



The Coal
Authority

Sustainability plan **2023** to **2026**





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Who we are

The Coal Authority exists to manage the legacy from Great Britain's coal mining past. So much of our 3 nation's history has been shaped by the natural minerals under our soil. None more than coal, which has provided heat, steam and power for hundreds and hundreds of years.

Coal was nationalised in 1947, which is why the UK Government own the majority of underground workings and remaining coal reserves under England, Scotland and Wales, along with the responsibility for many of the associated challenges and hazards.

As domestic coal mining has reduced, and humanity recognises the impacts of burning carbon on our climate, we are seeking alternative ways to maximise low carbon opportunities from closed and abandoned mines such as mine water heat networks. These can provide heat for homes and businesses, across communities whose identity was shaped by coal, while also supporting decarbonisation and levelling up outcomes for communities who could now benefit from low

carbon, social and economic benefits from the warm water in the historic mining assets.

We work with partners, communities and customers to listen, learn and take practical action to support them to create safer, cleaner and greener communities.

We are a 24/7 emergency response organisation, with staff across Great Britain ready to respond and take action to keep people safe and provide peace of mind.

Extensive coalfields exist across Great Britain and it is estimated that 25% of homes and businesses are located above former coal mines. The vast majority of people will never experience any problems from that, but for those who do we are here to provide support and expertise.

The Coal Authority is a non-departmental public body and partner organisation of the Department for Energy Security and Net Zero. You can read more about us [here](#).





Foreword



Carl Banton
Operations Director



Steve Wilson
Non-Executive Director

We're delighted to share with you our Sustainability Plan, which explains our sustainability priorities for the next three years as we deliver our mission of 'making a better place for people and the environment in mining areas'.

We are committed to becoming a more sustainable organisation and want to use our work to contribute to positive change in the communities we support. This includes thorough consideration of environmental and social sustainability and factoring this thinking into our decision making and reporting.

Ensuring sustainability is in all aspects of our work and is embedded across our [2022-2025 business plan](#) and 10 year vision.

Globally we are living through unprecedented times of innovation, health improvement and rapid technological change, but also converging challenges, including climate change, biodiversity loss and growing inequality.

Sustainability means different things to different people. We all have different ideas about what maintaining life into the future can and should look and feel like. However, what is clear is that achieving sustainability needs us all to do things differently; to fundamentally shift from seeing ourselves, business practices and our priorities as separate from society and nature, to a model where we know and act in a way that recognises those complex connections.

At the Coal Authority we have been gradually building our sustainable ambition and [integrating positive changes over previous years](#). Our new plan sets out how we will build on our past achievements to accelerate our sustainable change. Our priorities have been developed through assessing what supports our core work and where we can achieve positive changes. These include, reducing our greenhouse gas emissions and achieving our ambition to be a net zero organisation by 2030, being nature positive, supporting the circular economy, enabling social sustainability, and adapting to climate change.

Key government initiatives, policies and ambitions across England, Scotland and Wales are reflected throughout this plan, which demonstrates our commitment supporting the delivery of those outcomes across the three nations we serve.

This plan will act as our guide to ensure that, as an organisation, we hold ourselves to account with the commitments we're making.

Our people will bring this plan to life. We know everyone needs to have the time, good understanding of the plan, knowledge and tools to take action and make our plan a reality.

Not all the solutions are immediately available or easy to find but we are committed to spending time and resources to find them and act on them.

We can only achieve our mission by continuing to listen and learn from what we do. We always welcome challenges and suggestions on how you think we can do better.

Our mission, purpose and values



Our values

Trusted:

- we act with integrity
- we are open and transparent
- we deliver on our commitments

Inclusive:

- we promote a culture of mutual respect
- we recognise that our differences make us stronger
- we work with others to achieve our mission

Progressive:

- we are open minded and innovative
- we recognise that the past can help us shape the future
- we listen and learn



Our sustainability priorities



We can only achieve our mission of ‘making a better future for people and the environment in mining areas’ by acting sustainably. To do this we will undertake our work sustainably, maximising the positive changes we can make both natural and human. We will focus on 6 priorities:

How our sustainability priorities relate to our business plan

Sustainability must be embedded in all aspects of our work and is a key theme in our 2022-25 business plan and 10 year vision.

Our sustainability priorities support our core work but are also designed to make an impact. This three-year plan provides a foundation for the long term. We need to continue to evolve and adapt our organisation as we go, understanding some aspects may take time.

Reducing our greenhouse gas emissions

We will increase our use of renewable energy, improve our baseline data and develop clear actions so that we are ready to go to net zero and beyond. This includes reducing supply chain emissions especially from construction.

Being nature positive

We will support nature recovery on our sites to increase biodiversity.

Supporting the circular economy

We will reduce the amount of high impact materials we use and retain materials in circulation to help us reduce waste.

Adapting to impacts of climate change

We will become climate resilient by assessing and adapting to the impacts of climate change on our operations, staff and estate.

Enabling social value

We will seek to provide greater value to people and communities by thoughtful engagement and action with more integrated reporting.

Empowering sustainable change

We will deliver these priorities by empowering our people and embedding sustainability into all we do.



Net zero and reducing our greenhouse gas emissions



Net zero means that we achieve a balance between the greenhouse gases our work emits into the atmosphere against those we remove from it.

The UK government and Welsh government have a goal of reaching net zero by 2050, with 2045 the date for Scottish government. We have set our own target of net zero by 2030 and our work will support the wider targets of the three nations we serve. We know there are challenges and areas where we need greater evidence and more detail, but as a minimum we will remove greenhouse gas emissions from our direct and indirect purchased electricity and heat and significantly reduce emissions linked to the goods and services we purchase. We have defined our net zero scope in 'Our Journey to Net Zero' on page 8.

There are some things that we are not easily able to replace for a low carbon alternative, for example the chemicals we use to treat mine water. In these areas we will aim to support and influence our suppliers to contribute to sustainable change and decarbonisation. We will investigate carbon reducing natural

systems in our estate, such as new or improved woodland and peatland.

By setting this aspirational goal we are ensuring that reducing emissions is a top priority, we will learn as we go taking both immediate action as well as looking beyond net zero to be removing more greenhouse gases than we contribute through our operations and activities and play our part in limiting global warming.

We are the government delivery body that is responsible for licensing what remains of the coal mining industry. In doing this we have to follow the specific tests set out in the 1994 Coal Industry Act and take account of the policy from the UK, Scottish and Welsh Governments. We recognise that this is a politically and publicly sensitive area and we continue to be thoughtful, listen to feedback and provide practical operational information to government to help them balance the policy judgements they need to make.



Our journey to net zero 2030

Our journey to net zero involves a robust emission reduction programme. This includes reducing:

- Our direct emissions from fuel combusted and fugitive emissions from air conditioning or similar (often referred to as Scope 1);
- Indirect emissions from purchased electricity and heat (often referred to as Scope 2); and
- Indirect emissions from purchased goods and services, business travel, waste disposal and transportation (often referred to as Scope 3)

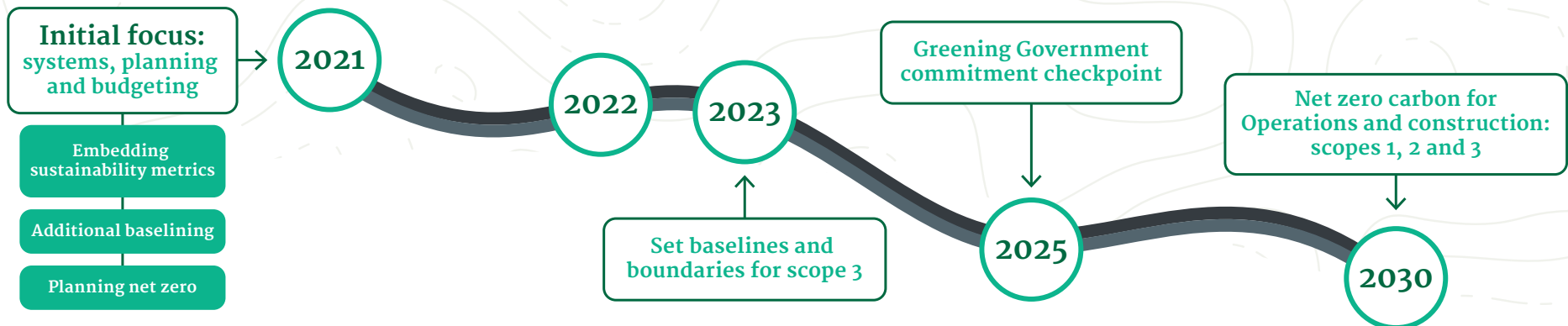
What net zero means to us

Scope 1: reducing the energy demand of our facilities with better insulation and energy efficiency measures at our head office, decarbonising our company fleet with low and zero emission vehicles

Scope 2: source all purchased and self-generated energy from renewable sources only or with limited other low carbon sources by 2030

Scope 3: Areas that we will take action and work to influence between now and 2030

- Decarbonise travel through travel reduction, use of public transport and no national or European air travel
- Working with our supply chain to reduce the impact of our operations. High impact areas of focus include
 - Construction
 - Water treatment chemicals





Our aim is to balance the emissions we cannot eliminate by 2030 through nature climate solutions and projects on our estate that provide evidence based long lasting carbon reduction.

We will need to continually review this goal and how we can support efforts to decarbonise by working with our supply chains.

Currently out of scope:

- Fugitive gas emissions from coal mines
- Emissions from licensing coal
- Other emissions resulting from the work we do, data we share and products we sell, although these will be reviewed as we learn more and can make evidence based decisions

*from 2017-2018 baseline

By April 2026 we will:

- Reduce greenhouse gas emissions from our estate, operations and travel by 65%*
- Baseline the carbon sequestration potential of our land and water assets and develop management plans
- Embed low carbon objectives on our procurement policies and processes
- Scope the research needed to understand the fugitive gas emissions from abandoned mine workings and develop actions

We currently generate over 1.3 gigawatt hours of renewable energy annually from our solar panels. This is equivalent to powering approximately 940 homes for a year. We will increase renewable generation, learning from past experience and avoiding materials that involve the exploitation of people through modern slavery.



Being nature positive

Being nature positive



Being Nature Positive: by managing our land and making choices which enable the natural world, and peoples' relationship with it, to regenerate so it can renew, evolve and thrive.

Our existing mining legacy works means that we are custodians of over 1300 hectares of land, including approximately 36 hectares of Wetlands. We are embracing the opportunity this gives us to protect, conserve and regenerate the diverse, and often unique,

mining legacy habitats and the species that our estate supports.

We will work with others so that, where possible, our estate supports nature recovery work in the locality, region and on a national scale.

Our mine water treatment schemes cover around 290 hectares of largely open water, wetlands and marginal planting. These provide a valuable habitat for many species including rare nesting marsh harriers.

A photograph of a stream in a forest. The water is a distinct reddish-brown color, indicating the presence of iron or manganese. The stream flows through a dense forest with various green plants and trees. The banks are covered in grass and fallen leaves. The overall scene is a natural woodland environment.

A natural mine water treatment scheme

We own a 46 acre woodland which is naturally cleaning a mine water discharge so that when it exits the wood and flows into a fast-running stream the water quality meets Environment Agency standards.

The woodland contains areas of ancient woodland species that can be returned to its former natural condition. Our careful management of the woodland will allow it to regenerate with native broadleaves through natural progression over time.

We are developing an ecological restoration plan, learning from the existing undisturbed ancient woodland ground flora, managed by Durham Wildlife Trust, locally.



We will use a mitigation and conservation hierarchy to become nature positive: **refraining** from or avoiding causing negative impacts; **reducing** to a minimum and impacts that cannot be avoided; **restoring** any immediate damage to nature; and **renewing** areas through working with others in our communities to provide better nature outcomes in the locality and region, thus compensating for any damage.

By April 2026 we will:

- Have a Nature Recovery Plan (informed by a biodiversity baseline of our estate) and will demonstrate how our estate and operations are being optimised for nature's recovery
- Be using green engineering and nature based solutions within at least 50% of our construction and maintenance projects
- Be working with partners to use our sites as a more holistic part of the catchment, local habitat or nature corridor with three identified opportunities
- Develop an ecological restoration plan for Hagwood site (case-study) informed by the learning we've taken from the site and from Durham Wildlife Trust in their management of the adjacent ancient woodland

Our waste reduction journey

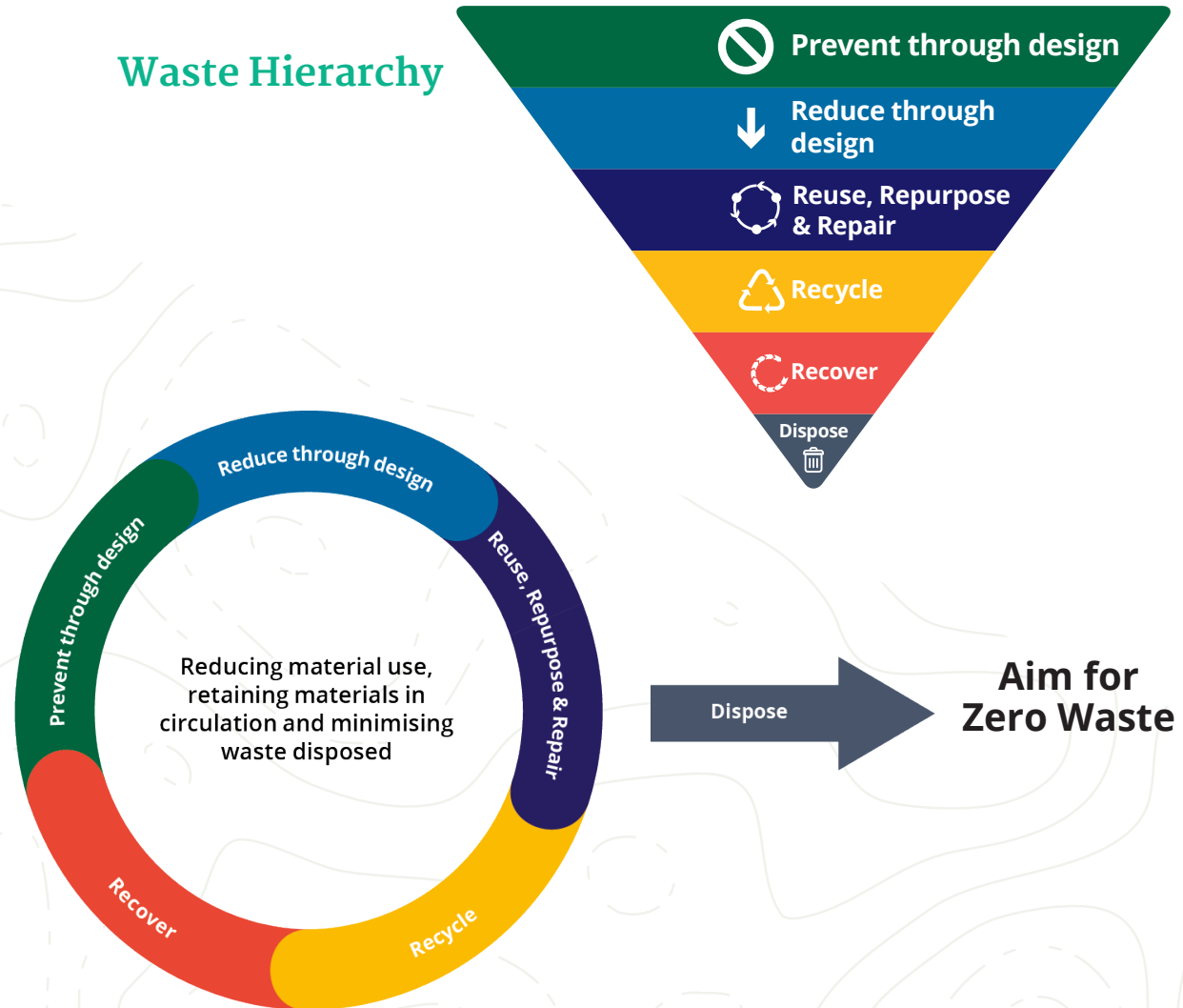
Our journey to minimise waste is based around the waste hierarchy. We are already making good progress in areas where we produce the greatest volumes of waste including:

- designing out waste from construction
- minimising chemical use through process optimisation
- finding new outlets for the large volume unavoidable materials generated from our mine water treatment

Through our duty of care we fully understand all of our waste streams but we need to ensure that they are minimised, managed or, if necessary, disposed of in the most appropriate sustainable way.

We know that there is more to do if we are going to minimise the waste our work creates. We will gather more data on the wastes we generate through our operations and activities so that we can ensure we focus on areas of greatest impact.

Waste Hierarchy





New life for a by-product

Historically this ochre, a mine water residue, was sent to landfill as a waste. Our innovation team considered whether it could be used as a beneficial material instead and have found a number of uses for it – including fine art paint, pigments and contaminated land remediation. We also found that it could be used in the Anaerobic Digestion Industry where the ochre captures hydrogen sulphide which reduces the risk of odour from the process and reduces maintenance to the plants.

This great example of circular economy means our ochre is replacing carbon intensive products previously imported from Europe and is saved from landfill. Alongside environmental benefits, this approach raises income and reduces costs and so helps us to create value and minimise cost to the taxpayer.

Supporting the circular economy



Supporting the circular economy: means minimising what we use and keeping what we generate in a circular resource loop, continually repurposing rather than a linear lifecycle that ends in disposal.

We are already working and innovating with others to build new circular systems that redefine our waste as a resource and reduce the need for raw materials to be used – from the use of mine water to heat and cool buildings, to the reuse of iron ochre mine water treatment residue and reed bed harvesting.

We continue to stretch our thinking, actively seeking opportunities to dramatically reduce our resource use and waste.

By April 2026 we will:

- Re-use or recycle 95% of the iron ochre and iron solids generated from our mine water treatment schemes to prevent disposal in landfill
- Reduce the amount of office waste going to landfill to less than 5% of overall office waste generated
- Reduce water consumption at our Mansfield Head Office by 8% (against the 2017/2018 baseline)
- Have effective systems in place to record, baseline and report on the raw materials we use



Adapting to the impacts of climate change

As the world warms, weather patterns are changing and weather events are becoming more extreme, so we need to adapt to ensure our people, operations and assets are protected and resilient. We need to learn more about the impacts of climate change on our mine assets and estate and the potential impacts this may have on the communities where they are located.

The impacts of global warming are occurring faster than expected since we carried out our previous climate risk assessment in 2010. As science and understanding has improved, we are taking this learning into our work and adaptation planning.

By April 2026 we will:

- Understand and recognise the impacts of climate change and extreme weather events on our estate and operations with a clearly defined adaptation plan
- Carry out climate risk screening and prioritisation (using ISO14090/91) across operational areas to provide additional information for our ongoing risk based approaches and management, to or identify further work needed and inform adaptation plans
- Increase awareness of climate resilience across the organisation to improve decision making
- Ensure that climate resilience is designed and built into all new infrastructure, schemes and assets

As part of our climate adaptation we need to ensure resilience of our coastal mine water treatment schemes to continue to protect the environment whilst managing risks from more extreme storms, rising sea levels and associated coastal erosion.



Enabling social value

We will enable social value by considering social impacts and opportunities when carrying out our work so that we maximise the outcomes that can be delivered for local people and communities alongside wider environmental and value for money outcomes.

This may be repurposing an area of land for use by a local school or group, working with an environmental NGO to join up adjacent sites and their management or transferring land to others who can make better social or environmental use from it. Where we own and manage land we will seek to do this in a way that is considerate of and embedded in the local landscape and community. When we undertake public safety works in communities we will not only minimise the impacts of our work but consider how we can leave the community in a better place for the future.

We own a number of rights, covenants and restrictions on land we do not own and we will increasingly vary the way that we work with partners and landowners to support them to use the land for social and environment benefit – for example in the Whitburn Coastal Centre example on page 19.

In every aspect of our work we rightly have a duty to deliver value for the taxpayer. We will work with others and be creative and innovative to ensure we can continue to do this while delivering social and environmental benefits for the communities we serve and in line with our Mission to ‘Make a better future for people and the environment in mining areas’.

By April 2026 we will:

- Manage our estate to maximise social and environmental benefit, be more visible and integrated in the local community and work with partners to join up sites and work for benefit (and in line with our nature positive and other sustainability priorities)
- Increase the number of our operational sites that have safe public access to support local access to nature and associated mental health and wellbeing benefits from the current baseline (27 sites)
- Develop a strategy for surplus sites / land to enable appropriate sites to be transferred to public or charity ownership and / or repurposed to provide social value or community benefit and progress 5 sites in this way
- We will use our information, services and estate to enable 300,000 hectares of regeneration and development for local communities in the former coalfields

A scenic coastal landscape featuring a pebbly beach in the foreground, a body of water with a small rock formation in the middle ground, and a large, layered rock cliff with a cave-like opening in the background under a blue sky with scattered clouds.

Whitburn Coastal Conservation Centre

In 2019 the National Trust approached the Coal Authority to discuss releasing a restrictive covenant on land at Whitburn, Tyne and Wear, England which the Trust rent under a long lease from South Tyneside Council. The Trust wanted to build a Coastal Conservation Centre on the site to showcase the area's cultural, industrial and natural heritage to visitors, school groups and the local community.

The Coal Authority had historic restrictive covenants over the land which restricted the use of the land. These dated back to 1979 when the National Coal Board (a predecessor of the Coal Authority) was a major landowner.

We worked with the National Trust and South Tyneside Council to find a simple and cost effective way forward that would allow this beneficial development to go ahead. We look forward to seeing the site used to raise the profile of the natural environment and heritage of the local area.



Empowering sustainable change

Our plan is ambitious and we need to enable it by empowering everyone at the Coal Authority and by working with customers and partners. We will ensure that our sustainability priorities are built into our business systems, approaches and decision making and is a key part of the support and development of our people.

We will bring everyone on our sustainable journey by providing learning and development, making space for honest conversations and hard choices and

working with partners to learn together and to implement holistic outcomes when working together in local environments and communities.

By April 2026 we will:

- Engage and develop our people to ensure that we are considering sustainability in every aspect of our decision making
- Implement integrated reporting that uses evidence-based and measured targets to show our commitment and progress on our sustainability goals
- Work collaboratively with our supply chain to maximise environmental, social and local economic benefit from procurement
- and ensure that our sustainable procurement policy is in line with public sector best practice
- Build sustainability into our key systems and governance
- Learn from partners who are leaders in sustainability and demonstrate how we have implemented this into our approaches

Progress against our 2019–22 Sustainability Plan



[Our previous sustainability plan](#) which covered the period 2019 to 2022 has given us the foundations that we will now build on. Our new ambitious and exciting sustainability plan is a big step forward in us becoming a more sustainable organisation.

You can find more information about our previous work on sustainability, the environment and more generally, in our [Annual Report and Accounts](#).

Links to further useful information:

- [UK Greening Government Commitments](#)
The Greening Government Commitments set out the actions UK government departments and their agencies will take to reduce their impacts on the environment.
- [Scotland climate change & net zero 2045](#)
Scotland's ambitious climate change legislation sets a target date for net zero emissions of all greenhouse gases by 2045.
- [Wales climate change](#)
An overview of the actions and milestones needed for the Welsh public sector to reach net zero greenhouse gas emissions by 2050.
- [Public sector annual reports: sustainability reporting](#)
This guidance can assist with the completion of sustainability reports in the public sector. It sets out the minimum requirements, some best practice guidance and the underlying principles to be adopted in preparing the information.
- [Scotland's National Performance Framework](#)
Find information of Scotland's National Performance Framework and how Scotland is performing against it.



Some of the things that we have made good progress on include:

Climate Change

- reduce our greenhouse gas emissions
- explore how we can help others minimise their carbon emissions and adapt to the effects of climate change



- reducing our greenhouse gas emissions
- increased installation of renewable solar energy
- reducing travel emissions and meeting government targets of 25% ULV by 2022

People and Places

- actively encourage the use of local and SME Suppliers
- inform and involve local communities in our projects



- sustainable procurement policy commits to 30% spend with SMEs
- dedicated community response team

Resource

- identify and implement opportunities to use natural and finite resources better



- great progress on developing the use of mine heat and repurposing mine water treatment residues

Nature

- minimise ecological damage and enhance biodiversity



- carried out research that shows our sites provide a rich diverse habitat

Minimising Waste

- apply the waste hierarchy to maximise the value of our resources
- eliminate single-use plastics and minimise their use in our operations



- end of waste solutions to prevent mine water treatment waste being sent to landfill
- baselined HQ single use plastics



Making a better future for people
and the environment in mining areas