

## Abbreviations and Glossary of Key Terms:

Abbreviations:

ABBREVIATION	TERM
BECCS	Bioenergy with Carbon Capture and Storage
CYC	City of York Council
DEFRA	Department for Environment, Food and Rural Affairs
DESNZ	Department for Energy Security and Net Zero
HNZO	Heat Network Zoning Opportunity
LAEP	Local Area Energy Plan
LINC	Local Investment in Natural Capital programme
LNZA	Local Net Zero Accelerator programme
MtCO <sub>2</sub> e	Mega-tonnes of Carbon Dioxide equivalent
NYC	North Yorkshire Council
YNY	York and North Yorkshire (the region)
YNYCA	York and North Yorkshire Combined Authority

Glossary of Terms:

Term	Definition
<b>Anaerobic Digestion</b>	Organic material, typically animal manure or food waste, is stored in an oxygen free container (known as an ‘anaerobic digester’). As it breaks down it produces gas (‘biogas’), which can be burned in a generator to produce electricity. This is carbon neutral, renewable electricity as it uses easy to replenish materials and the carbon released is absorbed as part of the regular carbon cycle (as opposed to fossil fuels, which take millions of years to form).
<b>Biodiversity</b>	Biodiversity describes the variety of life on earth, including plants, animals and bacteria. It is often used in relation to a particular area, like a forest or a lake. Ideally, we are looking for high biodiversity in our ecosystems. Earth’s biodiversity is very rich in that there are many species that have not been discovered yet, but many species are also threatened with extinction because of human activities.
<b>Bioenergy with Carbon Capture and Storage</b>	This involves generating energy from biomass (natural materials such as woodchip or crops), and using technology to remove the carbon produced during the generation process to be permanently stored. This is one strategy through which we can achieve negative emissions, as the process stores more carbon from the atmosphere than it releases.

<b>Carbon</b>	Generally, when people refer to carbon they are referring to carbon dioxide (CO <sub>2</sub> ), the greenhouse gas, but it is sometimes used to refer to the other greenhouse gases too.
<b>Carbon Budget</b>	A carbon budget is the estimated limit of cumulative emissions that can be emitted over a certain amount of time in order to keep global temperatures within a certain threshold, in most cases 1.5°C (to align with the Paris Agreement). This budget is often presented as how much carbon dioxide (and other greenhouse gases) we can emit per year or per decade before crossing that threshold.
<b>Carbon Negative</b>	This involves reducing our emissions by at least 90% relative to baseline reporting (2022 levels) and then removing more than the equivalent amount of our remaining emissions (i.e. unavoidable emissions that cannot be reduced further) within the region. For example, if we are still emitting 0.5 MtCO <sub>2</sub> e in 2040, we would have to remove <i>more than</i> 0.5 MtCO <sub>2</sub> e of carbon e.g. through tree and hedgerow planting, in order to be classed as 'carbon negative'. As a region, we would therefore be removing more carbon from the atmosphere than we emit, acting as a 'carbon sink'.
<b>Carbon Sequestration</b>	The process by which carbon in the air (which worsens climate change) is captured and stored. This can occur through natural processes, e.g. carbon is stored in trees and hedgerows, vegetation and soil (such as peatland), and the oceans, as well as through man-made processes e.g. directly capturing carbon as it is emitted through industrial activities and storing in gas or liquid form, typically underground.
<b>Circular Economy</b>	The Circular Economy is a system where we move away from the 'take-make-dispose' model for resource use and instead focus on keeping products and materials in circulation through interventions such as maintenance, repair, reuse, remanufacture and recycling. This helps tackle climate change through reducing the amount of resources we consume (and the damage this causes to the environment), emissions that come from manufacturing new products, and through reducing the amount of waste that goes into landfill. For more information see <a href="#">The Ellen Macarthur Foundation</a> .
<b>Clean Energy</b>	Energy that emits little to no greenhouse gas emissions when it is produced. Whilst this includes renewable

	energy, it also encompasses other non-renewable technologies such as nuclear.
<b>Climate Change</b>	Greenhouse gases, like carbon dioxide (CO <sub>2</sub> ) and methane, trap heat in the Earth's atmosphere. Increased human activities, especially burning fossil fuels which emits greenhouse gases, are causing our planet to warm. This warming is happening faster than natural changes in the past and is affecting our climate now. Rising global temperatures will also lead to wider changes to our weather. Current and increasing impacts of climate change include more frequent and severe heatwaves, droughts, and storms, rising sea levels threatening coastal communities, changes in plant and animal habitats, and impacts on agriculture and food production. For more information see the <a href="#">Climate Change Committee</a> .
<b>Climate Change Adaptation</b>	Climate Change Adaptation is adapting to the climate change impacts that are already happening, or that are expected in the future. Even if we stopped all emissions today, there are still some impacts of climate change that we are committed to that will impact us and future generations. Adaptation might involve reducing our vulnerability to erosion due to rising sea levels, or increased summer temperatures. It also includes utilising any positives of climate change, such as longer growing seasons.
<b>Climate Change Mitigation</b>	Climate Change Mitigation is essentially reducing climate change, usually by reducing the sources of greenhouse gases (such as by reducing fossil fuel use) and/or increasing capture and storage of gases (for example by planting trees).
<b>Community Energy</b>	Community energy refers to the delivery of community-led renewable energy, energy demand reduction and energy supply projects, whether wholly owned and/or controlled by communities or through a partnership with commercial or public sector partners. For more information see <a href="#">Community Energy England</a> .
<b>Decarbonisation</b>	Decarbonisation is the way that countries, organisations, regions or individuals aim to reduce emissions, or to 'decarbonise'. This usually includes reducing the greenhouse gas emissions of transport, electricity, heating etc.
<b>Geothermal</b>	The <a href="#">British Geological Survey</a> defines Geothermal energy as all energy stored in the form of heat beneath the

	<p>surface of the solid earth. It is a reliable and constant source of low-carbon, renewable heat that is not dependent on weather conditions. It is available across the UK at depths from a few metres to several kilometres and it can be extracted using different technologies.</p>
<p><b>Green Economy</b></p>	<p>This is the sector of the economy containing the businesses, industries, and investors that support net zero and sustainable activities, such as companies that install solar panels, or factories that build electric vehicles. According to a report by the <a href="#">CBI (2025)</a>, the UK's green economy is growing three times faster than the wider UK economy, supporting 273,000 full time jobs, and bringing £28.8 billion into the economy. With Yorkshire &amp; Humber cited as an emerging green economy hotspot, this represents a huge growth and employment opportunity for our region.</p>
<p><b>Green Finance</b></p>	<p>Any financial activity that supports positive environmental outcomes. This could be investment in renewable energy infrastructure, community climate projects, or habitat conservation. It includes innovative financial tools such as green bonds, as well as loans, debts, and investments to support projects in sustainability and climate action. This is one of the key mechanisms through which we can unlock private sector investment to help finance our transition to a sustainable future.</p>
<p><b>Green Growth / Green Economic Growth</b></p>	<p>Economic growth has always been tied to environmental degradation, through increased resource consumption, depletion of habitat and biodiversity, and increased greenhouse gas emissions driving climate change. The economic model of 'green growth' seeks to encourage the expansion of economic activities which do not damage or deplete the natural environment, framed as the 'decoupling' of GDP growth from environmental degradation.</p>
<p><b>Greenhouse Effect</b></p>	<p>The greenhouse effect is where heat is trapped close to the surface of the earth by greenhouse gases, like carbon dioxide, methane and water vapour. The greenhouse effect is what allows humans and other animals to populate the planet, because it keeps it at a liveable temperature. However, because there is a higher concentration of greenhouse gases in our atmosphere, there is more and more heat being trapped. It is important to note here that this process does not mean the same thing as climate change.</p>

<p><b>Greenhouse Gases</b></p>	<p>Greenhouse gases (often abbreviated to GHGs) are natural and anthropogenic gases that absorb and emit radiation, which causes the greenhouse effect. They primarily include water vapour, carbon dioxide, nitrous oxide, methane and ozone. There are also some entirely human-made greenhouse gases.</p>
<p><b>Natural Capital</b></p>	<p>The assets in our natural environment that directly or indirectly provide value to people and places. This includes both living and non-living elements across forests, rivers, coastlines, land and minerals, and more. They provide valuable ‘ecosystem services’ such as fresh air and water, resources such as timber and minerals, food, recreation and wellbeing, as well as resilience against climate change. Improving, restoring, and protecting our natural capital produces a wide range of benefits for our society, the economy, and the environment. In some cases, monetary value can be placed on our natural environment (see the <a href="#">Local Investment in Natural Capital programme</a>).</p>
<p><b>Net Zero</b></p>	<p>The Science Based Targets Initiative definition of net zero (recognised industry best practice) requires an absolute emissions reduction of at least 90% from current levels (for Y&amp;NY this our total emissions from 2022). This excludes emissions removals from technology e.g. carbon capture but includes removals from natural sources e.g. through tree planting.</p>
<p><b>Regenerative Agriculture</b></p>	<p>“Regenerative farming is a holistic, nature-based approach that repairs and restores ecosystem functions, prioritising soil health to improve water cycles, biodiversity, and profitability.” A set of farming practices that focus on working with nature to tackle issues of soil degradation, biodiversity loss, and flood and drought risk. It seeks to farm the land whilst improving soil health and biodiversity, through practices such as low or no till farming to minimise soil disturbance, cover cropping and crop rotation to aid soil recovery, and integrating livestock, trees and shrubs with crops.</p>
<p><b>Renewable Energy</b></p>	<p>Energy generated through natural, self-replenishing sources i.e. that will never run out or be depleted. Common sources of renewable energy include the sun, wind, water, and geothermal (heat stored in underground rock).</p>

<p><b>Retrofit</b></p>	<p>Improvement work to a building which increases energy efficiency (i.e. reducing energy bills) and makes it easier to heat and/or cool. Retrofit can improve ventilation, comfort and resilience to high and low temperatures. Some common works considered part of retrofit include insulating walls, roofs and floors; upgrading windows and doors and installing external window shutters; installing solar panels; installing mechanical ventilation, trickle vents and extractor fans; and moving away from fossil fuels, such as by changing the heating source to an air source or ground source heat pump. For more information see <a href="#">Y&amp;NY's Retrofit Strategy</a>.</p>
<p><b>Sustainability</b></p>	<p>In 1987, the landmark report by the <a href="#">United Nations Brundtland Commission</a> defined sustainability as “meeting the needs of the present without compromising the ability of future generations to meet their own needs.”</p>
<p><b>The Paris Agreement</b></p>	<p>The Paris Agreement is an international treaty on climate change that has the goal of limiting global warming to below 2°C, but preferably to 1.5°C compared to pre-industrial levels. It was agreed in 2015 at COP21 and is legally binding.</p>
<p><b>Vision Zero</b></p>	<p>A safety initiative that strives to end all serious injuries and deaths that occur on our roads. It focuses on designing road systems that prioritise the safety of pedestrians, cyclists, and drivers e.g. through traffic calming measures and bike lanes.</p>