

To: Councillor Brock (Chair)
Councillors Page, Barnett-Ward, Duveen,
Emberson, Ennis, Hoskin, Jones, Pearce,
Robinson, Rowland, Skeats, Stanford-Beale,
Stevens, Terry and White

Direct: ☎ 0118 9372303

23 October 2020

Your contact is: **Simon Hill - Committee Services (simon.hill@reading.gov.uk)**

NOTICE OF MEETING - POLICY COMMITTEE 2 NOVEMBER 2020

A meeting of the Policy Committee will be held on Monday, 2 November 2020 at 6.30 pm via Microsoft Teams. The Agenda for the meeting is set out below.

- | | | |
|----|---|-----------------------|
| 1. | CHAIR'S ANNOUNCEMENTS | |
| 2. | DECLARATIONS OF INTEREST | |
| 3. | MINUTES | 5 - 10 |
| 4. | PETITIONS AND QUESTIONS | |
| | To receive any petitions from the public and any questions from the public and Councillors. | |
| 5. | DECISION BOOKS | 11 - 12 |
| 6. | ENDORSEMENT OF READING CLIMATE EMERGENCY STRATEGY 2020-25 & ADOPTION OF CORPORATE CARBON PLAN 2020-25 | BOROUGH WIDE 13 - 136 |

This report invites the Committee to endorse the final Reading Climate Change Partnership's Reading Climate Emergency Strategy 2020-25 and adopt the new RBC corporate Carbon Plan 2020-25.

ITEMS FOR CONSIDERATION IN CLOSED SESSION AND BY THE COMMITTEE ACTING AS SHAREHOLDER OF READING TRANSPORT LIMITED

7. EXCLUSION OF THE PRESS AND PUBLIC

CIVIC OFFICES EMERGENCY EVACUATION: If an alarm sounds, leave by the nearest fire exit quickly and calmly and assemble on the corner of Bridge Street and Fobney Street. You will be advised when it is safe to re-enter the building.

The following motion will be moved by the Chair:

“That, pursuant to Section 100A of the Local Government Act 1972 (as amended) members of the press and public be excluded during consideration of the following items on the agenda, as it is likely that there would be disclosure of exempt information as defined in the relevant Paragraphs of Part 1 of Schedule 12A (as amended) of that Act”

8.	DECLARATIONS OF INTEREST FOR CLOSED SESSION ITEMS		
9.	RTL SHAREHOLDER REPORT	BOROUGH WIDE	137 - 168

Present: Councillor Brock (Chair);

Councillors Page (Vice-Chair), Duveen, Emberson, Ennis, Hoskin, Skeats, Stevens, Terry and White

RESOLVED ITEMS

43. MINUTES

The Minutes of the meeting held on 24 August 2020 were agreed as a correct record and would be signed by the Chair.

44. PETITIONS AND QUESTIONS

David McElroy presented a petition about increasing the Cycling Targets and Action in the new Local Transport Plan. Councillor Page, Lead Councillor for Strategic Environment, Planning & Transport, responded to the petition.

Questions on the following matters were submitted by members of the public:

	<u>Questioner</u>	<u>Subject</u>	<u>Reply</u>
1.	Roger Lightfoot	Arthur Hill site	Cllr Brock
2.	Roger Lightfoot	Arthur Hill legacy	Cllr Brock
3.	Peter Burt	Arthur Hill site - conflict of interest	Cllr Brock
4.	Peter Burt	Collaboration on Sports and Leisure provision	Cllr Hoskin

Questions on the following matters were submitted by Councillors:

	<u>Questioner</u>	<u>Subject</u>	<u>Reply</u>
1.	Cllr White	Covid-19 tests for Reading residents	Cllr Hoskin
2.	Cllr White	Targeting Covid-19 communications	Cllr Hoskin

(The full text of the petition, questions and responses was made available on the Reading Borough Council website).

45. DECISION BOOKS

The Assistant Director of Legal & Democratic Services submitted a report listing the Decision Books that had been published since the meeting of the Committee held on 24 August 2020.

Resolved -

That Decision Book Nos 608-610 be noted.

46. SUPPORTING READING'S ECONOMIC RECOVERY AND RENEWAL

The Executive Director for Economic Growth & Neighbourhood Services submitted a report outlining the current economic situation in Reading as a result of the COVID-19 pandemic and the initial and ongoing response from the Council. The following documents were attached to the report:

- Appendix 1 Reading Unlock Dashboard (August 2020)
- Appendix 2 The Reading 'Powered By People' Economic Strategy
- Appendix 3 RBC Economic Recovery and Renewal Group Terms of Reference

The report proposed formal adoption of the Reading 'Powered By People' Strategy, an economic recovery strategy developed by Reading UK, the Council's outsourced economic development and marketing company. The Strategy was based on extensive research and analysis by a variety of commentators and expertise within Reading UK and partner organisations. It aimed to build back an economy that was more inclusive, smarter and more sustainable, and to continue to raise the profile of Reading as a great place to live, work, visit and do business, in line with the Council's Corporate Plan priorities.

Resolved -

- (1) That the 'Powered By People' Strategy be endorsed and adopted as the Council's Economic Recovery Strategy Framework;
- (2) That the Council's commitment to working in partnership with Reading UK and other key partners to ensure a sustainable economic recovery which would address the key challenges facing residents and businesses in the Borough be reaffirmed.

47. HOUSING STRATEGY FOR READING 2020 - 2025 AND READING'S PREVENTING HOMELESSNESS STRATEGY 2020 - 2025

The Executive Director of Economic Growth and Neighbourhood Services submitted a report presenting the Housing Strategy for Reading 2020-2025 and Reading's Preventing Homelessness Strategy 2020-2025. The following documents were attached to the report:

- Appendix A - Housing Strategy for Reading 2020 - 2025
- Appendix B - Reading's Preventing Homelessness Strategy 2020 - 2025
- Appendix C - Equality Impact Assessment: Reading's Preventing Homelessness Strategy 2020 - 2025
- Appendix D - Housing Strategy Consultation Feedback
- Appendix E - Preventing Homelessness Strategy Consultation Feedback

The report explained that the Housing Strategy was an overarching strategy which provided an overview of strategies and plans across the Council aimed at facilitating the Council's ambition to provide decent, sustainable affordable homes within thriving neighbourhoods. A key theme running through the Housing Strategy was embedding the

Climate Emergency Strategy and the ambition to complete a ‘deep retrofit’ of existing homes in Reading alongside a programme of education and support to residents to enable energy efficient lifestyles. The report sought approval for the use of s106 contributions collected under the Council’s Zero Carbon Homes Local Plan Policy to fund the retrofit schemes, and for a delegation to select the retrofit schemes to be carried out.

The Preventing Homelessness Strategy 2020-2025 outlined the Council’s intentions to intervene early, prevent homelessness and ensure access to suitable alternative accommodation whenever prevention was not possible. The Strategy supported the priorities of the Housing Strategy 2020-2025.

Resolved -

- (1) That the Housing Strategy for Reading 2020 - 2025 and Reading’s Preventing Homelessness Strategy 2020 - 2025 be approved for publication;**
- (2) That the use of s106 funds collected under the Council’s Zero Carbon Homes Local Plan Policy for the purposes of local housing retrofit schemes within the Borough be approved;**
- (3) That the Director of Economic Growth and Neighbourhood Services be authorised, in consultation with the Lead Councillor for Strategic Environment, Planning & Transport, following recommendations from the Climate Programme Board, to select the ‘retrofit’ schemes to receive s106 funds collected under the Council’s Zero Carbon Homes Local Plan Policy.**

48. PLANNING WHITE PAPER AND OTHER NATIONAL PLANNING CHANGES

The Executive Director of Economic Growth and Neighbourhood Services submitted a report on the Planning White Paper (‘Planning for the Future’) and a number of other proposed changes to the planning system which had been published for consultation. Attached to the report at Appendix 1 was a proposed response to the Planning White Paper, and at Appendix 2 a proposed response to changes to the existing planning system.

The report explained that the main changes proposed in the White Paper had been designed to support key themes of reducing regulation in order to remove barriers to development and creating much greater certainty within the planning process. The White Paper was based around three pillars of Planning for Development, Planning for Beautiful and Sustainable Places, and Planning for Infrastructure and Connected Places, and it was proposed to form a ‘zoning system’, whereby the use of all land was defined at the plan-making stage. The proposals included nationally-set development management policies, national standard conditions, nationally set CIL (including affordable housing), binding nationally-set housing numbers through a standard methodology, a national design guide taking precedence where no design codes were in place, and a national body to support local design codes. As a result, there would be reduced opportunities for democratic oversight and local consultation on developments.

The report noted that alongside the White Paper a number of other planning changes were being consulted upon, which would operate within the current system and would be introduced largely through national policy. Although these changes were not as wide-ranging as the White Paper proposals, some of the implications would be highly significant.

The Committee was recommended to approve robust responses to the consultation on the Planning White Paper, which was set out in Appendix 1 and the changes to the existing planning system attached at Appendix 2. The responses would be submitted to the Government before the deadline of 29 October 2020 for the Planning White Paper and 1 October 2020 for changes to the existing planning system. There would be an opportunity for the Planning Applications Committee to consider the responses at its meeting on 7 October 2020 and contribute to the response on the White Paper.

Resolved -

- (1) That the proposed response to the consultation on the Planning White Paper, which was attached to the report at Appendix 1, be approved;**
- (2) That the proposed response to the consultation on changes to the current planning system, which was attached to the report at Appendix 2, be approved;**
- (3) That the Deputy Director of Planning, Transport and Regulatory Services be authorised to make any amendments necessary to the response to the Planning White Paper (Appendix 1), in consultation with the Lead Councillor for Strategic Environment, Planning and Transport, to reflect any changes agreed by Planning Applications Committee at its meeting on 7 October 2020.**

49. DRAFT AFFORDABLE HOUSING SUPPLEMENTARY PLANNING DOCUMENT

The Executive Director of Economic Growth and Neighbourhood Services submitted a report on the Affordable Housing Supplementary Planning Guidance (SPD), which would supplement policies in the adopted Local Plan that sought contributions to affordable housing from new developments. The draft SPD was attached to the report at Appendix 1.

The report explained that the adoption of a new single local plan to set out how Reading would develop up to 2036 required additional guidance on elements of the new Local Plan, including a new Affordable Housing SPD. Once adopted, the new SPD would be a material consideration in the determination of planning applications. The report was seeking permission to undertake community involvement on the Draft SPD, prior to preparing a final version for adoption.

Resolved -

- (1) That the Affordable Housing SPD, which was attached at Appendix 1 to the report, be approved for consultation;
- (2) That the Deputy Director of Planning, Transport and Regulatory Services be authorised to make any minor amendments necessary to the SPD that did not alter the policy direction, in consultation with the Lead Councillor for Strategic Environment, Planning and Transport, prior to consultation.

50. EXCLUSION OF THE PRESS AND PUBLIC

Resolved -

That pursuant to Section 100A of the Local Government Act 1972 (as amended), members of the press and public be excluded during consideration of items 52-54 below as it was likely that there would be a disclosure of exempt information as defined in the relevant paragraphs specified in Part 1 of Schedule 12A to that Act.

51. DIGITAL FUTURES FOUNDATIONS (ICT FUTURE OPERATING MODEL) UPDATE

The Executive Director of Resources submitted a report providing an update on the ICT Future Operating Model. The report stated that the Policy Committee had endorsed the preferred option in the Outline Business Case (OBC) on 22 June 2020 (Minute 14 refers) and granted delegated authority to proceed with its procurement and implementation, subject to delivery remaining within the financial envelope set out in the OBC, and a satisfactory update report on progress to this meeting. The report summarised progress to date and set out the subsequent critical future dates. It also gave an assessment of the three bidders for the contract and the rationale for selecting the preferred bidder.

Resolved -

That the progress made by the ICT Future Operating Model project to date be noted and a further report on progress be submitted to the Committee on 14 December 2020.

(Exempt information as defined in paragraph 3)

52. ASSET DISPOSAL UPDATE - CENTRAL CLUB

The Executive Director of Economic Growth and Neighbourhood Services submitted a report on a revised offer from the preferred bidder for the vacant former Central Club building.

The report explained that, as a result of changes to market conditions being experienced everywhere as a result of the Covid-19 pandemic and following pre-planning application discussions, the preferred bidder had amended the scope of its initial scheme and subsequently revised its initial offer for the site. Following an appraisal of the options facing the Council, and having taken the advice of an external valuer to ensure

compliance with section 123 of the Local Government Act 1972 in relation to Best Consideration, the recommendation was to accept the revised bid in the light of the changed market conditions and circumstances since the original bid had been submitted.

Resolved -

That the preferred bidder's revised bid for the Central Club be accepted and the Executive Director of Economic Growth & Neighbourhood Services, in consultation with the Leader of the Council, be authorised to finalise the terms of the agreement.

(Exempt information as defined in paragraph 3)

53. BRIGHTER FUTURES FOR CHILDREN LIMITED - RESERVED MATTERS

The Executive Director of Resources submitted a report to the Committee in its capacity as the sole member of Brighter Futures for Children Ltd (BFfC) to make consequential decisions, following the departure of the Company's Managing Director on 7 September 2020. The report described the interim arrangements, which had been agreed with the DfE, and would be in place until 31 March 2021. Attached to the report at Appendix 1 was a summary of additional interim duties for the Chair of BFfC.

Resolved -

- (1) That the amended role for the Chair of the Company's Board, as described in Appendix 1 to the report, which would remain in place until 31 March 2021, be approved;**
- (2) That the interim Executive Director of Finance and Resources be appointed as a Company Director until 31 March 2021;**
- (3) That the requirement in the Articles for the interim Executive Director of Finance and Resources to be an employee of the Company be waived until 31 March 2021.**

(Exempt information as defined in paragraphs 1, 2 & 3)

(The meeting started at 6.30 pm and closed at 8.32 pm)

REPORT BY ASSISTANT DIRECTOR OF LEGAL AND DEMOCRATIC SERVICES

TO:	POLICY COMMITTEE		
DATE:	2 NOVEMBER 2020		
TITLE:	DECISION BOOKS		
LEAD COUNCILLOR:	COUNCILLOR BROCK	PORTFOLIO:	LEADER OF THE COUNCIL
SERVICE:	LEGAL & DEMOCRATIC SERVICES	WARDS:	BOROUGHWIDE
LEAD OFFICER:	MICHAEL GRAHAM	TEL:	0118 937 3470
JOB TITLE:	ASSISTANT DIRECTOR, LEGAL AND DEMOCRATIC SERVICES	E-MAIL:	michael.graham@reading.gov.uk

1. PURPOSE OF THE REPORT AND EXECUTIVE SUMMARY

- 1.1 The Decision Book process was amended on 25 March 2020 to disapply the previous councillors' call-in arrangements within the 10-day period after its publication and replace it with the ability to seek a review of the decision retrospectively, and to keep the changes in force temporarily during the ongoing Covid-19 situation.
- 1.2 To complement the amended process the list of Decision Books published will be reported to Policy Committee as a standing item on the agenda.
- 1.3 The following Decision Book reports have been published since the previous report to Policy Committee:

No.	Title	Date
613	Test and Trace Discretionary Isolation Support Payment Scheme	19/10/2020
612	Extension of Period of Expressing Parental Preference for Grammar Schools	16/10/2020
611	Direct Award of the 0 -19 (25) Public Health Nursing Service Contract	28/09/2020
611	Appointment of School Governors	28/09/2020

2. RECOMMENDED ACTION

- 2.1 That the Decision Book Reports be noted.

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READING BOROUGH COUNCIL

REPORT BY DIRECTOR OF ECONOMIC GROWTH AND NEIGHBOURHOOD SERVICES

TO:	POLICY COMMITTEE		
DATE:	2 NOVEMBER 2020		
TITLE:	ENDORSEMENT OF READING CLIMATE EMERGENCY STRATEGY 2020-25 & ADOPTION OF CORPORATE CARBON PLAN 2020-25		
LEAD COUNCILLOR:	CLLR PAGE	PORTFOLIO:	STRATEGIC ENVIRONMENT, PLANNING AND TRANSPORT
SERVICE:	DEGNS	WARDS:	BOROUGHWIDE
LEAD OFFICER:	PETER MOORE	TEL:	0118 937 4275 (x74275)
JOB TITLE:	HEAD OF CLIMATE STRATEGY	E-MAIL:	peter.moore@reading.gov.uk

1. PURPOSE OF REPORT AND EXECUTIVE SUMMARY

1.1 The purpose of this report is to invite the Committee to (i) endorse the final Reading Climate Change Partnership's Reading Climate Emergency Strategy 2020-25 and (ii) adopt the new RBC corporate Carbon Plan 2020-25. The Reading Climate Emergency Strategy sets out the road map for the next 5 years to work towards the ultimate goal of achieving a 'net zero carbon' Reading by 2030 as per the Climate Emergency declaration, while the Carbon Plan sets out the Council's corporate pathway over the next five years to achieve the target of an 85% reduction in its own corporate emissions, en route to becoming a net zero organisation by 2030.

1.2 Appendices to this report are:

- Appendix 1: Reading Climate Emergency Strategy 2020-25
- Appendix 2: Consultation Report on Reading Climate Emergency Strategy 2020-25
- Appendix 3: RBC corporate Carbon Plan 2020-25

2. RECOMMENDED ACTION

- 2.1 That the Committee endorses the Reading Climate Change Partnership's 'Reading Climate Emergency Strategy 2020-25'
- 2.2 That the Committee adopts the revised RBC corporate Carbon Plan for 2020-25 and the headline target of an 85% reduction on 2008/09 emissions by 2025

3. POLICY CONTEXT

3.1 The Council declared a climate emergency in February 2019 and committed to the goal of achieving a 'carbon neutral Reading by 2030'. Reports were subsequently taken to all key Committees in the summer of 2019 committing then to embed the action required to work towards this goal in the relevant services, activities and plans of the Council.

3.2 The Climate Emergency Declaration required officers to ensure that the revision of the Reading Climate Change Strategy, which is produced by the Reading Climate Change Partnership (RCCP), reflected the urgency of the Declaration, and the process

was therefore brought forward by 6 months. The Council is an active partner in RCCP and Council officers supported the Partnership in developing the draft Strategy, with the intention of publishing a consultation draft in mid-March, finalising it by the end of May and bringing the final strategy back to the Policy Committee for adoption in June with a high profile launch planned for July. Although the mid-March deadline was met, with consultation being launched on 13 March, the national COVID-19 'lockdown' which began soon after impacted the timeline significantly such that public consultation was extended until the end of June. The launch event has now been re-scheduled for 10 November, the centerpiece of a week-long 'Reading Climate Festival' of virtual events and activities.

- 3.3 While the response to the COVID-19 public health emergency has inevitably been the focus of the Council's activity in recent months, global weather events linked to climate change have served as a reminder of the wide-ranging and potentially catastrophic impacts of unchecked global warming. As the winter floods which preceded the lockdown illustrated, Reading will not be immune to these impacts. Some commentators predicted that the lockdowns seen across the globe would lead to significant reductions in carbon emissions. The reality is that while these reductions were significant, they were too short-lived to make a major impact on the underlying trajectory, emphasising the need for action on climate change to be embedded in plans to recover from the impacts of COVID-19.
- 3.4 The idea of a 'green recovery' has been embraced by central Government and many local authorities, including RBC and our partners in Reading UK who have identified this as a key strand of Reading's economic recovery strategy, *Powered By People*, which was endorsed by the Council in September 2020. The strategy sets out how a model of inclusive, green growth can help people transition from industries hit by COVID-19 into the jobs of the future in environmental technology and other green industries. Similarly, the opportunities which opened up during lockdown to improve air quality and promote cycling and walking are being taken forward in Reading's new Local Transport Plan which will shortly be brought back to Committee following public consultation. The Council has been actively pursuing new national funding streams which have been made available to support these themes.
- 3.5 The Partnership has now revised the Reading Climate Emergency Strategy in the light of public consultation, and the final text was signed off by the Partnership Board, on which RBC is represented by Cllr Page, on 22 September. Partners are now being invited to endorse the final Strategy, included at Appendix 1, hence it being presented to Policy Committee at this meeting for RBC to endorse. RBC managed the consultation process on behalf of the Partnership and a consultation report, summarising the comments received and the changes made to the strategy as a result, is included at Appendix 2.
- 3.6 The Council has reduced its own emissions by 62.5% since 2008/09. The main vehicle through which this has been achieved is the Council's corporate Carbon Plan, the current iteration of which covers the period 2015-20. Officers have reviewed the Plan in parallel with the wider Reading Climate Emergency Strategy to cover the same period (2020-25) and the new Carbon Plan for this period is also now being presented to Policy Committee for adoption.
- 3.7 The Carbon Plan will take forward the Council's own commitment to delivering on the wider aspirations of the strategy and will enable the Council to lead by example as it encourages Reading's businesses, organisations and residents to take action on climate change. The headline target within the Carbon Plan is to achieve an 85% reduction in RBC emissions by 2025 compared to the 2008/09 baseline. This is considered an ambitious but achievable target, subject to existing investment plans and policies being maintained, and an appropriate milestone on the road to becoming a net zero carbon Council by 2030.

4. THE PROPOSAL

4.1 Current Position

The consultation draft Strategy approved by Policy Committee in February represented the Reading Climate Change Partnership's first attempt to map out a pathway to net zero by 2030. This has now been amended in the final version of the Strategy at Appendix 1.

4.2 Options Proposed

Having reflected on the outcomes of public consultation, the Partnership Board did not feel that the extremely ambitious goal of achieving a net zero carbon Reading by 2030 could credibly be accelerated still further. However, the Partnership felt it important to respond to the desire expressed in consultation for more ambition in some areas by making changes to the commitments and targets in the Action Plans contained within the Strategy to this effect. At the same time, disruption caused by COVID-19 has inevitably delayed some actions and changes have also been made to the final text to reflect this.

4.3 Other Options Considered

Having published the consultation draft, and conducted public consultation, the broad options in finalising the strategy were to (i) increase the level of ambition within the final strategy (ii) no change (iii) reduce the level of ambition. Public consultation suggested a variety of views about the proposed pathway, though the majority were generally supportive of the approach proposed and a significant minority favoured strengthening the level of ambition. Neither options (ii) or (iii) were therefore considered realistic options in the light of the Climate Emergency Declaration and subsequent public consultation.

5. CONTRIBUTION TO STRATEGIC AIMS

5.1 The Reading Climate Emergency Strategy 2020-25 contributes to all six corporate aims as follows:

- Securing the economic success of Reading and provision of job opportunities: the Reading Climate Emergency Strategy highlights the opportunities of pursuing 'clean growth', developing Reading's low carbon economy and stimulating a 'green recovery' from the economic impacts of COVID-19
- Ensuring access to decent housing to meet local needs: the Strategy includes ambitions to improve the energy efficiency of both public and private housing and to tackle fuel poverty
- To protect and enhance the lives of vulnerable adults and children: the Strategy notes that climate impacts are expected to be more severe for the more vulnerable in society, and proposes action to reduce these vulnerabilities
- Keeping Reading's environment clean, green and safe: the Strategy includes a number of 'natural solutions' to climate change (e.g. increasing tree cover) which will enhance the natural environment and greenspaces as well as helping mitigate and adapt to climate change
- Ensuring that there are good education, leisure and cultural opportunities for people in Reading: the Strategy includes actions to educate the community about climate change, how to tackle it and the benefits of taking action
- Ensuring the Council is fit for the future: the corporate Carbon Plan will contribute to this aim by minimising the risks and costs associated with energy and other natural resource use and improving the efficiency of Council operations.

6. ENVIRONMENTAL AND CLIMATE CHANGE IMPLICATIONS

6.1 The decision recommended fulfils a central commitment of the Climate Emergency Declaration by bringing forward a new Reading Climate Emergency Strategy and

setting out the pathway for Reading as a whole, and Reading Borough Council as an organisation, to achieve net zero carbon emissions by 2030.

7. COMMUNITY ENGAGEMENT AND INFORMATION

- 7.1 The process of developing the Reading Climate Emergency Strategy has involved a wide range of stakeholders, with theme groups of 6-8 key stakeholders meeting regularly to shape each of the six themes within the strategy. These theme groups arose out of a public meeting at the Civic Centre attended by 120 people at which the invitation to join the theme groups was opened to all. The extended consultation process provided further opportunities for stakeholders and the wider public to influence the strategy and advice was taken from RBC consultation and communication experts to refine the consultation questions. A consultation report is appended to this report (Appendix 2) summarising consultation responses and the changes made in response.

8. EQUALITY IMPACT ASSESSMENT

- 8.1 Initial screening prior to the launch of public consultation suggested that an Equality Impact Assessment was not required as the issues raised by climate change, which is the subject of the strategy, are universal and apply to the whole population regardless of race, disability, gender, sexuality, age or religious belief. That said, in taking forward specific actions proposed in the strategy it will be for the relevant lead partners to ensure that equality impacts are considered and assessed appropriately.
- 8.2 As a general observation, research suggests that climate change will impact disproportionately on the most vulnerable in society. In this context, action to tackle climate change should have an overall positive impact for vulnerable people, and the Strategy emphasises the importance of a 'just transition' to a low-carbon economy in which the costs of transition do not fall on those least able to sustain them.

9. LEGAL IMPLICATIONS

- 9.1 The Council managed the consultation process on behalf of the Reading Climate Change Partnership, and the main legal implication arising from this relates to the requirements associated with public consultation. Other action proposed within the Strategy for which the Council is identified as a delivery partner can be delivered within its current legal powers though there is explicit recognition within the Climate Emergency Declaration and the Strategy that some changes in Government policy and legislation may be required to support Reading in achieving the ambition of net zero carbon by 2030.

10. FINANCIAL IMPLICATIONS

- 10.1 Capital and revenue commitments: the specific actions identified for the Council within the Reading Climate Emergency Strategy can be delivered within the revenue and capital budgets agreed as part of the Council's Medium-Term Financial Strategy (2020-23). The approximate cost of delivering the action set out in the corporate Carbon Plan over 5 years is c£9 million although it is difficult to be precise in view of uncertainties around the extent of our asset rationalisation programmes, the pace at which the price of renewable energy will fall, and our ability to attract external grant funding to supplement our own investment. The Council, however, has identified capital funding of over £7 million over three years for investment in energy efficiency and renewable energy projects, an increase from an annual budget of some £250,000 which had previously existed for energy efficiency projects. In the two full financial years since the climate emergency was declared (2019/20 and 2020/21), the Council has committed c.£34 million to capital projects in transport, waste and energy, some

of which will also contribute to delivery of corporate carbon reduction targets. However, notwithstanding this investment, a number of actions involve pursuing external funding where we currently lack the resources to deliver them. The 'value at stake' or potential cost avoided by implementing the corporate Carbon Plan is estimated at c£1.5m p.a. on building running costs alone by 2025/26.

10.2 Strategy actions for which no funding has currently been identified: the Climate Emergency Declaration recognised that the ambitious aim of delivering a net zero carbon Reading by 2030 could not be achieved without additional resource and powers from central government. The Strategy therefore necessarily includes action which is required to reach this goal but for which funding has yet to be identified. To this end, the Strategy includes the clear statement that 'Some of the actions included in the action plans below, and the scale and pace at which they can be progressed, will be subject to the prevailing national policy context and/or the provision of additional powers and resources by central government, as made clear in Reading's climate emergency declaration. This does not mean we are not committed to them - on the contrary, we see them as key to achieving the net zero target - it is simply to reflect the reality that the partners in Reading alone cannot solve some of the bigger challenges we face'.

10.3 Value for money and financial risks: it has been well established since the publication of the Stern report into the economics of climate change in 2006 that the costs of inaction far outweigh the costs of action on climate change. In the context of climate change, which presents unprecedented risk and catastrophic consequences for our way of life and human wellbeing on a global as well as local scale, the action outlined in the strategy can be considered good value for money. Those actions which require further policy changes or investment by RBC will, however, be further tested for value for money at the appropriate time. At the project level, each RBC project will be subject to a business case with the aim of ensuring that revenue savings produced by the investment cover the debt financing charge including Minimum Revenue Provision (MRP) on the life of the asset.

11. BACKGROUND PAPERS

11.1 In producing the Strategy, the following have been referred to:

- Committee on Climate Change - various reports
- Intergovernmental Panel on Climate Change - various reports
- UK Government data on carbon emissions
- Reading Vision 2050
- Reading Climate Change Adaptation Plan
- Reading Local Plan
- Reading Local Transport Plan (current iteration and consultation draft)
- Reading Means Business on Climate Change: the Reading Climate Change Strategy 2013-20

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The Reading Climate Emergency Strategy 2020-25

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November 2020

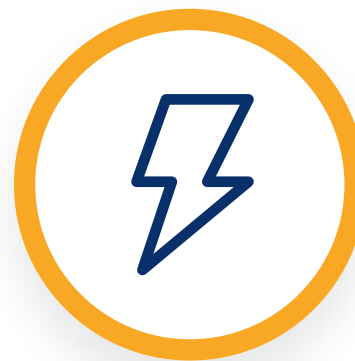


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FOREWORD

by Co-Chairs of the Reading Climate Change Partnership

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*So please, treat the climate crisis
like the acute crisis it is and give us
a future. Our lives are in your hands.*

– **Greta Thunberg** (2019)



As the new decade began, the impacts of a changing climate were making headlines around the world. The wildfires, floods and extremes of temperature now being experienced are all worryingly consistent with what the climate science has been predicting. In 2018 the Intergovernmental Panel on Climate Change (IPCC) concluded that to limit global warming to 1.5 degrees – considered necessary to avert the most catastrophic impacts – would require ‘rapid, far-reaching and unprecedented changes in all aspects of society’. Through the declaration of a climate emergency in February 2019, and commitment to the goal of a net zero carbon Reading by 2030, our community has embraced the call to action laid down by the IPCC.

Reading has a proud history of taking action on climate change – since 2005, carbon emissions per person have fallen by 52% in the borough, the 4th largest reduction of any local authority in England. Reading Borough Council has reduced its own carbon footprint by 62.5% since 2008 and many other partners in Reading have made significant steps on the journey to net zero carbon. But we know these impressive achievements are not enough. We must now re-double our efforts to accelerate the journey towards a net zero carbon Reading in the short time which the science suggests is available.

The 2018 IPCC report also highlighted the many benefits to people and the environment which would flow from taking action on climate change as the measures required should also contribute to a more equitable and sustainable society. So, responding positively to the climate emergency is also aligned with Reading’s aspiration to achieve clean and inclusive economic development from which the whole community benefits: as well as being a practical necessity, responding to the climate emergency represents a major opportunity. The transition to net zero carbon also needs to be a just transition, so that the costs and benefits are apportioned fairly.

This is really important to bear in mind as we think about people whose home has been flooded, whose health has suffered or whose children have asked whether they have a future they can look forward to: for them the impacts of a changing climate already feel very real, and research shows that the most vulnerable people will bear the brunt of these impacts. Climate change is happening now and the die is cast for the coming decades – preparing for these changes will be an essential part of our future strategy. Public concern for the state of the environment has never been higher, so publication of this strategy has not come a moment too soon.

The aim of the Reading Climate Change Partnership in producing this strategy is to set out a clear pathway to a net zero carbon, resilient Reading and to harness the commitment of everybody who lives, works, studies or plays in Reading to work together to achieve this ambition. In this sense we believe that the Partnership is truly what it describes: a close collaboration and an open and transparent working arrangement between business, academia, NGOs, community groups, the people of Reading and Reading Borough Council.

*What happens next is up to us all...
I truly believe that together we can
bring about the transformative
change that is needed.*

– Sir David Attenborough

The net zero carbon transition presents huge challenges, but it is clear that the costs and risks of embracing it will be far outweighed by the costs and risks of not taking action. We must also recognise that many of the factors which will influence our ability to reach net zero by 2030 remain out of the control of the partners in Reading and will require clear commitment by, for example, our national government. This strategy therefore sets out not only the action we need to take ourselves to tackle the climate emergency, but also the steps we need others to take to help us deliver our ambitious aims.

Ultimately, we cannot ignore the fact that this strategy is being launched in the context of the COVID-19 global pandemic. Indeed, the launch was delayed by four months as the public consultation stage was extended to allow people time to adapt to the new ways of living necessary to reduce infection rates. The imminent existential threat of the virus is clearly an urgent priority for all of us, but the risk of deep and lasting harm from climate change remains, and we cannot wait until we have resolved one threat before we address the other.

The COVID-19 crisis has disrupted our lives in many ways, some of which have reduced carbon emissions and contributed to 'climate-positive' behaviour. For example, the reduction in air traffic and commuting has reduced emissions and air quality has improved in many towns and cities, including Reading. Being confined to our homes has brought many of us a new appreciation of the importance of green spaces for health and wellbeing; it has also changed our patterns of consumption. But at the same time there are new waste streams being created by disposable masks and plastic gloves, as well as the manufacturing impacts of producing items that were not necessary previously. This new reality has to be taken into account alongside the extensive feedback received through public consultation.

So, as Reading re-thinks its future in the light of COVID-19, we also need to think about how we plan for the longer-term: to think and re-imagine Reading as a greener, more resilient and net zero carbon urban area to 2030, and beyond to 2050. This also connects to the ongoing work of Reading 2050 and the recovery strategies of various partners, so we will need to collaborate to ensure Reading's approach is closely integrated and produces a recovery that uses the crisis as an opportunity to tackle climate change and create sustainable, inclusive economic growth.

As we said earlier, this has been very much a partnership effort and we would like to express our appreciation to the members of the Reading Climate Change Partnership Board, the theme leads and group members who have given generously of their time and expertise to develop this strategy. We are especially grateful for the huge enthusiasm and commitment of our predecessor, Chris Beales, who completed his two-year term as Chair in April 2020 and who steered the strategy through most of the development phase.

Finally, we would like to thank all of the individuals and groups who attended our discovery events and responded to the consultation – we look forward to you playing an active role in helping deliver our shared vision for a net zero carbon, resilient Reading.

Professor Tim Dixon

Tracey Rawling Church

Co-chairs of Reading Climate Change Partnership



Acknowledgments

We would like to thank the following people for their contribution to this document:

Anon Ahmad
Jacquie Allan
Mohammed Ayub
Emma Baker
Adele Barnett-Ward
Niki Barton
Chris Beales
Rebecca Blakey
John Booth
Ben Bosh
Katie Brett
Lorraine Briffitt
Micheal Bright
Monika Bulmer
Sarah Burchard
Ben Burfoot
Sarah Burr
Oliver Burt
Susannah Bury
Chris Butler
Andrew Charlton-Perez
Alan Clark
Joanna Clark
Phil Coker
Kirstin Coley
Duncan Cook
Tony Cowling
Adam Daum
Tim Dixon
Paul Ducker
Linda Duff
Muhammed El-Beik
David Fallon
Paul Fishwick
Pascal Flohr
Malcolm Fowles
Giorgio Framaliccio
Natalie Ganpatsingh

Margaret Gardner
Andy Gillespie
Cristina Gomez
Tony Goodchild
Steven Gough
Clare Grashoff
Lilian Green
Evangeline Haggarty
Sarah Hanson
Faye Hargreaves
Poppy Harris
Paul Harrison
Rachel Hazell
Hazel Hill
Kathryn Horsepool
Nigel Horton-Baker
Christina Hughes Nind
Andrew Hughes Nind
Iris Hunt
Katherine Hyde
Ross Jarvis
Carolyn Jenkins
Barbara Jerome
Michael Keith-Lucas
Paul Kemp
Sara Kopp
Adrian Lawson
Pam Lewis
Zsuzsi Lindsay
James Lloyd
Luke Lloyd
Willem Londeman
Chris Maddocks
Tricia Marcouse
Jill Marston
Frances Martin
Mark D Mathews,
Rayner Mayer

Kathryn McCann
Amanda McDonnell
Leanne McKrill
Tracey Middleton
Eugene Mohareb
Peter Moore
Tomiko Morley
Brian Morley
Oscar Mortali
Marielle Mouyon
Clare Muir
Stephen Naylor
Katherine Naylor
Yolanda Nicholson
Alex Nickson
Andrew Nind
Jackie Oversby
Tony Page
Helen Palmer
Sophie Paul
Ellen Pilsworth
Richard Price
Lucy Prismall
Erica Purvis
Rosie Rand
Tracey Rawling Church
Nick Read
Gill Ringland
Elizabeth Robinson
Francis Rooney
Karen Rowland
Dot Roy
David Rylands
Michael Sage
Mick Schrey
Beth Scott
Jenny Searle
John Sharpe

Sam Shean
Helen Sheldrake
Debbie Shore
Caroline Smith
Ayo Sokale
Helena Soteriou
Ben Stanesby
Mark Stanley
Trevor Teer
Andrew Tucker
James Turner
Owen Turpin,
Anke Uberberg
Alexa Volker
Melanie Ward
Nicky Wheeler
Oliver White
Rob White
Jill Wigmore-Welsh
Rose Williams
Stephen Wise
Scott Witchalls
Mark Worringham
Vincent Zhuo

A special thank you to Ed Hawkins,
University of Reading for his permission
to use his climate stripes imagery.
The progression from blue (cooler)
to red (warmer) stripes portrays the
long-term increase in average global
temperature for Berkshire from 1850
(left side of graphic) to the present day.
#showyourstripes

1. INTRODUCTION

1.1 The Reading Climate Emergency Strategy

Following the declaration of a climate emergency in Reading in 2019¹, plans to produce a third Reading climate change strategy, scheduled for the latter part of 2020, were brought forward by six months. As a result, a consultation draft Reading Climate Emergency Strategy for 2020-25 was published in March 2020. The consultation period was extended due to COVID-19, and a planned launch in July 2020 was correspondingly postponed until November 2020.

1.2 Purpose of this document

This document, The Reading Climate Emergency Strategy 2020-25, sets out the action required during this critical five-year period to work towards the objective of a net zero carbon Reading by 2030, the target adopted in the climate emergency declaration. It also considers how we can adapt to the impacts of a changing climate. Following engagement and discussion with stakeholders, and a series of events and initiatives to engage the wider public culminating in a formal public consultation to which over 200 responses were received, this document has been compiled by the organisations who come together in the Reading Climate Change Partnership.

1.3 Ownership of the strategy

Production of this strategy has been co-ordinated by the Reading Climate Change Partnership with input from over 100 stakeholders across Reading. The Reading Climate Change Partnership is a community partnership established in 2009 to lead the response to climate change in the Reading area. The Partnership's Board includes representation from the community and voluntary sector, the statutory sector, the private sector, the health sector and academia. If the strategy is to succeed, however, the action within it needs to be 'owned' by every organisation, business and resident across Reading. The Partnership therefore invites partners to adopt, endorse or otherwise commit to its delivery via the most appropriate means. To start this process, Reading Borough Council, which passed the Climate Emergency Declaration on behalf of the wider community, endorsed the strategy at a meeting of its Policy Committee on 2nd November 2020.

¹ <https://www.reading.gov.uk/council/climate-change/>



2. CLIMATE CHANGE: THE CONTEXT

2.1 The global and national context

There is an overwhelming scientific consensus that human activity has been responsible for a dramatic increase in emissions of carbon dioxide and other greenhouse gases since the start of the Industrial Revolution, and that this has already been the cause of a rise in average global temperature of around 1°C. We also know that we are already 'locked in' to a further rise in average global temperatures as a result of past emissions which are likely to set off 'feedback' loops which will accelerate warming still further.

For society and our way of life to continue in its current form, it was, until recently, generally held that the rise in global temperature needed to be kept to 2°C. But most

authorities now agree that even a 1.5°C rise is likely to have very significant negative impacts on human society and the critical ecosystems on which it depends.

A key turning point in international climate change policy came in 2018 when the Intergovernmental Panel on Climate Change (IPCC), the UN body created to assess the science on climate change, published a report which advised that the international community should aim to limit global warming to 1.5°C, as opposed to the previous 'target' of 2°C. Their review of over 6,000 sources of evidence found that, with a rise of 1.5°C, there would be very significant risks to health, livelihoods, food security, water supply, human security and economic growth. A rise to 2°C would be even more catastrophic.

This conclusion led to a renewed focus on 2030 as a target to meet emissions reduction goals which had previously been set for 2050. While most of the world's national governments remain focused on achieving net zero carbon dioxide emissions by 2050, many municipalities have adopted the more ambitious goal of net zero by 2030.

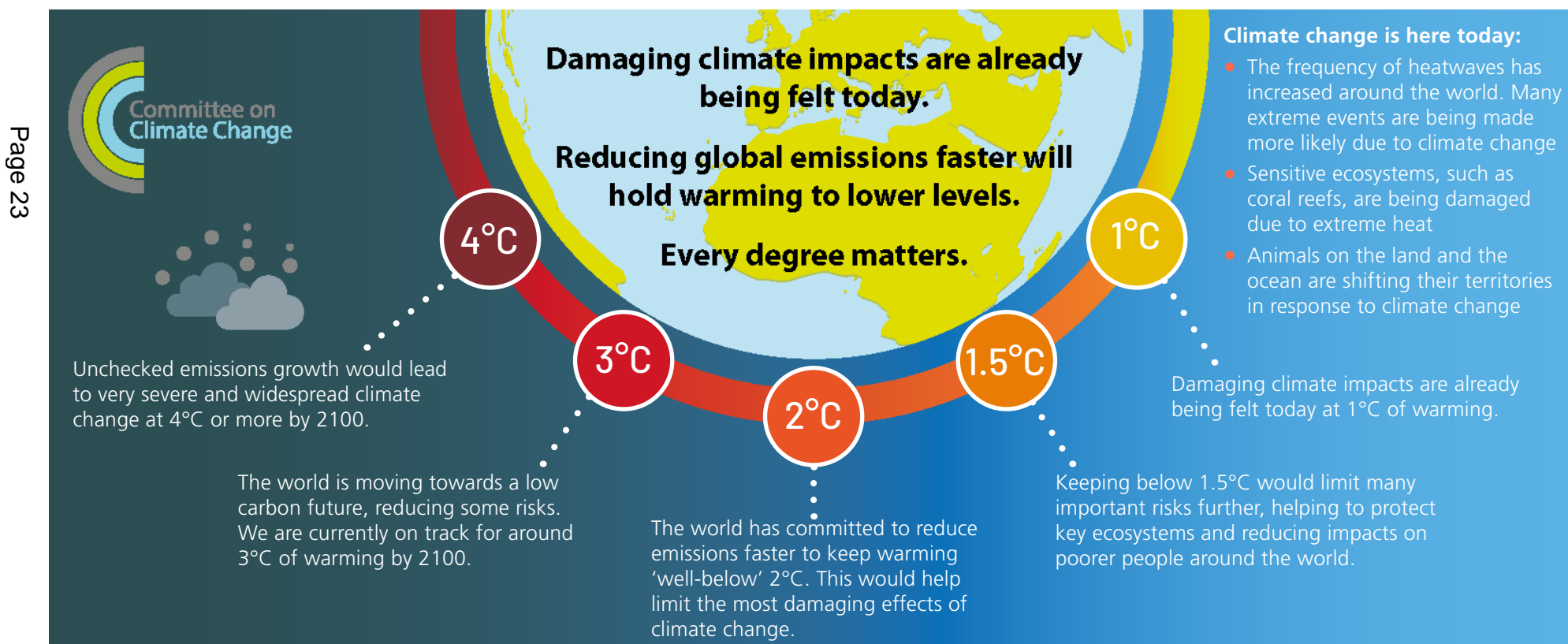


Fig 1: Why every degree of warming matters (Source: Committee on Climate Change²)

2.2 Global and national progress to date

Many agree that the global response to the challenge laid down by the IPCC has fallen well short of what the science suggests is necessary to limit the rise in global average temperatures to 'safe' levels. Emissions have continued to rise making the challenge of limiting climate change to 1.5°C in the short time available much harder. The UK has sought to make its contribution through the setting of legally binding emissions reduction targets supported by five yearly carbon budgets. As a result of the policies of successive UK Governments, emissions were 44% below 1990 levels in 2018 – heading in the right direction but not fast enough to meet some of our future carbon budgets.

The UK's first (2008-12) and second (2013-17) carbon budgets have been met and the UK is on track to meet the third (2018-22) carbon budget. However, according to the Committee on Climate Change (CCC), which was established by the Government to monitor performance in this area, the UK is not currently on track to meet the fourth (2023-27) or fifth (2028-2032) carbon budgets. In May 2019³, the CCC recommended a new emissions target for the UK of net zero greenhouse gas emissions by 2050 to deliver on the commitment made by the UK in the Paris Agreement.

The CCC advised that this target is achievable with known technologies and could be delivered within the cost that Parliament accepted when it legislated for the existing 2050 target of an 80% reduction on 1990 levels. However, the CCC advised that it was only possible if 'clear, stable and well-designed policies to reduce emissions further' are introduced across the economy without delay. The CCC's 2020 Progress Report to Parliament concluded that while 'Initial steps towards a net zero policy package have been taken...this was not the year of policy progress that the Committee called for in 2019'⁴.

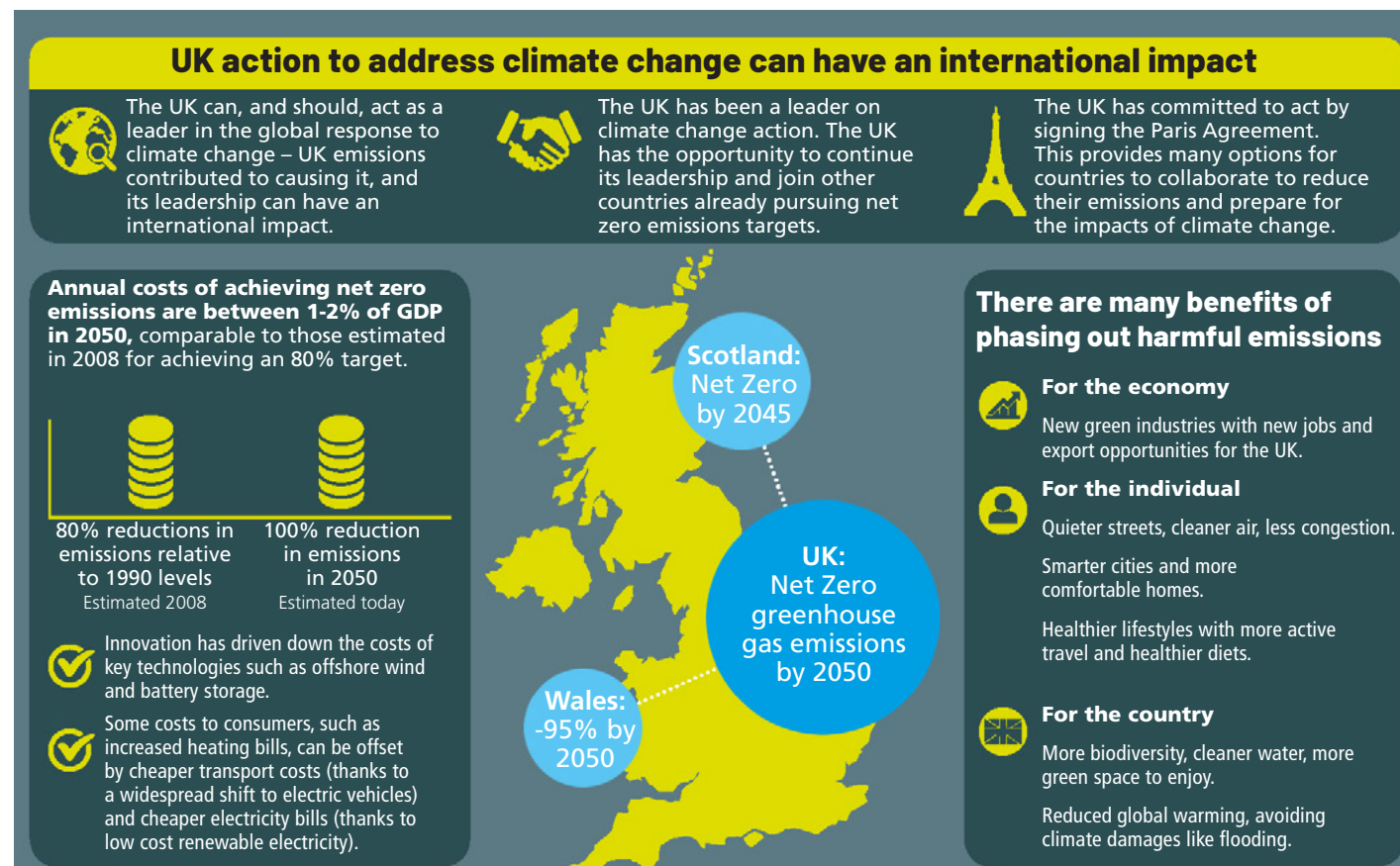


Fig 2: Can one country really make a difference? (Source: Committee on Climate Change⁵)

³ <https://www.theccc.org.uk/publication/net-zero-the-uks-contribution-to-stopping-global-warming/>

⁴ <https://www.theccc.org.uk/publication/reducing-uk-emissions-2020-progress-report-to-parliament/>

⁵ <https://www.theccc.org.uk/wp-content/uploads/2019/05/CCC-Net-zero-Infographic.png>

2.3 The local context: Reading's carbon footprint

Reading produces over 500 kilo-tonnes of carbon dioxide emissions annually (2018 figures). As the pie chart shows, around 36% of this 'carbon footprint' arises from industrial and commercial activity, 40% from domestic sources (heating, lighting and appliances) and 21% from transport.

Reading's per capita emissions have fallen significantly since 2005 – by around 52%. Around 17% of this reduction has been due to more low carbon energy going into the national grid. While the trend is positive, the way that emissions are measured hides the fact that many of the emissions for which we in Reading are ultimately responsibly are accounted for elsewhere – in the places where the goods we buy are made and the food we consume is produced. As such, our 'real' carbon footprint is substantially larger then the official figures suggest. At the same time our population has increased so gains made through relative reductions in emissions per head are, in part, offset by increases in absolute emissions over all. That said, as the bar chart in Fig.3 shows, total emissions (as opposed to per capita emissions) from the Reading area have still fallen by 47% since 2005.

2.4 Reading's progress to date

The Reading Climate Change Partnership and its constituent partners have a long track record of achievement on climate change. The first Reading Climate Change Strategy was adopted in 2008/09 and set priorities for action which were delivered by a wide range of partners. As a result:

- Reading's per capita carbon emissions have fallen by 52% since 2005 – the 4th largest reduction of any local authority area in the country
- Pioneering net zero carbon standards for new homes have been enshrined in the Reading Local Plan which governs future development across the Borough
- Reading Borough Council has reduced its own carbon footprint by 62.5% since 2008/09, avoiding energy costs of £11 million in the process
- Reading's vibrant voluntary sector and active network of community groups have promoted a wide range of climate-related projects, and small grants to local organisations, such as Draughtbusters, Transition Town Reading and Econet, have funded behaviour change campaigns to reduce carbon emissions and test new ideas
- The Reading Community Energy Society has delivered solar arrays on 20 community buildings, creating enough energy to power approximately 125 homes, with plans for installation of a further 4,000 solar panels and a new Reading Hydro power scheme at Caversham Lock

Reading Borough CO₂ Emissions

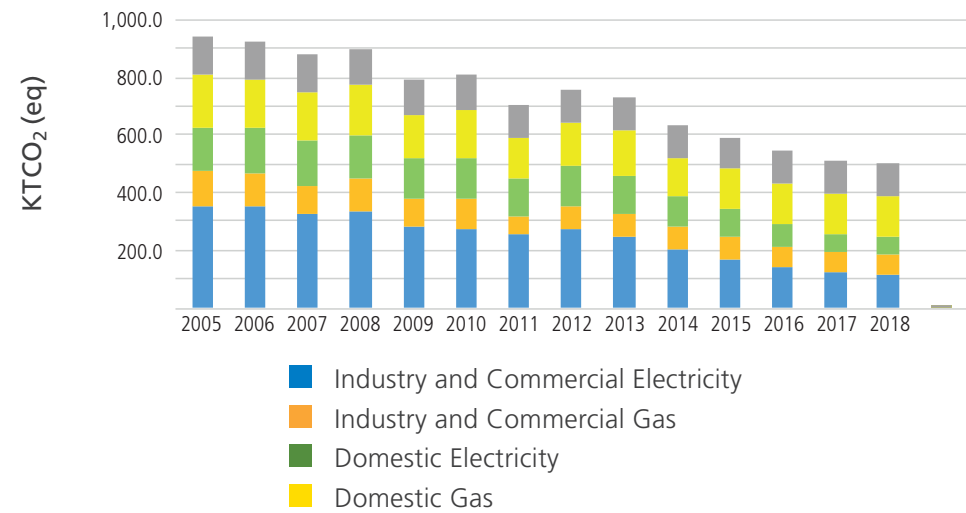
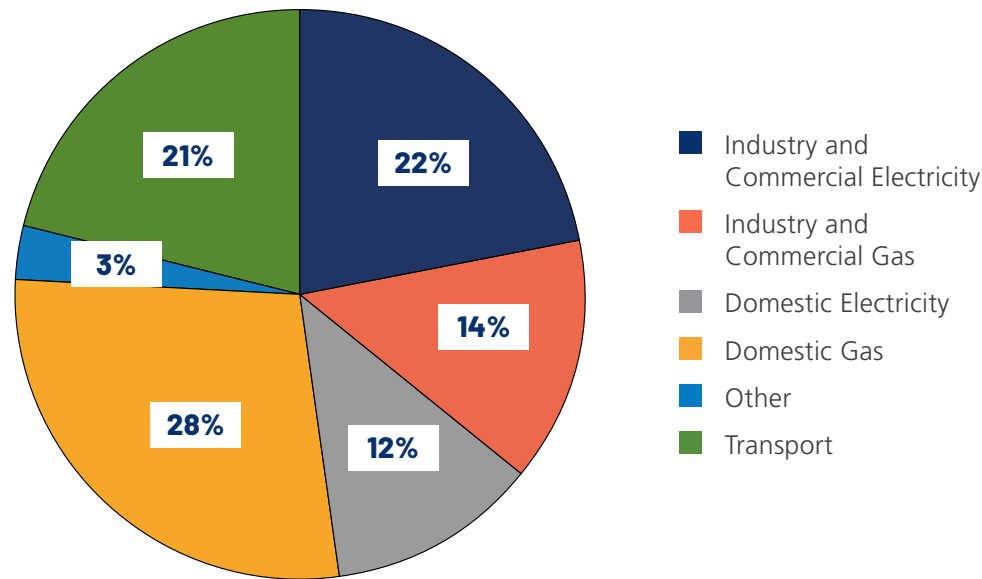


Fig 3: Reading's carbon footprint (Source: UK Government emissions data)

2.5 Reading’s exposure to climate change impacts

The latest information suggests that 2019 was the second hottest summer on record globally with 2016 being the hottest. The last decade (2010-19) was also the hottest on record with each decade since the 1980s being warmer than the last⁶. As the climate warms, projections for the UK show that we are likely to experience milder, wetter winters and hotter, drier summers, along with an increasing frequency and intensity of extremes:

- Hot summers will become more common – the chance of a summer as hot as 2018, one of the hottest on record, has already increased from less than 10% to between 10-25% in any one year, and is expected to be around 50% by mid-century
- The 2018 heatwave saw Reading reach a high of 32.9°C with no rainfall for 30 consecutive days
- Variability in rainfall is increasing so while we can generally expect wetter winters there will be some dry winters too, increasing the challenge of water resource planning
- Summer rainfall is likely to decrease but when it does rain, it may be more intense

These impacts mean that Reading needs to become more resilient to a wider range of conditions than in the past. This is a particular concern for vulnerable people in Reading as, in general terms, the evidence suggests that the more vulnerable in society will be most exposed to the impacts of a changing climate, underlining the need for a just transition to a net zero carbon Reading.

Buildings and energy supply	Business and industry	Health and wellbeing
Overheating in housing Overheating in hospitals, care homes, schools and offices Damage to buildings from extreme weather events Increased water stress Changes required in design, construction and management of buildings Increased flood risk to built environment Disruption of power networks and supply Increased urban heat island effect	Disruption to transport, energy and communications Reduced comfort in buildings with impacts on productivity Risks to supply chains (increasing with distance) Price increases for food and other imported commodities Particular exposure is forecast for food, clothing and electronics sectors	Increase in heat-related illness and death Risk to the elderly and very young with heart and respiratory disease Disrupted access to services and facilities Flooding impacts on wellbeing and livelihoods Air quality impacts exacerbated More positively, there is potential for more outdoor lifestyles
Natural environment	Transport	Water environment
Risk to vulnerable species and habitats Impacts on ‘eco-system services’ enjoyed by people Damage to natural habitats from water stress Impacts of increased drought risk on tree health Risk of invasive/non-native species colonising as suitable ‘climate space’ shifts northwards	Disruption of transport networks impacting on wellbeing and economy Flood risk to infrastructure Heavy rain/high winds leading to more accidents, treefall, road closures and delays Risk of slope/embankment failures Risk of rails buckling, cables sagging and roads softening Discomfort on public transport Overheating/failure of signalling/comms equipment	Further stress on already stressed water resources Increased competition for water between agriculture, industry, households and the needs of the natural environment Drought impacts on water quality and supply Increased flash flood risk

Table 1: Summary of climate risks for key sectors in Reading (Source: Reading Climate Change Adaptation Plan)

6 <https://public.wmo.int/en/media/press-release/wmo-confirms-2019-second-hottest-year-record>

3. VISION AND TARGETS

3.1 Our Vision

Our vision for 2025 is for a Reading which is working rapidly towards:

- Net zero carbon dioxide emissions in the Reading area by 2030
- Being better prepared to deal with the impacts of a changing climate.

We want and need the whole of Reading – residents, communities, businesses and other organisations – to mobilise in pursuit of this vision.

3.2 Our target

Our over-arching target is for Reading – defined as the whole Reading local authority area – to achieve net zero carbon emissions by 2030. This target is based on the sound science outlined by the Intergovernmental Panel on Climate Change, recognising the need for more ambitious and urgent action to avoid catastrophic climate impacts. This recognition manifested itself in the declaration of a climate emergency by Reading Borough Council, on behalf of the wider community, in February 2019, in a resolution which set out the steps necessary to reach the overall goal.

The climate emergency declaration explicitly recognised that the ambitious target of net zero by 2030 ‘can only be achieved with substantial policy changes from national government’, highlighting the need, in particular, for more government support for:

- Retro-fitting private and public housing to low/no carbon standards
- Renewable electricity and heat
- Smart energy technology, local energy storage and connections to local power grids
- Electric vehicle infrastructure and scrappage of older vehicles
- Cycling, walking and public transport
- National recycling standards for industry and supermarkets
- Food waste collection and its use for generation of local, green energy
- Town centre district energy systems to harness heat from local rivers/watercourses
- Widespread deployment of ground-source and air-source heat pumps
- Local authority procurement powers to require the delivery of net zero carbon strategies by suppliers of third party services

As we embark on the journey to a net zero carbon Reading by 2030, reductions in emissions are unlikely to reduce by the same amount every year. If the Government policy changes referred to above are not forthcoming within the lifetime of this strategy (2020-25), then the gains required to reach net zero in the latter part of the decade will obviously need to be greater. However, by calculating what the average annual emissions reduction for Reading would need to be to achieve net zero by 2030, we can give ourselves a benchmark against which progress towards that longer-term goal can be judged. This benchmark does not represent an annual target but will indicate how far we have to go to achieve the goal of net zero by 2030.

3.3 Preparing Reading for the impacts of climate change

The Reading Climate Change Partnership commissioned a first adaptation plan for Reading in February 2020⁷. This is not a detailed action plan, rather, it indicates headline climate impacts for Reading by the end of the century, describing the big picture risks alongside the opportunities for the town to adapt. It sets out key steps for consideration in each category of adaptation and recommends a number of areas of work to advance the development of Reading’s Adaptation Plan.

It is a good introduction to adaptation planning, with very much a Reading focus. Headline climate change impacts for each of the six themes set out in Section 5 of the strategy have been considered in development of the strategy. These include ‘low regret’ and ‘win-win’ options. There is more for us to pick up on and lots of reference information: including links to other Adaptation Planning documents. There is also advice for us to consider in relation to future governance of Adaptation Planning in Reading, which is something we can develop over the next few years.

The Reading Climate Change Adaptation Plan highlights the key stages which we need to progress through in Reading to become more resilient to the impacts of climate change as follows:



Fig 4: Key stages for effective planning to adapt to climate change impacts

⁷ See Reading Climate Change Adaptation Plan, <https://readingcan.org.uk/our-plan/adaptation>

3.4 The benefits of taking action on climate change

The science is clear that taking urgent action to reduce emissions is a practical imperative. But there is also much to be gained from doing so as an integral part of the wider Reading 2050 vision for a ‘smart and sustainable’ Reading⁸. Since the publication of the Stern report in 2006 on the economic impacts of climate change, it has been well understood that the benefits of action to reduce emissions considerably outweigh the costs. While the challenges associated with reaching the net zero by 2030 target in Reading will be significant, so will be the benefits.

Economic	Social	Environmental
Clean and inclusive growth in the local economy	More active, outdoor lifestyles	Improved air quality
Reduced energy costs	Healthier diets	Better access to greenspace and nature
Increased energy security	Warmer, healthier homes	Healthier water
High quality employment	Quieter, safer streets	Improved biodiversity
Reduced congestion	Vulnerable people protected locally and globally	Reduced risk of flooding, heatwaves and extremes
New opportunities in the low carbon economy	More cohesive, engaged communities	Global environment safeguarded for future generations
Economic costs of climate impacts avoided/reduced	Improved physical and mental health	

Table 2: Benefits of taking action on climate change

One of the striking features of the public consultation on the draft Reading Climate Emergency Strategy which took place between March and June 2020 was the large number of positive benefits from taking action on climate change highlighted by those who responded. Residents and organisations who responded to the consultation cited in particular the potential for action on climate change to:

- Improve community cohesion – by bringing communities together, reducing inequalities, encouraging personal responsibility and respect for each other and the environment
- Deliver health benefits – e.g. the physical health benefits associated with more active, less car dependent lifestyles
- Offer global benefits – including reduced climate impacts on poorer countries and reduction in the forces driving mass migration and refugees
- Improve mental health – directly from addressing anxiety about the future and indirectly as a result of healthier lifestyles
- Benefit future generations – reduced risks to younger people who will have to live with the impacts of a changing climate as a result of today’s emissions
- Stimulate new economic/employment opportunities – opportunities to develop new products, services, jobs and skills in the ‘green economy’
- Improve connection with nature – bringing us closer to nature, recognising our place in it, respecting it and recognising the contribution which nature can make to tackling climate challenges.



8 See Reading 2050 Vision, <https://livingreading.co.uk/reading-2050>

Responses to the consultation also highlighted to a lesser extent benefits such as learning/educational opportunities; improved resilience; improved food security; reduced pollution; reduced waste; lower/more stable energy costs; stronger local supply chains; safer streets; improved biodiversity; and improved quality of life.

Taking action on climate change will also deliver on multiple fronts – so called ‘win-win’ solutions, as illustrated in the diagram below.

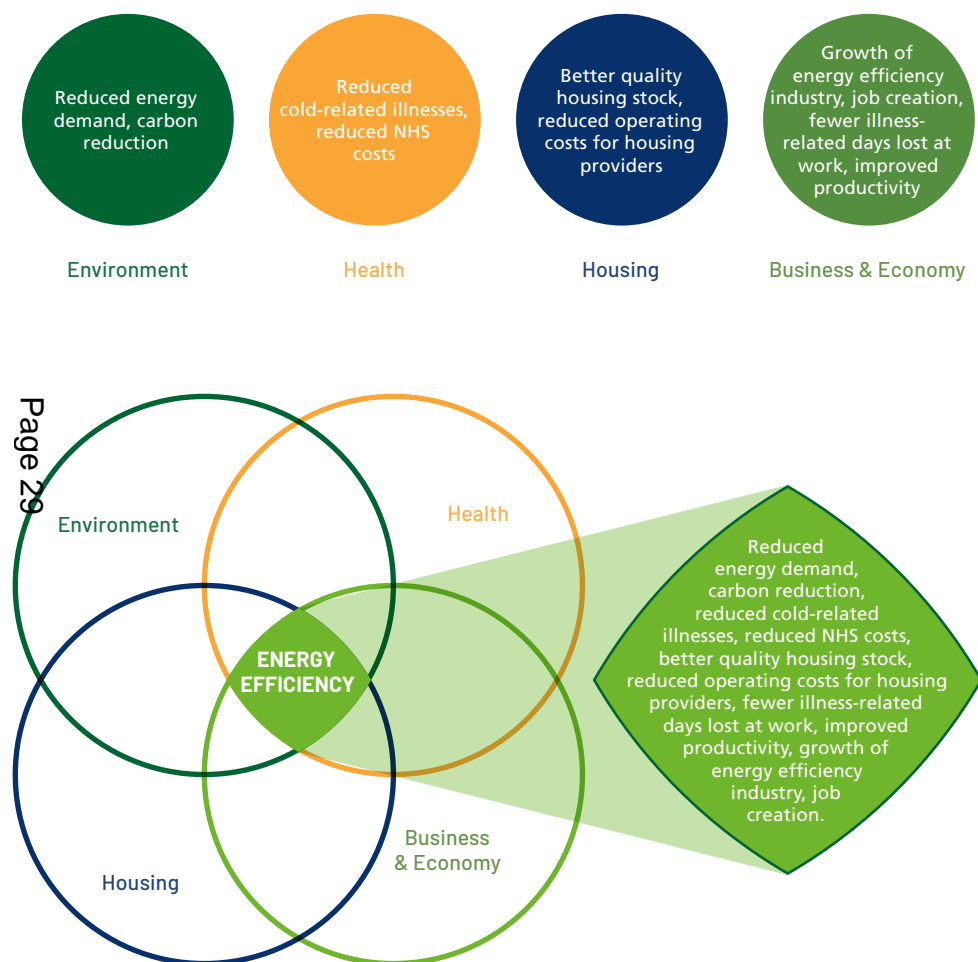


Fig 4: Example of the benefits of improving domestic energy efficiency to different sectors⁹

⁹ <https://www.imperial.ac.uk/media/imperial-college/grantham-institute/public/publications/briefing-papers/Co-benefits-of-climate-change-mitigation-in-the-UK.pdf>

Voices of Reading: A selection of quotes from contributors to our consultation

"A brilliant modern town for our children to be proud to call home"

"Greater social cohesion around this action plan"

"People feel less worried about climate change and good about doing something positive"

"A better future for our children and grandchildren"

"Increased opportunities for technical/IT innovation"

"Increased satisfaction/pride in Reading and recognition of it being a dynamic place to live"

"Reduced impact on other countries"

"The economic benefits in stimulating local green energy technologies"

"Setting a better example to our children about how important the environment is"

4. Reading's Pathway to Net Zero by 2030

4.1 Reading's energy demand and priorities on the pathway to net zero

Achieving the net zero carbon target for Reading will require the removal of virtually all fossil fuels from the energy mix. Key priorities in this regard have been identified as:

- Housing (retrofitting and building new homes and other buildings to low/zero carbon standards): we need to reduce energy demand in domestic and commercial properties via 'deep retrofit' of existing property, and ensure that new property is constructed to net zero standards
- Renewable energy (generating more energy from renewable sources): we need more green energy, particularly from local sources, to ensure that the increased demand for electricity which will arise as we move away from gas is met from low/zero carbon sources – an increase of approximately 10-15 times the current level of renewable energy generation is needed
- Transport (de-carbonising transport systems): we need to reduce traffic and the need to travel by more polluting modes of transport, encourage a switch to low/zero carbon modes of transport, and support the phased replacement of petrol/diesel vehicles with electric vehicles
- Consumption and waste: we need to buy and use less 'stuff', reduce waste generation overall, increase recycling and develop Reading's 'circular economy' in which waste will be treated as a resource
- Nature-based solutions: improved management of greenspace and the water environment in Reading also offers scope to reduce carbon emissions as natural areas can act as 'carbon sinks'. This will also have the advantage of helping the town adapt to the impacts of a changing climate by mitigating flood risk, reducing the urban heat island effect, improving air quality and enhancing health and well-being.

At the other end of the technology spectrum, Reading will need to embrace Smart energy technology to accomodate a radically different pattern of local demand for, and supply of, energy. Significant investment is already going into making Reading a 'Smart and sustainable city' so ensuring this investment supports the net zero objective will be important.

Across all of these priorities, effective communication with and engagement of the wider public will be critical to the success of our efforts to deliver the aims of the strategy. Further details of our plans to achieve this are included in section 6 of the strategy.

4.2 The pathway to net zero in numbers for energy use in the built environment

In order to establish the feasibility of a net zero carbon Reading we modelled the maximum conceivable action possible with existing technology, putting aside cost and other barriers for the purposes of the assessment, to calculate:

- The potential to reduce energy demand with 'deep retrofit' of the borough's housing stock and commercial buildings, plus deployment of LED lighting and AAA+ appliances
- The potential for renewable energy generation using existing or foreseeable technologies and an initial assessment of available opportunities
- The additional electricity demand generated for electrification of heat and transport as we move away from fossil fuels
- The gap which would remain when all the above are taken into account

These calculations are summarised in table 3. Achieving the demand reductions and renewable energy generation shown would require a massive investment beyond the means of any one agency in Reading – to give just one example, the estimated cost of retrofitting domestic property is approximately £30,000 per house. This is one of the areas which Reading's climate emergency declaration therefore highlighted would require national government policy changes and resources to support the achievement of a net zero target.

The key projects set out in this strategy will help to stimulate the shift to zero carbon energy infrastructure in Reading. Key examples are further installation of solar panels, the installation of heat pumps that use renewable energy from rivers and ground source, the establishment of district heating network(s), bringing forward of the adoption of electric vehicles and the necessary local charging facilities and the uptake of housing and business retrofit projects. The initial projects outlined in the strategy will not in themselves be sufficient to deliver the zero carbon aim but they will help to drive a greater uptake in these areas and enable an acceleration to achieve our end goal as we approach 2030.

Total Reading energy demand	+1889 GWh
Total potential demand reduction (gas and electricity)	-933 GWh
Total potential for renewable energy generation	-846 GWh
Additional load for electrified heating and transport	+315 GWh
Gap remaining	424 GWh

Table 3: Potential to reduce Reading's energy demand and generate renewable energy

4.3 Decarbonising power supply and the need for Reading to 'go electric'

Emissions from UK power stations have fallen by 60% since 1990¹⁰ and the 'carbon intensity' of grid energy is expected to fall still further as more low carbon energy is generated. A key part of the pathway to net zero is therefore for Reading to 'go electric': taking advantage of 'greener' grid energy; generating our own energy from local renewable sources; storing this so that it can be used at peak times; and deploying smart technology to make the best use of energy when it is most cost-effective. Reliance on electricity and technology to reach net zero will not be enough: we need to be reducing the amount of energy and other resources we use; drastically cutting the amount of 'stuff' we consume; changing our travel patterns and habits; adopting healthier, lower carbon lifestyles; and working with our natural assets to combat both the causes and impacts of a changing climate. The action plans in Section 5 set out how we can achieve this in more detail.

4.4 Lessons from the COVID-19 pandemic

A few days after the launch of public consultation on this strategy in March 2020, the UK went into a national 'lockdown' as part of the response to the COVID-19 pandemic. Its wide-ranging impacts caused policy-makers across the world to re-assess their priorities and plans to address this and other strategic challenges facing the world today.

It is notable that a global pandemic featured at the top of the UK's national risk register prior to the COVID-19 crisis, yet, when the risk materialised, the country appeared to be poorly prepared in many key respects. Extreme weather events sit not far below a global pandemic on the same risk register. Perhaps the first lesson we can learn from COVID-19 therefore is that we should not be complacent about the chances of worst-case scenarios coming to fruition. This underlines the urgency of our efforts both to reduce the emissions which are causing climate change, and to adapt to climate change impacts.

Many cities have already used the impetus of COVID-19 to re-think 'business as usual' models. For example, we have seen city leaders across the world using the lockdown to implement measures which encourage cycling and walking (for example, London, Milan, Mexico City, Paris, Bogota and New York) and even ambitions to re-design city economies (Amsterdam).

Nevertheless, the lessons to be learnt from COVID-19 and our response to it at individual, community, local and national level are varied and complex. In advice to the Government issued in May 2020, however, the UK Committee on Climate Change successfully distilled them down into six principles which it has highlighted as being key to 'a resilient recovery'. These are:

- Using climate investments to support the economic recovery and jobs
- Leading a shift towards positive long-term behaviours
- Tackling the wider 'resilience deficit' on climate change
- Embedding fairness and the idea of a 'just transition' as a core principle
- Ensuring the recovery does not 'lock-in' greenhouse gas emissions or increase risk
- Strengthening incentives to reduce emissions when considering fiscal changes



¹⁰<https://www.gov.uk/government/collections/energy-and-emissions-projections>

The Committee subsequently elaborated on its advice to Government by setting out five clear investment priorities for the economic recovery:

- Low carbon retrofits and buildings that are fit for the future: the Committee highlighted new employment and reskilling opportunities if Governments support a national plan to renovate buildings and construct new housing to the highest standards of energy and water efficiency, to begin the shift to low carbon heating systems, and to protect against overheating.
- Tree planting, peatland restoration, and green infrastructure: the Committee highlighted the scope for investing in nature, including in towns and cities, to create opportunities for highly-skilled employment, and outcomes that improve people's lives. Such investment, the Committee argued, will bring significant benefits for the climate, biodiversity, air quality, and flood prevention.
- Energy networks must be strengthened for the net zero energy transformation in order to support electrification of transport and heating: the Committee argued that Government has the regulatory tools to bring forward private sector investment and that new hydrogen and carbon capture and storage (CCS) infrastructure will provide a route to establishing new low carbon industries. The Committee also pointed out that fast-tracking electric vehicle charging points will hasten the move towards a full phase out of petrol and diesel cars and vans by 2032 or earlier.
- Infrastructure to make it easy for people to walk, cycle, and work remotely: the Committee called for dedicated safe spaces for walking and cycling, more bike parking and support for shared bikes and e-scooters to help the nation get back to work in a more sustainable way, accompanied by resilient digital technology (5G and fibre broadband).
- Moving towards a circular economy: the Committee called for not only an increase in reuse and recycling rates but also an end to sending biodegradable wastes to landfill within the next five years, specifically highlighting the need to support local authorities to invest in separated waste collections and recycling infrastructure and to create new regional jobs.

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The Committee also spelt out the opportunities to support the transition to a more sustainable economic recovery by investing in the UK's workforce, and in lower-carbon behaviours and innovation via:

- Reskilling and retraining programmes: the Committee set out how the net zero economy will require a net zero workforce, able to install smart low carbon heating systems and to make homes comfortable; and to design, manufacture and use low carbon products and materials.
- Leading a move towards positive behaviours: the Committee argued there is a window for Government to reinforce the 'climate-positive' behaviours that have emerged during the lockdown, including increased remote working, cycling and walking.
- Targeted science and innovation funding: the Committee called for a kick-start for research and innovation in low carbon and adaptation technologies which will facilitate the changes needed in the decades ahead and build UK competitive advantage.

The Reading Climate Change Partnership endorses the advice offered by the Committee on Climate Change and has sought to ensure that these insights have informed the final version of this Strategy.

Achieving the UK's climate goals and rebuilding the economy fit naturally together. Each makes the other possible. Success demands that we do both. The actions recommended by the CCC will deliver an improved economy, better public health, improved biodiversity and access to nature, cleaner air, more comfortable homes and highly productive and rewarding employment.

**Committee on Climate Change, Reducing UK Emissions:
Progress Report to Parliament¹¹**

¹¹<https://www.theccc.org.uk/publication/reducing-uk-emissions-2020-progress-report-to-parliament/>

5. Delivering the Strategy

5.1 The role of the Reading Climate Change Partnership and other partners

In developing the Reading Climate Emergency Strategy, the Reading Climate Change Partnership has engaged a wide range of organisations, sectors and groups.

The Partnership Board sits at the head of a wider Reading Climate Action Network which includes an extensive range of voluntary sector bodies, community groups and individuals, between which there is a strong track record of effective collaboration. A new Business Climate Action Network was also recently established to inspire and support action in the commercial sector. As such there is a long-standing tradition in Reading of partnership working across climate change, sustainability, health, nature, the arts and beyond.

The Partnership produced Reading's first climate change strategy in 2008 and a second in 2013. While the Partnership has a role in co-ordinating strategy development, advocating for implementation and monitoring progress, it is not in itself a delivery body – the responsibility for delivery sits with the partners who are identified in the strategy as owning individual actions.

5.2 Resources for strategy implementation

Some of the actions included in the action plans below, and the scale and pace at which they can be progressed, will be subject to the prevailing national policy context and/or the provision of additional powers and resources by central government, as made clear in Reading's climate emergency declaration. This does not mean we are not committed to them – on the contrary, we see them as key to achieving the net zero target – it is simply to reflect the reality that the delivery partners in Reading alone cannot solve some of the bigger challenges we face.

The resources of the Reading Climate Change Partnership are limited, and it will be vital for all delivery partners to bring forward plans which enable the actions set out in the strategy to be delivered and to set these in the context of their own organisational plans. This process is underway, with several key partners in Reading already committing to make their own organisations net zero carbon by 2030 and/or setting out the investment needed to achieve this goal. For example:

- Reading Borough Council has developed a new Carbon Plan for the period 2020-25, designed to deliver an 85% reduction in the Council's emissions by 2025 as a key milestone en route to net zero by 2030. In the two full financial years since the climate emergency was declared (2019/20 and 2020/21), the Council committed c.£34 million to capital projects in transport, waste and energy which will contribute directly to carbon reduction.



- The University of Reading has reduced its carbon footprint by 40% since 2008/09 through a programme of investment which has delivered £30 million in cumulative revenue savings since 2011. In 2019 alone over 500 individual solar panels were installed at University campuses.
- Thames Water has committed to making its operations net zero carbon by 2030 and invested in a shift towards self-generated renewable energy from sewage, wind and solar power which currently meet over 20% of its electricity needs. The company recently began sourcing 100% of its remaining electricity needs from external renewable energy generation, supplied via a Power Purchase Agreement with a 'green tariff' energy supplier.
- The Environment Agency has set itself the aim of becoming a net zero organisation by 2030. It will seek to meet the goal by reducing the emissions of its own activities and supply chain by 45%, with the remaining emissions addressed through tree planting or other measures. The Agency will also explore whether it could become an absolute zero organisation – eliminating all carbon emissions from its own activities and supply chain – by 2050.

These are just a few examples, but we need every business and organisation in Reading to take responsibility for its own carbon footprint, and make the investment necessary to reduce it to zero. The action plans in this strategy highlight some of the ways we aim to support them in doing that.

As well as new resources, new financing mechanisms are likely to be needed to support the transition to a net zero carbon Reading. The extent of the change under way was indicated in the announcement by the Bank of England in December 2019 that banks and insurers would be subject to 'stress tests' based on their exposure to climate related risk. This could require them to hold more capital to cover the risks they are bearing, potentially making insurance and mortgages harder to get and more expensive for assets which are exposed to higher climate risks.

As pressure for companies and pensions funds to divest from fossil fuels increases, and economies seek to rebuild after COVID-19, so finance could become available for a 'green' recovery and 'clean' growth. This illustrates how Reading's economy and businesses need to be aware of, and prepared to take advantage of, the economic opportunity which will arise from the transition to a low carbon economy.

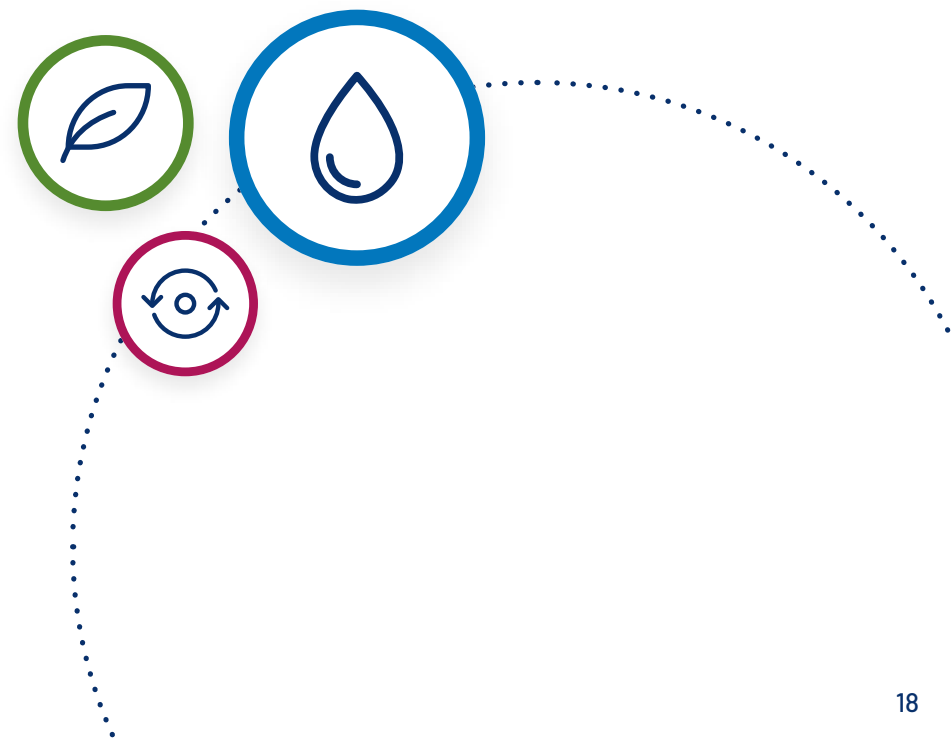
Structural changes are essential, but delivering the strategy requires changes in attitude and behaviours by all residents in the town as well as by the commercial sector. The strategy looks for changes in purchasing, management of private space, optimising water use and modes of transport. The network of voluntary and community groups in Reading will help bring about changes and disseminate the messages.

5.3 Action Plans for key themes

The rest of this section of the Strategy consists of six action plans developed for key themes for action on climate change. The action plans set out:

- The title and intention of the action identified
- A description of the main activities envisaged and links with other themes
- Targets, measures or milestones so we can track progress and take corrective action
- Target completion dates, usually within the 5-year lifetime of the Strategy
- Details of partners to be involved in delivery

The action plans were developed by working groups which included a range of stakeholders. Invitations to join working groups were made at public events and no-one who wanted to be involved was excluded. The action plans were revised to take account of comments made during the public consultation process. We are conscious, however, that not everyone who we would like to have been engaged in the process has been engaged thus far. We would therefore welcome new partners coming forward to help deliver the actions set out below, or otherwise commit themselves to new action which they are prepared to take to work towards the net zero carbon objective.



ENERGY AND LOW CARBON DEVELOPMENT ACTION PLAN



Buildings and climate change

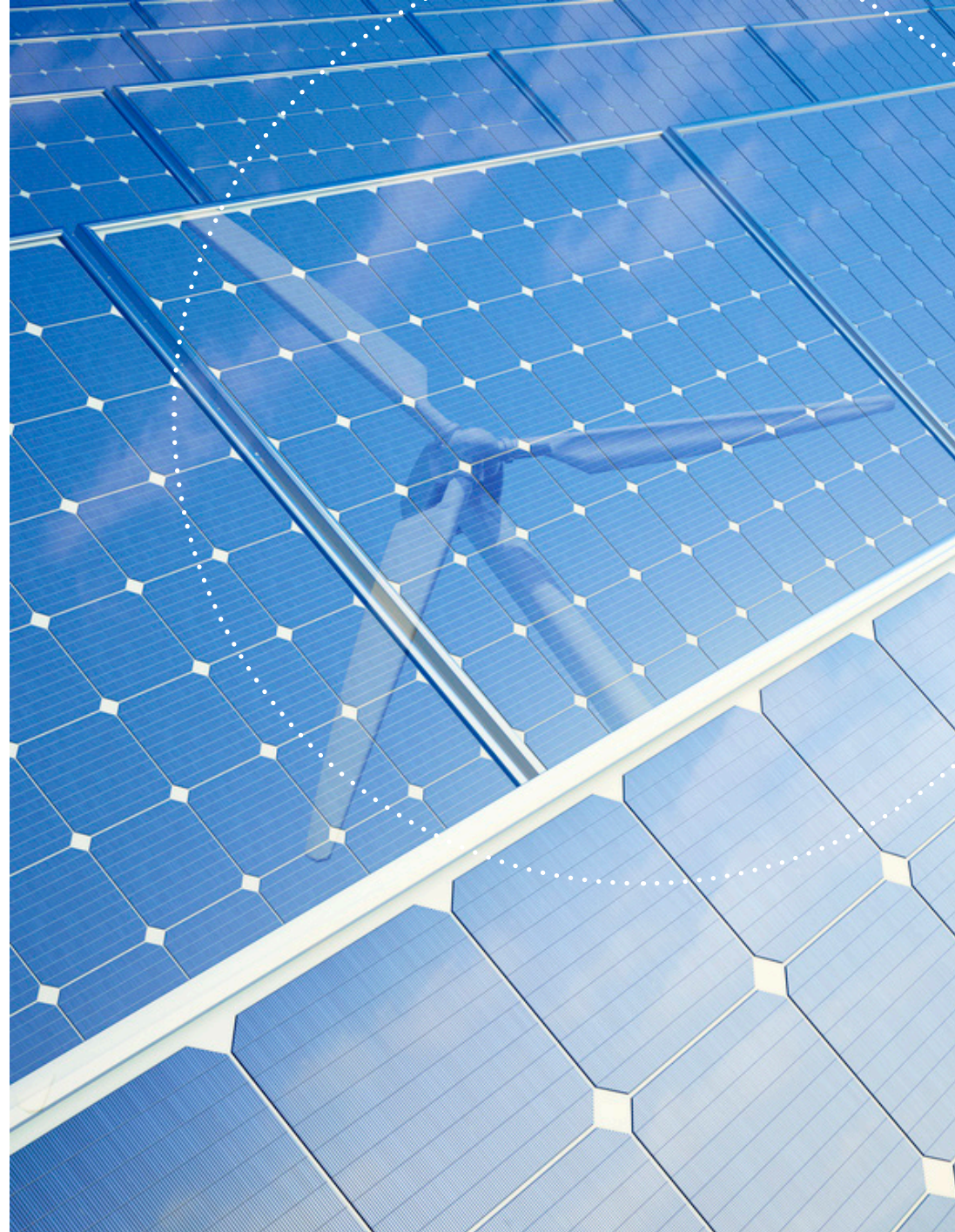
At UK level, emissions from energy consumption in buildings represent around 68% of the total¹², with 35% coming from industrial/commercial buildings and 33% from domestic properties, with the remainder from transport. In Reading, the equivalent figure is 79%, with an almost equal split between industrial/commercial and domestic. The vast majority of building emissions come from electricity (where they are typically generated at power stations) and gas (which is piped to homes and businesses directly). Reducing emissions from buildings requires insulating homes and businesses, using energy efficient devices and appliances and generating more renewable energy.

Gas, oil, petrol and diesel are fossil fuels and therefore have a high carbon footprint. Whilst electricity generated using fossil fuels has even higher carbon emissions, recent reductions in the 'carbon intensity' of electricity in the UK and the planned continuation of this through further investment in renewable energy generation makes electrification of heat and transport a key strategy for the UK.^{13,14}

Significant additional demands for electricity must be mitigated by reducing wasted energy and through harnessing local renewable energy resources.

The UK's energy infrastructure is exposed to the impacts of a changing climate and Reading is no exception. In the coming decades we can expect:

- Disruption of power networks impacting on wellbeing and the local economy
- Flood risk to energy infrastructure and networks
- Heavy rain/high winds leading to more impacts on networks such as through pylons and local power networks
- Risk of high loads and changing power use patterns from hot and/or unusual weather
- Increased discomfort in buildings where air conditioning fails
- Urban heat island effects becoming exacerbated by more air conditioning, generating and exhausting heat
- More positively, a warmer climate could lead to lower heating requirements during the winter months which could reduce carbon emissions associated with this source



¹²https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/790626/2018-provisional-emissions-statistics-report.pdf

¹³https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/766109/decarbonising-heating.pdf

¹⁴https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/739460/road-to-zero.pdf

Progress to date

Reading has had a lot of new development which means that more efficient buildings are being constructed as building regulations and planning requirements drive higher standards:

- Lighting in many newer properties and streetlighting are now LED, which use much less power
- Newer buildings have been built to higher standards than the national regulations through local planning standards
- Renewable energy generation has been a priority for the Council which owns and operates over 7500 solar panels in the town
- The Council has upgraded its council housing, which represents over 10% of the town's housing, to a good energy efficiency standard
- Early adoption of 'smart city' technology in Reading has potential to support efforts to reduce emissions in future

Reading has seen a significant reduction in emissions associated with buildings since 2005, with data from 2018 showing a 52% reduction in per capita emissions.

Priorities on the pathway to net zero for energy and low carbon development

To achieve the target of a net zero carbon Reading by 2030 will require:

- Substantial reductions in heat loss from buildings through a major retrofit programme for Reading
- The electrification of transport and heat (as opposed to fossil fuels)
- An order of magnitude increase in renewable heat and electricity generation
- The use of smart technologies such as batteries and varied time of power use

Reducing demand is the first step in achieving a zero carbon future. New developments are built to a higher standard but it will be important to reach the zero carbon standards set out in Reading's Local Plan. While ensuring that new development does not add to Reading's carbon footprint is vital, perhaps more important is the retrofitting of existing buildings that were built to a lower standard but which will remain in place for a long time to come. Many of these have solid walls and may be protected heritage buildings with high heat losses and are more difficult to insulate. Such buildings can cause social and health risks for those who struggle to afford to heat them and who may find themselves in 'fuel poverty' as a result.

Reading has thus far installed solar panels on only a fraction of its roof spaces. With solar PV (photo-voltaic) panels costing significantly less than a few years ago, Reading should quickly move to install solar panels onto viable roof spaces.

Reading must quickly build its local skills base and bring forward a step change in retrofitting buildings. In order to retrofit all the homes in Reading, a total of 17 houses per day would need to be completed. Modelling work shows that if housing could be lifted to an EPC 'B' rating, there would still be a significant amount of clean energy generation needed to bring the gap between that and zero carbon. Previous schemes have shown that householders and business owners will be unlikely to act without significant incentives and availability of finance, so this must be made available locally, especially for those least able to afford it, if Reading is to succeed.

Reading must also increase its local capacity to install energy reduction and renewable energy solutions and stimulate the market in low carbon products and services. There is a need to work closely with the energy companies to plan a low carbon energy future. Significant infrastructure projects need to develop quickly to enable a net zero carbon target to be achieved by 2030 through a new 'energy master plan' for Reading. This plan will map out a technology pathway and seek to establish financially sustainable ways to deliver the energy infrastructure needed which ensures energy is affordable. Supporting the local economy through local ownership of energy assets and local supply chain development are also important. Major town centre developments will need to be serviced by, and will form part of, a district green energy network which accesses local renewable heat reserves which are likely to predominantly be from the ground and local water courses as these are the most prevalent source of renewable heat in Reading. Clusters of houses and businesses will benefit from collective renewable heat and electricity generation equipment.

The choices we all make about how we use power will be a critical success factor in meeting the ambition for a net zero carbon Reading by 2030. Technology can help us and the smart city approaches that will allow us to easily control the way we utilise our local renewable energy to power our transport and buildings will also be vital. Minimising energy losses through distribution and transmission will be a further priority.

Key adaptation priorities for energy and the built environment

As we make an energy transition we need to consider the impacts of climate change and how they will change our needs in terms of buildings and transport and our newly developing local energy infrastructure. We will need to work carefully with our local environment and use it with care to help us meet our low carbon energy needs. New risks to the existing power distribution system will also need to be carefully managed. Risks relating to overheating in Reading's property also needs to be carefully considered.

Energy and Low Carbon Development Action Plan: our aim is that by 2025 Reading is taking urgent action to decarbonise its energy networks, increase energy efficiency and create renewable energy capacity. It has concrete plans to achieve sufficient demand reduction to enable its annual energy needs to be 100% covered by its renewable generation, taking account of the increased load from transport and heat becoming electrically powered.

NB: Some of the actions included in the action plans below, and the scale and pace at which they can be progressed, will be subject to the prevailing national policy context and/or the provision of additional powers and resources by central government, as made clear in Reading's climate emergency declaration (see section 3.2 above).

Sub Category: Energy Policy

Action name	Description	Targets and measure/milestone	Target completion date	Delivery partners
E1 An Energy Master Plan for Reading <div>Page 37</div>	» Develop an Energy Master Plan for Reading	Develop stakeholder group	Q4 2020	Scottish and Southern Energy (District Network Operator) Southern Gas Networks Ovo Energy Octopus Energy Local renewable energy suppliers Spirit Solar Reading Energy Strategy Forum
		Establish evidence base and technology pathway	Q2 2021	
		Develop cross sector implementation plan	Q2 2021	
E2 Energy Efficiency in New development	Introduce high standards of energy efficiency for new development » Large commercial to BREEAM 'excellent' standard with best methods employed » Larger housing developments built to zero carbon standards » Ensure standards post construction with best methods employed » Build new council housing to the highest standards. Net zero carbon and exceeding 50% reduction on building regulations » Consider the embodied energy in building materials in publicly commissioned projects	% achieving standard	Ongoing	Reading Borough Council
		Schemes supported through offset		
E3 Energy Reduction through Retrofit Programme	Establish a housing retrofit programme in Reading which is compelling for property owners: » Apply for funding » Compile high quality information on stock and energy efficiency levels of local housing » Identify partners » Zero carbon offset » Investigate green/community bonds and other finance innovation » Commercial retrofit scheme	Apply MHCLG Local Authority Delivery funding Sept to Dec 20 » Stock condition survey Oct 20 » Supply chain development work TBC » Collect Section 106 funds for zero carbon development » Work with LEP and Reading UK to establish companies to pilot – scheme TBC	2020/21	Reading Borough Council English Heritage South East Centre for the Built Environment University of Reading

Action name	Description	Targets and measure/milestone	Target completion date	Delivery partners
E4 Retrofit Design	Establish standards for climate-conscious retrofit (not exhaustive): <ul style="list-style-type: none"> » Develop/utilise standards for different property types <ul style="list-style-type: none"> - Heritage sympathetic measures e.g. Heritage England Energy efficiency guide - Consider design guides such as Passivhaus Energyphit - Use PAS 2035 where possible - Design for climate risks (e.g. overheating/flooding) - Consider embodied energy in material using LETI guide https://www.leti.london/ (also design guide) - Introduce water saving especially hot water » Develop public communication and resources for retrofit Links: Water, Business	Identify pilot projects which target specific solutions for different building types locally	2020 to 2022	Reading Borough Council English Heritage SECBE University of Reading
E5 Behaviours that save energy in homes and businesses and schools Page 38	» Develop approaches to reduce energy consumption in homes, businesses and schools » Create information resources » Develop targeted behaviour-change campaign Links: Community, Business, schools	Publish resources	2020/21	National/local agencies and organisations materials and resources Reading Borough Council Reading Climate Change Partnership Brighter Futures
		Targeted campaign	2021/2022	
E6 Best in class buildings	» Develop high standard projects in different sectors, to reduce emissions Links: Business	Publish reports on buildings	Q2 2021	Housing providers
E7 Reducing fuel poverty	» Continue to provide Winter Watch service » Support new schemes targeting retrofitting for those most in need » Build referral mechanisms for those suffering from poor health and/or fuel poverty Links: Community, Health	Reading Housing Strategy	2020/21	Reading Borough Council Other agencies (Health, Citizen Advice etc.)
		Design new approaches	2020/22	
		Establish cross-referral programme	Ongoing	
E8 Leadership and Influence	» Consider legal options for establishing standards that go higher than regulations » Buy sustainable LCGES (Low Carbon Goods and Environmental Services) from local suppliers to build supply chains where rules allow » Use social value KPIs » Develop in-house skills for retrofit of Council housing	Consider trials nationally	Q3 2020	Reading Borough Council Reading UK Thames Valley Berkshire Local Enterprise Partnership
		Project to work with public and private sector to build local supply chain	2021 to 2023	
E9 Reading Borough Council Carbon Plan 2020 to 2025	Reading Borough Council to set out plan to achieve emissions reductions and renewable energy generation targets	Published plan to 2025 and meet its milestones	Q4 2020	Reading Borough Council

Action name	Description	Targets and measure/milestone	Target completion date	Delivery partners
E10 Publish new housing strategy to incorporate energy retrofit	New strategy to include C-rating and where possible B rating for all Council and rental accommodation in borough by 2030 Link: Business	i) New housing strategy	2020/21	Reading Borough Council
		ii) Implementation	2021 onwards	

Sub category: Renewable Energy – Heat

Action name	Description	Targets and measure/milestone	Target completion date	Delivery partners
E11 Renewable Heat Ground Source Page 32	Work with developers to maximise district energy solutions in line with Local Plan policies on decentralised energy: » Establish District Heating » Investigate the potential of rivers, ground and aquifers in Reading for renewable heat » Implement heat pump schemes » Develop skills of local installers Link: Business	Complete studies	Q2 2020	Reading Borough Council Department for Business, Energy and Industrial Strategy University of Reading
		Implement scheme	Q2 2022 (dependant on developers)	
E12 Renewable Heat Air Source	Consider different types of heat pumps and develop skills of local installers Link: Business	Report on Air Source Heat Pumps	Q3 2020	Reading Borough Council
		Identify installers	Q3 2020	
		Conduct trials	Q2 2021	
E13 Renewable Heat Anaerobic Digestion	» Anaerobic digestion for food waste streams » Consider biogas generation for buses and inject to grid Links: Resources, Transport	Report informing waste strategy	Q2 2021	University of Reading
E14 Hydrogen	Investigate renewably sourced hydrogen fuel cell technology in particular for use in Heavy Commercial Vehicles (HCVs) Links: Business, Transport	Identify schemes/trials	Date TBC	Reading Borough Council Reading UK Reading Transport Southern Gas Networks
	Investigate hydrogen injection to gas network	Discussions with SGN		

Sub category: Renewable Energy – Electricity

Action name	Description	Targets and measure/milestone	Target completion date	Delivery partners
E15 Solar PV (commercial)	Establish large commercial roof-based schemes that service base loads in large commercial buildings Link: Business	Establish scheme	2020/22	Reading Borough Council University of Reading Reading UK TVBLEP SE Energy Hub
		Achieve high proportion of suitable roofs	2025	
E16 Solar PV (domestic)	Establish phase 1 of domestic scheme using bulk purchase to reduce price	Develop scheme	2020	RCCP Tenants groups local companies
		Scheme up and running	2022	
E17 Solar PV (Public buildings including schools)	Install solar panels onto public buildings including housing, community buildings, schools, hospitals, leisure centres, police and fire authorities	Council target 50% of electricity from renewables (mainly solar)	2025	RBC NHS Police Fire authorities
E18 Renewable Energy Hydro	To bring forward Hydro-electric power schemes powered by Reading's rivers To publicise sustainable energy through educational programme Link: Water	Planning approval secured already, investment and commence scheme	2020/21	Reading Hydro
		Launch educational programme, tours etc	2022	
E19 Investment in Renewable Energy at Regional level	Consider investment in land and sites in and outside of Reading that have potential to supply renewable electricity to Reading Investigate suitable land with (potential) planning and connections for renewable energy generation	Initial report by	Q2 2021	Reading Borough Council

Sub category: Electric Powered Transport. See also Transport Theme Action Plan

Action name	Description	Targets and measure/milestone	Target completion date	Delivery partners
E20 Energy strategy for Bus Depot and surrounding area	» Establish potential for solar – depot, car park canopies, Civitas School » Investigate Riding Sunbeams option for direct connection to railway network	Report	2020/21	Reading Borough Council Reading Community Energy Society

Sub category: Electricity Storage, Management and Metering – Smart Cities Solutions

Action name	Description	Targets and measure/milestone	Target completion date	Delivery partners
E21 Battery Storage	<ul style="list-style-type: none"> » Grid side battery storage by Local Energy company (District Network Operator) » Behind meter storage on domestic and commercial sites » Specialist large scale storage facilities third party 	Establish energy strategy group	2020	SSE Public Sector Private sector
		Develop energy strategy draft	Q2 2021	
E22 Smart Meters	<ul style="list-style-type: none"> » Roll out of smart meters in households » Identify 'Internet of Things' solutions linked to smart meters » Explore linkages to 'time of use' tariffs (different rates for different times of day) linked to IoT devices and 'vehicle to grid' (vehicles powering buildings) » Establish trials with vehicles/buildings and local network Links: Business, Transport	Energy company schedules/targets	2020 to 2024	Energy Companies University of Reading RCCP
E23 Internet of Things projects	<ul style="list-style-type: none"> » Introduction of in-building solutions for projects that use the cloud and smart response approaches including machine learning to optimise energy flows 	Smart Cities projects	2020 to 2022	Reading Borough Council University of Reading
E24 Heat storage	<ul style="list-style-type: none"> » Investigate the potential of natural and engineering based heat storage systems in urban context for stabilising heat supply and balancing summer storage and winter loads 	Set up energy working group	TBC	TBC
E25 Carbon intensity research	<ul style="list-style-type: none"> » Work with University and or third parties to develop accurate real time assessment of carbon intensity of electricity and optimise energy flows to minimise carbon emissions 	Set up energy working group	TBC	Reading Borough Council University of Reading

TRANSPORT THEME ACTION PLAN



Transport and climate change

At UK level, emissions from road transport represent around 33% of the total¹⁵. In Reading, the equivalent figure is just over 20%. As well as carbon emissions, pollutants from vehicles are a major source of air quality problems in the town. Taking action to reduce emissions from transport therefore offers scope to improve public health, reduce congestion, stimulate low carbon sectors of the local economy and improve the quality of life for Reading residents.

The COVID-19 'lockdown' had an immediate and a profound impact on travel behaviour, and although the long-term impacts on future travel demand and mode share are difficult to predict, some changes, such as more working from home, seem set to endure. Our Transport theme action plan was developed before the 'lockdown' and therefore our baselines and targets may need to be reviewed as the longer-term impact of the crisis become better understood. Reading Borough Council has, however, set ambitious targets for walking and cycling and is implementing a large number of active travel measures, including segregated facilities, in an attempt to ensure that positive changes in travel habits, such as more walking and cycling, are sustained. The ongoing success of our active travel targets will, however, be partly subject to Central Government funding to implement measures on a permanent basis.

Whatever happens to future transport demand, the UK's transport infrastructure remains exposed to climate impacts and Reading is no exception. In the coming decades we can expect:

- Disruption of transport networks impacting on wellbeing and the local economy
- Flood risk to transport infrastructure and access to key transport hubs
- Heavy rain/high winds leading to more accidents, treefall, road closures and delays
- Risk of slope/embankment failures due to heavy rain
- Risk of rails buckling, cables sagging and roads softening in extreme heat
- Increased discomfort on public transport
- Overheating/failure of signalling and communications equipment

These risks underline the importance of continuing to reduce the need to travel by more polluting modes of travel in the first place. More positively, a warmer climate may enable more outdoor lifestyles, making 'active' forms of travel – walking and cycling – more attractive.



Progress to date

Investment in the transport network in recent years means that Reading currently has enjoyed a good level of sustainable transport provision in terms of:

- Public transport with good rail links, an extensive bus network with a modern, clean fleet using bio-gas fuel, fast-track public transport priority routes and the initial phases of an effective series of park and ride schemes
- Provision for active, sustainable modes of travel via an extended cycle network and a pedestrian and cycle bridge over the Thames
- Early adoption of 'smart city' technology which has potential to support efforts to reduce emissions in future

Reading has also bucked the national trend for bus use – while bus use went down 0.7% across England in 2018/19, in Reading it rose by 4.2%. The figures mean bus use in Reading has increased by 40% since 2011/12. However, despite these advantages Reading still experiences high levels of traffic and congestion, with carbon emissions and air quality problems arising from this. While transport related emissions temporarily reduced during the peak of the COVID-19 pandemic, action is required to make these reductions permanent, particularly as use of public transport has been reduced at the same time.

Priorities on the pathway to net zero for transport

To achieve the target of a net zero carbon Reading by 2030 will require:

- Substantial reductions in the need to travel: to be achieved through careful planning to locate employment, services and leisure facilities close to where people live, and to integrate opportunities for sustainable living, working and shopping in new developments
- A significant switch from cars to more sustainable modes of travel: requiring a shift from the most polluting modes of transport (cars, HGVs) to less polluting modes (public transport, walking and cycling) and from motorised transport to the 'active' modes of travel (walking and cycling)
- Electrification of the vehicle fleet: even after reducing demand and encouraging modal shift, there will still be a significant need for motorised transport. As electricity supply is decarbonised, replacing fossil fuel-based vehicles with electric vehicles will be a key stage on the journey to a net zero carbon Reading

The key mechanism through which Reading's transport future is shaped is Reading's Local Transport Plan, produced by Reading Borough Council. A new Local Transport Plan, entitled the Reading Transport Strategy 2036, has been prepared and was the subject of public consultation process during 2020.

Ensuring that the new transport strategy supports the ambition of achieving net zero carbon by 2030 will therefore be important. This is a statutory process and as such needs to go through a formal process before the ambitions set out in the action plan below can be adopted – however, Reading Borough Council has already made a commitment in the climate emergency declaration that the 'forthcoming revision to the Local Transport Plan... reflect the urgency of this resolution'.

Beyond this, the choices we all make about how we get around will be a critical success factor in meeting the ambition for a net zero carbon Reading by 2030. This means we may all need to make difficult decisions about flying less, driving less, and using public transport, walking or cycling for essential journeys. If we do so, we will be fitter and healthier, our air will be cleaner, our public transport services will be better supported and more frequent, and the high cost of maintaining our roads should fall, freeing up resources for other much needed public services and/or further improving sustainable transport options.

Key adaptation issues for transport

As we make these changes, we need to prepare for increased disruption and damage to transport systems and infrastructure arising from climate impacts. As with mitigation, the best way to increase our resilience to these impacts will be to reduce the need to travel in the first place, with technology and digital access to information and services playing a key role in this. Beyond that, transport planners and operators need to consider individually and collectively how to make their infrastructure and services more resilient to the inevitable impacts of a changing climate.

Transport Theme Action Plan: Our aim is for a low carbon future for transport in which emissions are cut by reducing the need to travel by more polluting modes of transport, shifting more journeys to sustainable modes of transport and supporting the transition from petrol/diesel to electric vehicles. In the process, we will improve health and wellbeing, while making transport infrastructure more resilient to climate impacts.

NB: Some of the actions included in the action plans below, and the scale and pace at which they can be progressed, will be subject to the prevailing national policy context and/or the provision of additional powers and resources by central government, as made clear in Reading's climate emergency declaration (see section 3.2 above).

Sub category: Reducing need and demand for travel, promoting walking and cycling

Action name	Description	Targets and measure/milestone (NB numerical targets subject to confirmation in final Local Transport Plan still in development at time of publication)	Target completion date	Delivery partners
T1 Reduce the need to travel through well planned development	Ensure that services, leisure facilities and employment opportunities are located close to where people live and/or in locations easy to access by sustainable transport services via planning policy and decisions Links: Business, Community, Health, Energy and LCD	Reduction in transport-related emissions across Reading Implementation of Reading Local Plan policies	2025	Reading Borough Council Developers
T2 Develop demand management measures to reduce traffic and encourage shift from high carbon transport	Consider introduction of individual or combined policies via the forthcoming Local Transport Plan such as: » Workplace Parking Levy » Clean Air Zone » Alternative demand management measures Links: Business, Community, Health	Initiate consultation	Q2 2020	Reading Borough Council Local Businesses Neighbouring Authorities Department for Transport Reading BID
		Develop business case for preferred option(s)	2021	
		Implement preferred measure(s)	2022-23	
T3 Enhance provision for Pedestrians and cyclists to encourage low carbon travel choices	Provide space for walking and cycling improvements, including segregation and road reallocation (where feasible), surface improvements, crossing priority, safety improvements and increased cycle parking hubs/facilities as set out in Local Cycling and Walking Infrastructure Plan Links: Health	Increase proportion of adults who walk at least 3 times per week from 30.8% (2019) to 40% by 2025 (en route to a 60% target by 2036) Increase proportion of adults who cycle at least 3 times per week from 5.1% (2019) to 9% by 2025 (en route to a 15% target by 2036)	2025 as part of the Local Transport Plan targets through to 2036	Reading Borough Council Local User Groups Thames Valley Police
T4 Enhance Town Centre and Local Centre Public Space to improve air quality and reduce carbon use	Improve the pedestrian experience in Central Reading and local centres by providing better access to key destinations for walking, cycling and bus passengers Green up the local environment to encourage use and enjoyment of local facilities Links: Business, Community, Health	Increase active travel mode share of trips to/from Reading town centre from 32% (2017-2019 avg) to 34% by 2025 (en route to a 38% target by 2036) Increase public transport trips to/from Reading town centre from 44.5% mode share (2017-2019 avg) to 45.5% mode share per day by 2025 (en route to a 48% target by 2036) Decrease car trips mode share to/from Reading town centre from 23.5% (2017-2019 avg) to 20.3% mode share by 2025 per day (en route to a 14% target by 2036)	2025 as part of the Local Transport Plan targets through to 2036	Reading Borough Council Transport Operators Reading BID Local User Groups Developers Businesses Residents

Action name	Description	Targets and measure/milestone (NB numerical targets subject to confirmation in final Local Transport Plan still in development at time of publication)	Target completion date	Delivery partners
T5 Promote Sustainable Travel to School and other education sites to encourage low carbon travel choices	Establish dedicated and safe walking and cycling routes for each school. Reduce the danger and pollution from 'the school run' Roll-out Play Streets/School Streets programme – supporting local communities and schools who want to organise street closures	Increased shift from private car use to active travel Improved health and fitness of schoolchildren Improved air quality Trial school street closures at selected schools before a wider roll-out across the borough	2025 as part of the Local Transport Plan targets through to 2036	Reading Borough Council School Communities Bikeability Provider Thames Valley Police Local User Groups Residents University of Reading
T6 Improve major and radial routes to promote switch to sustainable modes of travel	Improve the transport options on main corridors and radial routes including A4, A33, A327, A329, A4074, A4155 and the Inner Distribution Road. Make space to encourage changes in travel choice to low/zero carbon modes Links: Business, Community, Education	As per T3 and T4	2025 as part of the Local Transport Plan targets through to 2036	Reading Borough Council Neighbouring Authorities TVB LEP Transport Operators Local User Groups Residents Businesses
T7 Improve Quality Bus Corridors	Improve branded local routes with faster, more reliable and more frequent services, changing people's travel habits away from dependency on cars especially for commuter and school journeys Links: Business, Community, Education	Increase bus journeys per year by 9% from 22.5M (2019) to 24.6M (en route to a target increase of 25% by 2036)	2025 as part of the Local Transport Plan targets through to 2036	Reading Borough Council Transport Operators Businesses Residents Schools Health Services Department for Transport
T8 Establish Fast-Track Public Transport Corridors	Improve speed and reliability of key public transport routes through establishment of key Fast-Track Public Transport (FTPT) corridors on strategic routes (including south, west, east and north)	As per T7	2025	Reading Borough Council Wokingham BC West Berkshire BC Oxfordshire CC Transport Operators

Action name	Description	Targets and measure/milestone (NB numerical targets subject to confirmation in final Local Transport Plan still in development at time of publication)	Target completion date	Delivery partners
T9 Extend Park and Ride provision to encourage car users to change onto low carbon alternatives to access Reading	Provision of new and expanded Park & Rides to intercept traffic on main corridors into Reading Links: Business	Increased annual number of P&R trips to/from Reading by 25% from 550,000 trips in 2019 to 690,000 trips by 2025	2025	Reading Borough Council Transport Operators Royal Berks Hospital Businesses Wokingham Borough Council Thames Valley Park W Berks BC Oxfordshire Borough Council TVB LEP Businesses
		New P&R at Thames Valley Park opened	2020	
		Winnersh Triangle P&R expanded	2021	
		New P&R sites identified	2025	
T10 Deliver Railway Station upgrades to encourage car users to use low carbon alternatives to access Reading	Improved access to railway stations at Reading, Reading West and Tilehurst by walking, cycling and public transport. Improved customer experience (including fully accessible platforms), interchange and public space enhancements, including new and improved cycle parking hubs and facilities	Increase public transport trips to/from Reading town centre from 44.5% mode share (2017-2019 avg) to 45.5% mode share per day by 2025 (en route to a 48% target by 2036)	2025 as part of the Local Transport Plan targets through to 2036	Reading Borough Council Network Rail Great Western Railway TVB LEP
T11 Open Reading Green Park Railway Station	Provide new station for access to Green Park and South Reading and interchange with integrated bus services Links: Business	New station completed and served by GWR services Interchange open with provision of integrated bus services	2021	Reading Borough Council Network Rail Great Western Railway Transport Operators TVB LEP Department for Transport Businesses
T12 Implement traffic management schemes to support low carbon travel choices	Provide effective management of the existing network to meet changing mobility demands of Reading Provide safe roads and pavements including crossings and reduce crossing conflicts and interruptions to the flow of walking and cycling	As per T4	2025 as part of the Local Transport Plan targets through to 2036	Reading Borough Council Transport Operators Emergency Services

Sub category: Reducing emissions from the vehicle fleet and using new technology

Action name	Description	Targets and measure/milestone (NB numerical targets subject to confirmation in final Local Transport Plan still in development at time of publication)	Target completion date	Delivery partners
T13 Develop a zero emission vehicle strategy for the Borough	<ul style="list-style-type: none"> » Study suitable locations » Identify potential network constraints » Assess potential demand 	Strategy development to follow Local Transport Plan	2020/21	Reading Borough Council
T14 Decarbonise the Council Vehicle Fleet	<ul style="list-style-type: none"> » Increase electric charging points at Council buildings » Consider phased replacement of Council vehicles with electric powered units wherever possible » Charging points to be installed at depot that can allow vehicles to power buildings » Carbon Plan will set targets for reduction in diesel/petrol 	RBC Carbon Plan Feasibility report, Business case, Budget approval* (subject to above)	Q4 2020 2022-2024	Reading Borough Council
T15 Increase Public Electric Vehicle Charging Points Page 47	Install electric charging points in <ul style="list-style-type: none"> » Council car parks » Leisure centres » Lamp columns (trials) » Business premises » Taxi ranks Links: Business, Transport	First car park project All suitable car parks First leisure centre All leisure centres	2020/21 2023 2020/21 2022	Reading Borough Council Reading UK Taxi and Private Hire Associations Leisure provider
T16 Increase zero emission vehicles uptake	Work with vehicle sales outlets in Reading to increase zero emission vehicle uptake Links: Business	Zero emission vehicle uptake compared to national benchmarks	Ongoing	Reading UK Reading Climate Action Network
T17 Establish and promote eBikes	Identify charging locations for electrically assisted pedal cycles and investigate potential for e-bike hire scheme	Develop strategy for location	TBC	Reading Borough Council Site owners
T18 Planning policy for EV charging in new properties	Monitor number of additional charging units installed in new properties Links: Business	Monitor additional units in line with planning policy	Ongoing	Reading Borough Council Developers
T19 Reduce emissions from the Taxi Fleet	Require all taxis and private hire vehicles to be electric or hybrid by 2030	Improved air quality, reduced carbon emissions	Beyond 2025	Reading Borough Council Taxi and Private Hire Associations

Action name	Description	Targets and measure/milestone (NB numerical targets subject to confirmation in final Local Transport Plan still in development at time of publication)	Target completion date	Delivery partners
T19A Reduce emissions and improve efficiency of freight movements	Work with the freight operators and businesses to encourage use of cleaner vehicle technology, consolidate deliveries, encourage 'out of hours' deliveries during quieter times and trial e-cargo bikes and freight consolidation parks where feasible	Improved air quality, reduced carbon emissions and reduced congestion	Beyond 2025	Reading Borough Council Road Haulage Association Logistics UK Freight operators and local businesses
T20 Improve Electric Vehicle Charging infrastructure	Develop and implement policy for appropriate provision of electric vehicle charging points across the borough	Provision of EV charging installed as per the policy to accommodate anticipated increases in demand	2022	Reading Borough Council Transport Operators Third Party Landowners
T21 Deploy Intelligent Transport Systems to encourage change to low carbon transport	Use technology and real-time data to improve safety, efficiency environmental performance and journey experience of users of the transport system, particularly at signal-controlled junctions	As per T4	2025 as part of the Local Transport Plan targets through to 2036	Reading Borough Council Transport Operators
T22 Embrace Smart Solutions to reduce use of carbon in transport	Smarter Working – maximise benefits of flexible working patterns including working from home (to cut transport demand) and more flexible working hours to encourage commuter travel outside of the peak periods Smart City Initiatives – use different types of electronic Internet of Things (IoT) sensors to collect data and then use insights gained to manage assets, resources and services efficiently Implement Micromobility and Mobility-as-a-Service (MaaS) schemes as they evolve to facilitate shift from personally-owned modes of transportation towards mobility provided as a service, combining public and private transportation services through a unified gateway that manages the trip, which users can pay for with a single account Links: Business	Decrease car trips mode share to/from Reading town centre from 23.5% (2017-2019 avg) to 20.3% mode share by 2025 per day (en route to a 14% target by 2036 Reduced need for car ownership across the borough	2025 as part of the Local Transport Plan targets through to 2036	Reading Borough Council Employers Transport Operators Emergency Services Highways England Motoring Organisations Department for Transport Car Clubs

Action name	Description	Targets and measure/milestone (NB numerical targets subject to confirmation in final Local Transport Plan still in development at time of publication)	Target completion date	Delivery partners
T23a (General): Develop education, initiatives, promotion and advice to encourage low carbon travel choices	Undertake marketing activities promoting sustainable transport, including national events such as Bike Week, Clean Air Day, In Town Without My Car Day, and organising local events and activities Enable access to any adults who want to undertake Bikeability training. Provide courses through schools as well as to individuals and to groups Provide up-to-date travel information to enable people to make informed travel choices including open data apps, real time passenger information and roadside Messaging Signs Develop programme of training, education and initiatives to promote sustainable transport usage Links: Education, Health	As per T4	2025 as part of the Local Transport Plan targets through to 2036	Reading Borough Council Stakeholders School Communities Bikeability Provider Thames Valley Police Local User Groups Residents
T23b (Schools): Develop education, initiatives, promotion and advice to encourage low carbon travel choices in school	Roll-out Mode-shift STARS accreditation scheme to all schools in Reading to recognise efforts encouraging sustainable travel Implement School Streets, working with the schools to provide temporary restriction on motorised traffic at school drop-off and pick-up times resulting in a safer, healthier and a more pleasant environment Enable access to anybody who want to undertake Bikeability training. Provide courses through schools as well as to individuals and to groups Links: Education, Health	Achieve 50% of all schools accredited to at least Bronze by 2025 Improvements to air quality and road safety as well as encouraging healthier lifestyles	2025	Reading Borough Council School Communities
T24 Research and plan for Carbon Reduction and Climate Change Adaptation	Participate in research programmes investigating the carbon footprint related to transport and the air quality impact of transport Design climate adaptation into the planning and operation of transport network to improve resilience to climate change impacts Links: Adaptation	Research completed and recommendations made Climate Change Adaptation key consideration in planning of all schemes	2022 2025 and beyond	Reading Borough Council Transport operators University of Reading Department for Transport Other Stakeholders

RESOURCES THEME ACTION PLAN



Most people around the world now live in urban areas with towns and cities being the major drivers of carbon emissions. But cities and towns, like Reading, are also where people meet, mingle and innovate, and are therefore central to developing positive responses to climate change.

Resources, consumption and climate change

Whether it's a car or a sandwich, everything we buy, consume and discard has a carbon footprint. This may be direct, for example the energy used by electrical appliances, or indirect, such as the energy consumed in mining raw materials, shipping parts and products, fuelling production and processing items discarded as waste. At the other end of a product's life, direct carbon impacts include the energy used to collect, transport and process waste or greenhouse gases released by the decomposition of biodegradable waste in landfill sites, while indirect carbon impacts include the need to mine more scarce virgin materials.

In our consumer society, we have become accustomed to buying whatever we need, whenever we want it, and discarding or replacing it on a whim. These patterns of consumption are well established and deeply embedded into society; indeed, our entire economic model relies on them. At the same time the consequences of unbridled consumerism are becoming increasingly difficult to ignore. There is plenty of very visible evidence of how the products we consume, and the way we use and discard them, cause deforestation, habitat destruction, pollution and increased emissions.

The COVID-19 pandemic has also influenced our waste habits for better and for worse: it was reported that, as people were taking time to pre-plan shopping and be more creative with ingredients, food waste dropped during the lockdown¹⁶. But the need to wear masks in public and concerns about hygiene also led to a resurgence in single-use products and associated litter.

So, the question for this theme is what can we do now to ensure that succeeding generations have the opportunity to live well whilst using fewer scarce resources and creating less waste?



¹⁶<https://wrap.org.uk/content/citizens-and-food-waste-lockdown-eases>

Progress to date

- Reading, through its Re3 partnership, has developed excellent facilities for recycling plastic, paper, card, metals and glass. Recycling is, however, well below the national average and too many recycling bins are diverted to general waste due to contamination
- Collection infrastructure is being improved so that people are encouraged to recycle more with domestic food waste collections to start in 2021
- Reading has reduced the proportion of domestic waste which is sent to landfill to 17% (April-Sept 2020 figures) and a large proportion of domestic general waste is incinerated with energy captured to generate electricity
- Refill Reading was launched by Transition Town Reading in 2016 to help independent shops overcome the costs of a reusable cup scheme and has since been expanded to promote other opportunities to Refill
- In 2019 Caversham became the first community in Reading to start working towards Surfers Against Sewage Plastic Free Community accreditation
- In 2019 Reading Borough Council passed a motion committing the Council to eliminate wherever possible single use plastic from Council premises and commissioned services¹⁷.

Priorities on the pathway to net zero

The top priorities for the resources theme over the coming five years are:

- To reduce the amount we throw away, including by encouraging more initiatives that offer people the option to rent, share and reuse as alternatives to single-use and disposability
- To recycle more of what we discard, using the infrastructure that already exists and making targeted interventions to reduce contamination and address gaps in provision
- To strategically identify products and systems that can be redesigned to make it easier to keep materials circulating at their highest value – developing Reading's 'circular economy'

The long-term goal is for Reading to become a 'zero waste', circular economy. To achieve near 'zero waste' to landfill or incineration, it is necessary to establish markets based on the value of materials that would otherwise be considered as waste. If we cannot reduce or reuse materials before they become waste, the first step is to get better at separating what can be recycled. As well as a continued focus on moving towards zero waste in the household collection waste stream, attention also needs to be given to commercial waste, including construction and other industrial processes.

Even after reducing waste and getting better at reusing and recycling what is left, there will still be some residual waste. The challenge then becomes to redesign the

systems of production and use to avoid these materials reaching the waste stream. For all materials, the aim has to be to keep them circulating for as long as possible at the highest possible quality and value. Applying this principle opens up innovations like peer-to-peer lending and sharing, as well as repair and reuse.

The action plan includes three strands that focus on experimenting at a system level, with actions designed to support behaviour change. These are chosen as iconic, high profile initiatives that have the potential to inspire and galvanise wider engagement.

- Plastic Free Reading: with the support of the Council and businesses there is an opportunity to encourage others to follow Caversham's lead in working towards plastic-free community status, possibly leading to Plastic Free Reading accreditation for the town as a whole
- Climate friendly food: food is estimated to account for around 20% of UK emissions. Food waste needs to be minimised and food waste residues returned to the soil locally where possible. Eating local, seasonal produce will reduce emissions from production and transport. And there is growing recognition that moving to a more plant-based diet can both reduce emissions and improve health. While it is beyond the remit of this action plan to dictate what people eat, we can support and enable people to make informed choices about diet
- Zero Waste Festivals: a growing number of festivals have made sustainability a central principle. Fields of abandoned tents stick in the public memory but there is much good practice within Reading's wide range of festivals. We plan to work with local festival organisers to explore opportunities to reduce waste. Reading Festival has already set itself the target of ending the sale of single-use plastic at its festival by 2021. But we are inviting them to go further and set a goal to become zero waste within five years. The aspiration of this theme is for Reading to become known as a town that champions zero waste at festivals

Underpinning this theme is the need for effective engagement and communication. The action plan therefore includes a number of initiatives that focus on the provision of information, education and skills to support people to make informed and responsible purchasing and consumption choices.

Key adaptation issues for production, consumption and waste

Historic carbon emissions are already having an effect on our climate. For Reading this means adapting to the possibility of disruption to global supply chains, with the manufacture and supply of food, clothes and electronic equipment particularly exposed. The best way to increase our resilience to these impacts is to move away from the 'take-make-waste' approach to production and towards a more circular one, where resources are valued and circulated for as long as possible. There are also opportunities for innovation and business growth, with recognised growth in an "adaptation economy" in the UK and worldwide, as new products and services come to market in response to adaptation-related opportunities.

¹⁷<http://news.reading.gov.uk/reading-council-to-go-plastic-free/>

Resources Theme Action Plan: our aim for 2025 is that Reading is on track to become a zero waste town by 2030, is actively innovating to find new ways of using resources more efficiently and thereby minimising our contribution to climate change. To facilitate this transition, by 2025 it is easy for everybody to access information and services to help them find ways to reduce waste and repurpose things they no longer need.

NB: Some of the actions included in the action plans below, and the scale and pace at which they can be progressed, will be subject to the prevailing national policy context and/or the provision of additional powers and resources by central government, as made clear in Reading's climate emergency declaration (see section 3.2 above).

Sub category: Reduce – questioning our need to generate waste in the first place

Action name	Description	Targets and measure/milestone	Target completion date	Delivery partners
R1 Food: Reducing domestic food waste	» Establish baseline and set meaningful targets for reducing domestic food waste » Adopt the Love Food, Hate Waste toolkit from WRAP and drive behaviour change through communications Links: Business	Baseline research completed by March 2021	Q1 2021	Reading Borough Council (lead) University of Reading (research)
		Communications programme in place, targets set and tracked annually from July 2021	Q3 2021 onwards	
R2 Food: Reducing commercial food waste	» Establish baseline and set meaningful targets for reducing commercial food waste » Create a programme combining reduction measures, well-managed charity donations and best outcome waste processing » Collaborative programme by and for business Links: Community, Business, Education	Baseline research completed by September 2021	Q3 2021	RCAN (lead) Reading UK CIC University of Reading (research) Connect Reading Waste/recycling contractors Reading Borough Council Commercial parties
		Communications programme in place, targets set and tracked annually from January 2022	Q1 2022	
		Commercial food waste collection from TBC	TBC	
R3 Food: Reducing food waste in schools	» Establish baseline and set meaningful targets for reducing food waste in schools » Create a programme combining reduction measures, well-managed charity donations and best outcome waste processing » Commercial food waste collection to be introduced by Reading BC for schools Links: Community, Business, Education	Baseline research completed by September 2021	Q3 2021	RCAN (lead) University of Reading (research) Reading Borough Council Commercial waste partners
		Communications programme in place, targets set and tracked annually from January 2022	Q1 2022	
		Commercial food waste collection from TBC	TBC	

Action name	Description	Targets and measure/milestone	Target completion date	Delivery partners
R4 Other: Clothing	<ul style="list-style-type: none"> » Establish baseline and set meaningful targets for reducing the amount of clothing wasted » Introduce programmes to divert unwanted clothing from general waste through various means including donation, swapping, sharing, leasing/rental, etc. » Investigate the potential for emulating the WearNext project pioneered in New York Links: Business, Community	Establish baseline and identify areas for improvement Publish programme of targeted interventions	Q1 2021 Q4 2021	Reading Circular Economy Club (lead) Reading UK CIC Connect Reading Re3 (baseline data)
R5 Other: Resource efficiency	<ul style="list-style-type: none"> » Publish easy to access and understand best practice guidance covering all common household purchases (in and out of home) » Focus on extended life, zero waste, energy efficiency » Signpost established labels and standards, advisory bodies, etc. » Establish communications programme to reinforce behaviour change Links: Communications and Engagement	Guidance published and communications programme launched	Q2 2021	ReadingCAN (lead) Re3 Reading UK CIC

Sub category: Reuse – keeping products in use for longer; delaying the point at which they need to be recycled

Action name	Description	Targets and measure/milestone	Target completion date	Delivery partners
R6 Reuse and repair: Establish a definitive information source on reuse and repair	<ul style="list-style-type: none"> » Compile and maintain a comprehensive directory of reuse and repair resources in Reading, and encourage new ones, especially through social enterprise » Include information resources like ifixit and services like Reading Repair Café and Reading Bicycle Kitchen » Establish communications programme to reinforce behaviour change Links: Community	Directory published, update process and communications programme in place by April 2021	Q2 2021	ReadingCAN (lead) Organisations offering reuse and repair services Reading UK CIC Transition Towns Re3
R7 Sharing, renting and swapping	<ul style="list-style-type: none"> » Compile and maintain a comprehensive directory of sharing, renting and swapping resources, and encourage new ones » Include peer to peer systems like Freegle, rental and “as a service” systems, charity outlets and platform services like Too Good to Go Links: Community	Directory published, update process and communications programme in place	Q2 2021	ReadingCAN (lead) Organisations offering sharing, rental and swapping services Transition Towns

Sub category: Recycle – seeing what we end up throwing away as still having value, and doing our best to retain and recover that value at its highest level

Action name	Description	Targets and measure/milestone	Target completion date	Delivery partners
R8 Food: Kerbside food waste recycling	<ul style="list-style-type: none"> » Maximise take-up of kerbside food waste recycling when introduced » Appropriate annual targets to be set in conjunction with Reading BC/ Re3 » Communications programme required to drive behaviour change Links: Community, Education	Increase Reading's recycling rate by 7% through food waste collection	Q4 2021	Reading Borough Council Re3
R9 Other: Glass	<ul style="list-style-type: none"> » Establish a baseline and set meaningful targets for increasing glass collection » Improve access to glass recycling facilities for residents » Focus on areas with high density housing/low car ownership » Work with hospitality industry to introduce colour segregated glass collection Links: Community, Business	Establish baseline and identify areas for improvement Publish plan to introduce improved provision for residents and businesses, including targets for collection	Q1 2021 2023	Reading Borough Council (Domestic lead) Reading UK CIC (Business lead) UoR (research) Waste/recycling contractors
R10 Other: Kerbside recycling	<ul style="list-style-type: none"> » Maximise kerbside collection and minimise contamination » Increase awareness of what can go in kerbside recycling » Implement communications programme to encourage and improve confidence in recycling » Set annual targets to improve collection/contamination rates Links: Community	Increase in Reading's overall recycling rate by 4% by October 2021 arising from efforts to reduce contamination	Q4 2021	Reading Borough Council Re3

Sub category: Rethink and redesign – Looking for opportunities to redesign products and systems to avoid waste, making Reading circular

Action name	Description	Targets and measure/milestone	Target completion date	Delivery partners
R11 Plastics: Plastic-Free Reading	<ul style="list-style-type: none"> » Continued implementation of single-use plastic-free pledge by RBC and sharing the learning » Encouraging adoption of the Surfers Against Sewage Plastic-Free Community methodology and tools by communities, businesses and schools » Replicate Plastic Free Caversham concept to achieve the critical mass of groups, schools and businesses required to secure Plastic Free accreditation for Reading Links: Business, Community, Education	Reading BC to share own lessons in becoming plastic free Caversham to secure accreditation as a Plastic Free Community, with first schools and businesses accredited Plastic-Free Community accreditation gained by at least one other Reading community Set annual targets for the number/percentage of schools and businesses to be Plastic-Free	Q3 2021 Q3 2021 Q4 2021 Q3 2022	Reading Borough Council (Council and schools lead) Reading UK CIC (business lead) Reading Business CAN

Action name	Description	Targets and measure/milestone	Target completion date	Delivery partners
R12 Food: Climate-friendly diet	» Publish reliable and authoritative information on how to eat more sustainably » Focus on dietary choices, sustainable sourcing, child nutrition » Guidance for caterers as well as individuals Links: Community, Business, Health, Nature, Education	Best practice identified and guidance prepared	Q1 2021	University of Reading Subject-matter specialists (e.g. breastfeeding, food growing networks)
		Communications programme developed and campaign launched	Q3 2021	
R13 Plastics: Zero waste and circular festivals	» Work with Reading's festival organisers to develop resource-stewardship systems to reduce waste at festival venues (and campsites, where appropriate) » Explore different approaches to engage and encourage organisers, vendors and festival goers in addressing waste » Establish baseline and set meaningful targets for reducing waste and maximising recovery of resources » Engage with Reading Festival to understand the challenge of campsite waste and explore opportunities to reduce unrecyclable tent waste » Connect with and draw on the experiences of Green Deal Circular Festivals and other sustainable events bodies (A Greener Festival, Julie's Bicycle, Vision 2025) Links: Business	Work with ReadingUK CIC local festival organisers group to understand the challenges and share best practice	Q3 2020	Reading Circular Economy Club (lead) Reading UK CIC University of Reading (research) Waste/recycling contractors Festival organisers
		Collect baseline data	Q1 2021	
		Co-produce programme of knowledge sharing and local collaboration	Q2 2021	
		All of Reading's festivals to have a statement or page describing their approach to sustainability on their website	Q3 2021	
		Zero tents to be left behind on site at Reading Festival	Q3 2025	
R14 Circular economy: Establish Reading Circular Economy Club to grow the Circular Economy in Reading	» Establish Reading Circular Economy Club – part of international network of Circular Economy Clubs » Peer to peer information exchange and networking for businesses/organisations » Develop resource exchange to create closed resource loops, reducing use of virgin resources and finding new uses for waste products Links: Business	Reading Circular Economy Club set up	Complete	Reading Circular Economy Club (lead) Reading CAN/Reading Business CAN Re3
		Regular scheduled meetings and events established and publicised	Q4 2020	
		Resources exchange set up and operational	Q2 2021	

WATER THEME ACTION PLAN



Climate change and the water environment

Our changing climate is expected to lead to more extreme weather events for Reading. These will include more intense rainfall and floods, heat-waves and droughts. The impacts are predicted to increase over time, with winters getting warmer and wetter, while summers become hotter and drier.

Reading is located in one of the most water stressed parts of the country, with a similar water availability per head to some communities in the Middle East. Approximately 80% of Reading's water is abstracted from the River Kennet, at the Fobney Water Treatment works. The chalk aquifer under the Berkshire Downs is the source of most of the water in the Kennet. Fortunately this gives Reading a good level of resilience for its water supply. However, we are vulnerable: with the potential for more intense future droughts – coupled with the expected growth of the town – we need to make sure we manage our use of water carefully.

As with other sectors, COVID-19 has had a huge impact on the water sector. We have seen a big increase in peak water usage, and a dramatic shift in the balance between domestic and commercial water consumption. Some of these changes, including more working from home, are likely to be permanent. Hence it will be a priority for us to understand how much more vulnerable Reading's water supply is, and it will make delivery of our actions even more important so we can prepare for the added impacts of the changing climate.

The risk of flooding will increase for Reading, particularly from the River Thames and from surface water, as a result of more intense storms. We have a large area of land at risk of flooding which is predicted to get worse due to climate change: increasing the frequency, duration and depth of floods; and increasing the area of land at risk. This needs to be taken into account when considering new development, including buildings. A Strategic Flood Risk Assessment (SFRA) has already been undertaken which describes and analyses how Reading is affected by flood risk and the nature of that risk. The flood plain plays an important role in protecting the built-up area of Reading and the surrounding area as it accommodates floodwater. This has been recognised in Reading's adopted Local Plan and reflected within its policies to ensure that: the capacity of the floodplain is not reduced; flood flow paths are not obstructed; and that inappropriate development in the flood-plain is avoided.



Progress to date

We have a strong community of water industry experts in Reading, who will help guide us towards our vision and targets. These include:

- Thames Water (who have their head office in Reading) supply all of our water, and most of our drainage, and have a lot of information and expertise to share
- The Environment Agency regulate our water environment and will help us to understand what the environmental limits are, as climate change increases our drought and flood risk

There are also a number of policies in the Reading Local Plan, adopted in November 2019, which are designed to encourage more efficient use of water and prepare for the impacts described above.

Priorities on the pathway to net zero for emissions related to water use

A big focus for the water theme will be on learning over the next 5 years, as we help everyone to become more 'water aware'. The need to save water is primarily an adaptation issue. However, approximately 1% of the UK's total greenhouse gas emissions are associated with pumping and treating water, so being more water efficient will make a notable difference. Of greater significance is the energy involved in heating water in our homes. This can be a very large part of the carbon footprint of a house. Measures to tackle this are picked up in the Energy and Low Carbon Development theme.

Key adaptation issues for the water environment

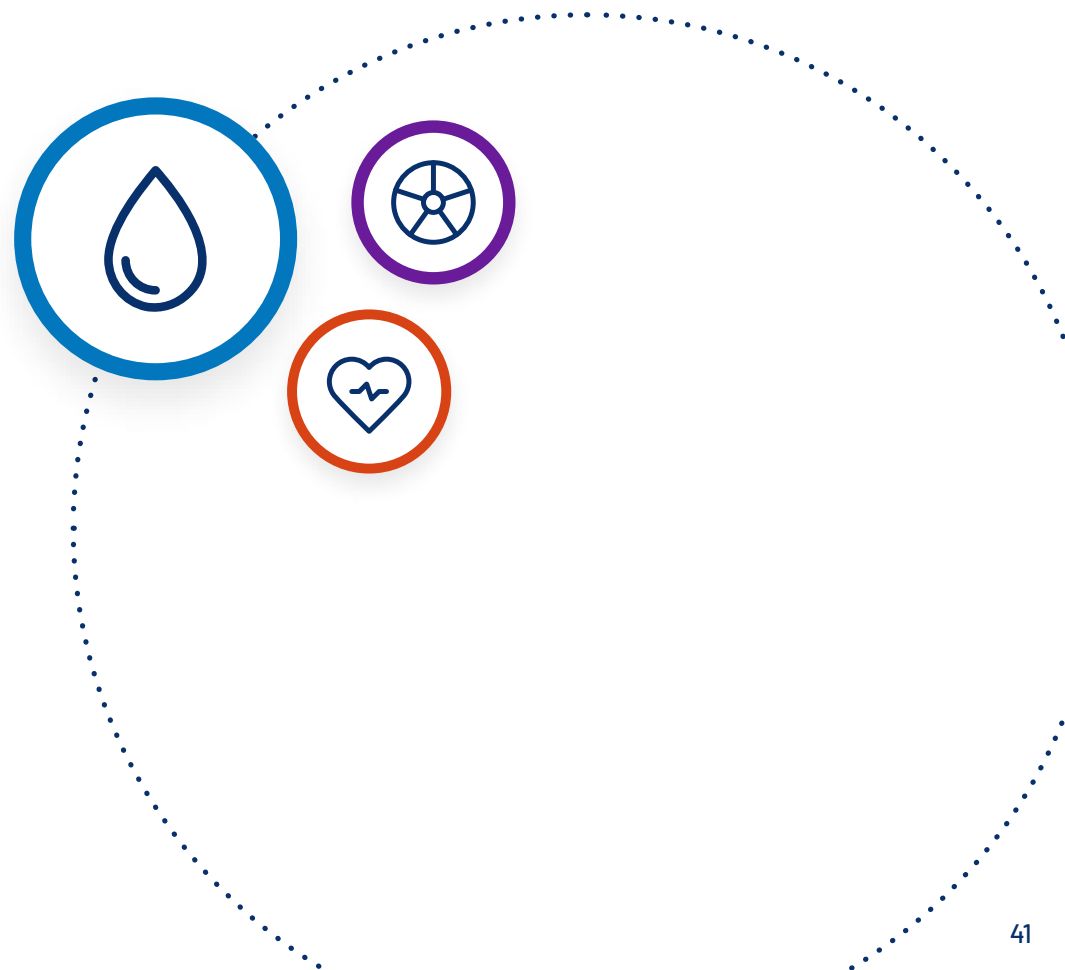
Reducing our water consumption is a vital response to the increasing risk from drought with the changing climate. Ambitious national targets on water efficiency are anticipated within the next year. Rather than set additional targets on water we intend to develop these, during the life of this strategy, into robust 2050 targets for Reading. These will aim to make us the most water efficient town in the country. Following on from this, we intend to:

- Contact Defra and volunteer Reading as a case study town to benchmark this new 2050 target
- Work with council planners and Thames Water to develop our already good Local Plan policies to explore the concept of 'Water Neutrality' in new development
- Research into water reuse, and help us understand our potential to help reduce future water demand
- Support Thames Water's future rollout of smart water meters on household and commercial properties

Our other key priority for Reading is to improve flood resilience:

- Through education we will help people and businesses prepare. By 2025 we want everyone at risk of flooding in Reading to be signed-up to the EA Flood Warning service
- We will advise on and encourage the reshaping of the town: breaking-up hard surfaces and encouraging green roofs, natural flood management measures and sustainable drainage systems to slow the flow of storm water. This will give it a chance to irrigate rather than flood the town

We also want to improve understanding about where our water goes so that we can minimise the impacts of waste water on the environment.



Water Theme Action Plan: Reading will aim to become the most water aware and water efficient town in the UK, going beyond national targets. We will achieve this by developing and implementing a dedicated communications and education strategy and delivering a range of water saving improvements in Reading's homes and businesses. Climate change will also increase the risk of flooding: significantly from the River Thames and from urban storm water. We will help residents and businesses understand these risks and to get ready for them.

NB: Some of the actions included in the action plans below, and the scale and pace at which they can be progressed, will be subject to the prevailing national policy context and/or the provision of additional powers and resources by central government, as made clear in Reading's climate emergency declaration (see section 3.2 above).

Sub category: Water supply and water conservation

Action name	Description	Targets and measure/milestone	Target completion date	Delivery partners
W1 Educate the public about Reading's water situation	» Share and explain our 2050 target and how this compares to current consumption, e.g.: - Domestic water consumption by activity - Info on non-domestic water consumption - Where our water comes from » Develop Comms Strategy for engaging public, including schools Links: Education, Community, Business, Communication and Engagement	Available material published on RCAN website	2020	Thames Water
		New material prepared and published	2021	
W2 Educate households about their water consumption and the need to save water	» Share information on the risks of drought and importance of water conservation » Provide tips and information on how to save water in the home and garden » Develop and implement Comms Strategy for engaging households Links: Energy & LCD, Nature, Communication and Engagement	Information resource compiled and published	2021	Thames Water
		Comms programme underway	2025	
W3 Educate businesses about water use, efficiency benefits, and dry weather preparedness/response	» Share the Thames Water Drought Plan » Signpost relevant information and case studies from reputable sources » Create industry-specific advice and case studies » Run a drought exercise with Local Resilience Forum (LRF), partners and businesses » Communicate the Environment Agency 'incident management' approach to drought Links: Business, Energy and LCD, Communication and Engagement	Information resource compiled and published	2020	Thames Water (lead) Environment Agency RCAN Reading Business Climate Action Network
		Industry-specific guidance available	2021	
		Drought exercise and incident management response	2022	
W4 Educate the public about water quality and sewer abuse	» Publish sewer abuse and water quality stats, messages and content to RCAN website Links: Business, Community, Communication and Engagement	Content published	2021	Thames Water

Action name	Description	Targets and measure/milestone	Target completion date	Delivery partners
W5 Water efficiency measures	» Promote installation of water saving and efficiency devices during refurbishment » Promote Thames Water's 'Smarter Business Visit' scheme to all schools in Reading » Increase awareness of leaky-loos and benefits of fixing plumbing losses » Engage with building management companies to promote retrofitting/leak fix » Expand the provision of water info packs from new homes to all households » Promote Thames Water's 'Smarter Home' visit scheme to homes with smart meters » Support the roll-out of smart meters » Conduct periodic research on understanding and engagement with water saving Links: Community, Business, Communication and Engagement	Refurbishment programme	2020	RCAN Reading Borough Council Thames Water University of Reading (research)
		Schools visits, building management company engagement and leaky loos programme	2021	
		Water info packs, smart meters and research project	2025	
W6 'Water Neutrality' as a planning requirement	» Investigate whether the RBC Sustainable Planning Document can be modified to include: - the requirement for all new major developments to contribute to funding water saving measures equivalent to the development's water consumption - adopting the 'fittings approach' within Building Regulations rather than a pcc calculation approach Links: Energy and LCD	Share the contents of the Sustainable Planning Document on RCAN website	2020	Reading Borough Council Thames Water
		Feedback on required amendments	2022	
		Amendments implemented	2025	
W7 Leadership and Influence	» Lobby MPs and Defra to introduce a mandatory water label to help consumers make water-efficient choices » Lobby MPs and Defra to strengthen building regulations and planning process, to drive water efficiency within all new developments and procurement schemes	Water labelling	2021	RCAN
		Building regs and planning	2025	

Action name	Description	Targets and measure/milestone	Target completion date	Delivery partners
W8 Research to drive future improvements	<ul style="list-style-type: none"> » Research the costs, benefits and suitability, of rainfall harvesting and grey water recycling schemes. » Use UKCP18 climate modelling and local river flow models, to develop projections for future drought / water resource availability. » With RBC and LEP update our estimates of Reading population growth to 2050 » Develop a new evidence-based 2050 water target » Review the first Adaptation Plan and identify and deliver initial win-win opportunities » Identify thresholds, risks, solutions and case studies for the second Adaptation Plan » Work with Thames Water to understand the changes to household and business water use due to COVID-19 impacts Links: Adaptation	Develop research proposals	2020-25	RCAN University of Reading (research)

Sub category: Flooding Resilience

Action name	Description	Targets and measure/milestone	Target completion date	Delivery partners
W9 Raise awareness of fluvial (river) flood risk	<ul style="list-style-type: none"> » Raise awareness of flood risk from the River Thames and the proposed Reading and Caversham Scheme by carrying out various engagement activities » Update the flood maps on the Gov.UK website to show the areas at risk of flooding based on the latest flood modelling Links: Education, Business, Transport, Community, Adaptation	Engagement activities Flood maps updated	Q2-3 2020 2022	Environment Agency Reading Borough Council Local councillors Local businesses and community groups
W10 Raise awareness of the Flood Warning and flood alert service	<ul style="list-style-type: none"> » Increase the number of at-risk homes and businesses signed-up to receive Flood Alerts » Signpost advice on the Flood Warning Service and what to do before, during and after a flood » Develop "what if" scenarios to help people and businesses understand the importance of self-preparation, and education about flood risk Links: Education, Business, Community, Adaptation	90% sign-up to FW service 100% sign-up to FW service 'What if' scenarios developed and posted on ReadingCAN	Q4 2021 Q4 2025 Q4 2025	Environment Agency Reading Borough Council Community groups

Action name	Description	Targets and measure/milestone	Target completion date	Delivery partners
W11 Reducing fluvial flood risk from River Thames	» Work in partnership with Risk Management Authorities and local stakeholders to identify ways to reduce fluvial flood risk » Gain support from all Reading communities on action to reduce flood risk from the River Thames » Seek funding through partnership funding and local grants. Links: Education, Business, Community, Adaptation	Reading community makes decision about favoured River Thames flood reduction option	Q2-3 2021	Environment Agency Reading Borough Council Local councillors Thames Water Local Resilience Forum Community groups and local businesses
		Funds raised to deliver favoured option	2025	
W12 Implement sustainable urban drainage systems (SuDS)	» Explain the importance of SuDS and their practical application » Find out what post scheme monitoring is happening and recommend how this can be improved Links: Nature, Adaptation, Transport	Share planning information	2020	Reading Borough Council
		Monitoring, reporting and research	2025	
W13 Investigate the use of green infrastructure to reduce and slow down storm water	» Investigate measures to slow the flow of storm water, eg by planting and creating scrapes and swales » Follow up on research by Reading University and the Landwise project » Transfer learning to RBC Sustainable Design and Construction (supplementary planning document) Links: Nature, Transport, Adaptation, Business	Scope project brief and costs	2020	Water theme group Environment Agency University of Reading
		Deliver results	2023	
W14 Improve the resilience of the Kennet Meadows	» Develop a plan for the Kennet Meadows to make it a resilient wetland » Make sure the plans preserve the need for the meadows to act as flood plain » Consider the drought risk and make sure the needs of the meadows are considered in EA / TW drought plans. There will be a limit to their protection... is it possible to develop a recovery plan early to try and mitigate? Links: Nature, Adaptation, Energy	Workshop to bring partners together and agree scope	2021	Environment Agency CEH (Wallingford) University of Reading Water theme group member
		Develop and share plan	2023	
W15 Improve our flood risk adaptation plans	» Improve our understanding of climate change adaptation thresholds » Investigate the latest UK climate projections to find out what extreme rainfall events we need to prepare for » Check the developing EA guidance for fluvial flooding and develop our own understanding of the changing flood risk for the River Thames and River Kennet » Develop our flood adaptation plans through to 2050 and beyond Links: Education, Adaptation	Post information on revised future flood modelling, as it is released	Ongoing	Environment Agency Reading Borough Council Local interest groups
		Deliver report on change in storm rainfall, and Thames and Kennet flood peaks	Q4 2024	

Action name	Description	Targets and measure/milestone	Target completion date	Delivery partners
W16 Investigate opportunities for Green roofs	» Develop recommendations for green roofs, green walls and landscaping for new build » Explore opportunities for retrofitting homes and offices » Develop advice for home owners on the benefits of breaking up hard surfaces in driveways and gardens Links: Transport, Nature, Community, Business	Create research proposals	2021	University of Reading Reading Borough Council Environment Agency
		Deliver results	2025	
W17 Develop links to the Thames Valley Local Resilience Forum	» Investigate the limits of our emergency plans and explore what the community of Reading can do to become more resilient » Share the developing adaptation planning and vision for Reading with the LRF to inform long term strategic decisions » Share advice on being prepared for an incident including "Thames Valley: Are you ready?" booklet and advice from the Environment Agency » Use resources from Business in the Community Business Resilience Group to help businesses improve resilience Links: Community, Business, Adaptation	Organise meeting with LRF	2021	Environment Agency Reading Borough Council Thames Water University of Reading Local Resilience Forum
		Public workshop/ event on resilience and adaptation	2022	



NATURE THEME ACTION PLAN



Nature and climate change

The natural environment is generally considered an ally in the battle against climate change as woodland, grassland, wetland and soils can all lock up carbon if managed correctly. But the natural environment is also threatened by the impacts of climate change. Rising temperatures will be higher in the town than that in the surrounding countryside due to the 'urban heat island' effect. More intense periods of rain and drought are expected, with impacts on natural habitats and increased competition for water resources to meet the needs of people, business and the environment.

Changes to vegetation and soil will affect many species and in ways that we have not seen before. More research is needed to gauge the way different species are affected, but we can expect more intense competition for food in times of drought and flood and impacts on the life cycle of certain species if they, or their prey, are dependent on particular plants at specific times. Whether climate change could lead to local or regional extinction is yet to be determined, but we know that certain species have not yet recovered from population crashes in the 1970s. Climate change also means that new, non-native and invasive species could colonise the area.

The COVID-19 lockdown highlighted the importance of people having access to greenspace where they live as it became even more vital for the health and wellbeing of people and communities as other activities were subject to restrictions. This underlines the importance of managing greenspace in a way which helps address climate challenges whilst improving access for people.

Progress to date

While Reading is predominantly an urban borough, the importance of its green areas and open spaces is increasingly recognised – not just for their own sake, but for the benefits they offer to our health and wellbeing. Examples of this include:

- The adoption of policies in the Local Plan to ensure that green spaces are joined up and that new development delivers a 'net gain' for biodiversity
- The launch of the 'Trees for Reading' initiative which seeks to increase tree cover in the town
- 'Rewilding' trials have been initiated by Reading Borough Council, reducing the frequency of mowing on selected highway verges to benefit wildflowers and wildlife, with initial feedback from the public proving very positive

Priorities on the pathway to net zero for nature and key adaptation issues

There is growing recognition of the role which 'nature-based solutions' can play in delivering climate change mitigation, and more information on this can be downloaded from the ReadingCAN website. Key priorities in this respect are:

- Managing existing natural habitats to sequester and store more carbon: by increasing the amount of permanent cover (including but not restricted to tree cover) and managing greenspace differently in the town and, perhaps even more important, increasing the storage of carbon within the soil, the natural environment can make a significant contribution to reducing Reading's carbon footprint
- Managing dead and dying plant material to leave in situ wherever possible or managed to return carbon and minerals to the soil
- Ensuring that new development delivers a 'net gain' for the environment: as Reading grows we need to ensure that national and local planning policies requiring a 'net gain' for biodiversity are observed, so that new and restored habitats can help us mitigate the causes and adapt to the impacts of climate change
- Creating and enhancing wildlife corridors through Reading: by joining up natural and semi-natural habitats we can increase the value of Reading's greenspaces as carbon stores and sinks, as well as making it easier for people and wildlife to adapt to climate impacts

Increasing vegetation cover will reduce the urban heat island effect and improve air quality. Street trees will provide shade in the town and encourage cycling and walking, while hedgerows will offer shade and some protection from wind.

By increasing permeable surfaces in the town, we can allow water to infiltrate the soils rather than run-off to increase flood risk. Some green spaces may also be able to store water for lengthy periods to mitigate flood risk in the town. The type of planting, the management of top growth and soils, and the management of water all need to change across the town; not just in gardens and green spaces, but also in car parks, road verges and vertical spaces.

Green corridors – along transport routes, waterways as well as in parks and open spaces – provide a route for wildlife to move through the town and colonise different spaces which will improve their resilience as local conditions change. Since we expect higher temperatures and risk of drought, as well as more intense periods of rain, these corridors need to contain areas that are big enough to provide shade and shelter as well as areas of higher ground.

Creating and improving these wildlife corridors will be beneficial to people as well. They will provide shade for people as they move through the town and additional greenery to reduce the urban heat island effect, improve air quality and enhance the townscape.

Gardens are an important resource for nature and higher temperatures, more intense rainfall and periods of drought in the future means that changes are needed in the way we manage our gardens to mitigate the impact of climate change and continue to provide a useful habitat for a range of species.

The green corridors and gardens referred to above are very important for wildlife, but the town needs a coherent approach as well to mitigate the direct impact of high temperatures on human health as well as on biodiversity. Emergency cool areas may be created in hospitals and public buildings, but most buildings could benefit from tree planting to provide shade, and perhaps green walls and roofs reducing internal temperature gains (as well as warming in winter). The nature theme action plan therefore looks at ways to modify the built environment to mitigate the climate change impacts, complementing actions in the water, health and low carbon development themes.



Nature Theme Action Plan: By 2025 the people of Reading will live in a greener town with changes to the management of open spaces and the green links between them that store more carbon as well as giving shade for hot summers, corridors for wildlife and some flood control. New developments will include biodiversity net gain and water management, and there will be exemplar sites showing how to change planting and soil management around buildings to mitigate the impacts of climate change.

NB: Some of the actions included in the action plans below, and the scale and pace at which they can be progressed, will be subject to the prevailing national policy context and/or the provision of additional powers and resources by central government, as made clear in Reading's climate emergency declaration (see section 3.2 above). They are also dependent upon recruiting enough volunteers to the Nature Task Force to supplement the existing nature theme group.

Sub Category: Carbon Sequestration

Action name	Description	Targets and measure/milestone	Target completion date	Delivery partners
N1 Increasing tree cover across the town <div>Page 65</div>	» Plant more street trees » Test new planting options in town centre and on the road network » Promote trees in private gardens/ business/ schools » Encourage tree and hedge planting in air pollution hotspots esp. schools » Enable more street tree planters » Promote use of degradable tree planting maps and tubes Link: Education, Transport	Targets per updated Biodiversity Action Plan & RBC Tree Strategy (NB resources for and timing of implementation may be influenced by England Tree Strategy, publication of which is awaited)	RBC to adopt Tree Strategy 2020 Planting programme to 2025	Reading Borough Council Ethical Reading Tree Wardens (RTWN) Nature Task Force Econet Food4Families Thames Water
		Publish guidance on RCAN website	2020	
		2 school hedges/year	2021	
		Review policies for traffic restrictions	2021	
		Policy for council planting; publish guidance for householders	2021	
N2 Managing land to store more carbon and increase biodiversity	» Review methods to protect existing stored carbon and relative benefits of different land uses » Identify optimum practical and effective management systems for retaining carbon in Reading » Feedback into review of management of Council land	Conduct literature review	2021	Reading Borough Council University of Reading Nature Task Force Berks, Bucks & Oxon Wildlife Trust
		Feedback into review of Council land management and planting programme	2021	
N3 Explore use of biochar and charcoal	» Research on cost benefit of charcoal and biochar » Expect results to show that expensive to purchase but beneficial for tree growth and resilience to climate change and should be part of planting plans » Seek opportunities to make charcoal from local forestry waste to sell locally and reduce imports and to dig into the soils to sequester carbon	Research undertaken RBC ground maintenance policies and planting policies revised accordingly Advice leaflets for householders on RCAN website	2023	University of Reading Reading Borough Council Local charcoal makers BBOWT Coppice Federation

Action name	Description	Targets and measure/milestone	Target completion date	Delivery partners
N4 Review Council parks and woodlands	» Survey land, including allotments, and make recommendations that increase carbon storage, flood control, and Biodiversity Action Plan delivery, compatible with increased public use for health Link: Water, Health	Survey minimum four sites per year Recommend management changes	From 2020	Reading BC Nature Task Force Econet RDNHS Reading Tree Wardens Network
N5 Test different management of parks, verges and roundabouts	» Review mowing regimes in parks » Consider measures like extending tree cover, scrub regeneration and conservation grassland » Consider options for managing roadside verges/roundabouts » Test, review and implement preferred options » Accompany changes with public education campaign	Annual meeting to review options for evidence-based changes	From 2021	Reading Borough Council Nature Task Force Community groups
		Consider options for changing mowing/planting on 6 area/yr of verge/roundabouts and 2 areas in parks	From 2021	
		Review impact and extend across town	From 2020	
N6 Planning for replacement for ash on back	» Decide which areas to be left for regeneration with resistant ash » Decide on replacement species on Council land where necessary » Grow on local material to plant out (potential schools project) Link: Education	Review Council woodlands and revise management plans	2022	RBC Parks 'Friends of' groups Nature Task Force Community groups
		2 year collection of seeds with schools	2 per year	
N7 Kennet Meadows	Review options to increase carbon storage and biodiversity through: » Maintaining water levels through the year » increasing granularity of livestock management to form a mosaic of swards » Before and after surveys required for carbon capture and biodiversity Links: Water	Discussions underway. Completion targets and dates to be agreed	TBA	Land Owners Environment Agency Reading Borough Council Nature Task Force Thames Water
N8 Increase hedgerows	» Survey existing hedgerows and suggest new hedgelines/infill » Schools encouraged to have hedge boundaries to mitigate air pollution » Hedgerows promoted along cycle routes/ walking routes for air pollution mitigation and shade » Links: Health	Review hedgerows as part of wildlife corridor survey at 10km/year	Annual report	Nature Task Force to survey Landowners to plant and maintain
		Target schools and park boundaries for priority planting	2 per year from 2021	
N9 Food waste/green waste	» Support no dig cultivation, home composting/ worm bins » Disseminate information on food fermentation and support larger scale waste trials » Seek University research to quantify effects	Information on RCAN website and links to other sources	2020	Nature Task Force Food4Families Community groups University of Reading Museum of English Rural Life
		Support 2 trials: data required before end of RE3 contract	2024	

Sub category: Supporting wildlife habitats and biodiversity

Action name	Description	Targets and measure/milestone	Target completion date	Delivery partners
N10 Compensatory habitat restoration/offsets for urban development	<ul style="list-style-type: none"> » Baseline review of the likely requirements for habitat compensation and biodiversity net gain due to development of sites in the Local Plan » Financial mechanism developed 	System to be set up	2020	RBC planning
		Implementation	Continuous	
N11 Identifying wildlife corridors	<ul style="list-style-type: none"> » Working from the green links shown in the Local Plan, and revision of the Biodiversity Action Plan, identify primary and secondary routes » Agree any changes/additions changes with RBC planning department and Council 	Identify routes and mark on plan for transfer to RBC Geographical Information System	2020	RBC planning BAP review/NTF RBC Parks & Highways
N12 Assessing the quality of wildlife corridors	<ul style="list-style-type: none"> » Review existing data » Walk through and rapid assessment of accessible land » List priorities for enhancement on public land and community land <p>Link: Community, Health</p>	Start within year 1, 10km a year reports on the corridor survey	Annual from 2020-2025	Reading Borough Council Nature Task Force Community groups Network Rail BBOWT
N13 Managing the impact of development areas on wildlife corridors	<ul style="list-style-type: none"> » Ensure design and planting on development sites contributes to wildlife corridors » Ensure connectivity through developments with appropriate supplemental planning guidance » Align with objectives of revised Biodiversity Action Plan and/or green infrastructure strategy/plan 	Supplementary Planning Document published	2021 Implementation ongoing	Reading Borough Council Berkshire Local Nature Partnership BBOWT
N14 Species protection/ recovery	<ul style="list-style-type: none"> » Biodiversity Action Plan develops objectives for increasing/recovery of identified key species » Ensure these are fed into management methods and changes in wildlife corridors 	Develop land management objectives	2020	Reading Borough Council Nature Task Force University of Reading
		Implement from:	2021	
N15 Biodiversity enhancement pilots	<ul style="list-style-type: none"> » Meet/work with residents associations/ community groups » Offer regular workshops/newsletter input/other methods to support changes in these areas <p>Link: Community</p>	Identify 2 areas to participate including an area of deprivation	2020	Nature Task Force Adopt-a-street Community groups
		Review impact relative to other areas	2023	
N16 Data recording/ monitoring	<ul style="list-style-type: none"> » Request that all new data go onto TVERC, irecord or data systems that link with TVERC (Thames Valley Environmental Records Centre) » Recruit volunteers for recording » Encourage householders to take part in garden surveys/ TV projects <p>Link: Community</p>	Contact all local groups	2021	Nature Task Force Community groups University of Reading
		Recruit volunteers	2020	
		Publicise surveys undertaken by others	Each year	

Sub category: Planting for biodiversity and resilience

Action name	Description	Targets and measure/milestone	Target completion date	Delivery partners
N17 Provide Information on adaptation	» Provide information on climate resilience and wildlife friendly gardening » Improving soil structure and promote water reuse » Promote exemplar sites – eg council, church, school Links: Water, Health, Education	Information published on RCAN website	Q4 2020	Nature Task Force RISC Community groups Reading Borough Council
		2 exemplar projects by:	2025	
N18 Greening front gardens and reducing hardstanding	» Provide information and links to potential designs for increasing green cover and reducing hardstanding » Hold seminar for developers » Seek TV support for project, eg Gardener's World Links: Water, Energy and LCD	Information by end 2021	2022	RCAN Nature Task Force RHS
		Seminar	2023	
		Contact TV options	2020	
N19 Interaction with garden centres	» Encourage garden centres to introduce a wildlife friendly and climate change adaptation section » Peat-free labelling of composts Link: Business	Programme introduced	2020	Nature Task Force BBOWT

Sub category: Green Spaces for Cooling/well-being

Action name	Description	Targets and measure/milestone	Target completion date	Delivery partners
N20 Green Infrastructure	Using green infrastructure to reduce carbon emissions from buildings and promote urban cooling, e.g.: » Promote green walls and roofs on new build » Promote green roofs on existing single storey structures » Plant for shading of cycle/pedestrian routes » Research on impacts of green infrastructure required Links: Energy & LCD, Water, Transport, Health	In local plan. May need supplementary planning document	SPD 2022	Reading Borough Council Nature Task Force University of Reading
		Advice published on RCAN website	2022	
		Research projects to evaluate effects	2021	
N21 Develop green space to enable increased health benefits	Tree/hedge planting to provide shade, reduce particulate pollution and oxides of nitrogen Links: Health	Part of reviews referred to in N4 above	Ongoing from 2020	Landowners

Sub category: Communication and Engagement

Action name	Description	Targets and measure/milestone	Target completion date	Delivery partners
N22 Raising awareness in the community	<ul style="list-style-type: none"> » Identify two areas in the town, including an area of deprivation, to concentrate existing resources to test ideas and communication methods for dissemination » Extend proven ideas to other areas Links: All themes, Business, Community	2 target areas identified and developed	Identify test areas by 2021; Extend to four areas by 2025	Nature Task Force
N23 Advice service for adaptation	<ul style="list-style-type: none"> » Provide advice to schools/ community groups/for wildlife friendly gardening/ water efficient gardening/recycling in the garden Links: Water, Education, Community, Adaptation	Offer half day advice service to up to 20 organisations a year, plus online leaflets	Advice service from 2021	Nature Task Force BBOWT
N24 Support schools in their climate change initiatives	<ul style="list-style-type: none"> » Provide list of support actions available through ReadingCAN or external sources to enhance existing systems (e.g. ecoschools), and distribute Links: Education, Communication and Engagement	Create option list for schools	2020	RCAN Nature Task Force
		Offer 8 support activities a year	From 2021	
N25 Supporting Businesses and NGOs in their climate change initiatives	<ul style="list-style-type: none"> » Make opportunities for groups to do practical work via Team Challenge Link: Business, Communication and Engagement	6 actions a year	Set up by 2021	Reading Borough Council Nature Task Force Econet The Conservation Volunteers
N26 Identify opportunities for green prescribing	<ul style="list-style-type: none"> » Produce a list of groups willing to provide options for social prescribing and make available to local GPs Links: Health	List available to RBC Public Health	2021	Nature Task Force

HEALTH & WELLBEING THEME ACTION PLAN



Health is a 'State of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity'. The Health and wellbeing strand of the strategy takes account of the Social Determinants of Health (SDH) and enables us to make the link between health equity and climate change. SDH is a term to describe the social and environmental conditions in which people are born, grow, live, work, and age, which shape and drive health outcomes.

This theme therefore considers the wellbeing of Reading's people holistically, with the emphasis on living healthily in a changing climate and addressing health inequities by supporting the most vulnerable communities who are disproportionately exposed to climate impact including the elderly, homeless people, BAME communities and those living in our most deprived wards. It also recognises that the health impacts of climate change will be exacerbated by the additional risks associated with COVID-19.

The actions we need to take to reduce CO₂ and adapt to climate change also have the potential to improve our community's health and wellbeing. Most of the themes of the Reading Climate Change Strategy contribute to the 2030 carbon zero target directly: they are primarily concerned with mitigation. The Health & Well-being Theme focuses on aligning health and climate goals as well as dealing with the consequences of climate change that are likely to negatively affect the health of people in Reading over the next 10 years, despite best efforts at mitigation.

We have used the WHO analysis of the health impacts of climate change¹⁸ to define three categories of risk which are expected to significantly impact Reading – increased heat waves and related air quality issues, increased rainfall and associated flooding, and changing transmission patterns for infectious diseases. All of these can negatively affect the physical and mental health and wellbeing of Reading's residents. Alongside these are the underlying issues of health issues associated with fuel poverty and the potential for mental health challenges associated with anxiety and stress caused by climate change.

Many of the themes include outreach and education strategies; we propose that an integrated resource base and education programme be supported by appropriate partners. In order to monitor progress under many of the themes, monitoring of environmental characteristics will be needed. We propose that these be linked to monitoring of health data, potentially via a Lancet Countdown¹⁹ project. This could make environmental and health data visible to the public e.g. on public billboards or through apps.

¹⁸https://www.who.int/globalchange/181008_the_1_5_healthreport.pdf

¹⁹<https://www.lancetcountdown.org/>



This is the first time that health has been included in Reading's climate change strategy, therefore many of the actions are about linking with existing local and national frameworks and strategies, researching external sources, setting up resources, systems and processes for Reading and establishing networks to link health professionals to climate change planning. Outcome based targets could include falling levels of asthma, lower rate of heat-related fatalities and increase of journeys by zero carbon modes of walking and cycling.

Health Theme Action Plan: By 2025, people in Reading will be well informed about how to embed climate-friendly activities into their lives and self-manage the health impacts of climate change, benefiting from policies and programmes that enable them to thrive despite its effects. All climate change mitigation and adaptation strategies will consider the impact on health; with particular emphasis on heat-related health risks, air quality and mental wellbeing.

NB: Some of the actions included in the action plans below, and the scale and pace at which they can be progressed, will be subject to the prevailing national policy context and/or the provision of additional powers and resources by central government, as made clear in Reading's climate emergency declaration (see section 3.2 above).

Sub category: Heat

Action name	Description	Targets and measure/milestone	Target completion date	Delivery partners
H1 Adaptation and anticipation in health facilities	Facilities in hospitals and care homes adapted to extreme heat, e.g. » Provision of cool space for residents » Storage for medicines requiring cool temperatures » Risk register of those at risk from heat	CQC reports on facilities in Reading all positive on these aspects.	2023	Public Health Berkshire (lead)
H2 Publicise cool public spaces	» Explore potential for air-conditioned places to be opened to the public during heatwaves » Maps and lists in libraries, public spaces, buses » Publicity in local media when heatwaves are forecast » Support tree planting initiatives and man-made (canopies) solutions Links: Energy & LCD, Nature, Business, Communication and Engagement	Completion and publication of list	Initial list 2022 List updated yearly	Reading Borough Council RCAN
H3 Increase the number of cooling public spaces/ nature-based solutions	» Implement urban greening and tree-planting initiatives » Create man-made solutions where necessary (canopies)	See action N1 in Nature Theme		

Sub category: Flooding

Action name	Description	Targets and measure/milestone	Target completion date	Delivery partners
H4 Anticipation in health and social care facilities	» Flexible accommodation for peak loads in emergencies » Flood risk planning and preparation for in-patient facilities Link: Water	Establish baseline	2020	Public Health Berkshire (lead) Reading Borough Council
		Set targets	2021	
		Plan published	2022	
H5 Minimising health impacts from flooding	» Convene a group to determine what support is needed to minimise the health impacts from anticipated flooding and to make recommendations about appropriate interventions Link: Water	Group to report by end:	2022	RCAN

Sub category: Air pollution – see also Transport Theme Action Plan

Action name	Description	Targets and measure/milestone	Target completion date	Delivery partners
H6 Supporting citizens to self-manage air quality risks	» Explore the application of dynamic real time air quality data to help citizens protect themselves » Raising awareness of green/ blue corridor and urban travel routes with lower pollution levels » Reach those most in need by prioritising areas measuring high pollution levels and areas of deprivation » Possible collaboration with Adept Live Lab project Links: Nature	TBC	TBC	Reading Borough Council (lead) University of Reading Adept Live Lab Stakeholders

Sub category: Infectious diseases

Action name	Description	Targets and measure/milestone	Target completion date	Delivery partners
H7 Minimising the health impacts from infectious diseases	» Convene a group to determine what support is needed to minimise the health impacts from infectious diseases associated with climate change and to make recommendations about appropriate interventions	Group to report by end:	2022	RCAN

Sub category: Reducing emissions from the health sector in Reading

Action name	Description	Targets and measure/milestone	Target completion date	Delivery partners
H8 'For a Greener NHS' campaign	<ul style="list-style-type: none"> » Adopting the national 'For A Greener NHS' campaign in Reading to determine the quickest feasible path to get the NHS to 'net zero carbon' » Royal Berks NHS Foundation Trust to produce action plan subsequently 	NHS staff and establishments to feed into Expert Panel to report by Summer 2020 (local action plans to be produced subsequently)	Q2-3 2020	Royal Berks NHS Foundation Trust Other NHS facilities
H9 Implementation of NHS Standard Contract	<ul style="list-style-type: none"> » New national contract requiring hospitals to reduce carbon from buildings and estates, whilst switching to less polluting products, and encouraging more active travel for staff 	Contract implemented	Q2 2021	Royal Berks NHS Foundation Trust
H10 Development of Green Plan for Royal Berks Hospital	<ul style="list-style-type: none"> » New plan covering asset management, travel and transport, use of resources and greenhouse gas emissions 	Plan completed	Q2 2021	Royal Berks NHS Foundation Trust
H11 Cooperation with local GP practices	<ul style="list-style-type: none"> » Link GP practices with sustainability initiatives including 'The Green Impact for Health Toolkit'²⁰ 	Health Theme Group to make contact with GPs or representative body	2021	RCCP RCAN GP Practises

Sub category: Communication, engagement and education

Action name	Description	Targets and measure/milestone	Target completion date	Delivery partners
H12 Cooperation with local health authorities	<ul style="list-style-type: none"> » Create strong links to ensure climate change is at the centre of strategy » Initiate discussions with Health and Wellbeing Board https://democracy.reading.gov.uk/mgCommitteeDetails.aspx?ID=176 	Meet to determine next steps	Q3 2020	RCAN lead
H13 Cooperation with local planning authorities	<ul style="list-style-type: none"> » Supporting Planning Team in climate impact assessment, ecosystem services tools and mitigation measures in relation to new builds and health and wellbeing of existing communities and future generations 	Meet to determine next steps	Q4 2020	
H14 Cooperation with Brighter Futures for Children and schools	<ul style="list-style-type: none"> » Align with health and wellbeing targets » Connect with young people in their own right and as a route to influence their parents » Create repository of sustainable frameworks and climate change learning resources for schools » Increase tree and hedge planting in schools, for heat reduction and improving air quality » Support outdoor learning initiatives in school grounds and urban green spaces <p>Links: Nature</p>	Meet to determine next steps	Q4 2020	RCAN Brighter Futures for Children Primary Schools Secondary Schools

Action name	Description	Targets and measure/milestone	Target completion date	Delivery partners
H15 Improve cooperation between RBC Parks and Open Spaces team, conservation and therapeutic nature and horticulture sectors	<ul style="list-style-type: none"> » Increasing amount and quality of green space to enable residents to benefit from the improved physical and mental health » Mapping nature recovery priorities against indices of deprivation data to support people and wildlife where needed most » Supporting Reading Tree Strategy » Promoting green prescribing initiatives Links: Nature	Ongoing – measure quality using Natural England’s guidance	Ongoing	Reading Borough Council Nature Task Force
H16 Publicise the health and well-being benefits to be gained from taking action on climate change	<ul style="list-style-type: none"> » Awareness raising linking health & well-being with climate friendly choices, including diet (less food miles, less processing, more plant-based), travel choices and housing retrofit » Encourage behaviour change by highlighting positive impact of climate action, such as air quality improvements reducing asthma attacks and supporting brain development » Awareness raising to highlight the importance of greenspace to health and well-being and climate adaptation including boosting conservation volunteering and tree planting Links: Education, Community, Business	Explore carbon literacy training and positive climate action campaign tailored to specific target audiences	2021	RCAN Reading Green Christians
H17 Support for mental health and wellbeing, targeting those suffering health inequalities	<ul style="list-style-type: none"> » Extension of existing mental health programmes to include the mental health issues associated with heat, flooding or air pollution; also climate anxiety » Supporting the local nature sector to deliver green prescribing, especially for vulnerable groups » Sustainable greenspace management boosting biodiversity, carbon sequestration and supporting health and wellbeing 	Extended programme in place	2022	Reading Borough Council Public Health
H18 Support the community gardening and food growing sector	<ul style="list-style-type: none"> » Encourage the use of greenspace/ gardens for growing food in public and private spaces and educational opportunities » Education around healthy and climate-friendly diets, including basic cookery skills 	Measure number and size of spaces and volunteer numbers	Ongoing	Reading Gardening for Health and Wellbeing Network Food4Families Reading Food Growing Network
H19 Research, measuring and monitoring	<ul style="list-style-type: none"> » Explore what data is already available on public health impacts of climate change in Reading » Identify data gaps and establish research projects » Measure, monitor and report on correlation of illnesses with climate change impacts to improve adaptation planning » Possible link with Lancet Countdown project 	Scoping meeting	December 2019 DONE	RCAN University of Reading

6. COMMUNICATIONS AND ENGAGEMENT

6.1 Our ambition for community engagement in action on climate change

Our goal for climate action in our community is that everyone who lives, works, studies or plays in Reading understands Reading's pathway to net zero carbon, is equipped with the knowledge, tools and support required to make their contribution to it, and takes ownership and responsibility for the corporate and individual action required to get there.

Following the declaration of a climate emergency in 2019, an extensive programme of community engagement took place, following the guiding principles for City Climate Action Planning recommended by the International Council for Local Environmental Initiatives (ICLEI). This commenced with a public forum attended by over 120 people. This gathering identified the key themes for the strategy and led to the creation of theme groups which have been open for anyone to join since June 2019. The groups have been advertised online and via conventional media, meeting physically and virtually. The community-led theme groups have had a fundamental influence on the development of action plans within the Reading Climate Emergency Strategy.

Individuals and communities have a huge part to play in tackling the climate emergency via the choices they make and the signals they send through, for example, their purchasing and consumption decisions. We therefore need to equip them with the advice and tools they require to understand and reduce their impact on climate change.

The consultation process which informed development of this strategy highlighted the enthusiasm and commitment which the people of Reading are willing to bring to the challenge of tackling climate change. We asked what changes people would be willing to make to this end and a selection of responses is shown here.

6.2 A climate change communications and engagement plan for Reading

While the community in Reading is relatively engaged in the climate change debate, we know that we have a long way to go before we reach everyone. As such, we have developed a detailed communications and engagement plan, encompassing the launch of the final version of this strategy, and a programme of events and initiatives to support engagement of the whole community in its implementation. A summary of this plan is below.

Voices of Reading: A selection of quotes from contributors to our consultation

"I'm veggie choosing not to own a car and use plastic-free toiletries"

"I just wish there were greener options around me. I would really like to shop plastic free but that isn't really possible with the options around in Caversham"

"We are discussing how to reduce our carbon emissions in our street and are already changing behaviour"

"Helping with school walking trains"

"As a school we are particularly keen to make our building more energy efficient and tackle the issues of resources and food"

"To promote awareness and action in local churches and to support local environmental NGO"

"My organisation is planning improvements to its building and looking to a net zero building and ways to reduce waste"

"Cycle more, use the car less"

Communications & Engagement Plan summary

Sub category: General

Action name	Description (With bulleted list of activities needed to achieve action and links)	Target and measure/milestone (i.e. How will we know that we have completed the action?)	Target completion date	Action owner + list of delivery partners	Any resource or capacity challenges? (In funding, in skills, in capacity, missing key partners)
C1 Information hub	<ul style="list-style-type: none"> » Establish and maintain a hub on the website where all themes are supported with relevant, practical information for all stakeholders, so that everything is available in a single place » Mixture of bespoke content (Reading-centric) and signposts to reliable sources of information eg WRAP, Wildlife Trust, Energy Saving Trust, Carbon Trust etc » Supported by comms programme (conventional and social) to drive traffic » This should also have info on how we are doing. Achievements, measurement etc (does this need to be a separate workstream or do the theme heads take care of this?) 	Published	Set up by November 2020, continuously updated thereafter	Comms and Engagement Team Theme leads	Website needs professional design to make sure it's engaging and mobile-optimised
C2 Dashboard	<ul style="list-style-type: none"> » Develop a dashboard with KPIs that track progress against the targets in the strategy » Publish on the RCAN website but also strategic media around the town, eg large digital sign at the station, buses, The Oracle, Reading Borough Council venues 	Published	Set up by December 2020 and continuously updated thereafter	RCAN	Some of the indicators will be lagging, these needs to be clearly communicated
C3 Brand Book and Stakeholder Map	<ul style="list-style-type: none"> » Develop brand guidelines, style guide and messaging matrix » Confirm role of RCCP versus RCAN and relationship with other organisations within Reading 	Brand Book and stakeholder map created	By end September	Comms and Engagement Team	Will need to be revised and updated after the governance audit is completed
C4 Campaign Calendar	<ul style="list-style-type: none"> » Develop and publish a calendar of campaigns to encourage action on different issues, eg Beat the Street, Fair Trade Fortnight » Align with RBC campaigns and initiatives led by other organisations in the town, as well as national "days" eg Earth Day » Support with social media and conventional media such as bus advertising, outdoor, The Oracle, council magazine 	Quarterly Rolling Comms Plan devised and published	By November 2020	Comms and Engagement Team	May require funding for creative and media

Action name	Description (With bulleted list of activities needed to achieve action and links)	Target and measure/milestone (i.e. How will we know that we have completed the action?)	Target completion date	Action owner + list of delivery partners	Any resource or capacity challenges? (In funding, in skills, in capacity, missing key partners)
C5 Climate Literacy Training	<ul style="list-style-type: none"> » Offer carbon and climate training, tailored to support the RCAN Action Plan, to all who live, work or study in Reading » Begin by training all RBC staff » Potential to build on the University's MOOC and/or Climate Reality training » Accreditation available from the UNEP endorsed Carbon Literacy Project 	Development of training Targets for delivery	December 2021	RCAN	Carbon Literacy accreditation depends on securing funding
C6 Third party events	<ul style="list-style-type: none"> » Take part in/support local public events eg Town Meal, Beanpole day, Waterfest, Meadows day, school fetes etc etc 	Events calendar published and theme support agreed	10 events per year	RCAN	Requires portable display materials as well as volunteer help
C7 Funding hub	<ul style="list-style-type: none"> » Establish and maintain a list of sources of outside funding that can be drawn on to support RCAN initiatives » Offer grants to support small local initiatives that align with RCAN goals 	List	Set up by end of 2020, continuously updated thereafter	RCAN	Opportunity to offer advice on preparing bids subject to resource
C8 Volunteer Programme	<ul style="list-style-type: none"> » Work with Reading Voluntary Action to establish process to recruit volunteers to support delivery of RCAN activities 	Relationship built and process established	December 2020	RCAN RVA	
C9 Research Programme	<ul style="list-style-type: none"> » Establish a research programme to support the actions in the strategy » Work with the University of Reading to develop a structured approach to matching research needs with students seeking research projects 	Programme developed and approach defined	April 2021	RCAN University of Reading	
C10 Climate Action Pledge	<ul style="list-style-type: none"> » Develop a pledge that residents can sign to commit to taking action on climate change across a relevant range of impacts » Possible "eco-journey" starting with simple things and becoming more advanced 	Pledge defined and published	November 2020	RCAN	

Sub category: Business Focus

Action name	Description (With bulleted list of activities needed to achieve action and links)	Target and measure/milestone (i.e. How will we know that we have completed the action?)	Target completion date	Action owner + list of delivery partners	Any resource or capacity challenges? (In funding, in skills, in capacity, missing key partners)
C11 Climate-friendly Organisations Pledge	» Define a set of commitments for organisations to sign up to in order to gain "Climate Friendly" status	Pledge defined and published	November 2020	RCAN	
C12 Climate-Aware Business	» Embed climate change into the workstreams of the LEP, IOD, Chamber of Commerce and other local business networks » Work with leaders of those organisations to convince them of the strategic importance of climate change for their own organisations and their membership	All nominated organisations have climate change as part of their mission	Summer 2021	RBC	
C13 Lobbying for better business practice Page 78	» Identify barriers preventing use of sanctions to address "carbon crimes", eg: - Leaving lights on all night in office buildings - Having doors of restaurants/retail units open - Incorporate the GHG Protocol (Scope 1, 2 & 3) ? » Lobby central government for the policy changes	Issues identified and lobbying programme launched	Spring 2021	RCAN	
C14 Reading Business Climate Action Network	» Establish business network for sharing of expertise and knowledge on sustainable business » Hold regular events » Publish business-centric advice and guidance and signpost tools and models from reputable sources on the RCAN website » Encourage all Reading Businesses to nominate an employee who is their representative and can help to engage the company	Network already launched Events programme published Information hub launched	November 2020	RCAN Ethical Reading Sustainability Champions	
C15 Sustainable Business Accreditation	» Investigate the suitability of BCorp and BITC frameworks and other accreditations » Ideally have a free-to-use dashboard system » Introduce an accreditation scheme for businesses that recognises achievement at different levels, eg bronze, silver, gold, to create a race to the top	Research completed and proposal published	Summer 2021	RCAN	May require funding

Action name	Description (With bulleted list of activities needed to achieve action and links)	Target and measure/milestone (i.e. How will we know that we have completed the action?)	Target completion date	Action owner + list of delivery partners	Any resource or capacity challenges? (In funding, in skills, in capacity, missing key partners)
C16 Divestment	<ul style="list-style-type: none"> » Divestment from fossil fuels is an important signal of intent as well as a way to divert capital investment from carbon-based to cleantech/Greentech innovation » Run a campaign encouraging all institutional investors in Reading to divest 	Campaign launched	November 2021	RCAN	
C17 Business volunteering	<ul style="list-style-type: none"> » Create opportunities for staff to support delivery of actions from the strategy via Team Challenge 	6 business actions a year	First actions Q1 2021	RCAN Connect Reading RBC Nature Task Force Econet TCV	

Sub category: Community Focus

Action name	Description (With bulleted list of activities needed to achieve action and links)	Target and measure/milestone (i.e. How will we know that we have completed the action?)	Target completion date	Action owner + list of delivery partners	Any resource or capacity challenges? (In funding, in skills, in capacity, missing key partners)
C18 Working with other organisations	<ul style="list-style-type: none"> » Establish links with other groups working on the sustainability agenda across Reading and showcase their work through the RCAN website » Enable sharing of events, expertise, knowledge and resources by other groups 	Partner hub set up with ability for representatives to contribute content	Partner hub set up by end 2020	Comms and Engagement team	
C19 Community focused work	<ul style="list-style-type: none"> » Identify 2 geographical areas in Reading (up to 10 streets)– and support the residents in these streets to lead more Climate friendly lives. Develop competition (eg 'green streets initiative') » Identify and work with community groups (i.e. religious, ethnic, age related) – and support the members to lead more Climate friendly lives, through community talks and projects 	2 areas per year	First area identified by Q2 2021	RCAN	
		6 groups per year	First group identified by Q1 2021		

Sub category: Education Focus

Action name	Description (With bulleted list of activities needed to achieve action and links)	Target and measure/ milestone (i.e. How will we know that we have completed the action?)	Target completion date	Action owner + list of delivery partners	Any resource or capacity challenges? (In funding, in skills, in capacity, missing key partners)
C20 Schools-based interventions	<ul style="list-style-type: none"> » Working with the Education team and Brighter Futures for Children, to establish a programme of climate change interventions for schools. » To cover physical changes (i.e install solar panels, heat pumps etc) and support with lessons/curriculum/local community engagement (use Eco Schools framework?) » Draw on established tools and programmes where possible 	Programme launched	September 2021	RCAN admin Brighter Futures for Children RBC	www.eco-schools.org.uk/ www.greenschoolsproject.org.uk/ www.wwf.org.uk/get-involved/schools/green-ambassadors www.youngclimatewarriors.org/
C21 Reading Schools Climate Action Network	<ul style="list-style-type: none"> » Establish teacher network for sharing of expertise and knowledge on sustainable schools (for primary and secondary) » Hold regular events » Publish school-centric advice and guidance and signpost tools and models from reputable sources » Link to home schooling networks 	Network launched Events programme Information hub launched	September 2021	Brighter Futures for Children RCAN	Nature Task Force?
C22 Model Climate Conference	<ul style="list-style-type: none"> » Expand the model climate conference to include all schools in Reading » Bring the outputs back to the RCAN website » Legacy – Supporting the schools to make the changes they committed to on the day, through the RSCAN 	50% increase in schools participating in the Model Climate Conference	November 2021	Just ideas	Subject to funding
C23 Young Persons Climate Assembly	<ul style="list-style-type: none"> » Explore the potential to set up a Young Persons activist Network – for young people to meet up with like minded individuals to develop ideas and support » regular meetings, Intragram account? » Work with existing programmes 	Research appetite and develop proposal if appropriate	June 2021	RCAN	Must be youth led and with proper safeguarding

7. GOVERNANCE, MONITORING AND REPORTING

7.1 Monitoring and reporting

It is vital that progress in delivering both the aims and actions within the strategy is monitored so that corrective action can be taken if needed. With this in mind:

- Progress of delivery against action plans and targets will be monitored at quarterly meetings of the Reading Climate Change Partnership Board
- A short annual report summarising progress will be prepared for the Board and published more widely
- In the fourth year of the five-year strategy a comprehensive review will be conducted to inform development of the fourth Reading climate change strategy to cover the period 2025-30.

When completed, the strategy will be available on the Reading Climate Change Partnership website (www.readingcan.org.uk). Theme groups will regularly post updates, which will both show progress on delivering action, as well as creating a useful information resource for Reading.

In addition, individual partners will of course take responsibility for monitoring and reporting on progress with their own carbon reduction and adaptation plans as appropriate to their organisations.

7.2 Governance

The many strands of activity proposed in this strategy represent an ambitious programme of activity which will require some co-ordination to maximise the impact of individual actions, avoid duplication and enable effective monitoring and reporting. We therefore aim to review the constitution and operating model of the Reading Climate Change Partnership Board, its relationship with its constituent partners and the Reading Climate Action Network, to address this.

On the basis that form should follow function, now that the strategy is finalised, we have initiated a review of the Reading Climate Change Partnership to ensure that it is fit for the purpose of delivering the strategy over the next five years. This review will be completed within six months of the publication of the final strategy document.



GLOSSARY OF TERMS

Adaptation Adjustment designed to prepare for the consequences of a changing climate, e.g. floods or heat-waves.

Biodiversity The number and variety of organisms found in a particular habitat or eco-system – see also ‘resilience’.

Carbon emissions The release of carbon dioxide (CO₂) gases into the atmosphere.

Carbon footprint The total amount of greenhouse gas emissions caused directly or indirectly by an individual, group or organisation.

Carbon neutral Achieving an overall balance between CO₂ emissions produced and CO₂ emissions taken out of the atmosphere – see also ‘net zero’.

Carbon offsetting Attempting to compensate for CO₂ emissions by participating in schemes designed to make equivalent reductions of CO₂ in the atmosphere.

Carbon sequestration The process of removing CO₂ from the atmosphere.

Circular economy A concept which encourages more efficient use, and greater reuse and recycling, of materials through the economy, rather than the conventional approach of ‘take-make-waste’.

Decarbonisation The reduction or removal of CO₂ emissions from a product or process.

District energy system A local system for distributing heat generated in a centralized location for residential and commercial heating, generally using waste heat from local power plants or renewable energy.

Embodied carbon/energy The sum of energy or carbon involved in the production of goods and services, including the extraction and transportation of raw materials, manufacture, assembly and maintenance.

Green Deal A government scheme to retrofit buildings in order to make them more energy efficient, allowing householders to use future energy savings to pay for energy efficient measures to be installed in their homes.

Greenhouse gas emissions Gases which exaggerate the ‘greenhouse effect’, thus contributing to global warming – the main greenhouse gas being carbon dioxide (CO₂), but also methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF₆).

Heat supply networks The method of supplying heat to multiple buildings using waste heat from local power plants or renewable energy, as part of a district energy scheme.

Low carbon Generating relatively few carbon emissions.

Mitigation/climate mitigation Efforts to reduce or prevent the emission of greenhouse gases.

Modal shift A change in the type of transport used.

Modes of transport Different methods of transport, such as car, public transport, walking and cycling.

Net zero/net zero carbon Achieving an overall balance between CO₂ emissions produced and CO₂ emissions taken out of the atmosphere – see also ‘carbon neutral’.

Quality of life The conditions in which we live, including social factors such as education, environment, and physical and mental health, as well as material and economic factors.

Renewable energy Energy which is generated using natural resources which are renewed such as wind, sun, ground heat or biomass.

Resilience/climate resilience The ability to anticipate, prepare for, and respond to hazardous events, trends, or disturbances related to climate change – see also ‘adaptation’.

Retrofit The addition of new technology or features into existing older buildings, often applies to energy efficiency measures.

Sharing economy An economy measured by social interactions and exchanges and sharing of goods.

Smart energy Systems which allow energy to be stored, and enables communication between the user and supplier, in order to provide a better understanding of variations in power supply and consumption.

Smart meter A device for recording and displaying the consumption of electricity in real-time, for the purpose of monitoring energy use by both customers and energy suppliers.

Sustainable Capable of being maintained at a certain level without depleting natural resources.

Sustainable development Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Sustainable Urban Drainage Systems (SuDS) An approach to drainage which attempts to mimic natural drainage and reduce the risk of flooding, through a range of techniques in developments and redevelopments.

ACRONYMS

BAP	Biodiversity Action Plan
BBOWT	Berks, Bucks & Oxon Wildlife Trust
BC	Borough Council
BEIS	(Department for) Business, Energy and Industrial Strategy
BID	Business Improvement District
CC	County Council
CEHUK	Centre for Ecology & Hydrology
DfT	Department for Transport
EA	Environment Agency
LA	Local Authority
LRF	Local Resilience Forum
MERL	Museum of English Rural Life
RBC	Reading Borough Council
RES	Reading Community Energy Society
RDNHS	Reading and District Natural History Society
NTF	Nature Task Force
RBCAN	Reading Business Climate Action Network
RCAN	Reading Climate Action Network
RCCP	Reading Climate Change Partnership
RISC	Reading International Solidarity Centre
RTWN	Reading Tree Wardens Network
SECBE	South East Centre for the Built Environment
SGN	Southern Gas Networks
SSE	Scottish and Southern Energy
TCV	The Conservation Volunteers
TVB LEP	Thames Valley Berkshire Local Enterprise Partnership
TW	Thames Water
UoR	University of Reading



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CONSULTATION REPORT ON THE READING CLIMATE EMERGENCY STRATEGY 2020-25

1. Introduction

Public consultation on the draft Reading Climate Emergency Strategy 2020-25 opened on Friday 13th March. The consultation process was managed by Reading Borough Council on behalf of the Reading Climate Change Partnership which 'owns' the strategy. As a result, the Council is obliged to produce a consultation report summarising the results of consultation and the main changes made in response.

2. Timescale for the consultation process

The original intention had been for the consultation period to run for 6 weeks from 13 March until 24 April 2020. However, following the national 'lockdown' instituted as part of the response to COVID-19, the Partnership Board extended the consultation period until 31 May 2020 to enable more people to comment. The Partnership Board subsequently agreed to a further extension until 28 June 2020, a total of just over 14 weeks.

3. Promotion of the consultation process

The consultation was launched with a photo-call at the University of Reading involving a group of students, the Deputy Leader of the Council and the Vice-Chancellor of the University. Shortly after this the national 'lockdown' was instigated, and the communications programme designed to promote consultation was inevitably impacted as the focus of media attention was on COVID-19. Nevertheless, during the consultation period the opportunity to comment was promoted via:

- A press release issued by Reading Borough Council to launch the consultation
- An email to 2,000 members of Reading Borough Council's Citizen's Panel
- The social media accounts of the Reading Climate Change Partnership, Reading Climate Action Network, Reading Borough Council and other partners
- Advertisements on the digital screen outside Reading railway station

In addition to this, individual partners and organisations promoted the opportunity to comment via their own networks and internal communications (e.g. Reading Borough Council included details of the consultation in communications to all staff and many partners promoted the consultation during the later stages). The Partnership would like to thank all those organisations and individuals who promoted the consultation.

4. Responses to consultation

205 responses were received using the on-line consultation response form. A further 6 responses (2 of which were duplicates) were received directly by the Partnership via e-mail bringing the total to 210. This is a reasonable response for a consultation of this nature, particularly in view of the prevailing focus on COVID-19 throughout the period, and a higher level of response compared to previous Reading Climate Change Strategy consultations.

5. Schedule of key changes made in response to consultation

The table below summarises key changes made to the strategy in response to consultation and updates made to reflect new developments/data available since the consultation draft was published in March 2020. These changes were discussed and agreed by the Board of the Reading Climate Change Partnership with input from theme groups and other partners.

Chapter	Changes to post-consultation draft strategy
Executive Summary	<ul style="list-style-type: none"> Amended to be consistent with later sections (see below)
1. Introduction	<ul style="list-style-type: none"> Updated to reflect changes since first draft
2. Climate Change: the context	<ul style="list-style-type: none"> Factual changes to update (2.2) Graphs of/references to Reading's carbon footprint updated with latest data (2.3, 2.4)
3. Vision and Targets	<ul style="list-style-type: none"> Changes made to clarify that the targets apply to the whole Reading Borough area Vision statement broken down into two elements to make a clear distinction between 'net zero' and 'resilient' elements of the vision Language amended to refer to Reading 'being better prepared to deal with' climate impacts to better explain meaning of 'resilience'
3.4 The benefits of taking action on climate change	<ul style="list-style-type: none"> Section 3.4 expanded to refer more comprehensively to positive benefits Selection of quotations on positive benefits compiled (see end of 3.4) to reflect consultation responses
4. Reading's Pathway to Net Zero	<ul style="list-style-type: none"> Priority statements amended to better reflect priorities highlighted in consultation (4.1) Importance of education and engagement emphasized and 'Natural Solutions' added to list of priorities (4.1)
NEW SECTION 4.4	<ul style="list-style-type: none"> Added to summarise impacts of/opportunities from COVID-19
ENERGY THEME	<ul style="list-style-type: none"> Changes made to theme narrative to summarise best available evidence for renewable energy technologies and why some are given higher priority than others More detail added to action E3 on retrofit to reflect consultation comments
TRANSPORT THEME	<ul style="list-style-type: none"> Targets for modal shift revised to reflect higher level of ambition called for in consultation responses Action being taken to promote active travel and access Government funding summarised in theme narrative to reflect desire expressed in consultation for more support for active travel

Appendix 2: CONSULTATION REPORT ON THE READING CLIMATE EMERGENCY STRATEGY
2020-25

	<ul style="list-style-type: none"> • Consultation responses on congestion charging and other issues flagged with LTP team to consider in final revisions to LTP • Also new actions added on freight, schools and mobility services in response to consultation
RESOURCES THEME	<ul style="list-style-type: none"> • Substantial revisions to theme narrative and action plan to better reflect waste hierarchy • New references added to address commercial waste
WATER THEME	<ul style="list-style-type: none"> • Para added to narrative on Covid-19 impact (increased domestic/reduced commercial use)
NATURE THEME	<ul style="list-style-type: none"> • Action added on biochar (N3) • Para added to narrative on Covid-19 and new action added on health benefits (N21) • Comments on tree planting flagged with RBC team working on revised Trees Strategy
HEALTH THEME	<ul style="list-style-type: none"> • Substantial changes to theme narrative to address perceived focus on negative/adaptation issues by strengthening content on opportunities to align health and climate goals, and theme title amended to 'Health & Wellbeing' • Links with other themes highlighted in new actions added to reflect desire for more cross-referencing between this and other themes • Changes to narrative and action plan to highlight climate impacts on the vulnerable (e.g. new action H2 on elderly/heat stress) • New actions added on cooling public space (H4) and links with key stakeholders (H11, H15)
COMMUNICATIONS & ENGAGEMENT	<ul style="list-style-type: none"> • Selection of quotes/commitments from consultation included (6.1) • Detailed summary of Comms & Engagement Plan included (6.2)

6. Detailed summary of consultation responses

The on-line consultation form consisted of 6 questions with one of these questions being in 6 parts relating to the 6 action plans within the strategy – details of each are below.

6.1. Vision and Targets

The draft Strategy proposed a vision for 2025 of a Reading which was working rapidly towards a net zero carbon, resilient Reading by 2030, reinforcing the target of reaching net zero by 2030, and question 1 in the on-line consultation form asked ‘Do you have any suggestions for improving these?’

Response	Total	% of total
No suggestions for improvement/No comment	99	48.5%
Suggestions for improvement	105	51.5%

Most frequent suggestions for improvement (>10)	Number of references	% of total responses
Include sustainable transport	17	8.3%
More ambitious approach	14	6.9%
Clarity on targets	13	6.3%
Clarity on scope	12	5.9%

Analysis of responses:

- Just under 50% of responses either did not offer suggestions for improvement or explicitly stated support for the vision and targets – taken together these suggest a reasonably high level of support for the vision and targets as drafted
- Of those which did offer suggestions for improvement, the most frequent comments (>10) related to (i) the need for more sustainable transport/reduced vehicle traffic (ii) a desire for more ambition (iii) requests/suggestions for greater clarity around either the scope of the vision and targets, or the targets themselves
- Only 5 comments out of the total of 210 suggested that the vision and targets should be removed or were inappropriate on the basis that climate change was not a priority, but these were very clearly outweighed by the number of responses indicating support or calling for a more ambitious approach
- Many comments offered in response to this question did not relate specifically to the vision and targets – for example, they related to specific policies or projects which would not be appropriate to include in a high level vision statement but which are addressed elsewhere within the strategy
- Other comments or suggestions made less frequently (5 or fewer) related to: air quality; clarity on the definition of ‘resilience’, the priorities, the practical implications of the vision or the language used; competition with other areas; climate change being everyone’s responsibility; greenspace improvements; inclusion of biodiversity; involvement of people; inclusion of carbon sequestration; less development; littering; local food; local supply chains; preserving the environment; policy integration; impracticality of public transport for everyone; recycling;

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sustainable energy; third Thames Crossing; traffic light indicators; vision too long; tree planting; caveat on need to protect vulnerable people; more working from home; working in partnership (employers/business); working in partnership (neighbouring areas).

Responses received by e-mail outside of the main consultation questionnaire were also generally supportive of the vision and targets, though the response from Extinction Rebellion Reading suggested that Reading should adopt an alternative to the national BEIS dataset as the basis for measuring Reading's emissions. While their point (that the BEIS data focus on emissions from production not consumption) was well made, the Government measures the emissions from Reading Borough and we are obliged to follow the international protocols on emissions reporting which flow from this. Redirecting scarce resources to create parallel emissions reporting at a Council level is not considered a priority and would detract from the action needed to decarbonise the borough. On this basis, the Partnership Board rejected the suggestion of using an alternative mechanism as the basis for measuring Reading's progress towards 'net zero carbon by 2030' and the Strategy therefore uses the national BEIS data to assess the emissions from the borough as a whole, but encourages the use of more inclusive 'scope 3' emissions measurement for organisations when reporting their own emissions.

Summary & Subsequent Revisions to the Strategy:

In view of the analysis above it was clear that many respondents supported the vision and targets, and that there was very little appetite among respondents for any weakening or dilution of the vision and targets. That said, there was some desire for greater clarity in how the vision and targets were expressed, and some appetite for more ambition (particularly on sustainable transport), albeit among a minority of respondents.

The Partnership Board considered these comments against the fact that the target of a 'Net Zero Reading by 2030' represents a hugely ambitious goal, and concluded that the desire for more ambition could be better reflected in amendments to the action plans (see below), rather than by changing the vision statement and headline targets themselves. That said, the Vision and Targets have been revised to:

- Clarify the scope of their application
- Make a clear distinction between 'net zero' and 'resilient' elements of the vision
- Better explain the meaning of 'resilience'

6.2 Benefits of tackling climate change:

The draft Strategy listed a range of benefits to be gained from taking action on climate change and question 2 in the on-line consultation form asked 'What else should we consider as a benefit of tackling climate change?'

Response	Total	%
No comments	52	25.4%
Comments offered	153	74.6%

Most frequently cited benefits of taking action on climate (>10)	Number of references	% of total responses
Community cohesion	24	11.8%
Health benefits	16	7.8%
Global benefits	13	6.3%
Mental health benefits	13	6.3%
Future generations	12	5.9%
New economic opportunities	12	5.9%
Connection with nature	11	5.4%

The consultation produced a wide variety of responses to this question - the most frequently cited benefits of climate action (>10 references) included:

- Community cohesion - bringing communities together, reducing inequalities, encouraging personal responsibility and respect for each other and the environment
- Health benefits - e.g. the physical health benefits associated with e.g. active lifestyles
- Global benefits - benefits to the wider world including reduced climate impacts on poorer countries and reduction in the forces driving mass migration and refugees
- Mental health - improved mental health directly from addressing anxiety about the future and indirectly as a result of healthier lifestyles
- Future generations - benefits to young people who will have to live with the impacts of a changing climate as a result of today's emissions
- New economic/employment opportunities - opportunities to develop new products, services and jobs in the 'green economy'
- Connection with nature - bringing us closer to nature, recognising our place in it, respecting it and recognising the contribution which nature can make to tackling climate challenges

Other responses to this question made less frequently (<10) included (roughly in order of number of references, and excluding suggestions made only once): learning/educational opportunities; improved resilience; food security; reduced pollution; reduced waste; reduced/stable energy costs; local supply chains; safer streets; empowering people to act; improved biodiversity; no benefits; improve quality of life; and reduced travel.

A small number of comments (3) suggested that there were no benefits or that negative consequences would arise from taking action to tackle climate change. However, these were overwhelmingly outweighed by the comments identifying additional benefits which had not been identified in the draft Strategy.

Summary & Subsequent Revisions to the Strategy:

A striking feature of the consultation response was that it identified a wide range of benefits arising from taking action to tackle climate change. The Strategy has therefore been revised such that:

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- The final draft strategy narrative and theme action plan narratives refer more comprehensively to the many positive benefits arising from action on climate change which were highlighted by the consultation process
- The section in the strategy on benefits arising from climate action has been expanded to include quotations from people who responded to the consultation

A selection of quotations from the consultation has also been compiled to be used in wider communications around the strategy launch and subsequent awareness raising and engagement activity as these represent the authentic voices of Reading citizens.

6.3 Priority areas for action

The draft strategy identified four priorities on the pathway to net zero (low/zero carbon housing, more renewable energy, reducing need to/impacts of travel and reducing consumption/waste) and asked 'What else should we consider as a priority as we work towards a net zero carbon Reading by 2030'?

Response	Total	%
No comments	35	17.1%
Comments offered	170	82.9%

Most frequent suggestions for additional priorities (>10)	Number of references	% of total responses
Sustainable transport	42	20.6%
Waste management	23	11.3%
Renewable energy	21	10.3%
Public education and engagement	18	8.8%
Sustainable greenspace management (e.g. tree-planting)	16	7.84%
Sustainable consumption (including food/diet)	15	7.4%
Housing retrofit	11	5.4%

The consultation produced a wide variety of responses to this question - the areas most frequently identified as additional priorities (>10 references) included:

- Sustainable transport - measures to reduce the need to travel, improve public transport and its affordability, better provision for Electric Vehicles, better provision for/promotion of walking and cycling and measures to reduce/disincentivise diesel/petrol vehicles
- Sustainable waste management - food waste collections, home composting, improved recycling, action on fly-tipping and a variety of other measures to reduce waste and manage it more sustainably
- Renewable energy - a variety of renewable energy technologies (particularly solar) and mechanisms to encourage their adoption
- Public education and engagement - importance of engaging and educating the wider public and giving them information to make climate-friendly choices

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- Sustainable greenspace management - highlighting the role of greenspace in delivering 'natural' solutions to climate challenges (e.g. via tree-planting), benefits of improved access to greenspace etc
- Sustainable consumption - action to reduce emissions from consumption, reduce its impacts or reduce consumption overall
- Housing retrofit - support for housing retrofit to reduce carbon emissions

Other responses to this question made less frequently (<10) included (roughly in order of number of references, and excluding suggestions made only once): local economic opportunities (9); support for local, sustainable and/or organic food (7); working from home (4); sustainable management of water (3); people need cars (3); business engagement, Commercial Buildings, Challenging targets, Divestment in fossil fuels, nature connection, reduce energy use, social justice, sustainable urban planning, cross-boundary collaboration (2 references each).

Summary & Subsequent Revisions to the Strategy:

A number of the suggestions for additional priorities arising from the consultation were already included explicitly or implicitly within the draft strategy (e.g. renewable energy, housing retrofit, sustainable transport within the priority around travel, sustainable consumption and waste management within the priority around consumption and the 'circular economy'). While at one level this could be taken to reinforce support for the stated priorities, it also suggests that the priorities could be expressed more clearly or would benefit from some elaboration. The strategy priorities were therefore re-visited to better reflect the priorities highlighted in the consultation exercise.

Additionally, the section within the strategy on priorities was amended to emphasise:

- (i) the importance of public education and engagement;
- (ii) the potential for sustainable greenspace management and 'natural solutions' to help tackle climate challenges (both adaptation and mitigation), reflecting the importance attached to these points in the consultation response.

6.4. Action Plans

The consultation invited comments on each of the six action plans as set out below.

6.4.1 Energy & Low Carbon Development Action Plan

Response	Total	%
Comments/suggestions offered	90	43.9%
No comments/suggestions offered	115	56.1%

Most frequent comments/suggestions on Energy Theme Action Plan (>5)	Number of references	% of total responses
Support for the action plan	15	7.3%
More renewable energy	13	6.3%

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Housing retrofit/domestic energy efficiency	8	3.9%
Need for grants/subsidy for housing retrofit	8	3.9%
Reduce development pressure	5	2.4%
Questions about how this will be funded	5	2.4%

The consultation produced a wide variety of responses to this question - the areas most frequently commented on or suggested (5 or more references) were:

- Support for the action plan: there were a number of positive comments about the plan
- More renewable energy: there was support for more deployment of renewable energy both in general, in terms of specific technologies (heat pumps, solar, hydro, wind) and in terms of community energy/renewables
- Housing retrofit/domestic energy efficiency: there were a significant number of comments highlighting the importance of this, with some suggesting a major programme akin to the switchover to gas being required and others calling for obligations on landlords to retrofit private rented accommodation
- Need for grants/subsidy for housing retrofit: linked to the previous point, a similar number of comments suggested that incentives would be needed in view of the cost of retrofit to individual households
- Reduce development pressure: a number of comments made the link between new development and increased emissions, some of these expressing concern about the number of flats being built in Reading
- Questions about how this will be funded: several responses raised questions about how the actions, particularly in relation to housing retrofit, would be funded

Other responses to this question made less frequently (<5) included (in order of number of references, and excluding suggestions made only once): concerns about smart-meters (compatibility, trust) (4); caution urged on reliance on BREEAM standards, include proposals for retrofitting commercial not just domestic, make targets smarter/more specific, turn lights off in commercial buildings out of hours; require net zero standards through planning (3 each); consider embedded/embody carbon, develop exemplar renewable heat projects, encourage switching to 'green' tariffs, more detail on skills, information for homeowners about retrofit, more ambitious targets, don't rely on off-setting, reduce streetlighting, ensure value for money with energy investment (2 each).

Among the e-mail responses received outside the formal consultation questionnaire, Extinction Rebellion Reading called for more ambitious targets (in relation to EPC ratings); solar power deployment at the bus depot; a task force to lead on funding, investment and programme/project management for housing retrofit; and greater clarity about how peak demand/surplus generation could be managed in a low carbon energy future.

Summary & Subsequent Revisions to the Strategy

The consultation highlighted the challenge of identifying the best way forward in a fast moving energy policy environment as, while the thrust of the action plan was generally supported, concerns were raised or caution urged in relation to use of, for example, ground source heat pumps, anaerobic digestion/biogas, housing retrofit, carbon offsetting, BREEAM standards and smart meters.

This illustrates that the solutions to our energy challenges are among the most hotly contested areas of climate policy. It also highlights the importance of good evidence to inform this vital strand of the strategy, not just for its own sake but also to give confidence to householders and organisations who are being urged to invest in low carbon energy solutions. Otherwise, the other over-arching message of the consultation for this theme was the need for more clarity about how the scale of retrofit required will be taken forward and funded.

With these points in mind, the theme was revised to:

- Summarise the best available evidence for the renewable energy technologies proposed and the reasons why some are given higher priority/greater prominence within the action plan than others
- Add detail to the actions on housing retrofit programmes

6.4.2 Transport Theme Action Plan

Response	Total	%
Comments/suggestions offered	105	51.2%
No comment/suggestions offered	100	48.8%

Most frequent comments/suggestions on Transport Theme Action Plan (>5)	Number of references	% of total responses
Better cycling infrastructure	26	12.7%
Better bus infrastructure/services	17	8.3%
Support for electric vehicles	13	5.4%
More ambitious targets	8	3.9%
Incentives/subsidies for public transport	7	3.4%
Segregated cycle routes (from cars and/or pedestrians)	7	3.4%
Introduce road pricing/congestion charging	6	2.9%
Improve cycle parking/storage (at stations and elsewhere)	6	2.9%

The consultation produced a wide variety of responses to this question – the areas most frequently commented on or suggested (>5 references) included:

- Better cycling infrastructure – this was the most commented on area, reflecting a desire for the action plan to place greater emphasis on improved cycling infrastructure, with a number of comments emphasising the importance of making cycling safer – linked to this, the 6th most commented on area was the desire for cycle routes to be segregated from vehicle traffic and/or pedestrians, while the 8th most commented request was for improve cycle parking/storage facilities (e.g. at stations)
- Better bus infrastructure and/or services – the consultation suggested a significant desire for the action plan to prioritise improved infrastructure for buses and/or higher quality/more frequent bus services
- Support for electric vehicles – the consultation indicated support for more EV charging infrastructure or other measures to accelerate take up of EVs, with a number of these

mentioning the taxi fleet in particular. A smaller but significant number of responses (5) suggested that reference be made to e-bikes and e-scooters in the action plan

- More ambitious targets: a number of comments called for transport action plan targets to be more ambitious, particularly in relation to modal switch (measured by % of journeys, not increase in public transport trips, active travel and traffic reduction)
- Incentives/subsidies for public transport: a number of responses called for incentives to promote public transport use, particularly in light of the impacts of Covid-19
- Introduce road pricing/congestion charging: a number of responses supported using pricing mechanisms to reduce traffic (compared to a much smaller number suggesting that the cost of travel should not be increased)

Other responses to this question made less frequently (<5) included (in order of number of references, and excluding suggestions made only once): encourage walking and cycling (5); promote working from home (5); pedestrianise town centre, repair roads (4); offer bikehire/replace ReadiBike scheme, use land use planning to 'design out' traffic/need to travel; work across boundaries/neighbouring areas to reduce traffic, reduce school traffic, ensure LTP is aligned with climate strategy, new development creates new traffic (3); more specific targets, more no car zones, build Third Thames bridge to cut through traffic, remove traffic lights, lower speed limits, consider hydrogen vehicles, improve cross-modal transport, unrealistic plans (2).

E-mail responses received outside the main consultation questionnaire reinforced support for better cycling infrastructure, improved public transport and support for EVs although the response from Thames Water suggested referring to 'zero carbon/non-fossil fuels' instead of EVs to accommodate potential for other technologies. Additionally, the email response from Extinction Rebellion Reading called for more ambitious targets (e.g. in relation to modal switch and requiring Taxis to switch to EVs), dynamic road pricing, segregated road space for cycling and a comprehensive cycle route plan for Reading, and more rigorous assessment of the carbon impact of Park and Ride and other transport proposals.

Summary & Subsequent Revisions to the Strategy

The consultation suggested that those who responded would support a higher level of ambition and provision for active travel (particularly cycling), public transport (particularly buses) and electric vehicles within the policies and targets in the final Action Plan. Many of policy decisions covered in the Action Plan will ultimately be taken forward via the statutory Local Transport Plan, which has been the subject of its own consultation exercise. With this constraint in mind, the theme was revised to:

- Set a higher level of ambition in targets for traffic reduction and modal shift
- Better describe steps being taken to promote active travel

All the comments made have also been flagged with the LTP team.

6.4.3 Resources Theme Action Plan

Response	Total	%
Comments/suggestions offered	91	44.4%
No comment/suggestions offered	114	55.6%

Most frequent comments/suggestions on Resources Theme Action Plan (>5)	Number of references	% of total responses
Improve recycling	10	4.9%
Improve waste education	8	3.9%
Promote re-use/repair/sharing	8	3.9%
Support for the action plan	7	3.4%
Use greenspace/gardens for growing food	6	2.9%
Press businesses for more action on packaging/plastic	6	2.9%
Use regulatory measures to penalise non-compliance	6	2.9%

The consultation produced a wide variety of responses to this question - the areas most frequently commented on or suggested (>5 references) included:

- Improved recycling: the most frequently commented on area related to a call for improved recycling facilities or the ability to recycle a wider range of materials.
- Improve waste education: a number of comments highlighted the importance of educating people (via schools and elsewhere) about the sources/impacts of waste and where it ends up
- Promote re-use/repair/sharing: a number of comments asked to see more support for places or scheme enabling products and clothing to be re-used, repaired or shared e.g. Repair Cafes. Several of these highlighted the potential to work with charities to help those in need and potentially use vacant town centre premises for the purpose.
- Support for the action plan: supportive comments were made on the comprehensive nature of the plan
- Use greenspace/gardens for growing food a number of responses highlighted the potential for growing food in public and private spaces, drawing attention to the education value of connecting people with the food they eat
- Use regulatory measures to penalise non-compliance: a number of responses indicated support for a tougher approach to be taken e.g. with people or businesses who do not separate waste properly.

Other responses to this question made less frequently (<5) included (in order of number of references, and excluding suggestions made only once): encourage switch to more plant-base/climate friendly diet (including through public procurement); change culture of consumption, take more ambitious action on Reading Festival, make targets more specific/SMART, support for food waste collection (4 each); develop good communications, promote home composting, retain/expand allotments, support local producers (3 each), less emphasis on recycling/more on waste reduction, more action on commercial waste, questions about how this will be funded, climate-friendly labelling, more ambitious targets, focus on new economic opportunities, support the circular economy (2 each).

Summary & Subsequent Revisions to the Strategy

While the focus of suggestions for improvement from the consultation was on recycling, reflecting public buy-in to the concept, the consultation also demonstrated concern that the action plan should focus higher up the waste hierarchy, on waste reduction, re-use and repair. The theme narrative and action plan was therefore revised to:

- Better align with the 'waste hierarchy' with action to 'reduce' waste highlighted at the top
- Include more reference to commercial waste relative to domestic

6.4.4 Water Theme Action Plan

Response	Total	%
Comments/suggestions offered	80	39.0%
No comments/suggestions offered	125	61.0%

Most frequent comments/suggestions on Water Theme Action Plan (5 or more)	Number of references	% of total responses
Support for Action Plan	14	6.8%
Water saving measures (various)	13	6.3%
Water company should tackle leaks/repairs/maintenance	9	4.4%
Prevent building on floodplains	6	2.9%
Prevent paving over of gardens	5	2.4%
Expand water metering	5	2.4%
Natural solutions to adaptation	5	2.4%

This theme attracted the fewest comments but still a wide range of suggestions. The most frequent areas commented on were:

- Support for the action plan: respondents expressed support for the plan in general
- Water saving measures: support was expressed for a variety of water saving measures including taking the opportunity of retrofit/new build to incorporate water saving measures in development, use grey-water recycling (including promotion of water butts), and the deployment of a range of water saving devices/practises.
- Water company should tackle leaks/repairs/maintenance: a number of responses indicated that this should be given greater priority and suggested that efforts to promote domestic water saving would be under-mined unless this issue was addressed.
- Prevent building on floodplains: responses called for development on floodplains to be restricted by the planning process.
- Prevent paving over of gardens: responses expressed concern about porous surfaces such as lawns and gardens being replaced with hard standing thus increasing flood risk.
- Expand water metering: responses expressed support for metering as a means of reducing domestic water consumption.
- Natural solutions to adaptation: responses said that well managed greenspace and initiatives like tree planting could contribute to a reduction in flood risk.

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In a response received from Thames Water outside the consultation questionnaire, the company expressed its support for water efficiency policies and targets as set out in the National Planning Policy Framework and Local Plan. Thames Water also supported the emphasis on management of flood risk and asked for further discussion on the Kennet Meadows proposal.

Summary & Subsequent Revisions to the Strategy

In light of the consultation responses, the theme was updated to reflect the impacts of Covid-19 on patterns of demand for water.

6.4.5 Nature Theme Action Plan

Response	Total	%
Comments/suggestions offered	94	45.9%
No comments/suggestions offered	111	54.1%

Most frequent comments/suggestions on Nature Theme Action Plan (>5)	Number of references	% of total responses
Support for the Action Plan	19	9.3%
Change mowing regimes (less cutting/more wildflowers)	13	6.3%
Protection or planting of trees	9	4.4%
Prevent paving over of gardens	6	2.9%
RBC commitment to nature questioned	6	2.9%

This theme attracted a high number of comments (2nd only to transport), including a significant number of positive comments. The most commented on areas were:

- Support for the Action Plan: the consultation suggested that respondents were pleased to see the inclusion of nature as a theme within the strategy
- Change mowing regimes: these responses generally called for less cutting, more 're-wilding' and/or an approach to managing verges and greenspaces to encourage biodiversity/wildflowers. Responses in favour of this approach outweighed responses calling for more grass cutting in the ratio 13:1
- Protection or planting of trees: responses included general support for tree-planting, planting for flood protection, better protection of existing trees (including railway trees), with a number of comments also expressing a preference for natural regeneration and the need for after care of newly planted trees
- Prevent paving over of gardens: responses on this point echoed similar concerns raised in the content of the Water Theme, with some asking about the Council's ability to regulate this area
- RBC commitment to nature questioned: a number of comments questioned RBC's role for example in the context of approving developments which were perceived to be damaging to nature conservation

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Other responses to this question made less frequently (<5) included (in order of number of references, and excluding suggestions made only once): improve nature education, promote rewilding/natural regeneration (5 each); make targets SMART/more specific, reduce development pressure (4); include litter, set up/support volunteer groups (3 each) discourage/ban peat in compost, ensure after-care of newly planted trees, use planning to get developers to plant more trees, promote hedge-laying, include carbon sequestration, improve/create wetlands/ponds (2 each).

Summary & Subsequent Revisions to the Strategy

The high number of comments on this theme illustrated the importance which residents attach to nature and greenspace in Reading. While the support for tree-planting expressed was perhaps to be expected, significantly, this was outweighed numerically by support for changing mowing regimes which could benefit wildlife, save money and sequester carbon. Comments on tree planting were also qualified by some in terms of a preference for natural regeneration, the importance of aftercare of newly planted trees, and using native species. In light of consultation, the theme was revised to:

- Address the impacts of Covid-19
- Include a new action on biochar (N3)
- Include a new action on health benefits (N21)

5.4.6 Health Theme Action Plan

Response	Total	%
Comments/suggestions offered	85	41.5%
No comments/suggestions offered	120	58.5%

Most frequent comments/suggestions on the Health Theme Action Plan (5 or more)	Number of references	% of total responses
Support for the Action Plan	9	4.4%
Importance of greenspace	7	3.4%
Requests for clarity/relationship with other themes unclear	6	2.9%
Importance of health education (diet, exercise etc)	5	2.4%
Importance of cooling public spaces (via trees, canopies etc)	5	2.4%
More emphasis on the poorest/most vulnerable	5	2.4%

This theme attracted a variety of comments, with the most commented on areas being:

- Support for the action plan: a number of responses said they were pleased to see the issue of health being addressed in the Strategy and/or approved of the content
- Importance of greenspace: responses highlighted the importance of greenspace/access to greenspace both for health and climate adaptation
- Requests for clarity: a number of responses said that the Health theme seemed 'tacked-on', had an unclear relationship with other themes, or could be improved by taking a broader approach than the current focus on adaptation

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- Importance of health education: responses highlighted this in relation to diet and exercise in particular
- Importance of cooling public spaces: responses supported action on this issue in relation to both natural (trees/hedges) and man-made (canopies) solutions
- More emphasis on the poorest/most vulnerable: a number of responses highlighted the fact that vulnerable people/communities are most exposed to climate impacts and suggested this be addressed in the action plan, specifically in relation to the elderly, homeless people, BAME communities and the poorest in society

Other responses to this question made less frequently (<5) included (in order of number of references, and excluding suggestions made only once): more emphasis on improving health (relative to adaptation); more specific/smarter targets (3 each); more on transport to/from hospital/health facilities, reduce streetlighting (to aid sleep), make drinking water available for refills (via public fountains, shops/restaurants etc), questions about how action will be funded, encouragement of walking/cycling for health, importance of publicising health information such as air quality data, increase support for buses to reduce air pollution (2 each).

Summary & Subsequent Revisions to Strategy

The mixed nature of consultation responses highlighted the challenge the Partnership faced in bringing a cross-cutting issue like health into the Strategy as a 'new' theme. That said, there was support for its inclusion and the Action Plan generally so the Theme has been retained with some refinements:

- Substantial changes to theme narrative to address perceived focus on negative/adaptation issues by strengthening content on opportunities to align health and climate goals, and theme title amended to 'Health & Wellbeing'
- Links with other themes highlighted in new actions added to reflect desire for more cross-referencing between this and other themes
- Changes to narrative and action plan to highlight climate impacts on the vulnerable (e.g. new action H2 on elderly/heat stress)
- New actions added on cooling public space (H4) and links with key stakeholders (H11, H15)

6.5 Encouraging/enabling action on climate change

The consultation asked (question 5) 'How can we get more people to take action to tackle climate change?'

Response	Total	%
Suggestions offered	177	86.34
No suggestions offered/not specific	28	13.66%

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Most frequent suggestions for how to get people to take action on climate change (>10)	Number of references	% of total responses
Raise awareness	82	40.2%
Financial incentives	43	21.1%
Improve engagement	38	18.6%
Financial penalties	20	9.8%
Demonstrate the positive of taking action	13	6.4%
Regulatory measures	12	5.9%

The consultation provided a wide variety of responses to this question but a number of comments or themes stood out, namely:

- Raising awareness: the need to raise awareness, provide information or encouragement to act on climate change via both mainstream and social media was highlighted in a large number of responses to this question. A significant number of these highlighted the importance of informing young people, both in their own right and as a route to influencing their parents.
- Financial incentives: a reasonable number of responses suggested that financial incentives (e.g. to use public transport or invest in renewable energy) would get more people taking action on climate change
- Improving engagement: the need to go beyond raising awareness to improve engagement of individuals, communities and businesses, giving them the tools to understand and reduce their emissions and to take ownership of the issue was referenced in a significant number of responses to this question
- Financial penalties: a number of responses suggested that financial disincentives (e.g. for polluting activities, driving, parking) would get more people taking action on climate change (though these were outnumbered by the number of references to financial incentives in the ratio of about 2:1). Related to this, a number of responses indicated concern that the burden of paying any additional costs of tackling climate change should not be borne by those least able to pay
- Demonstrate the positives of taking action: responses suggested that the benefits of climate action should be emphasised.
- Regulatory measures: responses suggested that regulatory measures or restrictions on polluting activities would enable more action on climate change

Other responses to this question made less frequently (<10) included (roughly in order of number of references, and excluding suggestions made only once): show leadership by example (mainly the Council but also businesses and individuals)(10); exemplar developments or projects (7); support the community/community initiatives, incorporate in the curriculum/schools (=6); make action simple, create Citizen's Assemblies, the importance of a just transition (=5); create a hub for information/action, reduce development pressure (=3); abandon catastrophism, reduce immigration, report transparently, facilitate walking/cycling (=2).

Email responses received outside the main consultation questionnaire also emphasised the importance of an effective communications and engagement strategy, e.g. XR Reading

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suggested that RBC should initiate this and co-ordinate with other partners and that it should include a 10-point plan for climate action which the public could sign up to. Additionally, the e-mailed response from XR Reading supported the creation of a Citizen's Assembly.

Summary & Subsequent Revisions to the Strategy:

One of the strongest messages emerging from this part of the consultation was the importance of good communication and engagement to raise awareness of why and how people and organisations can take action on climate change. At the time the draft strategy was published, development of a communications and engagement plan referred to in section 6 was at an early stage. However, further work has been done to develop this aspect of the strategy since then. The final strategy therefore:

- Gives greater prominence and adds further detail to the communications and engagement plan referred to in section 6 of the draft strategy.
- Draws attention to the importance of communications and engagement in the theme narratives.

On the issue of a Citizen's Assembly, while the national Citizen's Assembly on climate change has proved very instructive, the Partnership Board does not believe it has the capacity to manage such a proposal effectively at the Reading scale. The Partnership Board agreed, therefore, that the final strategy should not include a commitment to establish a Citizen's Assembly for Reading. That said, the Board acknowledged that this could be something to discuss with other Berkshire local authorities as we seek to improve collaboration with them on climate change.

6.6 Commitments to tackle climate change

The consultation asked (question 6) 'Please tell us what you/your organisation would be willing to do to help make Reading a net zero carbon borough by 2030 - What would you be willing to do to help?'

Response	Total	%
Suggestions offered	152	74.1%
No suggestions offered	53	25.9%

Most frequent responses on willingness to help (>10)	Number of refs	% of total responses
Already do something/as much as I can	25	12.3%
Cycle/walk more	24	11.8
Help with communications/spreading the word	19	9.3%
Volunteering (not specific)	18	8.8%
Invest in renewable energy/green energy supply	17	8.3%
Recycle more	16	7.8%
Do all I can (not specific)	13	6.4%
Drive less	12	5.9%
Invest in energy efficiency	11	5.4%

Appendix 2: CONSULTATION REPORT ON THE READING CLIMATE EMERGENCY STRATEGY 2020-25

Switch to Electric Vehicle	11	5.4%
Get involved in managing greenspace/tree-planting	11	5.4%
Switch to public transport	11	5.4%

The consultation suggested a strong appetite to commit to additional action to tackle climate change in general and in a wide range of specific areas, as well as a sense that many responders were already 'doing their bit' (hence the most frequent response in the table above). Of those specific areas where people indicated a willingness to make changes:

- Cycle/walk more - a number of those saying they would cycle/more indicated that this was conditional on feeling safer, particularly in relation to cycling on roads
- Invest in renewable energy/switch to green energy supplier - some of these qualified their comments by saying as long as it was affordable
- Recycle more - many of those saying this indicated that they would do so if the facilities were available (e.g. in relation to food waste)
- Drive less
- Invest in energy efficiency
- Switch to an electric vehicle
- Get involved in managing greenspace/tree-planting
- Switch to public transport

Other responses to this question made less frequently (<10) included (in order of number of references, and excluding suggestions made only once): support with lobbying government (9); influence the institutions (e.g. church) I am part of (6); reduce energy use, support local/sustainable food (=5); buy local, use less water, work from home more often (=4); buy less plastic, share materials/equipment, pay more tax, make a zero carbon commitment (organisations) (=3); leave the area (2).

In addition, 28 responses (13.7%) made specific offers to help or collaborate in taking forward the aims of the strategy.

Summary & Subsequent Revisions to the Strategy

In view of the strong appetite to take action on climate change expressed by those who responded to the consultation, the following changes were made to the final strategy:

- A selection of responses to this question were compiled to be included in the final strategy and to be used in wider comms around the strategy launch and subsequent awareness raising/engagement activity
- The communications and engagement plan will include action to identify and promote the most significant actions which individuals and organisations can take to reduce their carbon footprint, making this as simple and accessible as possible

The Partnership is also following up with those individuals or organisations who have made specific offers to assist or collaborate on strategy implementation, with a view to engaging them in the work of the Partnership and/or theme groups as they transition from strategy development to implementation.

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The Carbon Plan 2020-2025



Reading Borough Council - our pathway to net zero Carbon

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1. Introduction

The use of energy, water and other natural resources is essential to the operation of Reading Borough Council and in providing services to the community. Whilst vital to the functioning of the organisation, it is crucial that our use of energy and water is managed and minimised to reduce our impact on the environment, limit our expenditure and mitigate our exposure to insecure energy supplies and limited water resources.

The use of certain types of energy directly, or indirectly, produces greenhouse gas emissions, typically in the form of carbon dioxide, such as from the combustion of natural gas in boilers, or from combustion of gas in power stations generating electricity for the National Grid. Greenhouse gases are a main factor in causing man-made climate change, which is having, and will in the future have, a significant impact on our way of life and the world around us. By limiting our energy and water use and thereby restricting our carbon emissions we are helping to safeguard our world for future generations. The urgency and importance of doing so was underlined by the Council's declaration of a climate emergency in February 2019, committing to the ambitious goal of a net zero carbon Reading by 2030.

The Council's Carbon Plan sets out our policy and targets on corporate energy and water management, and identifies actions to achieve these within the time period 2020-2025. The plan includes actions to ensure the authority is compliant with relevant legislation (such as Energy Performance in Buildings legislation) and national reporting requirements (such as Greenhouse Gas Protocols). The Plan will assist the council in making energy and water management an integral part of its decision-making processes, to ensure efficient use of these resources today and in the future.

Crucially, the implementation of the Plan will:

- Contribute to the Corporate Plan aim to 'Build a Council fit for the future' by improving the efficiency of our operations and minimising costs
- Deliver many of the Council's commitments as set out in the Reading Climate Emergency Strategy 2020-25
- Enable the Council to lead by example as we encourage Reading businesses, organisations and residents to reduce their own environmental impacts.

An assessment of 'value at stake' showed that by basing our carbon reduction investments on robust business cases, the council has avoided energy costs of around £11 million since 2008/09, including some £1.5m in 2018/19 alone.

Looking ahead, the estimated 'value at stake' by 2025/26 is £1.5m for buildings alone - this is summarised in figure 1.1 below.

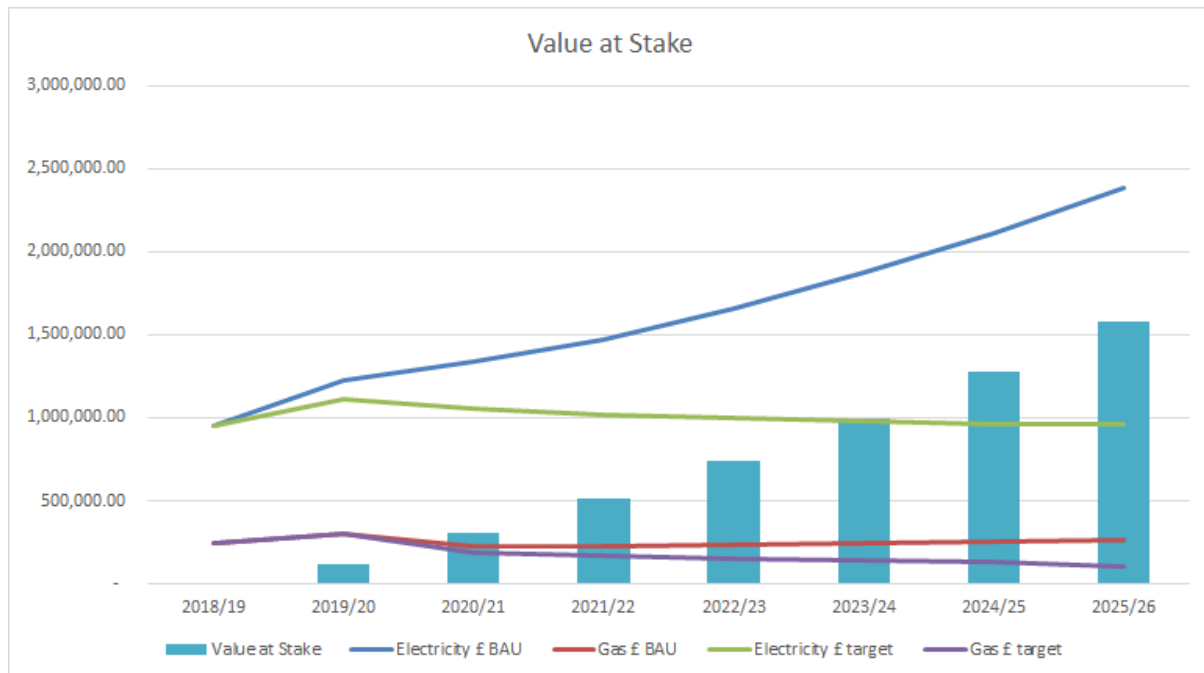


Figure 1:1 - value at stake (£) over the course of 2020-25 Carbon Plan (buildings only)

2. Our Vision and Ambition

In February 2019, Reading Borough Council declared a Climate Emergency and set out on a journey to achieve a carbon neutral borough by 2030.

A key element of this vision was the that the Council would lead by example to bring about the changes needed. It is therefore important that the Council shows that it can make meaningful progress towards being zero carbon in its operations by 2025. Our vision for the Council in this Carbon Plan is therefore to:

‘lead by example and work in partnership towards achieving net zero carbon operations by 2030’.

Setting ambitious yet realistic targets for carbon reduction and renewable energy generation by 2025 will be important to keep us on track to the ultimate goal of becoming a net zero organisation by 2030.

The Carbon Plan 2020-25 will work towards four headline targets as follows - by 2025 we will:

- Reduce the organisation’s carbon emissions by 85%, against a 2008/9 baseline¹
- Generate equivalent to 50% of our energy from renewable sources by 2025²
- Reduce our use of fossil fuels by 50%, against a 2008/09 baseline³
- Achieve a 5% p.a. reduction in water use against a 2019/20 baseline.

By achieving these targets Reading Borough Council will be on track to meet its challenging ambition of becoming a net zero carbon organisation by 2030.

¹ By 2018/19 RBC had achieved a 63% reduction in carbon emissions against a 2008/09 baseline – to reach 85% by 2025 will involve almost halving our current energy use

² By 2018-19 RBC was generating c.10% of its energy needs from renewable sources so while a 50% target is ambitious this will be 50% of a much smaller total energy demand in light of the demand reduction measures set out within the Plan

³ A Policy Committee resolution [reference] requires inclusion of a fossil fuel reduction target in this Carbon Plan - the ability to achieve the proposed fossil fuel reduction target of 50% is, however, heavily dependent on switching the Refuse Collection Vehicle Fleet to EV, which is currently the subject of ongoing feasibility study. In the event that a switch to EV proves impossible during the period of this plan (e.g. for technical reasons), it is unlikely that this target will be met. While this would also make the achievement of the headline 85% carbon reduction in the Plan target more challenging, it would remain within reach assuming that the shortfall could be made up from other areas of our corporate carbon footprint.

3. Managing our resources - progress to date

Since Reading Borough Council signed the Nottingham Declaration on Climate Change in 2006 the authority has undertaken a wide range of work to address energy, water and carbon management, focusing on reducing costs, limiting its impact on the environment, decarbonising our energy supply and integrating these approaches across the organisation. In the last five years, the organisation has been working on the actions set out in the Carbon Plan 2015-20 to achieve a carbon emission reduction target of 50% by 2020, against the 2008/9 baseline.

Reading has a strong track record on carbon emissions reduction, being amongst the top ten boroughs in the Country for reductions since 2005, totalling 228kT CO₂ or 52% of Reading's total reductions. In the latest year for which data is available (2018/19), Reading was 4th out of all the English local authorities by this metric.

During the same period Reading Borough Council has reduced its own emissions faster than the borough with reductions of 63% in the decade from 2008 to 2018, achieving the 50% reduction target in the Carbon Plan 2015-20 three years early.

Reading Borough Council's current corporate energy use is principally through electricity and gas, for buildings and street lighting, with a small volume of fuel oil for heating buildings, with the cost in 2018/19 totalling over £1.8m.

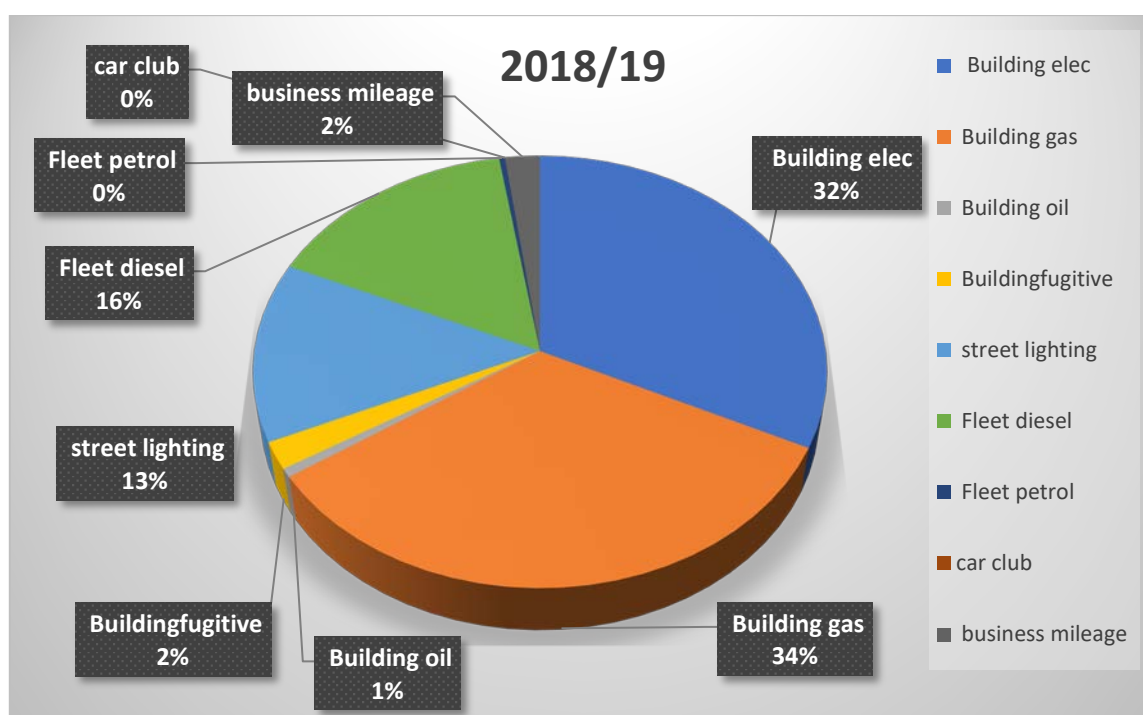


Figure 3.1: Breakdown of Reading Borough Council carbon footprint, 2018/19

The carbon emissions from energy used in buildings accounted for 68% of the Council's carbon footprint in 2018/19, as shown in Figure 3.1 above. Carbon emissions from street lighting have reduced as a proportion of the total since 2008/09. Other energy is used to fuel cars for the RBC fleet and business travel,

which now accounts for a higher proportion of the carbon footprint as emissions from other sectors have been reduced - up from 10% in 2008/9 to 18% in 2018/19.

Unit prices for energy have gradually increased over the last six years, so although energy use in kWh has decreased by nearly 50% since 2008/9, spend on energy has remained relatively stable.

Carbon emissions reduction over the last 10 years has mainly been achieved through reductions across the building and street lighting estate. Reduction in building energy use has accounted for nearly three quarters of the total emissions reduction, whilst street lighting changes are credited with 20% of the total emissions savings, as illustrated in Figures 3.2 & 3.3 below.

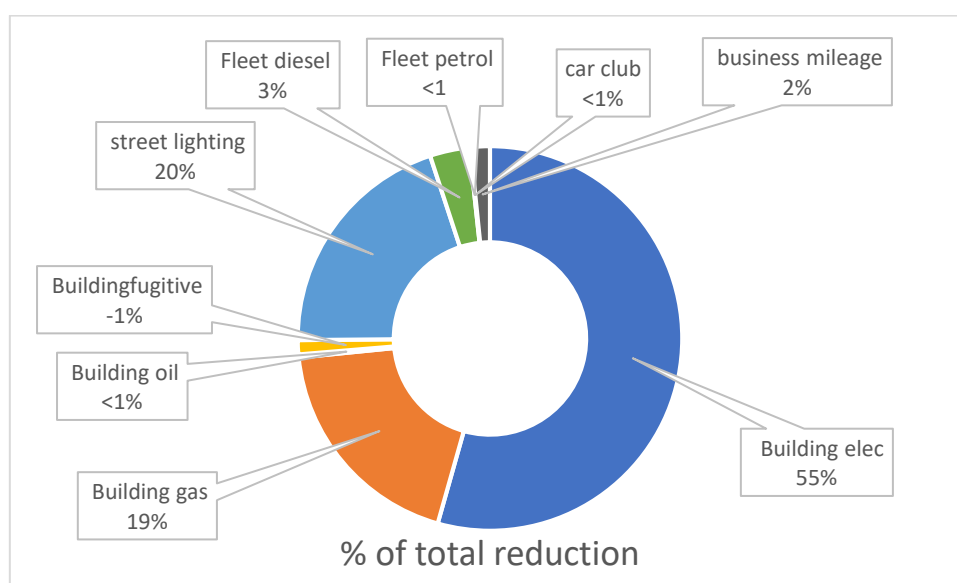


Figure 3.2: breakdown of RBC emissions reduction achieved over the last decade

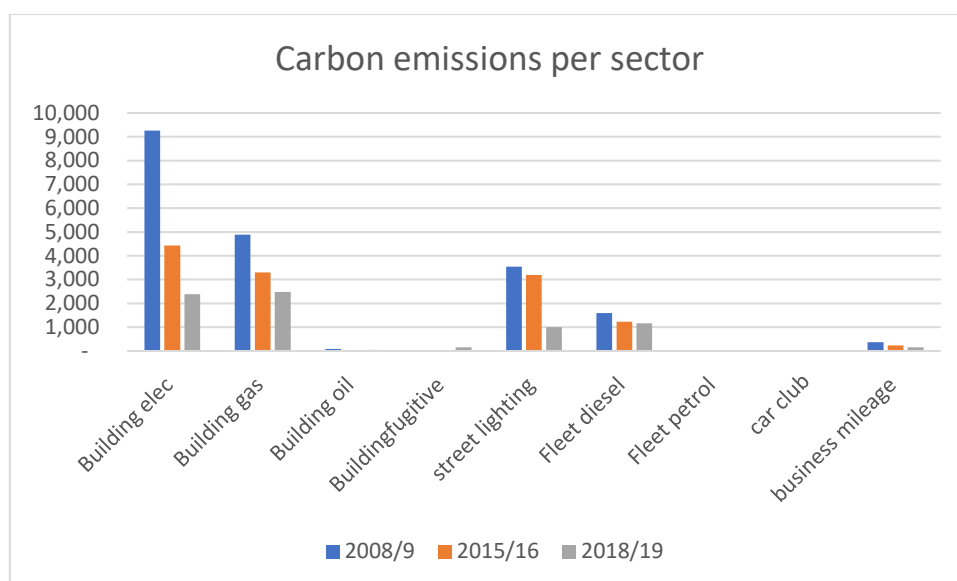


Figure 3.3: change in RBC emissions by source since 2008/09

Areas where the most significant progress in reducing emissions has been made, and a summary of how these have been achieved, are summarised below:

Street lighting

The entire street lighting estate, totalling over 13,000 units, across Reading Borough has been upgraded to LED, resulting in over 50% reduction in electricity consumption, and the ability to have greater remote control of the lighting.

Buildings

The carbon reductions within buildings can be attributed to numerous projects. The Building Rationalisation strategy followed over the last 7 years, resulting in the disposal of assets, relocation and co-location of services into buildings with a higher intensity of use, has reduced the overall demand for energy across the organisation. The key buildings to account for this include the (old) Civic Offices, Central Pool, Arthur Hills Baths and smaller libraries and community centres.

Building refurbishment has been key in the Building Rationalisation programme, where services are brought together in a new hub. Significant investment in energy efficiency measures, principally through Salix funding, has been made in a 'whole building' approach to the refurbishment of the Civic Offices, Reading Town Hall, and 19 Bennet Road depot building. Energy saving measures include insulation, LED lighting and controls, heating upgrades, electrification of heat and solar pv.

Additional Salix funds have been invested in smaller building projects across the council estate, totalling 101 projects, and £1.4m investment.

Renewable energy

To date the Council has installed over 7,500 solar panels on 40+ council, community and school buildings, and 457 houses. In 2018/19 the systems generated 1.6 MWh of electricity, the equivalent to powering over 400 houses with 100% of their electricity needs. The Civic Offices now hosts the Council's largest solar panel system with 572 solar panels, generating an estimated 10% of the building's electricity. Most recently, a roof mounted solar P.V. system was installed at 19 Bennet Road. This represents the first phase of renewable onsite generation at the depot.

Travel & transport

Within the last 5 years, the Council has invested in nine electric vehicles with associated charging points. Investigations are ongoing to establish the best route for full electrification of the vehicle fleet.

4. The Council's route to net zero carbon

In pursuing a successful carbon reduction strategy to date, the Council has focused on schemes offering the best return on investment. While this will continue, it is inevitable that additional carbon reductions and the associated returns will be more challenging to achieve as we approach net zero – the 'low-hanging fruit' has been harvested requiring us to reach higher for future reductions.

To guide us we have structured this Carbon Plan around the actions set out by the Committee for Climate Change in its July 2019 report 'Reducing UK emissions: Progress Report to Parliament'. This identifies four key themes over the next five years to drive further and deeper carbon emissions reductions, and by adopting these we can position the organisation to achieve net zero carbon by 2030 through innovation in demand side management, renewable generation and energy storage solutions.

Policy statement

Reading Borough Council is committed to working to reduce its energy use, Greenhouse Gas emissions and water use across its estate and operations, and to make energy, carbon and water savings an integral part of the everyday decision-making process. Reading Borough Council is dedicated to substantially reduce its dependence on fossil fuels to reach net zero carbon by 2030 and diversify its range of energy supplies, thereby reducing the organisation's exposure to the volatility of the energy markets, limited water resource availability and the financial risks from price fluctuations. We are committed to invest in the generation of renewable energy, to supply energy to both our council operations and our surrounding community. We will ensure that the necessary systems and processes are in place to allow continuous improvement in the council's operations, through effective monitoring and management of energy and water use.

Targets

We will reduce RBC's carbon footprint by 85 % by 2025, and aim for 100 % by 2030, against a 2008/9 baseline, to include provision of sufficient renewable energy to meet net zero carbon emissions by 2030.

To meet these 2025 targets, on an annual basis we will need to reduce RBC's energy use by an average of 4.4% per year, and double our renewable energy generation every two years such that we are generating 50% of our energy from renewable sources by 2025.

We will also adopt a fossil fuel target to reduce our diesel and petrol consumption by 50% by 2025.

In addition, we will seek to reduce our water consumption by 5% per annum against a 2019/20 baseline.

Measuring progress

The Council measures its emissions using the internationally accepted annual reporting process known as the Green House Gas (GHG) emissions reporting protocol. This is carried out in respect of the emissions for which we have control (known as Scope 1&2), but also for managed services, emissions from which are not in our direct control (known as Scope 3). We also monitor the emissions of community schools. The Council will continue to monitor and manage its carbon emissions through the GHG reporting protocol.

We will review progress against our aims and targets annually, reviewing the Policy & Strategy after 3 years and developing a new strategy for the 2025-2030 period as we approach this phase of our journey towards net zero carbon.

Pathway towards net zero carbon - our four key aims

Led by the priorities set out by the national Committee on Climate Change, this Carbon Plan is structured around the following four aims:

- i) **REDUCE** - we will reduce our energy demand through energy efficiency measures, asset disposal and other measures to reduce demand
- ii) **DECARBONISE** - we will reduce emissions from ongoing activities via electrification of heating and vehicle fleets
- iii) **GENERATE** - we will install further renewable energy capacity to meet a higher proportion of our own needs
- iv) **SMART** - we will align consumption with generation, adopting new technologies to help balance changing patterns of supply and demand

4.1 REDUCE

4.1.1 The pathway to reduce energy demand

The first stage of an energy management and carbon reduction strategy is to reduce demand for energy and to make the use of energy as efficient as possible. The biggest reductions to date have been following these principles. Further focussed action needs to happen across the Council's building, street lighting and vehicle estate.

Ensuring that we keep our building, street lighting and vehicles estate under constant review, and rationalising it to ensure that we retain only those assets needed for the operation of services, will help limit our energy demand. Energy efficiency technologies can then be installed in retained assets; including, for example, LED lighting and controls, insulation, heating controls, improved glazing, reduced solar gain and 'A'-rated electrical equipment.

All full building refurbishments and new builds need to be to a high standard of energy efficiency, to ensure long term energy inefficiencies are not engrained from the outset and to avoid the cost of any future retrofit. More efficient technologies are always being produced and where possible we will make investments to ensure that we operate the most energy efficient equipment and plant whilst ensuring that we procure at the right times to avoid unsustainable waste. Additionally, cross-organisation awareness-raising and training will help to make the use of buildings and equipment as efficient as possible.

The following section summarises the principal actions which the council will take to 'Reduce' carbon emissions by 2,987 tCO₂, or 15.1% against the 2008/09 baseline. Figures 4.1 and 4.2 below illustrates these savings graphically.

- Rationalisation of building estate: based on the known or likely building disposals, carbon emissions savings are predicted to be 878 tCO₂, or a further 4.4 % against the 2008/09 baseline. There are significant additional opportunities to make savings within this area, ensuring that the organisation is maximising the use of the most efficient facilities and disposing of inefficient assets. Energy efficiency needs to be a central consideration for development of our asset strategy.
- Dimming & trimming, and inventory update of street lighting: by updating and correcting the street lighting inventory, upgrading remaining assets, along with instituting a 'dimming and trimming' regime across specific areas in Reading, it is estimated that 459 tCO₂ can be saved, or 2.3 % against the 2008/09 baseline.
- Building lighting: within the retained estate, building energy use needs to be addressed. LED technology has developed significantly since the Council first installed it over 10 years ago. All buildings should have the lighting upgraded, and controls installed where appropriate. Typical energy savings from LED lighting range from 40-80%, which in combination with reduced maintenance

costs and longer lamp life can bring significant savings. By upgrading the remaining lighting across all buildings by 2025, it is estimated that 249 tCO₂ saving will be made, or a further 1.3% against the 2008/09 baseline.

- Building small power improvements: electrical equipment, such as monitors, printers, fridges and phone chargers, within buildings when at end of life should be upgraded to the most energy efficient versions possible. Energy ratings should be a central point of consideration when electrical equipment is being procured. By making these improvements across the entire building estate, it is estimated 115 tCO₂, or 0.6% savings are made by 2025.
- Heating demand reduction through building envelope improvements and building cooling and heating improvements: ageing buildings built and/or refurbished when standards were lower than today tend to have high heat loss and therefore higher demand for heat than necessary. By improving the building envelope, heat losses and gains can be significantly reduced thereby reducing the energy needed for heating or cooling. This can be achieved by installing building insulation, improving glazing, insulating pipework and draught sealing buildings. In combination with upgrades to heating and cooling systems and their associated controls, reductions to the carbon footprint will total 526 tCO₂, or a further 2.7% against the 2008/09 baseline.
- Awareness raising: ensuring every member of staff is aware of the need for efficient use of energy, and understands the actions they can take as an individual to reduce their consumption, is predicted to result in 267tCO₂, or a further 1.4% savings against the 2008/09 baseline.
- Rationalisation and downsizing of fleet: a recent Green Fleet Review (GFR) in 2020 analysed the composition and usage of the organisation's vehicle fleet. Based on the size and mileage, the review has recommended that consideration should be given to downsizing the fleet, in particular in the Heavy Commercial Vehicle (HCV) sector. HCVs have high fuel consumption per mile, so should be limited to work which specifically requires such vehicles. The GFR recommends that replacement of HCV with smaller vehicles should be done in combination with electrification. If any HCVs can be downsized and electrified, it is estimated 393 tCO₂ can be saved, or 2% against the 2008/09 baseline, as illustrated in Figure 4.3 below.
- Efficient driving training: driver training to encourage safe and fuel-efficient driving is estimated to help contribute to 100.5 tCO₂, or 0.5 % of saving, as set out in the GFR (2020), and illustrated in Figure 4.3 below.

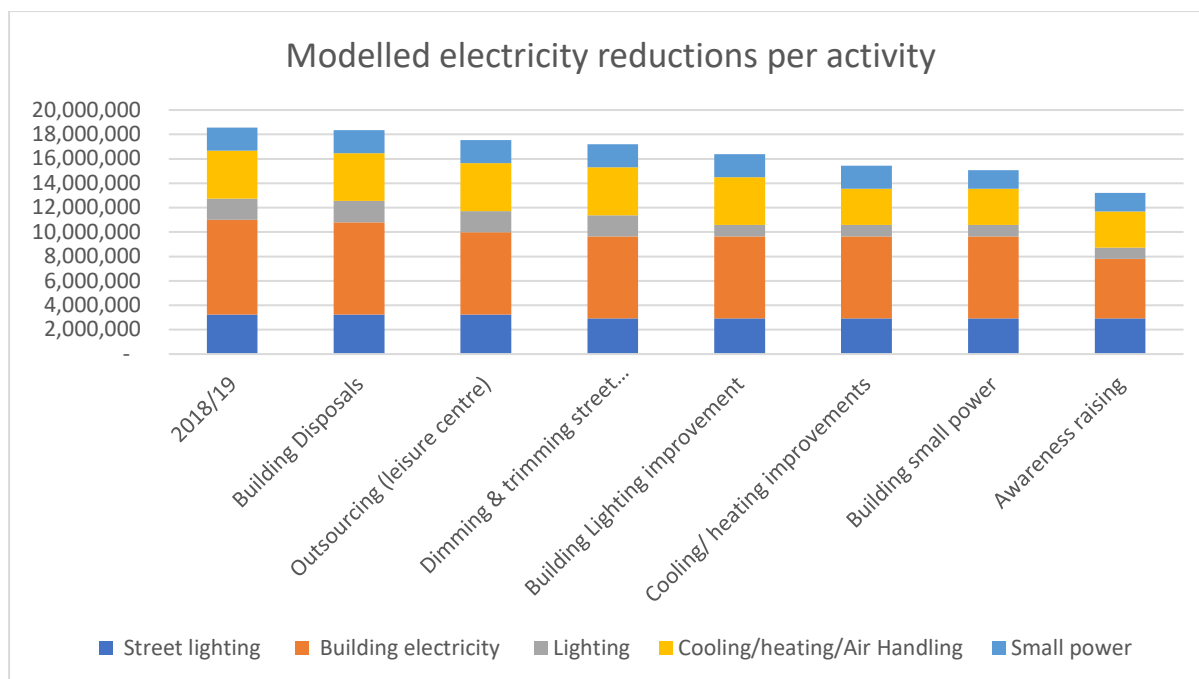


Figure 4.1: kWh electricity savings from different actions across the building and street lighting estate

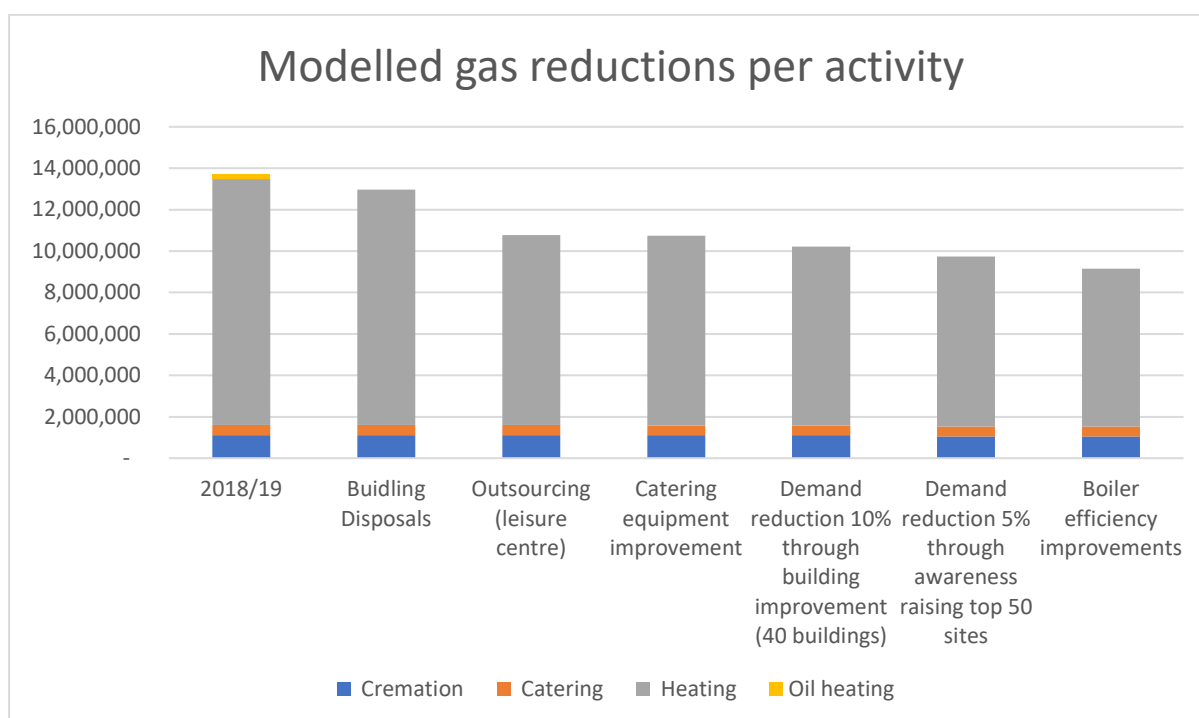


Figure 4.2: kWh gas savings from different actions across the building estate

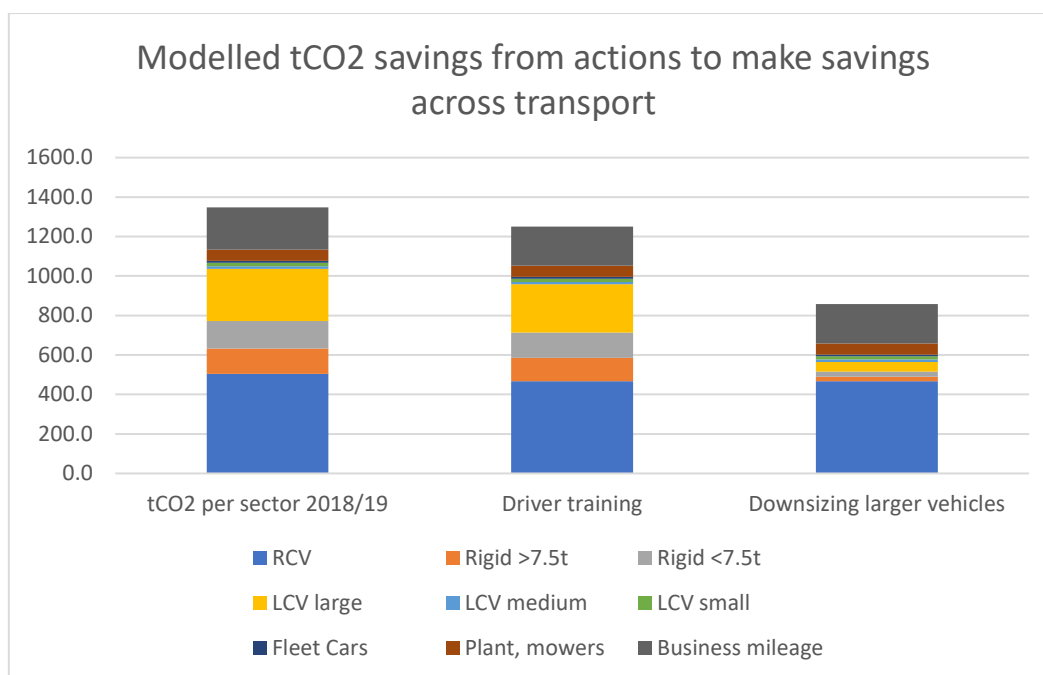


Figure 4.3: potential carbon savings from transport

4.1.2 Action plan

Sector	Action		Predicted saving tCO ₂ (% reduction)	Timing
Building estate	Rationalise building estate - disposal of most inefficient assets. Energy efficiency key factor in decision-making		878 (4.4%)	TBC
	Building energy efficiency improvements; Through whole building approach, or individual upgrades	Lighting improvements	249 (1.3%)	2020-25 via Salix pipeline
		Building fabric improvements and heating upgrades	526 (2.7%)	
		Small power equipment and catering equipment - replacement with A* rated models	115 (0.6%)	
	Deep retrofit and new builds to meet or go beyond Planning and Building Regulations requirements		To be established	
	Awareness raising - Carbon literacy programme		267 (1.4%)	2021

Street lighting estate	Rationalise street lighting portfolio - inventory review and corrections	459 (2.3%)	2021
	Dimming & trimming scenarios (reducing lighting levels)		2021/2022
Fleet	Rationalise fleet and appropriate sizing of vehicle - downsizing HCV and LCV. Refer to Green Fleet Review 2020 for detail	393 (2%)	2024/25
	Driver training - safe & efficient driving	100.5 (0.5%)	TBC

4.2 DECARBONISE

4.2.1 The pathway to electrification

Buildings

In addition to reducing our energy demand as far as possible, to meet our targets we also need to reduce direct fossil fuel consumption such as our gas and vehicle fuel consumption. This means that we need to change how we heat buildings and how we fuel or power vehicles.

Gas boilers are the most prevalent means of heating buildings and up until recently, provided among the lowest carbon intensity heating technology for delivering space heating in the winter. The reason for this was that electricity generated remotely in power stations was traditionally produced using fossil fuels, and in particular carbon intensive coal fired power stations. This process of generating electricity is only about 30% efficient with much of the energy from burning the fossil fuels being lost as heat through the generation process, typically visible in the clouds of steam emitted from cooling towers at power stations. Electricity consumed in buildings in 2010 therefore had a 67% higher carbon footprint than the combustion process itself (2010 carbon intensity figures: 540gCO₂ for electricity compared to gas at 180gCO₂). Gas boilers on the other hand directly combust the gas supplied to the site via the gas network and are typically 85-90% efficient.

As electricity generation has shifted away from coal to gas and now renewable sources such as biomass, wind and solar, the carbon intensity of electricity from the National Grid has decreased significantly. With more renewable sources coming online, the carbon intensity of electricity is predicted to half by 2030, whilst natural gas carbon intensity is due to rise, as illustrated in Figure 4.4 below.

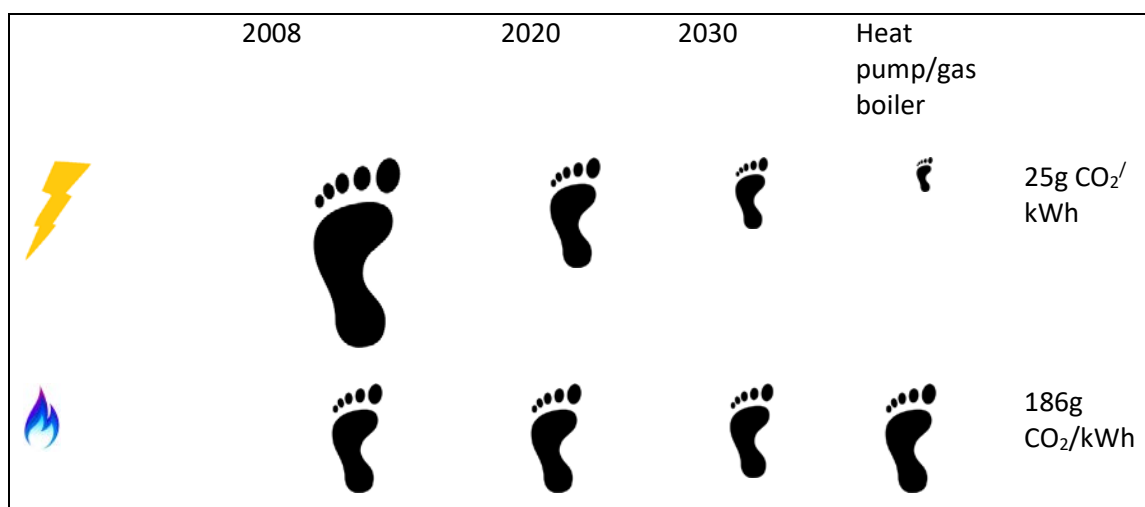


Figure 4.4: Relative Carbon footprint projections for gas vs electricity powered heat

The government, in line with the recent Committee on Climate Change report 'Reducing UK emissions Progress Report to Parliament' (2019), now advocate a move away from gas heating and towards heating by electrical means. Heat pumps are seen as the best technology to fill this gap, as they efficiently use the renewable heat from the natural environment (ground, air or water) for space and water heating. Electricity is used by the heat pump to transfer and compress heat from the natural resource and transfer it to where it is needed. Heat pumps are considered highly efficient, when designed and sized appropriately, as they can be 300-500% efficient (3-5 units of energy are produced for every 1 unit of energy put in), compared to a 90% efficient boiler.

To meet the net zero target, the authority must therefore shift its heating from fossil fuel to electrical, and principally heat pumps. This technology does prove a challenge for retrofitting given that existing heating systems are designed and sized for a very different heat generation technology (gas boilers). It is therefore essential that building heat losses are reduced to a minimum and that the heat delivery system is designed appropriately. Electrical capacity of the building and local infrastructure needs to be considered. The organisation needs to ensure that there is sufficient capacity and capability within the mechanical and electrical engineering professions to manage this transition.

To deploy this technology across the authority, it is proposed that it is introduced in phases, with a small number of key buildings in the first few years, and installed across a significant proportion of the estate by 2025, as illustrated in Figure 4.5 below.

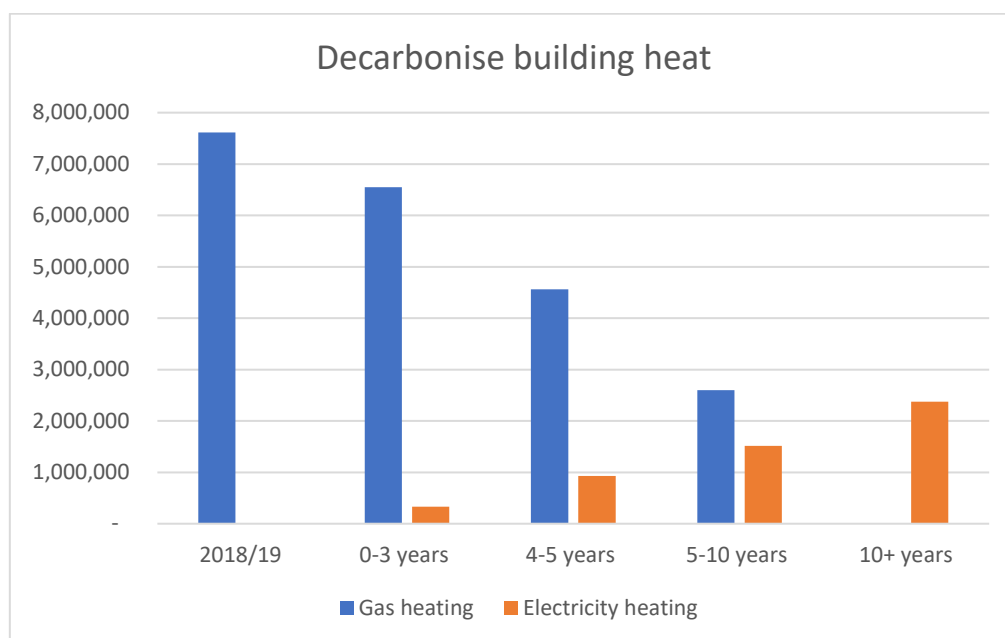


Figure 4.5: planned shift in fuel use, in kWh, following electrification of building heating

Electric vehicles

Electric vehicle technology has advanced rapidly in recent years. With no tailpipe emissions, their carbon emissions are indirect and are associated with the fuel used to generate the electricity for the powering and manufacture of the vehicles. Electric vehicles are significantly more energy efficient than internal combustion engine (ICE) vehicles and the Green Fleet Review (2020) has estimated that the energy use of an all-electric fleet would be at least 75% less than the equivalent ICE fleet.

The Green Fleet Review (2020), on the basis of these more efficient vehicles, in combination with falling carbon intensity of the grid, demonstrates that a phased electrification of the fleet would bring significant contributions to meeting the net zero carbon targets. It is estimated that an all-electric fleet would reduce energy use (kWh) by 75%, and carbon emissions by 90%, as illustrated by Table 4.1 below (GFR 2020). Furthermore, if solar electricity generation is co-located with the electric vehicle charge points, there would be the opportunity to achieve net zero by 2030.

Table 4.1: Impact of electrification of the RBC Fleet on carbon emissions and energy use, based on 2020 prices. Green Fleet Review 2020

Factor	ICE - 2019	BEV 2030	Change	Reduction
Energy (MWh)	3,667	917	-2,750	-75%
Energy Cost (£)	£378,783	£108,768	-£270,016	-71%
GHG Emissions (t)	897	92	805	-90%

We are already approaching the point where Battery Electric Vehicles (BEVs) up to 3.5 tonnes should be less expensive to buy and run than their ICE equivalent because they will not need expensive emission control and “light-weighting” technology to meet challenging new air quality emission regulations. Over the next 5 years the cost of batteries will continue to fall and their energy density (kWh per kg) will increase. Affordable battery electric cars and vans with a single-charge range of 300 miles or more will become the norm.

BEVs have many fewer moving parts (under 80 moving parts in the drive train of a BEV and over 2,000 in a typical ICE vehicle, giving much lower service costs (experience to date in car and van fleets suggests 30% to 40% lower but some operators suggest 60% to 80% lower for some vehicle categories) and higher reliability. BEVs already have lower energy (fuel) costs; a typical electric car or small van, charged overnight on a standard tariff, costs no more than £0.04/mile or about one third the comparable ICE cost. Using off-peak tariffs BEV energy costs can be as low as £0.02/mile and private users on some tariffs (e.g. Octopus Agile) can occasionally be paid to charge their cars.

With the Refuse Collection Vehicles (RCV) fleet, consisting of 13 vehicles, making up over 37% of the organisation's transport carbon emissions, action in this sector of the fleet is a high priority. The Green Fleet Review has run initial analysis on electrifying the RCV fleet, with results showing that the reduction in carbon emissions from using eRCVs is substantial even when charged from the UK grid. In the first phase of change over it should be at least 70% but by 2029/30 the decarbonisation of the UK grid is expected to have increased the annual reduction in GHG emissions to at least 90%.

Further detailed analysis of the fleet and the financial implications of the electrification of the fleet is needed, but initial results indicate that there would be a strong business case for the organisation to have an all-electric fleet by 2030 - and this may in any case be driven by national policy which is rumoured to be bringing forward the ban on sales of new petrol/diesel vehicles to 2030. The move to electric vehicles has significant implications for the electrical charging infrastructure at depots, offices and at employees' homes where vans may be parked overnight, and this needs to be considered when planning the fleet change over.

4.2.2 Action plan

Sector	Action	Predicted saving tCO ₂ (% reduction)	Timing
Building estate	Electrify heating - Install heat pumps Phase 1 - installation of first four heat pumps in buildings Phase 2 Installation of further 5 heat pumps Phase 3 Installation of further 8 heat pumps Phase 4 Remaining buildings	568 (Phase 1 and 2)	Phase 1 2020-22 Phase 2 2023-25 Phase 3 2025-2030 Phase 4 beyond 2030
	Reducing use of flouracarbon and other GHG gases by substituting with lower GHG equivalents and or reducing size of Heating Ventilation and Air Conditioning systems	n/a (achieved via procurement)	TBC
Fleet	Electrify LCV fleet (small van fleet) Installation of 4X6 load balancing charging banks at Depot Procurement of remaining van fleets As recommendations of GFR 2020	n/a	2022 2022 By 2025

	Procurement of further EV vans (x24) Procurement of remaining LCV van fleets (x93) As recommendations of GFR 2020	64 193 (totals 1.3%)	2021/22 By 2025
	Electrify fleet cars	TBC	
	Electrify HGV and/or consider biomethane or other options or conversions As recommendations of GFR 2020	Requires further investigation	
	Electrify RCVs - Refuse Freighters (eRCVs) - Phased replacement Phase 1 (trial eRCV vehicle)	Totals 396 (2 %)	2020/21
	Phase 2 (5 eRCVs) Phase 3 (remaining 7 eRCVs)		2021/22 2022//23

4.3 GENERATE

4.3.1 The pathway to renewable energy generation

Clean low carbon energy supply must be at the heart of a zero carbon Council strategy. The Council has installed around 7500 solar panels across its building estate to date, including social housing, and Reading's Civic Offices, which has the largest multi solar array system in Reading, with seven arrays mounted on the roof and a total of >500 solar panels. However, in order to supply the equivalent amount of energy to the electricity being used by the organisation, it must not only cover the electricity we use to power lighting and buildings, but also the energy needed for newly electrified heat and vehicle use, which currently is predominantly fuelled by fossil fuels such as gas, petrol and diesel.

This section is primarily concerned with the plan to increase the provision of renewable electricity. Whilst a key aspect of the renewable energy available locally is the heat stored in the ground, rivers and aquifers, this is dealt with in the decarbonisation section as electricity is used to run the heat pumps which rely on these sources. However, unless this electricity is from a renewable source this is not 'pure' renewable energy.

Since the Feed in Tariff subsidy was introduced in 2010, the cost of solar panel installations has reduced to around a quarter of their original price. Whilst the subsidy has been discontinued for new connections, solar panels are now cost effective without it.

In current financial modelling, solar pv systems need to be sized so that the majority of the renewably generated electricity is supplied to and used onsite, rather than being exported to the National Grid. In practice this means that solar pv system sizes are limited in capacity size to just above the electrical baseload of the building on which they are sited. When taking this into consideration with the seasonality of generation (the majority of electricity generated from solar pv systems occurring in the summer months), a problem exists in the sense that there is space available for systems which generate 'too much' electricity for use at a given site, yet this renewable electricity generation is essential for reducing the carbon emissions of the organisation and the borough. To resolve this issue, we need to work out how to shift excess electricity generation to times when it is needed such as winter evenings, when lighting and heat demands peak, yet solar electricity generation is very low or zero. There is the potential for this problem to be resolved with onsite battery storage.

Wind energy in the national network has increased dramatically due to offshore wind development and it is expected that there will be periods when very low carbon energy is available from the grid. Reading is not generally considered to be a good location for wind generation and indeed the wind turbine at Green Park is not considered to be a high 'yield' turbine. That said, wind remains a good resource in

the UK and the turbine is profitable, providing the largest single contribution of clean renewably generated energy in Reading.

Local community energy organisations in recent years have installed renewable energy assets across the county. Reading Community Energy Society (RCES) has been active within Reading, installing numerous solar pv systems across the borough. Whilst Reading Borough Council does not directly own the renewable energy assets installed by RCES, we have been involved in establishing and supporting the development of RCES and Reading Hydro. Currently the Council owns shares in both and this remains a mutually beneficial way of investing in renewable energy locally. Shares in community energy cost a very similar amount in terms of investment per tonne of carbon but offer wider benefits to the community.

Carbon dioxide emissions are defined by the Greenhouse Gas protocol which defines the emissions as direct and indirect. A host of offsetting products and 'green power' options are available on the market and these are varied in their approach. For the latter, the Council procures 100% 'green' electricity through Renewable Energy Guarantees of Origin (REGOs). Unfortunately these cannot be guaranteed to supply additional renewable energy and may utilise current renewable electricity on the grid, which has been provided through subsidy or obligation. The Council accepts the Energy Saving Trust advice on this matter and therefore does not include the notional emissions saved from this approach in its carbon accounting.

In respect of offsetting strategies, the Council takes the view that local schemes that supply communities within the borough of Reading with renewable energy and/or carbon reduction through shareholding held by the Council or through other mechanisms could be acceptable, and may have a part to play in our strategy as we approach 'net zero' and have to tackle the most difficult residual emissions in the period beyond 2025. However, offsets which lead to reductions in carbon emissions in other parts of the country or internationally are not currently considered appropriate due to the complexity of interactions with the national grid and other government policies, international conventions and Ofgem provisions, hence them not featuring in our plan for 2020-25.

To achieve net zero carbon by 2030, the organisation needs to have a generation capacity of at least 14 MWp. Currently the Council has a 2 MWp capacity. With an additional 5 MWp, the total generation output is predicted to be 5.6 MWh by 2025, which is equivalent to 48% of the organisation's total kWh energy use.

Over the next five years, the council therefore intends to follow a hierarchy of sourcing electricity generation, as illustrated in Figure 4.6 below.

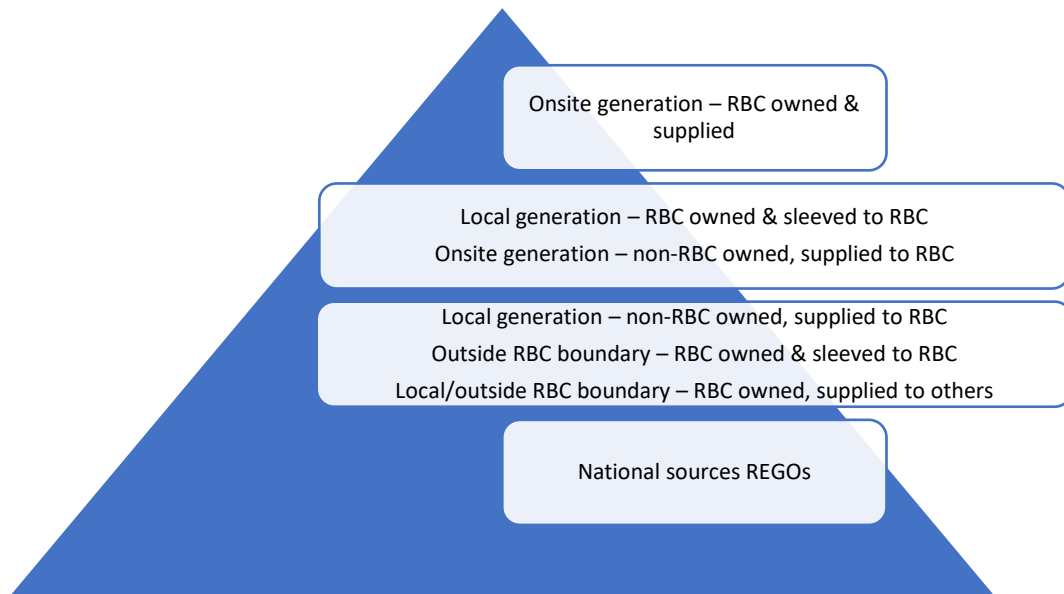


Figure 4.6: Hierarchy of renewable energy generation, with onsite, RBC owned and supplied being the optimal option

4.3.2 Action plan

Sector	Action	Tonnes p.a. of CO ₂	Timing
Solar pv	Solar array – Bennet Road depot 228kWp	34	2021
	Solar farm Smallmead (location TBC)	119	2022
	Investment in off-site generation – Reading Bus Depot	17	2021/2022
	Install solar onto Council housing 1000 houses	332	2022/2023
Wind	Investigate land holdings with Reading Community Energy Society for wind options	TBC	2021/2022
Ground/rivers	Reading Hydro – consider further shares and/or PPA with Reading hydro project	TBC	2022
	Ground Source heat pumps – see decarbonise section		
	Consider further shares purchases in Reading Community Energy Society	TBC	
	REGOs & REGO+ (Renewable Energy Guarantee of Origin)	N/A	REGO for 100% electricity – completed 2019 REGO+ – timing TBC
Total		502 tonnes	

4.4 SMART

4.4.1 Planning for the future

As we go forwards local and national energy networks will become more diverse with local renewable energy generation forming a much greater proportion of the energy mix. Alongside this, the capability to store electricity in batteries and heat in buildings gives us more flexibility on when this energy is used. This is crucial when considering the intermittent nature of renewable energy generation.

Whilst a Smart Council is crucial, it is mainly an enabling function to allow the other projects to work effectively and to strengthen business cases. For this reason no incremental carbon savings are shown in this section. But the actions below will give us an increased utilisation of local renewable energy and help to reduce the carbon emissions associated with electricity supplied through the national grid.

The Council will work with the University and other bodies on projects to increasingly align the Councils energy consumption with times when low or zero carbon energy are available. We will also look for ways to supply our communities with renewable energy when we do not need it. As the Council will always need to be connected to the national grid via the local electricity network, we must, in the future, supply more renewable energy than we use to compensate for the carbon emissions of the energy we consume.

Many of the technologies and services that we will need in this new era of nearly and net zero carbon operations are being developed and/or at trial stage and therefore the 'Smart Council' work during the 2020 to 2025 period will seek to establish a series of projects and trials that can lead to reductions in carbon emissions but also establish further RBC owned renewable generation infrastructure that can help to supply our communities, as we already do for our Council tenants.

4.4.2 Action plan

Sector	Action	Timing
Demand side response	Implement fast frequency response demand for largest council loads	2023
Battery storage	Install batteries at Council site - Subject to Reading Zero Carbon Accelerator funding (bid submitted, result awaited)	2022 to 2023
Vehicle to Grid (V2G)	Initial purchase of V2G compatible vehicles	2022
Real time carbon emissions	Through the Reading Zero Carbon accelerator project (subject to successful bid)	2021 to 2023
Machine learning	Smart City Clusters Project	2020

Real time carbon utilisation	Reading Zero Carbon Accelerator Project (subject to successful bid)	2021 to 2023
Power Purchase Agreements (PPAs), sleeving and REGO+	Work with West Mercia Energy (RBCs energy supplier) to align local generation with consumption. Also work jointly with University and Reading Community Energy Society to establish PPAs for our own consumption with local renewable energy suppliers	2020 to 2025
Agile Tariffs	Explore agile tariffs with energy supplier (to align consumption with cheaper, lower carbon periods)	When available
Private wire contract for solar farm	Establish a PPA contract with a local off-taker from solar farm installed at Smallmead facility	2022

5. CONCLUSIONS

Taken as a whole the strategy to reduce, decarbonise, generate and get smart have helped to inform the action plan, which over the period of the strategy has the potential to reduce emissions by 85% compared to the 2008/9 baseline. This would leave us with carbon emissions of no greater than 3000 tonnes, less than half of our existing emissions (see figures 5.1, 5.2 and 5.3 below), a level which would be in line with the expectations set in the Climate Emergency Declaration to achieve net zero carbon by 2030.

A large number of variables remain in play - the nature of our business and size of our estate going forwards in the light of the pandemic, the challenge of forecasting energy costs and network carbon intensity, the size of our capital programme and priorities within that. In view of these uncertainties, we cannot guarantee that this will be our precise trajectory but we will retain the ability to flex our plans in line with research and national developments. But we will also have significant opportunities to use our low carbon investment to leverage in funding from national and other sources, and to ensure that this investment drive the Council's wider aim for a 'green recovery' from the impacts of COVID-19.

The actions set out in this plan will make good business sense as well as environmental sense, reducing future revenue pressures and ensuring that the Council is fit for the future and on track to a net zero carbon Reading, at the forefront of the UK and city governments worldwide in tackling climate change.

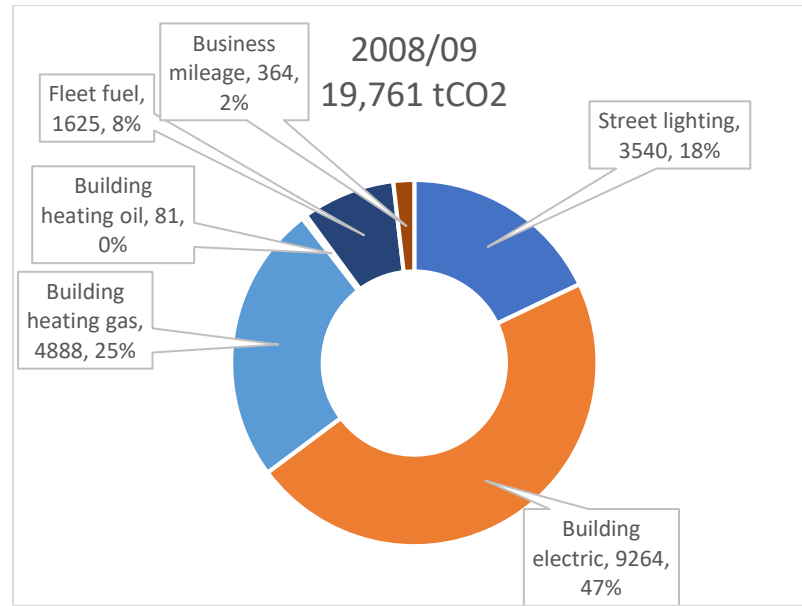


Figure 5.1: Breakdown of RBC carbon footprint for 2008/09

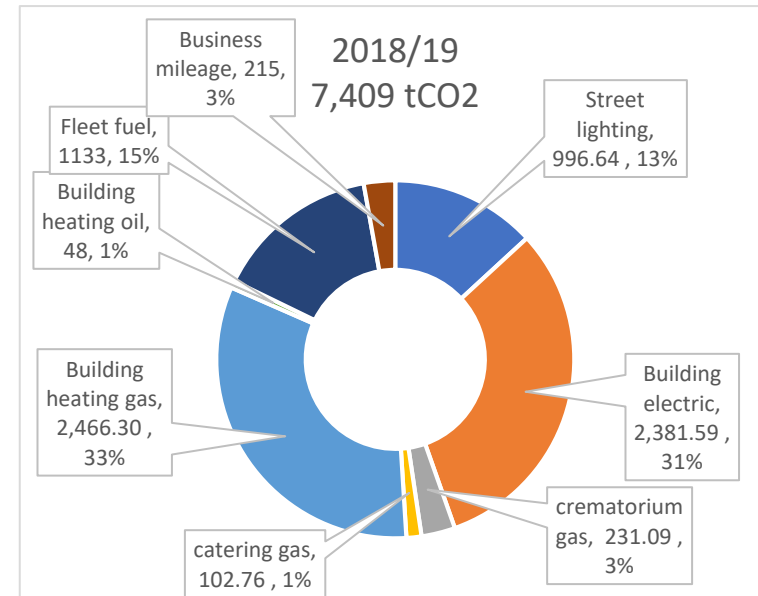


Figure 5.2: Breakdown of RBC carbon footprint for 2018/19

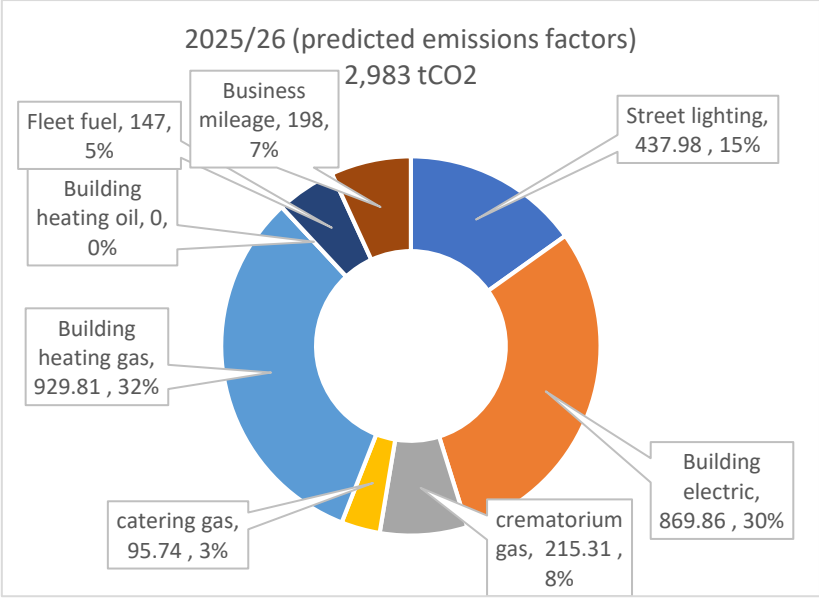


Figure 5.3: Breakdown of RBC carbon footprint for 2025/26

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