

CLIMATE ACTION WORKING GROUP

Summary: To (1) present the *layman's guide* of the Small World Consulting technical report and (2) outline the proposed activity for the remainder of 2023/24

Recommendation: That the Executive Committee:

1. Notes the report and
2. Approves the Layman's Guide, ahead of seeking full Board adoption in June.
3. Approves the proposed activity for 2023/24 ahead of seeking Board endorsement.

Report by: Ben Dent, Chair of the Climate Action Working Group

BOARD MEMBERS REPRESENTED ON THE CLIMATE ACTION WORKING GROUP (CAWG)

- Benjamin Dent (Chair)
- Jane Hull
- Katherine Chesson
- Rosie Pearson
- Isabel Ross
- Graham Hopkins
- Martin Brown

CAWG MEETINGS/ACTIVITY SINCE THE LAST EXECUTIVE COMMITTEE

1. 19 April – Working Group met online.
2. Late April/Early May – Working Group reviewed and recommends for Executive Committee approval:
 - a. The Layman's Guide to the Small World Consulting (SWC) report (*Appendix A*), and
 - b. Proposals for remaining steps between now and March 2024 to fulfil our commitment "*to identify a scenario which allows us to endorse a path to net zero emissions (or better) by 2050 (or sooner).*"

In combination, this will keep us on track to enable the Board to endorse a pathway in time to have climate change activities prioritised to inform the 2025-30 Management Plan.
3. **This paper seeks the Executive Committee's agreement to these recommendations being proposed to the Board for approval in June.**

OTHER KEY ACTIVITY SINCE LAST EXEC MEETING

4. Mike Elliott (Climate Action Lead) has left the CNL team. The Layman's Guide to SWC's report and the plan for engaging partners and local communities in establishing CNL's pathway towards net zero have been created, including consultation with the CNL team.

THE LAYMAN'S GUIDE

5. The Layman's Guide to the SWC report is included at *Appendix A* and incorporates feedback from Working Group members and the CNL team. The Guide is a summary of SWC's analysis of current greenhouse gas emissions (GHG) and SWC's proposed pathway for CNL to become a net zero region by 2050, and a carbon sink thereafter. Before publication, the guide will be professionally designed to make it more accessible.

6. There are a few points worth noting about SWC's proposed pathway:
- ⇒ Its focus is on emissions resulting from consumption within CNL, not from production. Most significantly, this means it does not include any specific proposals for the amount of renewable energy generated within CNL, only for a decrease in energy used by residents and businesses, and then an increase in the proportion of renewable energy within the remaining consumption.
 - ⇒ It excludes residents' personal flights, although these account of 16% of residents' total emissions (250% above the national average).
 - ⇒ It excludes visitors' flights to get to the UK, even though these account for 37% of the total emissions of all visitors, domestic and international. SWC explain that this is due to difficulty in monitoring changes, and hence they are hard to include in tracking progress along the pathway. In addition, it would be illogical to apportion all these emissions to CNL, given overseas visitors are highly likely to visit other destinations as well. Nonetheless, it means SWC's pathway does not reflect over a third of the emissions which result from CNL's important visitor economy.
 - ⇒ It assumes visitor numbers stay the same.

The Working Group feel strongly that these aspects of the SWC model should be noted, but **they must not be used as a reason for debate and so further delay**. No model is without peculiarities, and further iterations of the model can be incorporated in future reviews.

FUNDING THE WORK DURING 2023/24

7. With Mike's departure, we are left with a budget of around £25,000 for climate action work until the end of March 2024. This will be allocated proportionally to cover:
- CNL team support (to cover the activities Mike would have undertaken)
 - Professional consultancy and facilitation
 - Design work for Layman's Guide
 - Stakeholder engagement activities/workshops

Opportunities for additional support funding will be explored over the next 2-3 months.

Please note that the CEO and Partnerships and Fundraising Lead are currently seeking funding to resource the Board's climate action work beyond March 2024.

PROPOSED ACTIVITY 2023/24

8. The proposed timetable is as follows:
- May - Executive Committee considers Layman's Guide and activity plan.
 - June - (1) Board considers the same which, if adopted, are sent to a designer, (2) Joint Climate Action and Planning and Infrastructure Working Groups meeting on consultation feedback on the draft Renewable Energy Position Statement, and to agree revised version to recommend for Board adoption.
 - July - SWC Report, Layman's Guide and consultation paper published.
 - July - Appoint 'freelance' specialist support to guide and facilitate.
 - July/Aug - Preparation/planning for six stakeholder workshops during Oct and Nov:
 1. CNL Board Members and Voluntary Wardens
 2. Parish, Town, District, Unitary and County Councils
 3. Farmers, landowners and land managers
 4. Environmental NGOs, educational establishments and umbrella organisations, e.g. NFU
 5. Businesses, including from the visitor economy
 6. Communities

- Oct/Nov - Deliver the workshops, with the Working Group attending or regularly reviewing their conclusions.
- Late Nov - Freelancer, Working Group and CNL team hold a workshop on engagement results, and to agree a pathway towards net zero.
- Dec - Pathway towards net zero drafted, and then agreed by the Working Group and the CNL team.
- Jan '24 - The Executive Committee considers the proposed pathway.
- Feb '24 - The Board considers/adopts the pathway.
- Mar '24 - Pathway launched, including a guide to the actions which residents, land managers, businesses, councils, visitors, etc. can take to help implement it. Pathway's implications and targets to inform the development of the Management Plan 2025-30.

Thereafter, and subject to resources, the CNL Board will work with partners and communities to deliver the pathway. The Working Group will review the Board's recent Climate Change Strategy to ensure it aligns with pathway; confirm baseline data and monitoring process for progress along pathway.

DECISIONS REQUIRED

- ✓ To approve the Layman's Guide (Appendix A) to take to the June Board meeting for formal adoption and to then be published
- ✓ To approve the proposed activity for 2023/24 ahead of seeking Board endorsement in June:
 - Appendix C – any additional issues the consultation should explicitly cover?
 - Appendix D – any additional consultation activities?

SUPPORTING PAPERS

- Appendix A (for approval) - Layman's Guide
- Appendix B (info only) - Approach to managing the uncertainties around climate change
- Appendix C (for additional suggestions) - Key consultation questions
- Appendix D (for comment) - Consultation process

MAY 2023

Appendix A – Endorsing a Pathway to Net Zero (or better) by 2050 (or sooner)

Creating a Pathway to a Climate-Friendly Cotswolds

Introduction

In 2021 the Cotswolds National Landscape Board commissioned Small World Consulting (SWC) to map the climate footprint of the landscape. This guide presents the results of SWC's analysis of the positive and negative impacts from what residents, visitors and businesses consume, and how we use the land. SWC is undertaking similar work for other National Parks and Areas of Outstanding Natural Beauty, and by applying the same calculations to many areas, we will have strong foundations for working together.

All landscapes are constantly evolving, whether through natural processes or human activity. Some climate change is already unavoidable, and this will drive further transformation. The Cotswolds will have hotter summers, milder, wetter winters, and more extreme weather events. This means it is inevitable that treasured Cotswolds views, wildlife and plants will be permanently affected. The crops which thrive here will also change, as farmers must find species and varieties that thrive in new climatic and soil conditions. So, preserving the Cotswolds exactly as it is today is simply not possible. The questions are how do we want the landscape to adapt and change to contribute to limiting climate change, and what changes are we willing to make to our own behaviour to avoid the need for more extreme changes to the landscape?

It's time for action, urgent action, and so what matters are the insights into the relative impacts of different sources of emissions, and the opportunities to start tackling the problem. We can always adjust the pathway as new details and new solutions emerge. Detailed results and a technical explanation of the calculation can be found in the full report which also summarises ways to tackle climate change [[insert link](#)]. Here we focus on the headlines specific to the Cotswolds, and which we can all use to have well-informed discussions about how we want to shape a climate-friendly future for the Cotswolds.

The global objective is to achieve net zero emissions by 2050. This requires us to reduce our greenhouse gas emissions (gases that make the climate hotter, for example from burning natural gas or using petrol). In addition, we must remove all the remaining, unavoidable emissions from the atmosphere, for example through growing trees which absorb carbon dioxide and then store it.

The Cotswold National Landscape Board is committed to endorsing a pathway to net zero emissions (or better) by 2050 (or sooner). A pathway which respects this area's precious beauty; provides a vibrant place to live, work and visit; produces food and restores nature; and contributes to residents' and visitors' physical and mental wellbeing. The first step, fulfilled by the SWC report, was to create an evidence-base to determine current emissions, and the potential options for reaching Net Zero. Next, we want to engage local communities and partners in considering SWC's findings and recommendations, allowing us to find the best approach to reducing emissions and increasing carbon capture and storage while conserving and enhancing CNL's natural beauty and maintaining the social and economic value of local communities. This guide to SWC's analysis is part of the engagement. Once the CNL Board endorses a pathway, we will work with our partners to follow it as they develop and deliver their own responses to the climate emergency.

Agreeing a pathway will be a challenge, but many communities, businesses and farmers are already rising to this challenge, and in the words of Sir David Attenborough, *"If we can do something about it, then do it. We can do it. We must do it."*

Headlines

Let's start with some headlines, based on emissions in 2019.

Cotswold residents' emissions arise primarily from what we eat and drink (22%), flying (16%), and vehicle fuel and household energy (both 13%). In total, they are around 26% higher than the UK average. In particular, compared to UK averages:

- Our food and drink footprint is around 10% higher than average,
- Electricity and driving are around 35% and 30% higher, and
- Emissions from flying are 2½ times (250%) higher.

Resident population is just over 163,000 people.

Visitors' emissions, including travelling to/from the Cotswolds, are equivalent to about half of total residents' emissions. Their emissions overwhelmingly come from traveling to/from the Cotswolds, rather than what they do, buy and eat while they are here. In particular,

- Emission from travelling are dominated by flying (48%) and road fuel (41%)
- While visitors are here, about half their emissions are due to food and drink.

16 million people currently visit the Cotswolds every year.

How big is the challenge?

To offset the greenhouse gas (GHG) emissions of Cotswolds' residents, visitors and businesses just for 2019, we would need to plant the equivalent of 10,800 football pitches (7,400 hectares) with broadleaf trees, and let them grow for over 100 years. To put that in context, currently the total woodland cover in the Cotswolds is estimated at around 25,000 hectares, or nearly 14% of the area. Another way of envisaging the challenge, is that if we only planted trees to offset all the GHGs we emit, the whole of the Cotswolds would be covered in trees by 2050. Of course, no one is suggesting that, but it demonstrates the scale of challenge, and why we need to tackle emissions across a wide range of activities, and not think tree planting alone would solve the problem.

What does "net zero" mean, and why is it important?

The United Nations define net zero as, *"Cutting greenhouse gas emissions to as close to zero as possible, with any remaining emissions re-absorbed from the atmosphere, by oceans and forests for instance."* Achieving this target should limit global warming to 1.5°C. In 2019, law was introduced requiring the UK to bring all greenhouse gas emissions to net zero by 2050. In 2022, the Cotswold National Landscape Board adopted a commitment to *"to identify a scenario which allows us to endorse a path to net zero emissions (or better) by 2050 (or sooner)."* Small World Consulting's analysis provides us with a baseline and set of recommendations as the basis for consulting on what that path should be.

Small World Consulting's Analysis

SWC made recommendations focused on consumption – what residents and visitors buy and do within the Cotswolds. They focused on areas:

1. Energy-only emissions by residents, visitors and industry, excluding residents' emissions from flights, all through traffic (which is significant) and non-energy emissions from individual businesses' supply chains [NB – currently checking this explanation with SWC]
2. Food and drink consumed by residents and visitors;
3. Other goods purchased by residents and visitors, such as clothing, electronic equipment and cars;

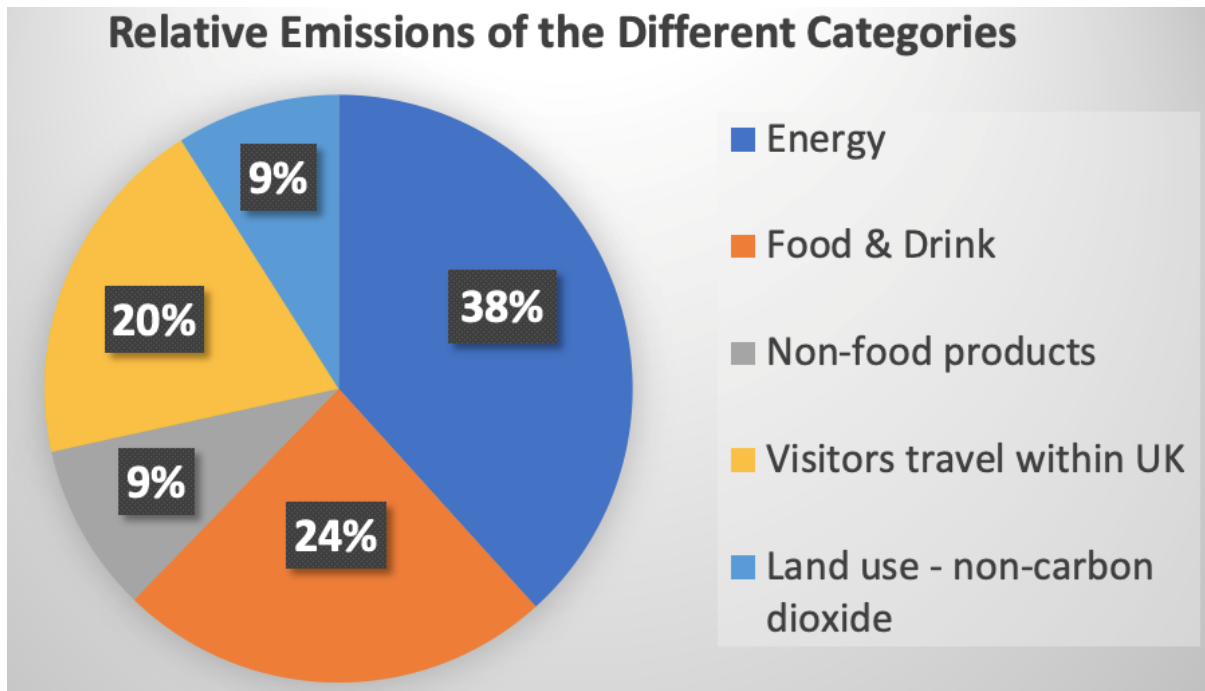
4. Visitor travel within the UK to and from the Cotswolds, so excluding visitors’ flights due to the difficulty in tracking this data;
5. Land-use non-carbon dioxide component, which means primarily emissions from livestock digestion and from fertiliser use, and
6. Land-use carbon dioxide component, which mostly covers the beneficial contribution of land management because trees, hedges and soils absorb carbon dioxide from the air.

These six areas were selected as the best-fit between the competing objectives of covering everything of significance within policymakers’ influence; keeping the boundary simple to describe; avoiding double counting, and making use of any data readily available so we can track progress. The calculations are based on no significant change to the number of residents or visitors.

The rate of reduction required to reach net zero by 2050 for each category is set out in this table. The rate of reduction and level at which further reduction cannot be achieved is based on what is currently considered the limit of what is possible in terms of technology and changes to our behaviour. This is a challenging pathway, illustrating the scale and urgency of action needed. It would mean a slightly better than a net zero Cotswolds by 2050, but only if we start making a difference immediately. It is worth noting that these targets are already four years behind because they use 2019 as the baseline (pre-pandemic), and so every year that the annual targets are not met, they will have to increase in order for the Cotswolds to reach net zero by 2050.

SWC’s full report is available on the CNL website: [\[INSERT HYPERLINK\]](#)

	Annual reduction	Limit of what is currently achievable compared to present-day level
Energy-only emissions	13.6%	5%
Food and drink	5%	30%
Other goods	5%	10%
Visitors’ travel	10%	7.5%
Land use – non-carbon dioxide component	5%	30%
Land use – carbon dioxide component	Not applicable because <ul style="list-style-type: none"> - Annual reductions will not be the same each year, because the rate should increase as trees and hedges grow, and soil is improved to hold more carbon, and - 2050 is a short time horizon in terms of land-based carbon sequestration measures, so there a ‘limit’ is not relevant. 	



Energy

What does this cover?

Emissions relating to energy use within the Cotswolds by residents, visitors, local industries and their supply chains, and service providers, such as local health and education authorities, and water and sewerage companies. This includes emissions from roads (except from through-traffic); electricity, gas and oil consumed in our homes; energy used in constructing and maintaining buildings, and by our health and education services. It does not include residents' flights.

Where are we now?

This category counts for over 45% of total emissions, primarily from household electricity and other fuel, vehicle fuel, and housing

What is proposed?

A 13.6% reduction every year to a target of 5% of present-day emissions.

Decreasing our use of energy or greenhouse gas emissions from energy production by about 14% a year. SWC propose that this is achieved by switching to renewable sources (solar, wind, tidal and/or hydro-electric power), with tariffs backed by Power Purchase Agreements; lowering the thermostat temperature and improving home insulation, and replacing oil or gas boilers with alternatives such as electric heat pumps. Moving properties which are not connected to mains gas from oil heating to a heat pump has the potential to reduce emissions significantly, while offering householders a more convenient system. However, there may be issues to do with affordability. Increases in demand for electricity will need improved grid connections or community renewable energy production, such as ground-source heat pumps.

Not all our renewable energy needs to be generated within the Cotswolds, for example because of widespread decarbonising of the national electricity generation and use of electric vehicles. What is critical is that homes and businesses swap to renewable sources. Additional approaches would include:

- Zero-carbon buildings, for example using less concrete and steel, and more timber,
- Low carbon transport, such as electric cars (especially if they are recharged using renewable sources), public transport and cycling.

Moving to electric cars will help significantly – although how the electricity is generated will make a difference - as would buying smaller cars and/or car sharing. Similarly, electric bikes use just 5% of the energy of an electric car.

Food and Drink

What does this cover?

Whatever residents and visitors eat and drink. This includes everything bought from shops, restaurants, take-aways, pubs, hotels and B&Bs, and reflects how far it has been transported.

Where are we now?

Emissions from food and drink are significant. They account for 22% of residents' footprint, and 52% of visitors' emission while they are here.

What is proposed?

A 5% reduction every year to a target of 30% of present-day emissions. This assumes 3% reduction per year from dietary change (as set out in the National Food Strategy), 1% per year from waste reduction and 1% per year from other changes, including technology.

There are three main ways of reducing total emissions from food and drink:

1. Reducing emissions from producing, processing and transporting items of food,
2. Reducing food waste, which can reduce an individual's carbon footprint from food by up to 12%, and
3. Changing our diet to include more low carbon products. This includes "less and better meat".

In terms of emissions, how a product was produced on-farm, and subsequently processed and transported will impact on its emissions. Beef from an animal fed on imported grain will have different levels of emissions to one fed on pasture, especially if its manure is used instead of artificial fertiliser.

Navigating choices which reconcile climate, nature, local farmers' livelihoods, health and affordability are complex, especially as our understanding of all these aspects and therein interconnections deepens. Accordingly, it needs collaboration between policymakers; agriculture and food businesses, including retailers; public health organisations; and local people.

Goods and services other than food and drink

What does this cover?

All purchases of non-food and drink items, such as clothing, electronic equipment, furniture, soft furnishings and cars.

Where are we now?

This category accounts for about the same level of emissions as from livestock and applying synthetic fertiliser, or just over a third of the food and drink category.

What is proposed?

A 5% reduction every year to a target of 10% of present-day emissions. This includes supply chains for these goods reducing their emissions. It also envisages developing a more circular economy that involves sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products for as long as possible, rather than throwing them away and buying new.

Visitors' travel**What does this cover?**

Visitors' travel within the UK to/from the Cotswolds and within the area, but not overseas visitors' flights to/from the UK. International travel is omitted due to the practical difficulty of tracking change, for example changes in where visitors are coming from, and how many other places they visit in the UK as well as the Cotswolds.

Where are we now?

Over 16 million people visit the Cotswolds every year. Tourism supports almost 31,000 jobs, about 8% of the total. Indeed, we have one of the highest number of visitors of all National Parks and AONBs, and one of the highest proportions of overseas visitors. Visitors' travel to the Cotswolds vastly exceeds the emissions while they are traveling around the area.

Nearly 80% of visitors' footprint is travelling to and from the Cotswolds, and nearly half of that is flights.

What is proposed?

A 10% reduction every year to a target of just 7.5% of current emissions. This is based on visitor numbers remaining stable. This should be achieved in similar ways to how residents will contribute to meeting their target for emissions from travel, for example, increasing use of electric vehicles and public transport both the travel to and within the Cotswolds. *[NB – currently checking this explanation with SWC, need clarity on the calculation of achieving a 10% reduction per year primarily from switching to electric vehicles and greater use of public transport to get to and travel within CNL?]*

Land use: non-carbon dioxide component**What does this cover?**

These emissions come primarily from livestock (methane generated by digestive systems of cattle and sheep) and synthetic fertiliser use, in the form of nitrous oxide.

Where are we now?

Emissions from this type of land use is equivalent to about a third of emissions arising from what residents and visitors eat and drink.

What is proposed?

A 5% reduction every year to a target of 30% of present day emissions.

Many farmers are already moving towards toward more climate- and nature-friendly farming. However, SWC's recommendations requires further transition, including a significant increase in cover crops (an increase of 2,438ha every year as part of farmers moving towards regenerative techniques), which are crops planted to cover the soil to reduce erosion, retain nutrients, etc. rather than for their harvested value. It also requires an increase of 363ha/year in use of legumes such as clover, to reduce the need for artificial nitrogen applications to grasslands.

Land use: carbon dioxide

What does this cover?

Land management is also part of the solution, since carbon can be sequestered (absorbed) by trees, grassland, hedgerows, and soils. Increasing sequestration is crucial to addressing the climate emergency, and in many activities also contribute to supporting wildlife by enhancing and creating new habitats. We can increase the amount of sequestration by planting trees as new woodlands, orchards, in public places like parks and schools, or small groups of trees. We could also restore hedges and orchards. With the increase in the uptake of regenerative farming, farmers are increasingly managing soils on their farms in ways which sequester and retain more carbon by increasing soil organic matter.

Where are we now?

The Cotswold landscape absorbs about 10% of emissions from the five sources covered by this analysis.

What is proposed?

In order to make up the remainder of the pathway to net zero not achieved under the other five categories, SWC calculate that we would need to plant:

1. 700ha of new woodland every year across the Cotswolds – a total of 21,000ha by 2050, which is about 4½ times the size of Cheltenham or 7 times the size of Bath. This would nearly double the current woodland cover to around 22%, and compares to a total increase of 4,000ha as part of the Cotswolds Nature Recovery Plan. These figures do not include trees planted to replace ash trees lost to ash dieback, nor beech trees which die due to the more frequent and intense drought conditions expected from unavoidable climate change. *[NB - checking with SWC that replacement of ash and beech would be in addition to 700ha/yr., and so if replacement was not done in addition that would negate the Net Zero pathway because areas of ash and beech lost would offset the 700ha of new planting].*
2. Just over 50km every year of new hedgerows *[NB - checking with SWC. Report recommends 20.6ha every year, or 206,000sq m. If average hedgerow grows to 4 metres wide, that's 51,500m of new hedging every year, and so from 2019-2050, that's over 1500km of new hedgerow.]*
3. 360ha every year of new agro-forestry, which involves using the same land for crop or livestock farming and tree planting. While this increases carbon sequestration by improving soil management, the increase is less than 20% achieved by planting the same area with trees.

Nearly three-quarters of sequestration assumed in the pathway comes from new native broadleaf woodland, compared to the combination of agroforestry, new hedgerows, and use of legumes and cover crops. Broadleaf trees, such as oak, beech, small-leaved lime and wild cherry, absorb more carbon and are generally better for wildlife than coniferous trees such as pine, although conifers absorb carbon more quickly.

It is important to recognise that the Cotswold landscape (which is so cherished) is largely the result of farming, and replacing sheep with other types of farming or with trees will change that appearance. Significantly, many Cotswold farmers' livelihoods are based on livestock farming. In addition, some fields currently used for grazing sheep and cattle cannot just be converted to arable farming, for example those which are too steep to use a tractor, or where the soil is too thin.

It is important to note that trees and hedges absorb carbon quite slowly when they are first planted, and then as they get bigger and grow faster, their absorption increases; it peaks after 20-30 years, and then the rate of sequestration declines. This is why it is important to start planting trees soon.

Equally, it is important to consider – *'right tree, right place, right reason'*. Tree species need to be planted in locations where they will thrive and enhance the landscape, and where they would not block our choicest views. Consideration also needs to be given to planting tree species which are suitable for our future climate (higher temperatures, increased average rainfall, more frequent flood events, and more drought periods).

Planting and managing woodland must be funded, either by the wood being commercial (the UK is the world's second largest importer of wood), or through contributions from public or private finance, whereby companies pay for trees to be planted to offset their corporate carbon emissions. Finally, we need to consider the impact of planting trees in fields which are currently used to produce food. Many of the countries from which we currently import our food are becoming increasingly water-stressed due to climate change, and so long term supplies may be jeopardised, and growing our own food becomes more important.

Exclusions

Because the SWC analysis focused on what is consumed rather than made in the Cotswolds, their recommendations exclude several categories, most significantly emissions from:

- Residents' flights, because this is considered outside local authorities' influence. However, as highlighted in the headlines, people in the Cotswolds on average fly a lot.
- Businesses, because the focus is on consumption and from land use, not from production.
- Through traffic, although they are very significant – for major roads, three times greater than caused by residents' traffic.

Next Steps

National Parks and AONBs cover around 25% of England, and the Cotswolds is the third largest protected landscape in England and Wales. As such, these areas need to pull their weight in delivering the UK's legally-binding commitment to achieve net zero status by 2050. Equally, as the nation's most cherished landscapes, we need to be sensitive as to how tackling climate change impacts on the natural beauty of these areas. Similarly, the Cotswolds is not a museum, but somewhere people live and work, as well as love to visit. For example, 86% of the land in the Cotswolds is used for farming. Accordingly, CNL will consult on the optimum pathway to a climate-friendly Cotswolds by discussing SWC's findings and proposals and alternatives with local communities and partners. We want to reach consensus about a pathway which tackles the climate and nature crises we face; delivers the purposes for designating the Cotswolds as a protected landscape; which continues to ensure the Cotswolds offer residents and visitors somewhere that lifts their spirits; and which offers farmers and other businesses a place to earn their livelihoods.

Appendix B – Endorsing a Pathway to Net Zero (or better) by 2050 (or sooner)

This Appendix explains how the Board’s pathway will deal with the uncertainties around tackling climate change.

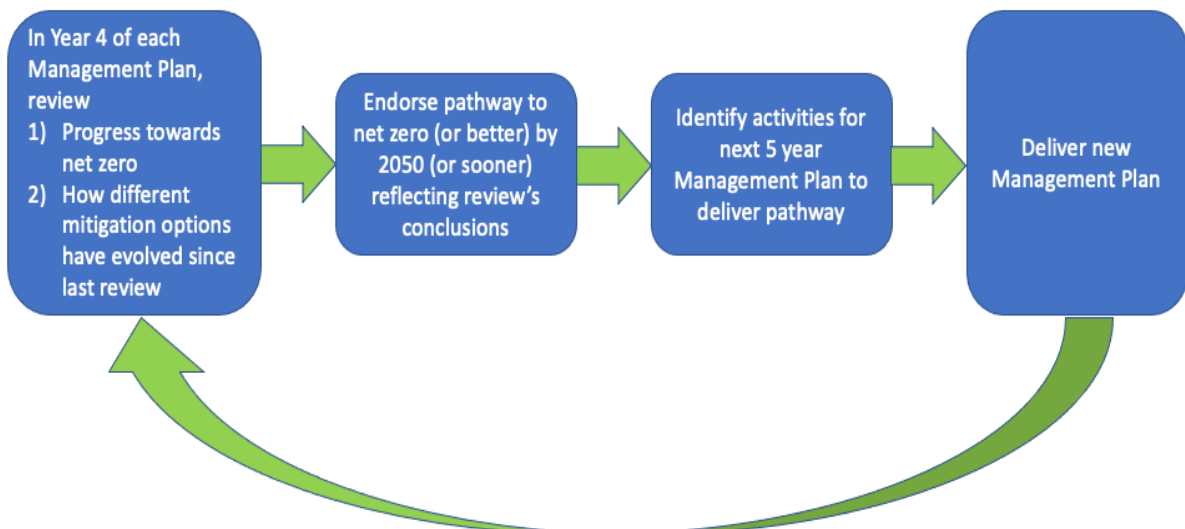
Sources of uncertainty

There are two significant sources of uncertainty around tackling climate change.

- 1) New technology, scientific understanding, and climate modelling: innovation and deepening understanding is constant, and as the climate crises gets even more dire, investment will grow in developing new technologies to decarbonise power, transport and food production. **However, the viability/timing of new solutions is highly uncertain.**
- 2) How rapidly government policies and individuals’ collective behaviour will change to mitigate climate change: in relation to CNL’s pathway, sources of this uncertainty include how/when: (a) Government policies in the UK and elsewhere will evolve to tackle and adapt to climate change, (b) CNL residents and businesses will switch to renewable energy sources, (c) Land managers in CNL will transition to techniques which sequester GHG, (d) Residents will reduce the number of flights they take.

These uncertainties cannot be a reason to delay action. Rather, they need to be managed with the pathway including a variety of options, each of which can be expanded or contracted depending on how these uncertainties unfold. This approach recognises that some currently speculative options might be scaled rapidly if they become viable. Equally, for those existing, proven options which can be hard to scale quickly, such as creating woodland or installing energy efficiency measures in buildings, implementation needs to start now in case viable alternative options do not emerge. Accordingly, our policy would acknowledge that while we are endorsing a pathway towards net zero based on what is currently known to be practical, we are not setting a definitive, linear pathway which will remain unchanged until 2050. Rather, **we will review the pathway at least every five years to align with the development of each Management Plan**, potentially with interim reviews to reflect new legislation, targets, guidance or significant data (see diagram below). This review will involve both tracking local, national and international progress towards net zero, and reviewing the menu of options to see if we should divert from our original pathway. This embeds in our pathway:

- 1) Flexibility - CNL will respond to uncertainties as they unfold, without irresponsibly failing to make progress in the meantime,
- 2) Reversibility - Potentially, turbines and solar farms can be removed if new, more landscape-benign options emerge.



Appendix C – Consultation Paper

1. The engagement activities will help to build consensus for a pathway and identify the priority first steps for both CNL and its partners in embarking on the pathway. These will be included in the 2025-30 Management Plan. This Appendix explains how the consultation paper will explain the context, and then pose specific questions.

The Context

2. Climate change is an existential risk to life on this planet, whose scale and urgency is unprecedented. This is recognised in the Board’s commitment “to endorse a pathway to Net Zero (or better) by 2050 (or sooner).”
3. The Cotswold landscape is in a constant state of evolution. Since the last Ice Age, natural processes have changed in response to climate change and human intervention, from the clearing of woodland in the neolithic, through feudal field systems, then enclosures, and most recently agricultural intensification through artificial fertilisers and pesticides. Unavoidable climate change will result in further changes to the landscape, including the loss of ash and drought-sensitive beech trees; agricultural changes to crops more suited to the new climate, and more flooding and/or flood mitigation measures, and threatening its special qualities. Accordingly, mitigating the rate of climate change and building resilience are essential aspects of conserving CNL’s natural beauty. Similarly, the Board’s Nature Recovery Plan acknowledges the principle that some changes enhance natural beauty.
4. CNL is a designated Area of Outstanding Natural Beauty, recognising that the landscape is of national importance. It is characterised by the influence of the underlying oolitic limestone on the landscape, vegetation and wildlife, as well as on human activities, from Neolithic long barrows, to the wool trade and the use of Cotswold stone as a building material for houses, churches and walls. Its distinctive, special features include the landscapes of the High Wold, Dip Slope Lowland, valleys and escarpment, and land use such as arable and livestock farming, beechwoods and meadows. Accordingly, the Board is not able to adopt policies with complete discretion, because it must abide by its statutory purpose to “conserve and enhance the natural beauty”.
5. CNL’s boundaries are determined by the special qualities of its landscape, not its capacity to tackle climate change. Other areas of the UK might be able to reduce emissions or sequester/store GHG:
 - a) More effectively - speed or total volume of reduction or sequestration,
 - b) More efficiently - more cheaply or using less space, or
 - c) More confidently - involving changes which will definitely reduce emissions, rather than relying on less certain approaches, such as persuading individuals to change behaviour.
6. The National Association of AONBs¹ and the CNL Board² have adopted high level commitments to set out and pursue a pathway to net zero by 2050 - and in CNL’s case potentially better and sooner. In line with SWC’s analysis, in this case, net zero is the balance between emissions caused by consumption within the Cotswolds minus carbon sequestration in the Cotswolds. This bold ambition forces us to consider transformational, rather than incremental, changes that are needed for the scale and urgency of moving the UK to net zero by 2050, as enshrined in law. Remembering that National Parks and AONBs cover about 25% of England, if they do not fulfil this ambition, greater requirements will be

¹ <https://landscapesforlife.org.uk/projects/colchester-declaration>

² <https://www.cotswoldsaonb.org.uk/wp-content/uploads/2021/11/CNL-Climate-Change-Commitment-11-2021.pdf>

required by non-designated areas. Some of these areas, such as the East Midlands and East Anglia, are amongst the country's most agriculturally productive areas.

7. Land cannot be simply swapped from one use to another. Physical constraints include topology, soils, aspect and visual impact (for example, as reflected in "right tree, right place, right reason" approach). There is competition between land uses, and also financial constraints. Owners/managers of private land have a reasonable expectation of earning a return, and so switching from crops and livestock which generate annual income to woodland which accrues long term value will require changes to financing from a mixture of public, private and charitable sources (blended financing).

The Questions

8. The SWC analysis and proposed pathway lead to the following questions:

⇒ **How do we ensure changes to land use/management proposals reflect:**

- The purposes of CNL's designation as a protected landscape.
- CNL is a living, working landscape, upon which many people depend for their livelihoods, and its appearance is in large part a result of this.
- Food security: While food miles are not a good surrogate for environmental impact, current sources of imported food are likely to suffer from climate disruption, so it will be prudent to increase the resilience of our domestic food system.
- Nuance over reducing total emissions from livestock: for example, the environmental impact of imported meat from intensively-farmed cattle fed on chemically-grown grain is significantly greater than from local, pasture-fed cattle raised as part of an organic rotation.

⇒ **What level of expansion of woodland cover is consistent with the purpose 'to conserve and enhance natural beauty'?** SWC's pathway envisages 21,000 ha of new woodland by 2050, approximately doubling the current extent and about five times the expansion included in the Cotswolds Nature Recovery Plan³, which itself reflected the Cotswold's area-based proportionate approach to delivering amount of woodland cover recommended by the Climate Change Committee. Critical questions include:

- How can we ensure that new woodland creation, and more trees in the landscape as part of mosaic habitats, contributes to nature recovery?
- In the current absence of funding for detailed opportunity mapping for new woodland, should the Board nonetheless endorse the principle of trebling tree cover pending such an assessment?
- If for any reason, the Board would not yet endorse this extent of new woodland, how could the resulting reduction in sequestration be offset to ensure we still fulfil our commitment to endorse a pathway to net zero?

⇒ **To what extent should CNL generate its own renewable energy, especially from sources which have visual impacts like solar and wind farms?**

- Should the pathway set a target only for renewable energy consumption, and restrict its endorsement of generation to the scale of developments included in the recently revised Renewable Energy Position Statement?
- If the planning system were to become more permissive, would generators consider that CNL offers suitable sites for wind and solar?

³ <https://www.cotswoldsaonb.org.uk/looking-after/cotswolds-nature-recovery-plan/>

- ⇒ **How does guidance/case law inform us on what is compatible with “conserve and enhance”?** Given the existential threat of climate change and the links between climate change and changing natural beauty, will the interpretation of “conserve and enhance” also change?
- ⇒ **Which local partners are best able to influence each of the options** (traffic, housing, industry, land use, land management etc)? Will those partners endorse those aspects of SWC’s net zero pathway over which they have most influence? Do they expect to exceed any of those targets?
- ⇒ **What, if any, changes would key partners including local authorities need to make to maximise energy efficiency in new and existing buildings; and accelerate the consumption of low carbon/renewable sources of power and heat?**
- ⇒ **Building conservation: should local authority planning functions be more permissive around retrofitting energy efficiency measures, such as double glazing, to listed buildings and those in conservation areas?**
- ⇒ **What options are significantly dependent on action outside the region, and hence highlight a need to influence those outside the region, including central government?**
- ⇒ **How should CNL drive the pathway; monitor progress, and review it as progress, uncertainties and new opportunities unfold?** What innovations are most likely to change the pathway, and so should be monitored in the run-up to the first review of the pathway ahead of the 2030-35 Management Plan?

Appendix D – Consultation Process

1. We will need to engage directly and/or with representatives of:
 - ⇒ Local authorities and parish councillors (the Board will have a valuable role here)
 - ⇒ Landowners/managers/farmers (individuals, plus NFU, FWAG, Pasture for Life, RAU, farm clusters)
 - ⇒ Businesses, including the visitor economy
 - ⇒ Communities, ensuring diverse audiences, for example, in terms of age. Some of this can be through relevant community groups, such as those represented by Community Action Groups, such as Carbon Neutral Northleach, but we also need to engage more conservative viewpoints
 - ⇒ NGOs: Local Nature Partnerships, Visit Cotswolds, Rural Community Councils, Cotswold Voluntary Wardens

Accordingly, six workshops are proposed:

1. CNL Board Members and Voluntary Wardens
 2. Parish, Town, District, Unitary and County Councils
 3. Farmers, landowners and land managers
 4. Environmental NGOs, educational establishments and umbrella organisations
 5. Businesses, including from the visitor economy
 6. Communities
2. The CEO recently discussed climate change with Wayne Lewis, Head of Environment at Gloucestershire County Council (GCC), who is keen support the consultation, including with officer time to arrange workshops. Equally, Cotswold District Council (CDC) have deliberately commissioned SWC to produce a footprint analysis and pathway, just based on CDC's boundaries rather than CNL's. This is very positive because we will avoid stakeholders debating which calculation is better, and means we can work with CDC on compatible net zero pathways for CNL and CDC. Embarking early on CNL's climate change work was exactly so that we could contribute to an informed debate. Involving all local authorities and other partners in the consultation process should increase the likelihood of them also endorsing the pathway, and then working with the CNL Board to deliver it.
 3. Meanwhile, we will build on Mike's networking with National Parks and other AONBs. Several other NPs/AONBs are using SWC's model, and it will be valuable to work together as each organisation considers how to implement their own conclusions, reflecting their own specific landscape.

ENDS