The Reading Climate Emergency Strategy 2020-25

Annual Report 2022/23

November 2023















24

Reading Climate Emergency Strategy 2020-25

3rd Annual Progress Report (2022/23)

6. SUMMARY & CONCLUSIONS

Produced by Reading Climate Change Partnership/Reading Climate Action Network (November 2023)

CONTENTS

FOI	REWORD .			•	•			·	•		3
1.	INTRODUCTION										5
2.	PROGRESS REPORT	ON REA	DING'S I	EMISSIO	NS						5
	2.1 Measuring Rea	ding's er	missions								5
	2.2 Progress towar	ds net z	ero by 20	030							6
	2.3 Emissions redu	ction in	Reading	compar	ed to otl	ner Berk	shire lo	cal auth	ority are	as	7
	2.4 Progress on im	proving	resilienc	e to clim	iate imp	acts					8
	2.5 Future risks and	d challer	nges								9
3.	CASE STUDIES FROI	M 2022/	23								10
4.	KEY DEVELOPMENT	ΓS AND A	ACHIEVEI	MENTS S	SINCE OU	JR LAST	ANNUA	L REPOF	RT		23
5.	PROGRESS WITH A	CTION P	LAN DEL	IVERY			•				24

FOREWORD

The World has changed a great deal since Reading's Climate Emergency Strategy was published in 2020.

While we have emerged from the grip of the coronavirus pandemic, we have seen many lasting changes to the way we live, work and connect. We have seen an energy price crisis followed by a cost-of-living crisis, dragging more people into fuel poverty and underlining the importance of energy security. Conflicts in Ukraine and the Middle East have further highlighted how tragedy and instability reverberate around the world.

The headlines have often been dominated by extreme weather events across the globe, with record breaking temperatures, forest fires, droughts and floods causing untold misery and destruction, and taking countless lives. As climate scientists have highlighted for decades, climate change will increase the frequency and severity of such events.

Against this backdrop, scientific consensus has concluded that the Paris Agreement target of keeping the global average temperature increase below 1.5°C above pre-industrial levels is increasingly unlikely to be achieved, with the IPCC's 6th synthesis report concluding that we are probably on a pathway to 2.8°C of warming by 2100 and the 1.5 °C limit will likely be exceeded this decade.

As we report on progress against our 2020-25 Climate Emergency Strategy, the Reading Climate Change Partnership is already beginning work on developing our 2025-30 plan, which will take us up to our target date of 2030 for a net zero and climate resilient town. The process will include an extensive community engagement programme to ensure that every individual and organisation in Reading has the opportunity to contribute, and we would urge you to participate if you can.

While the global outlook may not be entirely positive, we have seen some progress locally. Reading's emissions have reduced by 51% since 2005, the 8th largest reduction out of 374 UK local authority areas, and we have retained our coveted place on the CDP's global 'A' list. We have strengthened our board to include more of the town's anchor institutions and continued to foster collaborations towards developing systematic solutions to climate-related problems. You will find a number of case studies in this report that showcase some of these.

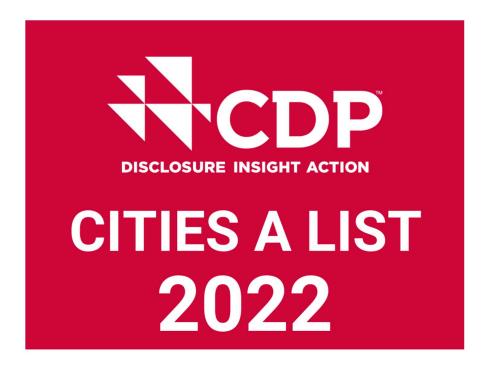
A highlight in 2023 was a greatly expanded Reading Climate Festival which, with the support of Reading Borough Council's Culture Service, REDA and the University of Reading brought the iconic artwork "Gaia" to the town as a centrepiece for 12 days of events, performances and talks. Whether providing actionable information on best practice to cut carbon or inspiring a deeper appreciation of the fragility of the planet that sustains us, community engagement is a key component in encouraging everybody to play their part in reducing carbon emissions and helping to protect biodiversity.

We are extremely grateful to the colleagues, partners, organisations and individuals across Reading who have worked together collectively and individually to take action on climate. We have been unable to capture every action taken in this report but felt it important to record our thanks as every action taken, no matter how small, can make a difference. In particular we would like to thank Professor Tim Dixon, our former co-chair, whose leadership we greatly appreciated and who stepped down having retired this year from his position at the University of Reading.

We don't underestimate the scale of the challenge but we remain committed to our mission of bringing together everybody who lives, works or studies in Reading to combat climate change and help ensure a more sustainable future for us all.

Dylan Parkes and Tracey Rawling-Church

Co-Chairs, Reading Climate Change Partnership



Reading

1. INTRODUCTION

The Reading Climate Emergency Strategy 2020-25 was published in November 2020 and included a commitment to review progress annually. This report represents the third annual report on the Strategy covering the year 2022/23. The report combines:

- An assessment of progress against the headline targets in the strategy (section 2)
- Case studies illustrating and celebrating progress (section 3)
- A summary of key developments and achievements since our last Annual Report (section 4)

Annex 1 to this report - a detailed account of progress with the seven action plans on which the strategy is based - will be published on the Reading Climate Action Network website at Annual Report - Reading Climate Action Network (RCAN) (readingcan.org.uk) simultaneously to this report being published in November 2023.

While the report has been produced by the Reading Climate Change Partnership and reflects progress with action to which a wide range of partner organisations have contributed, in the interests of transparency, and to put the report on the public record, a copy has been submitted to the 15th November 2023 meeting of Reading Borough Council's Strategic Environment Planning and Transport Committee, and it has also been published on the RCAN website via the link above.

2. PROGRESS REPORT ON READING BOROUGH EMISSIONS

2.1 Measuring Reading's emissions

The Reading Climate Emergency Strategy reinforced the goal of a 'net zero Reading by 2030' which was first set out in the Climate Emergency Declaration passed by the Council in February 2019 on behalf of the wider community.

Carbon dioxide emissions statistics for UK local authority areas are compiled by the Department for Energy Security and Net Zero (DESNZ) and published annually as 'The UK local authority and regional carbon dioxide emissions national statistics'¹. This dataset represents the most reliable and consistent breakdown of CO₂ emissions across the country, using nationally available data sets going back to 2005.

The DESNZ statistics include a data subset for 'Carbon dioxide emissions within the scope of influence of local authorities'. This excludes sources of emissions which cannot realistically be influenced by local action such as those arising from motorway traffic, large industrial installations (excluding power stations) within the EU Emissions Trading System, diesel railways and land use change. We use this dataset to track progress towards the net zero by 2030 target for Reading as, while it does not substantially change the headline figure for emissions reduction in the area compared to the main DESNZ dataset, it does reflect the sources of emissions from Reading over which local partner organisations and residents have most control and influence.

¹ https://www.gov.uk/government/statistics/uk-local-authority-and-regional-greenhouse-gas-emissions-national-statistics-2005-to-2021

While these statistics represent the most comprehensive and robust assessment of emissions by local authority area and are used by many other local authority areas to measure their progress toward net zero, it is important to recognise their limitations. Chief among these is the fact that they measure 'territorial' or 'production' emissions (goods, products and services made or provided in Reading), but do not take account of emissions arising from consumption (things used or eaten in Reading but produced outside Reading's boundaries). This latter calculation would add a significant proportion to Reading's 'real-world' carbon footprint due to our reliance on imported food and other products. This is not to say that our Strategy ignores the issue of emissions arising from consumption – on the contrary, measures to tackle such emissions feature prominently in the Action Plans on which the Strategy is based – but it does mean that the impact of these actions will not necessarily be reflected in the headline measure of the Borough's carbon footprint used to measure progress towards net zero.

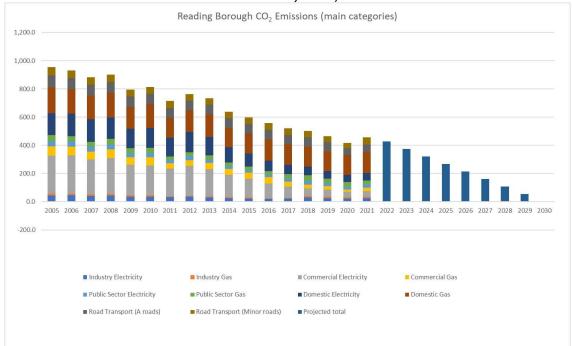
2.2 Progress towards net zero by 2030

As described above, the headline measure of Reading's progress towards net zero is the reduction in emissions since 2005 based on the national data for 'emissions within the scope of influence of local authorities'. The 2021 statistics (the latest year for which data is available) were published in June 2023 and show that CO_2

51.3% cut in Reading's area emissions since 2005

emissions fell from 985.8kt in 2005 to 480.1kt in 2021 - a reduction of 51.3% which compares favourably to the UK average of 39.3% and the South East regional average of 38.9%. The reduction in Reading Borough emissions is also the 8th highest reduction out of 374 UK local authority areas, suggesting that Reading is leading the way in national efforts to reduce emissions by this measure. Figure 1 summarises the reduction in Reading Borough's emissions over that period by sector.

Figure 1: reduction in carbon dioxide emissions within the scope of influence of local authorities from Reading Borough 2005-21 by sector (with projected reductions needed to reach 'net zero by 2030')



It is important to note that there is a significant time lag in this dataset so the data reported in June 2023 in fact relates to the calendar year 2021. As figure 1 shows, Reading's emissions actually rose between 2020 and 2021, a pattern which is replicated internationally and nationally: 96% of UK local authority areas saw an increase in emissions over the same period. While colder weather increasing heating demand was a factor, the increase is largely explained by the fact that while emissions fell sharply between 2019 and 2020, mainly as a result of pandemic restrictions coming into effect, they then 're-bounded' in 2021 when those same restrictions were lifted. Caution should therefore be taken with year-on-year comparisons, especially those affected by the pandemic, and the long-term trend is more instructive.

While not all of the 51.3% reduction in Reading's emissions since 2005 is attributable to local action – a significant portion of it arises from national policies to decarbonise the energy going into the

national grid – the way in which Reading's economy has developed, with a focus on high-tech sectors with relatively greater reliance on electricity, and relatively less reliance on gas and other fossil fuels, has enabled the Borough to benefit from the lower carbon energy now coming through the grid. The benefits of lower-carbon grid energy were of course experienced by every local authority area, so the fact that Reading has seen the 8th largest reduction out of all UK local

Reading has seen the 8th largest reduction in emissions out of 374 UK local authority areas since 2005

authority areas still provides meaningful evidence that Reading is heading in the right direction, and doing so faster than most.

It remains equally clear, however, that there is much more to do. Whilst we saw a year-on-year reduction in emissions of 11% between 2019 and 2020, we then saw a 9.7% increase in emissions between 2020 and 2021 which makes the challenge of reaching net zero by 2030 even harder. Even smoothing for pandemic effects, the data suggest that emissions fell by only 2% between 2019, the pre-pandemic year, and 2021, the post-pandemic year, whereas we need to see annual reductions of 5-10% every year between now and 2030 to bring net zero within reach. As Reading's Climate Emergency Declaration made clear, net zero by 2030 cannot be delivered by local action alone and requires changes in central government policy and resources which, thus far, have not been forthcoming at the scale and pace required.

The Reading Climate Emergency Strategy document made clear that progress towards the aspiration of a 'net zero Reading by 2030' was unlikely to take the form of a straight-line reduction in emissions, and it was always likely that the pace of emissions reduction would need to accelerate as the decade progressed. The data appears to confirm that the challenge will indeed increase as the decade advances – but it also shows that we are making progress which should build confidence in our ability to tackle the huge challenge which the achievement of 'net zero' represents.

2.3 Emissions reduction in Reading compared to other Berkshire local authority areas

Comparison with neighbouring local authority areas provides another way of looking at emissions

reduction in Reading. Table 1 shows the reduction in emissions in each Berkshire local authority area between 2005 and 2021, based on the national dataset for 'emissions within the scope of influence of local authorities', as well as figures for the South East and UK as a whole. Table 1 also shows the figures for per capita emissions for these jurisdictions.

The data for the Reading local authority area is positive by both measures. Reading is the only local authority area in Berkshire

Reading has the highest long-term rate of emissions reduction and lowest per capita emissions out of the 6 Berkshire local authority areas to have seen a 50%+ reduction in emissions between 2005 and 2021, and is also the only local authority area in Berkshire with per capita emissions of below 3 tonnes CO_2 per annum. Reading also compares favourably with South East and UK averages – a 51.3% cut in emissions since 2005 compared to 38.9% for the South East and 39.3% for the UK; and per capita emissions of 2.8 tonnes p.a. compared to 3.7 tonnes p.a. for the South East and 4.1 tonnes p.a. for the UK.

Table 1: Emissions reduction in Berkshire local authority areas (with South East and UK averages)

Area	% reduction 2005-21	Per capita emissions (tonnes pa)
Reading	51.3%	2.8
Bracknell Forest	44.3%	3.3
Slough	14.1%	3.8
West Berkshire	38.6%	4.9
Windsor & Maidenhead	41.8%	3.9
Wokingham	38.7%	3.1
SE average	38.9%	3.7
UK average	39.3%	4.1

2.4 Progress on improving resilience to climate impacts

The vision for the Reading Climate Emergency Strategy has two key elements – first, reducing emissions to net zero by 2030, and second, making Reading more resilient to the impacts of a changing climate. Whilst we have metrics for the former as summarised above, there is no simple means of measuring the latter. However, the Action Plans within the Strategy include several actions designed to adapt to climate impacts.

Overall, while there are well-established mechanisms for adaptation planning in some areas like flood risk management and heatwave planning, adaptation planning in Reading (like many other areas) remains at a developmental stage. Furthermore, while we have a good understanding of the potential impacts, further work is needed to raise awareness of these and the steps which public services, businesses, organisations and individuals need to take to improve their resilience to the impacts of a changing climate.

The heatwave of summer 2022, which saw UK and Reading temperature records broken, provided an important test of preparedness for the sort of extreme conditions we can expect more of in future. Communications on staying safe in the heat were stepped up and, many organisations made temporary changes to working practises from which we can learn to help us adapt in future.

Nonetheless, it is estimated that there were 3,271 excess deaths in the UK (6.2% above the five-year average) during the five 'heat periods' between June and August 2022 (defined as days when the average temperature is above 20°C in central England). 2,803 of these were among the over-65s, illustrating how extreme weather events tend to impact the most vulnerable.

During 2021-22, Reading Borough Council worked with the University of Reading and the Met Office to produce a 'City Pack' for Reading outlining key climate impacts we can expect. This was published

in August 2022 and Reading is one of only 20 cities for whom the Met Office have conducted this work, providing a valuable resource to inform adaptation planning going forward. The City Pack sets out the factors affecting Reading's weather and climate, summarises observed changes and impacts, explains the projections used to forecast future changes based on different emissions scenarios and sets out the basis of good climate risk management. The City pack provides organisations in Reading with a valuable resource to inform their efforts in planning to adapt to future climate change.

2.5 Future risks and challenges

Since our last annual report, which documented the rapid escalation in energy prices, fossil fuel prices have remained high and volatile. Global pressures make it unlikely that this volatility will cease.

With wider cost-of-living pressures and high levels of inflation, many more households have been pushed into fuel poverty. Many of the policy solutions being considered as a response to rising energy bills fail to address both the magnitude of the increase in prices, and one of the underlying causes of the crisis: dependence on fossil fuels. At the same time the policies which offer some of the quickest and cheapest solutions — encouraging people out of their cars, promoting active travel, insulating homes — are not being promoted or invested in as heavily as they might.

In addition, a backlash in some quarters against 'net zero' threatens to undermine the consensus on the need for action. The evidence suggests that neither fracking nor the opening up of new oil and gas fields in domestic waters will do anything to lower prices in the short or medium term and, even if they did, they would undermine our net zero aspirations.

Recent government announcements have suggested even further dilution of key policies designed to meet net zero. This puts the onus on Reading and like-minded cities to work even harder to keep net zero at the top of the agenda, and to deliver their own local commitments.

3. CASE STUDIES FROM 2022/23

It is important to celebrate progress on the journey to net zero and there have been some significant developments and achievements over the last year of which Reading can be proud. The case studies below demonstrate progress by a range of partners within the scope of the Strategy:

CASE STUDY 1: ENERGY & LOW CARBON DEVELOPMENT Low-carbon leisure facilities for Reading

The climate crisis is also a public health crisis, making it essential that investment in the latter also addresses the former. Reading has invested in modern, regionally-significant leisure facilities to improve health and wellbeing whilst ensuring alignment with its ambitious climate commitments.

Having secured planning permission to construct two new leisure facilities at Palmer Park and Rivermead to exacting BREEAM 'Excellent' standards, the Council and its leisure partner, Greenwich Leisure Limited (GLL), went the extra mile by designing additional heat pumps and solar systems to reduce emissions from the two flagship leisure facilities through a low carbon energy package worth over £2.5 million.

The heat pumps being installed at Rivermead will reduce the use of gas by c.1,400,000 kWh/year, an 80% reduction in the carbon emission rate of the new centre compared to the original design, with much of the additional electrical load offset by new solar panels. The additional heat pump at Palmer Park will reduce the new centre's use of gas by c.400,000kWh/year, a 57% reduction in the carbon emission rate compared to the original design. Solar panels were already being installed at Palmer Park and will, again, help offset the additional electrical load generated by the heat pump. The new Palmer Park facility opened in December 2022, followed by Rivermead in July 2023. These buildings now host two of the largest heat pump projects in Reading.



CASE STUDY 2: ENERGY & LOW CARBON DEVELOPMENT University of Reading Water Source Heat Pump

A £2.2 million grant from the Government's Green Heat Network Fund is helping the University of Reading reduce the carbon footprint of its entire built estate by 10%.

The grant, which is being match funded by the University, is being used to fund the installation of a large water-source heat pump in the University's Energy Centre. The Energy Centre provides heating and hot water to 17 buildings on the Whiteknights campus through an underground district heating network (DHN), currently powered by a combination of a Combined Heat and Power (CHP) engine and gas boilers.

The Green Heat Network Fund, funded by the Department for Energy Security and Net Zero (DESNZ), provides capital funding towards the cost of decarbonising heat networks, through a competitive process open to private and public sector heat networks.

The new water-source heat pump will provide around 50% of the current heating supply to the district heating network. As well as providing heating, the project will see the creation of a small district cooling network to some of the science facilities nearby, with cooling being a free by-product of the heat pump.

Work began in October 2023 to drill the boreholes required for the scheme to extract water from the below-ground aquifer. Once fully operational, the water-source heat pump will reduce the University's emissions by 1,500 tonnes of carbon per year. This is equivalent to a 10% reduction in emissions from buildings across the entire University estate.

Dan Fernbank, Energy & Sustainability Director at the University of Reading, said: 'This project will have significant impact for the University and for the local area. The reduction in nitrous oxide emissions will be the equivalent to those of around 394 diesel cars per year, so this is good news from a local air quality perspective'.

Borehole drilling for the new water-source heat pump system at Whiteknights Campus





CASE STUDY 3: TRANSPORT Opening of Green Park station

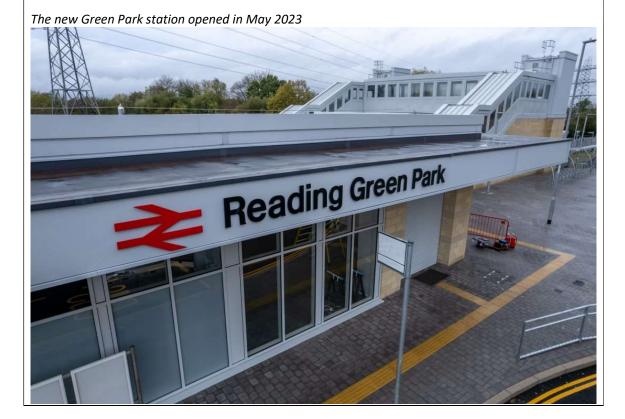
Reading Green Park Station opened for public use in May 2023. The first new railway station to open in Reading since Reading West in July 1906, this major facility provides improved sustainable travel options for local residents and businesses in the Green Park area, as well as fans attending events at the Select Car Leasing Stadium, home of Reading Football Club.

The station, built by Reading Borough Council, Network Rail and Great Western Railway (GWR), features:

- Two 150m platforms
- A new fully accessible station building
- A fully accessible overbridge, providing access to both platforms, via stairs and lifts
- A bus interchange, taxi rank and cycle parking facilities

The station sits on the Reading to Basingstoke line, with half-hourly services running north to Reading and south to Basingstoke through the day. It significantly improves accessibility to the south Reading area where large-scale development is taking place, including the expansion of Green Park Business Park and Green Park Village.

Reading's public transport offer continues to go from strength to strength, with the transformation of Reading West Station and the Elizabeth Line now offering travellers to and from Reading a seamless transition into central or east London without having to change to the tube at Paddington.



CASE STUDY 4: NET ZERO RESEARCH

University of Reading secures funding to help shift when UK uses energy

In July 2023 the University of Reading confirmed that it will be leading a key theme in a new research hub, aiming to change the way the UK uses energy. Professor Jacopo Torriti, from the University's School of Built Environment, will lead the Flexibility Theme of the new £15 million Energy Demand Centre, as part of a £53 million investment in six research hubs and centres aiming to help the UK meet its net zero targets. The Flexibility Theme will explore the capacity to shift energy consumption at different times of the day or the year to make the most of renewables.

Professor Torriti said: 'Flexibility of electricity demand is one of the most critical challenges of a net zero society. This is because being able to move energy demand loads would enable suppliers to make better use of variable renewable energy, would make the most of smart systems and battery storage, and would minimise the investment needed in energy infrastructure to meet peak energy demand. These changes would make the task of reaching net zero more straightforward and more affordable'.

The work could help curb energy bills by encouraging use of energy away from the peak times, such as early evenings. The research is part of a series of new UK energy research centres and hubs, aimed at boosting knowledge, creating innovative green technologies and reducing demand for energy to achieve greener, cleaner domestic, industrial and transport energy systems.

A new national Energy Demand Research Centre will build an evidence base for understanding consumer behaviour, assessing the impact of socio-technical energy demand reduction measures, and research mechanisms to improve energy efficiency. The centre, led by the universities of Sussex and Newcastle, will investigate how domestic, industrial and transport energy demand reduction can be delivered on a local and national level across the UK. The centre has been awarded £15 million from the Engineering and Physical Sciences Research Council (EPSRC) and the Economic and Social Research Council (ESRC).

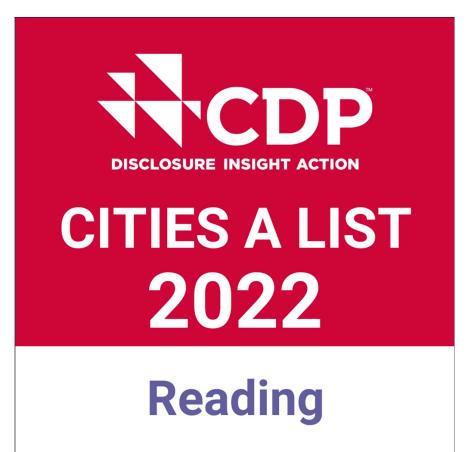


CASE STUDY 5: TRANSPARENCY & ACCOUNTABILITY Reading again recognised for global leadership on climate change

In November 2021, Reading Borough Council received notification that Reading had been added to the 'A' list of cities taking 'bold climate action' by the international NGO, the Carbon Disclosure Project (CDP). The Council re-submitted Reading's data to the CDP platform again last year, and was pleased to receive confirmation in November 2022 that Reading had retained its place on the CDP 'A' list. The annual assessment, designed to encourage cities to ramp up climate action, is conducted by the CDP which holds the world's richest and most comprehensive dataset on how companies, cities, states and regions measure and address their environmental impacts. It is widely recognised as the 'gold standard' of environmental reporting.

Reading was one of only 19 UK local authority areas, and one of just 122 globally, to be admitted to the CDP 'A' list in 2022, out of over 1,000 cities who submit their data to the platform. Reading and the other towns and cities on the 'A' List are celebrated for showing that urgent and impactful climate action - from ambitious emissions reduction targets, to building resilience against climate change - is achievable at a local level despite the pressures of a challenging global economic situation.

According to CDP, 'A' list cities demonstrate their climate leadership through concerted and effective action; are taking twice as many mitigation and adaptation measures as non-'A' List cities; and identify more than twice as many opportunities, such as the development of sustainable transport sectors and clean technology businesses.



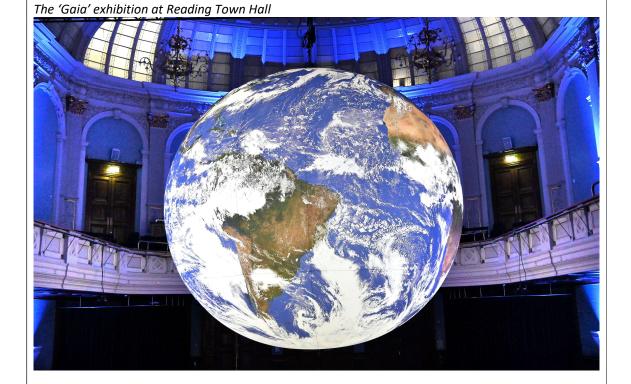
CASE STUDY 6: COMMUNICATIONS & ENGAGEMENT Reading Climate Festival 2023

The 2023 Reading Climate Festival took place from 10th-21st June with the stated aim of 'inspiring and encouraging positive action on climate change'. The first Reading Climate Festival, curated by Reading Climate Action Network (ReadingCAN) with support from a range of partners, was held in November 2020. This inaugural Festival took the form of a series of on-line events necessitated by the pandemic restrictions in place at the time, with the centrepiece being the launch of the Reading Climate Emergency Strategy 2020-25. The festival has been held annually since 2020, achieving good levels of participation (c.1,000 registrations for events in 2022).

The Festival continues to be run and curated by ReadingCAN, the public-facing brand of the Reading Climate Change Partnership. In 2023 the partners – led by ReadingCAN, Reading Borough Council, the University of Reading and the Reading Economic & Destination Agency (REDA) - developed plans for the most ambitious festival to date. The centrepiece of this vision was the exhibition of a major international artwork, Luke Jerram's 'Gaia', at Reading Town Hall.

As a result, the 2023 Festival engaged 13,000 people in 20 events held across Reading, with 'Gaia' attracting c12,000 of these and drawing in people from all parts of Reading and the UK. As well as engaging a wide range of people in conversations about climate change the Climate Festival therefore represented a significant cultural, educational and economic event for Reading as a whole.

'Gaia' was hosted at the Reading Concert Hall from the 10th-18th of June 2023. The partnership collaborated to deliver 57 ticketed sessions, including 'Twilight' events (for late night sessions) and 'Relaxed' events (aimed at neurodivergent audiences). Sessions were £2 per ticket for over 16s, under 16s were free. There were also 10 curated events and 10 school sessions to engage students.



CASE STUDY 7: COMMUNICATIONS & ENGAGEMENT 'Show Your Stripes Day' 21st June 2023

As the culmination of the Reading Climate Festival 2023, the University of Reading spearheaded international 'Show Your Stripes Day' on 21st June.

The 'climate stripes' infographic was created in 2018 by Professor Ed Hawkins, climate scientist at the University of Reading and National Centre for Atmospheric Science. These vertical, coloured bars have no words and no numbers but show the progressive heating of our planet in a single, striking image. The blue and red stripes show clearly and vividly how global average temperatures have risen over nearly two centuries.

The White Cliffs of Dover were illuminated blue and red to highlight a stark climate change message. The Tate Modern chimney and landmarks in Reading, the USA and Canada also displayed the climate stripes. People all over the world were encouraged to download and share the graphics and start conversations about the impact of climate change where they live.

Professor Hawkins said: 'In 2022 millions of people saw the stripes at Reading Festival, London Fashion Week and on football kits and started conversations about climate change. Displaying the stripes on the White Cliffs of Dover and other landmarks will hopefully lead to more conversations about our warming world and inspire people to work together to tackle climate change. We are seeing a rapid rise in temperature, mainly due to burning fossil fuels, and this already means we are experiencing more intense extreme weather with severe consequences for all of us. Every bit of future warming will make those consequences worse'.

Schoolchildren in Reading and Wokingham came together to think about climate actions they would like to see in their schools at a Youth Climate Summit on 21st June, gathering at the Select Car Leasing Stadium, home of Reading FC, to display the climate stripes. A number of Reading landmarks were also illuminated in blue and red to showcase the stripes.



CASE STUDY 8: NATURE & GREEN SPACE Tree-mendous designs for urban shade

During lockdown, Sara Kopp of Sara's Gardens visited the majority of Reading Borough Council's public land holdings to identify existing features supporting biodiversity and carbon storage and to suggest potential changes to increase provision.

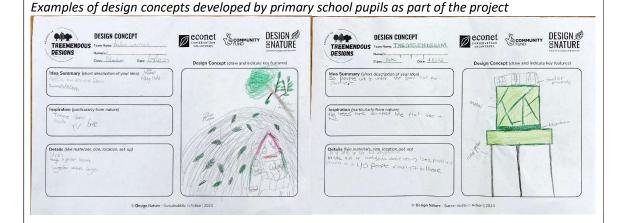
This complex matrix was given to Reading Borough Council alongside detailed suggestions and drawings for five central urban areas. These were discussed with the Council and agreed changes compiled, including new tree planting for additional shade in future during hotter summers.

Two of these sites, Victoria Park on Great Knollys Street and Shinfield Road Recreation Ground, formed the core of a lottery application by Econet to fund the changes and to introduce climate change mitigation ideas in the local community.

Econet worked with two local primary schools, Ridgeway School in Whitley and Civitas Academy on Great Knollys Street, and planted bulbs in the two parks with every class. Design Nature provided a workshop at each school looking at the requirement for future shade and getting the children to design solutions for use in the park, the school or at home.

Reading and District Natural History Society delivered training on the life cycle of butterflies and how to identify the species likely to be seen in the school grounds and local park, with a monitoring activity pack for the summer term.

The Council and Ethical Reading's Trees for Reading fund planted standards in the winter of 2021/22 and Reading Tree Wardens added more in Great Knollys Street in 2022/23. Finally, the fund paid for new benches in Whitley parks.



CASE STUDY 9: RESOURCES & WASTE Royal Berkshire NHS Foundation Trust IT Amnesty

This year RBH developed a programme to reuse and repurpose old IT equipment. Working with Sunscreen IT and Centerprise, the Trust's IT department and Royal Berks Charity developed a process to recycle old IT hardware - reducing landfill, saving CO₂ and providing a charity donation back to the Trust.

A simple concept, the project has produced many benefits. Previously unused IT hardware would be stored and then destroyed but now the Trust is able to avoid carbon, save water, help children around the world with the recycled equipment and raise money for the charity. The waste costs have been removed and the Trust is sharing the project with other NHS Trusts.

Since the launch the Trust has been able to facilitate 6 collections; 379 items have been collected and recycled; 128 tonnes of carbon has been avoided; and 57.05 million litres of water has been saved. The intention is that the initiative will continue and be expanded for 2023/24 with a view to accepting personal IT hardware from staff.



CASE STUDY 10: HEALTH & WELLBEING

Oasis Health and Wellbeing Garden at Royal Berkshire Hospital, Reading

It's been 18 months since Food4families (F4F)/Mulberry Tree Landscapes first teamed up with the Royal Berks Charity to design and develop a garden to complement the new Royal Berkshire NHS Foundation Trust staff wellbeing centre at 17 Craven Road, Reading.

Significant progress has been made and a beautiful garden has been developed which not only enhances the wellbeing of staff but also supports the Trust to achieve other goals: a net zero carbon strategy, community engagement, staff recruitment and retention, improved health outcomes for the wider community and new partnerships with the town. Although wellbeing gardens are being developed in many hospital trusts, the practice of wellbeing gardening to support staff is still new.

The value for the Trust of the partnership with F4F is that as well as garden design skills, they bring many years' experience of community engagement and a wide network of community groups who are involved in promoting green wellbeing as a means to foster social cohesion and community resilience.

The primary purpose of the centre and garden is to create a safe haven for highly stressed hospital staff, creating a nurturing, multi-purpose green space not only for staff but also providing opportunities to enhance health and wellbeing in the wider community. With careful scheduling of community activities, the Trust ensures ongoing maintenance of the site but also supports the provision of green social prescribing that Primary Care Trusts across Reading are promoting through Reading Voluntary Action and GP practices.



CASE STUDY 11: NATURE & GREEN SPACE Clayfield Copse Security Bund

The fencing alongside the car park for Clayfield Copse in Caversham was falling apart and no longer providing a secure barrier. Econet worked with Reading Borough Council to provide an economic solution that improves biodiversity.

The Council arranged for construction and maintenance wastes to be deposited along the land boundary. Econet volunteers, including Friends of Clayfield Copse and Conserve Reading on Wednesdays, worked to create a sensible profile and produce an acceptable tilth for sowing. Reading Borough Council planted a row of English oak standards along the external bund boundary.

Volunteers, including children from Caversham Park Primary School, scattered wildflower seed over the bank, raked it in, and installed a string matrix across the area to reduce the amount eaten by birds. Despite a drought period after sowing, cornfield annuals appeared and flowered the first summer and attracted pollinators. A wider variety of annuals, biennials and perennials came up in the second summer with a greater number and variety of insects and at least one bumblebee nest. The bund is managed by Friends of Clayfield Copse, a part of Econet.



CASE STUDY 12: BUSINESS COMMUNITY ENGAGEMENT Reading Climate Fayre, 22nd November 2022 and Reading Climate Festival, 16th June 2023

NatWest, in collaboration with Ethical Reading, Crowe Accountants and REDA as the organising committee, welcomed 150 business owners and employees from across the Thames Valley to Green Park in November 2022 for the first Reading Climate Fayre, aimed primarily at the business community. Guests heard from a mix of public and private organisations on the challenges and opportunities associated with climate change and how to start a journey to net zero as an organisation. Speakers included:

- Professor Richard Allan, Professor in Climate Science, Reading University
- Dr Maria Carvalho, Head of Climate Economics & Data, NatWest
- Akhil Handa, Founder & CEO, Earth51
- Peter Moore, Head of Climate Strategy, Reading Borough Council
- Tracey Rawling-Church, Co-Chair, Reading Climate Action Network
- Stuart Clark, Head of Climate Transition, Lombard
- Mairead Taylor, Director Green & Sustainable Finance, NatWest
- Mirry Christie, Director, Matrix

The day also enabled local businesses who support other businesses and households with their climate journeys to display their services and products in a trade show format.

NatWest, in collaboration with Ethical Reading and Crowe Accountants, subsequently held a breakfast session as part of Reading Climate Festival 2023 looking at the topics Sustainability Financial Reporting, Greenwashing and ISO14001. Speakers included Alex Hindson, Head of Sustainability at Crowe, and Danny Owen of NatWest Mentor.



CASE STUDY 13: ENERGY & LOW CARBON DEVELOPMENT DraughtBusters Reading

DraughtBusters is a voluntary group that started to install draughtproofing measures into the homes of people living in fuel poverty over a decade ago, facilitated by an initial grant from Reading Borough Council. Clients are now referred to DraughtBusters by the Council's WinterWatch service, Citizens' Advice Reading and the NHS, who direct people to the free service. The programme went into 'whisper' mode during the pandemic, although the DraughtBusters website (www.readinguk.org/DraughtBusters) remained as a source of technical know-how for DIY enthusiasts and others seeking help.

In 2022, DraughtBusters received a £10,000 grant from the government's Shared Prosperity Fund via Reading Borough Council to be paid over three years to increase awareness of the help available, recruit more volunteers and start additional hubs in the Reading area. Demand for services increased over the following winter, driven by the energy price hike, and the payback period for introducing draughtproofing measures into a home reduced to just a couple of months.

DraughtBusters have successfully trained new volunteers over the last 18 months, improved their website, developed 'how-to' videos on their YouTube channel, and become active on Facebook, Twitter and Instagram, which was suggested by two teams of students from the University who helped out with the project. DraughtBusters regularly attend community events with information stalls and provide advice to community groups. The team has also begun talking with housing associations and the charitable housing sector to provide their employees and tenants with draughtproofing training.

Another 10 DraughtBusters groups have started in the towns surrounding Reading with help from DraughtBusters Reading. The team were also involved in the production of the first technical guide on draughtproofing houses which was published in September 2023.



4. KEY DEVELOPMENTS AND ACHIEVEMENTS SINCE OUR LAST ANNUAL REPORT

Reading's place on the CDP 'A' list of cities taking 'bold climate action' confirmed for the second year running Reading Schools Climate conference, modelling the COP talks, is held in the Council Chamber First Reading Climate Fair for business takes place at Green Park Nov 2022 Reading Borough Council reports 71.3% cut in corporate emissions since 2008/09 Dec 2022 Reading Borough Council secures £19.1m from the Government's Levelling Up Fund for projects to create a new central Library within the Civic Offices and a new performance space at the Hexagon Theatre - the projects will include replacement of gas heating with air source heat pumps at the Civic Offices and ground source heat pumps at the Hexagon Theatre campus Reading secures £327,000 for educational air quality schools initiatives Feb 2023 Reading marks the 4th anniversary of its Climate Emergency Declaration 6 workshops take place in Reading as part of the 'Strategy Room' project, a national pilot to engage residents in discussions about cliamte change First sections of cycling and walking improvements on Shinfield Road opened to improve active travel provision in Reading New discounted 'Reading All-Bus' day travel ticket introduced, giving passengers greater flexibility and making bus travel more attractive Mar 2023 Reading shortlisted for 'Leadership in Responding to the Climate Emergency' in the Municipal Journal Awards 2023 in response to a submission by Reading Borough Council University of Reading publishes climate stripes graphics for world cities for the first time ahead of Earth Day 2023 (Saturday 22 April) Apr 2023 University of Reading announces plans to install £2.2m water source heat pump at Whiteknights campus, reducing its overall emissions by 10% Reading Green Park station opens - improving sustainable access to Green Park, the first new railway station in Reading for over 100 years
 Reading Borough Council initiates consultation on proposals for 6 new bus lanes promoting sustainable travel choices May 2023 Reading Climate Festival engages a record 13,000 people with 'Climate stripes day' on 21st June promoting climate awareness
 Reading joins other Berkshire Councils to promote a new 'Berkshire Solar Together' scheme, offering residents access to low cost solar installations
 Reading Borough Council launches consultation on a new, sustainable Local Transport Strategy to 2040 Annual government statistics show that Reading's emissions have fallen by 51.3% since 2005, the 8th largest cut out of 374 UK local authority areas
 Rivermead leisure centre opens, featuring new air source heat pumps and solar arrays
 University of Reading announces participation in a new national Energy Demand Research Centre to investigate energy demand reduction Jul 2023 Reading Borough Council consults on a new Electric Vehicle Charging Infrastructure Strategy for Reading to boost EV charging provision and support the transition to EVs Competition concludes to name five new electric bin Iorries - almost half the Council's refuse fleet is now EV 'Trees for Streets' initiative launched in Reading Aug 2023 Reading Borough Council's Policy Committee raises concerns about constraints on electricity grid capacity hampering net zero ambitions, producing a positive response from regulators and the district network operator Consultation initiated by the Council to improve Air Quality and reduce emissions across Reading via smoke control zones Sep 2023 • Reading Borough Council rolls out formal Carbon Literacy Training for key council staff, using materials developed by the Carbon Literacy Project - staff can achieve formal accreditation as 'Carbon Literate' if they meet the required standard Reading Buses launches 'tap on tap off' to make bus travel cheaper and more convenient
 Christchurch Bridge is lit up green to promote Recycle Week (16-22 October) Oct 2023

- · 3rd Annual Report on the Reading Climate Emergency Strategy published, underlining our commitment to transparency
- Reading Borough Council reports 74% reduction in corporate emissions since 2008/09 Reading Borough Council meets its target of halving fossil fuel use by 2025 two years early Nov 2023

5. PROGRESS WITH ACTION PLAN DELIVERY

5.1 Overview

Annex 1 to this report - a detailed account of progress with the seven action plans on which the strategy is based - will be published on the Reading Climate Action Network website at Annual Report - Reading Climate Action Network (RCAN) (readingcan.org.uk) simultaneously to this report being published in November 2023. We have reviewed each Action Plan in preparation for this Annual Report and 'RAG'-rated the status of each action based on the following definitions:

- RED not yet started
- AMBER started but not in line with target dates/outcomes
- GREEN complete/underway and on target
- BLUE action no longer relevant/overtaken by events/information not available

The majority of actions remain 'green' or 'amber', but a significant number have not been progressed due largely to constraints on the Partnership's resources, and a number have been ranked 'blue' where the action envisaged is no longer relevant or has been over-taken by events.

6. SUMMARY & CONCLUSIONS

It is clear from this Annual Report that much has been achieved – the reduction in Reading's emissions between 2005 and 2021 (the latest year for which data is available) of 51.3% is the 8th highest reduction of 374 local authority areas according to the UK Government dataset which records 'carbon dioxide emissions within the scope of influence of the local authority'.

However, it remains equally clear that there is much more to do – the 're-bound' in national and local emissions seen after pandemic restrictions lifted makes the achievement of net zero by 2030 even more challenging.

As we said in the Strategy document, we did not envisage progress towards the aspiration of a 'net zero Reading by 2030' would take the form of a straight-line reduction in emissions, and it was always likely that the pace of emissions reduction would need to accelerate as the decade progressed. The data appears to confirm that the challenge will increase as the decade advances — but also shows that we are making progress which should build confidence in our ability to tackle the huge challenge which the achievement of 'net zero' represents. We will, however, need more support from central government to make net zero by 2030 possible as this cannot be achieved by local action alone.

Climate-related weather events around the globe and at home illustrate the equally pressing need to adapt to future climate impacts. It therefore remains incumbent on all partners to develop their adaptation strategies alongside plans to reduce their emissions in the coming months and years. As part of the developed world the UK has more resources to adapt than many, but also bears more than its share of responsibility for historic emissions — further underlining the importance and urgency of the need for us to take action in this vital area.