairman advised the Authority at its meeting in February 2020 that the Service were regrettably still not in a position to ask Members to decide where a new training centre and fire station should be built in Huntingdon. The Acting Police and Crime Commissioner (APCC) has formally advised that the land offered at Monks Wood would most likely be needed for police purposes and despite their best endeavours, the Service has yet to obtain full costings for the proposal to build at St Johns if the collaboration opportunity at Monks Wood did indeed fall through.
- 4.2 Whilst it's unfortunate that full clarity cannot yet be given, it does give more time for the police to provide absolute certainty about their intentions, which means Members will be able to make the best decision for the Service and push ahead with either;
- a training centre at Monks Wood and fire station at St John's, or
 - a training centre and fire station at St John's.
- 4.3 A special meeting of the Authority has been convened on 30 March 2020 in order to make the final decision.

BIBLIOGRAPHY

Source Documents	Location	Contact Officer
Fire Authority Minutes 2019/20 Various	Fire Service HQ Hinchingsbrooke Cottage Huntingdon	Dawn Cave 01223 699178 Dawn.cave@cambridgeshireg.gov.uk