

# Improving Our Environment

The vision is to create a healthier, cleaner, and more sustainable environment in Penrith by reducing pollution through a comprehensive set of strategies and actions.

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## A Plan to Combat Air Pollution

To reduce air pollution in Penrith, 7 key strategies have been identified as a starting point for developing a more detailed plan.

1. Raise public awareness and increase community engagement
2. Improve and encourage the use of public transport and walking and cycling routes
3. Increase, improve, develop and enhance green spaces
4. Reduce exposure to emissions from all categories of vehicle
5. Minimise the burning of fossil fuels
6. Reduce, Re-use and/or Recycle
7. Lobby for and support regulation and legislation

## Penrith Town Council Commitments

The Penrith Town Council will undertake to implement the following measures aimed at minimising air pollution in our town.

### 1. Raise Public Awareness and Increase Community Engagement

- Organise workshops, seminars, and public meetings to educate residents about the sources and impacts of air pollution
- Use local media, social media, and community bulletin boards to share information on air quality and pollution prevention
- Launch public awareness campaigns about the health impacts of air pollution and ways individuals can contribute to reducing it
- Provide accurate information on the causes and dangers of air pollution and the levels to be found in Penrith

- Provide facts and information to residents about the benefits of sustainable transportation, energy conservation, and responsible waste disposal
- Encourage residents to participate in local environmental groups and activities
- Use public forums to voice concerns and generate support for pollution reduction measures
- Collaborate with local healthcare providers to offer information on the health risks associated with air pollution
- Collaborate/network with neighbouring towns, regional authorities, and non-governmental organisations to share resources and knowledge
- Collaborate with local schools and educational institutions to provide accurate information to residents about air quality data, air pollution and its health impacts
- Share air quality data with the public and raise awareness about the health impacts of air pollution
- Involve the local community, schools, businesses, and organisations in developing and implementing air quality improvement initiatives.
- Encourage community members to form local environmental groups dedicated to addressing air pollution
- Organise community clean-up events to remove litter and debris from public spaces
- Undertake, with the involvement of the Westmorland & Furness Council, a consultation survey to discover the level of public awareness of the issues, views on voluntary and/or statutory actions to develop mitigation measures, and views on what could be done to improve air quality

## **2. Improve and encourage the use of public transport and walking and cycling routes**

- Campaign and provide practical support for the development of an efficient and accessible public transportation network to reduce the reliance on personal vehicles
- Promote cycling lanes, pedestrian paths, and other infrastructure to encourage walking and cycling as alternative modes of transportation
- Work with local businesses to establish shuttle park and ride services and free out-of-town parking for workers and visitors

## **3. Increase, improve, develop and enhance green spaces**

- Advocate for the planting of trees and the creation of green spaces in the town to help absorb pollutants and improve air quality, in particular, tree species that are effective at trapping particulate matter
- Encourage residents to practice sustainable gardening and landscaping techniques

#### **4. Reduce exposure to emissions from all categories of vehicle**

- Promote the adoption of electric and hybrid vehicles and counter the misinformation and myths appearing in some social and mainstream media
- Seek to develop EV charging infrastructure throughout the town to promote the adoption of electric vehicles

#### **5. Minimise the burning of fossil fuels**

- Synchronise working from home to maximise the time when the office is empty
- Conserve Energy by using energy-efficient appliances and light bulbs
- Turn off lights, devices and electronics when not needed
- Switching energy suppliers to companies that use renewable energy sources

#### **6. Reduce, Re-use and/or Recycle**

- Reduce indoor pollution
- Keep living spaces well-ventilated to reduce indoor air pollution
- As far as possible, become a paperless organisation

#### **7. Lobby for and support regulation and legislation**

Many of the changes necessary to reduce pollutants and create cleaner air can only be achieved with the Authority of the **Westmorland & Furness Council**, the **UK Government** and other Government Agencies.

Therefore, the Penrith Town Council will seek to actively influence, lobby and campaign to achieve the actions outlined below.

#### **Traffic Limitations and Clean Air Zones (see end for information on Clean Air Zones)**

- Consult and consider the development of Clean Air Zones on those roads causing the greatest concern and exceeding World Health Organisation safe levels
- Implementation of traffic calming measures and reduced speed limits to reduce vehicle emissions
- Creation of more car-free zones where pedestrianisation and clean air are the priority
- Consider the implementation of Low-Emission Zones (LEZs) where only vehicles meeting certain emission standards are allowed to enter
- Consider closing roads, or creating low emissions zones for roads adjacent to schools to protect children, who are most vulnerable to air pollution

### **Improve Public Transportation**

- Investment in a reliable, affordable, and well-connected public transportation system to provide an attractive alternative to driving
- Transition public transportation and Council fleets (in-house or contractors) to low-emission and electric vehicles and encourage businesses to do the same

### **Promote Green Building Practices**

- Encourage the construction of green buildings that incorporate energy-efficient designs and materials, reducing both indoor and outdoor pollution sources
- Encourage energy-efficient construction practices to reduce indoor and outdoor air pollution sources
- Campaign for regulations to require the use of cleaner heating technologies in buildings
- Design and implement land-use planning and zoning that prioritises mixed-use development, reducing the need for long commutes and decreasing overall vehicle emissions

### **Introduce Restrictions and Control Industrial and Commercial Emissions**

- Enforce stricter emission controls on industrial processes and facilities, especially those located near residential areas
- Encourage local industry to adopt cleaner production methods and technologies
- Develop local policies that prioritise air quality improvement and align with national clean air goals
- Regulate and limit the use of solid fuel burning (e.g., wood and coal) in residential areas
- Councils should support and buy products from companies that prioritise environmental sustainability
- Encourage businesses to adopt cleaner production processes and reduce emissions

### **Plant Trees and Maintain Green Spaces**

- Plant trees to shield local residents from major road systems such as the M6, A66 and A6: trees help absorb pollutants and improve air quality
- Introduce new tree-planting initiatives and maintain and preserve green areas
- Create more green spaces near to the areas of town where there are higher levels of air pollution

### **Advocate for Policy Changes**

- Build support and advocate for stricter air quality regulations and enforcement
- Campaign and lobby for a broader network of Clean Air Zones (also known as Low Emission Zones) that reduce motorised transport, underpinned by a legal framework which sets minimum standards and consistency between towns and cities
- Campaign for the implementation and enforcement of strict vehicle emission standards to limit pollutants from vehicles, including particulate matter (PM), nitrogen oxides (NO<sub>x</sub>), and volatile organic compounds (VOCs)
- Lobby the government to offer incentives, subsidies, and funding for the rapid development of the charging infrastructure to enable residents to switch to electric and hybrid vehicles

## **How Local People can Support a Climate Change Strategy**

Even small actions collectively make a significant impact. By adopting these practices and encouraging others to do the same, residents can contribute to the reduction of air pollution and the overall improvement of air quality. The town will need the residents to make personal commitments to take measures to reduce air pollutants. Those measures are outlined below.

1. Raise public awareness and increase community engagement
2. Improve and encourage the use of public transport and walking and cycling routes
3. Increase, improve, develop and enhance green spaces
4. Reduce exposure to emissions from all categories of vehicle
5. Minimise the burning of fossil fuels
6. Lobby for and support regulation and legislation

### **1. Raise public awareness and increase community engagement**

- Participate in local environmental groups and activities
- Use public forums to voice concerns and generate support for pollution reduction measures
- Form a local environmental group dedicated to addressing air pollution.
- Organise community clean-up events to remove litter and debris from public spaces
- Share your sustainable gardening practices with others to raise awareness and encourage more eco-friendly landscaping approaches

## **2. Improve and encourage the use of public transport and walking and cycling routes**

- As far as possible, travel to shops in your local area by walking or cycling
- Plan ahead to combine your trips as much as possible
- If going further away consider public transport such as bus or train
- Consider holidays that don't involve flying

## **3. Increase, improve, develop and enhance green spaces**

- Minimise garden waste generation by composting
- Don't pave over garden space
- Where gardens have been paved over, return them to their natural state.
- Grow your own fruit and vegetables
- Practice sustainable gardening and landscaping techniques (see end for information on these techniques)

## **4. Reduce exposure to emissions from all categories of vehicle**

- Cut down on car journeys
- Maintain vehicles and regularly service them to ensure optimal fuel efficiency
- Consider switching to a cleaner car, such as an electric or hybrid, to lower your emissions **Or** when purchasing an ICE (Internal Combustion Engine) car, check its nitrogen dioxide emissions and avoid diesel if you can
- Keep tyres properly inflated (a source of particulate matter)
- Avoid idling your car engine for extended periods as leaving the engine running when the car is not moving can release many harmful pollutants as well as waste fuel
- Public transport is often cheaper and more convenient than driving and parking your car. For example, Carlisle, Edinburgh, Manchester and Newcastle are easily accessible by train
- To avoid breathing in air pollution from cars on the road, try looking at alternative traffic-free routes. (There are over 5000 traffic-free miles on the National Cycle Network.)

## **5. Minimise the burning of fossil fuels**

- Domestic burning has increased over the last decade, becoming the largest contributor to the UK's particulate matter emissions, so avoid burning at home
- Minimise or stop the burning of solid fuels, such as in open fires and wood-burning stoves, as they have a significant impact on air pollution.
- Avoid burning leaves and rubbish in your garden too
- Consider switching energy suppliers to companies that use renewable energy sources

- By checking your Energy Performance Certificate, you can see where there may be room for improvement, such as installing better insulation or more efficient appliances
- Conserve Energy by using energy-efficient appliances and light bulbs
- Turn off lights, devices and electronics when not needed
- Set your thermostat at an energy-efficient level
- If possible, opt for renewable energy sources like solar or wind power if feasible
- More energy-saving tips at <http://www.energysavingtrust.org.uk/home-energy-efficiency>

## **6. Reduce, Re-use and/or Recycle**

- Minimise waste generation by recycling
- Use reusable containers and bags instead of single-use plastics
- Try to avoid purchasing items in the supermarket that are pre-packaged using plastic
- Instead of throwing out unwanted items, always consider making charity shop donations with goods that are still in reasonable condition and fit for purpose
- Use Penrith Repair Cafe instead of discarding items: <https://www.penrithact.org.uk/penrith-repair-cafe>
- Reduce Meat Consumption - meat production contributes to air pollution. Reducing meat consumption or opting for more sustainable and plant-based options can help
- Reduce indoor pollution
- Keep living spaces well-ventilated to reduce indoor air pollution
- Use air purifiers and indoor plants to improve indoor air quality
- Choose household products that are eco-friendly and have lower VOC (volatile organic compound) emissions

## **7. Lobby for and support regulation and legislation**

- Vote and Advocate for Change and Support Clean Air legislation
- Support and vote for policies and local and national politicians that prioritise environmental protection and air quality improvement
- Support local developments and local and national policy changes that are focused on air pollution

# **A Plan to Combat Light Pollution**

Reducing light pollution is a collaborative effort that requires the involvement of local governments, businesses, and the community. By taking a multi-faceted approach, we can work towards preserving the beauty of the night sky and promoting a more sustainable and environmentally friendly lighting environment.

Reducing light pollution in the town requires a combination of community efforts, policy changes, and individual actions. Strategies to help mitigate light pollution include:

## **Policy Changes**

### **Light Pollution Regulations**

Advocate for the implementation of local measures that regulate outdoor lighting. These measures may include specifying the types of lighting fixtures allowed, limiting the amount of light emitted, and requiring shielding to direct light downward.

### **Engage with Local Government**

Engage with local government and decision-makers to prioritise the reduction of light pollution in town planning and development projects.

### **Promote Smart Street Lighting**

Upgrade street lighting to energy-efficient and smart lighting technologies. Smart systems can adjust light levels based on need, reducing unnecessary brightness during low-traffic times.

### **Monitor and Enforce Regulations**

Lobby for measures to regularly monitor and enforce light pollution measures to ensure compliance.

### **Preserve Natural Darkness**

Support efforts to preserve areas with minimal light pollution. This may include designating dark sky parks or reserves where lighting is carefully managed to protect the natural night sky.

### **Tree Planting and Vegetation**

Plant trees and other vegetation strategically to act as natural light barriers. Vegetation can help absorb and block excess light, especially near sources of light pollution.

## **Community Efforts**

### **Raise Awareness**

Educate the community about the impacts of light pollution and the benefits of reducing it. This can be done through public workshops, community meetings, and information campaigns.



### **Outdoor Lighting Education**

Educate residents about responsible outdoor lighting practices. Provide information on how to install and maintain outdoor lights to minimise their impact on the night sky.

### **Advocate for Responsible Advertising Lighting**

Work with local businesses and advertisers to ensure that outdoor signs and advertisements are properly illuminated without causing excessive glare or light spillages.

### **Use Dark Sky-Friendly Lighting**

Encourage the use of dark sky-friendly lighting fixtures that direct light where it's needed and minimise light spillage into the sky.

## **Individual Actions**

### **Use Timers and Motion Sensors**

Encourage the use of timers or motion sensors for outdoor lighting so that lights are only on when needed. This not only reduces light pollution but also saves energy.

# A Plan for Waste & Recycling

Improving council waste management involves a combination of strategic planning, community engagement, infrastructure development, and policy implementation. The following actions that can be taken to enhance waste management at the council level

## Penrith Town Council Actions

### Public Awareness and Education

- Launch public awareness campaigns to educate residents about proper waste disposal practices
- Provide information on recycling, composting, and the importance of reducing waste. (Reduce, reuse, recycle leaflet)

### Expand Recycling Programs

- Investigate the possible increase of types of materials accepted for recycling
- Campaign to establish drop-off locations for hazardous waste and electronic waste

### Community Engagement

- Encourage community participation in waste reduction initiatives including the separation of food waste
- Gather information from residents on their feelings, both positive and negative, about waste and recycling services in Penrith

### Support Composting Programs

- Encourage composting at the household level
- Explore the possibility of providing compost bins and educational resources to residents

### Actions for PTC Office

- Implement green procurement policies that prioritise products with minimal packaging and recyclable materials

### Collaborate with Businesses

- Work with local businesses to reduce packaging and encourage sustainable practices
- Ensure local businesses dispose of commercial waste responsibly

### Influence future Contracts

- PTC to work with W&F when the next contract is due for renewal in 4/5 years

## **Possible actions**

**Explore which of these actions, which has been considered elsewhere by other municipal authorities, could be valid within our own area**

### **Conduct Waste Audits**

- Perform regular waste audits to understand the composition of the waste stream
- Analyse the results to identify opportunities for recycling, composting, and waste reduction

### **Implement Source Separation**

- Ensure source separation of waste at the household level
- Identify if the separate bins for recyclables, are adequate and explore the possibility of food waste collection and composting with W&F

### **Explore Pay-as-You-Throw Programs**

- Explore the possibility of variable-rate billing based on the amount of waste generated with W&F
- Provide incentives for residents to reduce waste and increase recycling

### **Green Procurement Policies**

- Ensure W&F implement green procurement policies that prioritise products with minimal packaging and recyclable materials

### **Monitoring and Evaluation**

- Regularly monitor waste management initiatives
- Evaluate the success of programs and adjust strategies based on performance

### **Explore Innovative Technologies**

- Investigate and adopt innovative technologies for waste management, such as smart waste bins or data analytics for optimising collection routes

### **Legal and Policy Frameworks**

- Review and update waste management policies and regulations to align with best practices and environmental goals

### **Monitoring and Evaluation**

- Regularly monitor waste management initiatives
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### **Explore Innovative Technologies**

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**Legal and Policy Frameworks**

- Review and update waste management policies and regulations to align with best practices and environmental goals

**Invest in Public Infrastructure**

- Provide adequate public bins and containers in high-traffic areas
- Ensure efficient collection schedules to prevent overflowing bins

By combining these actions, councils can work towards more sustainable and effective waste management systems that benefit both the environment and the community.

# **A Plan for Rivers and Water Courses**

In taking the actions outlined below, individuals and communities can play a key role in preserving and protecting local rivers and watercourses from the harmful effects of pollution. However, it requires a shared commitment to responsible practices and an increased awareness of the interconnectedness between human activities and the health of our water ecosystems.

## **Penrith Town Council Commitments**

- Increase awareness about the impact of pollutants on water quality within the community
- Provide educational materials/events in schools and community spaces to promote responsible water practices
- Support and participate in local tree-planting initiatives along riverbanks to stabilise soil, prevent erosion, and filter pollutants
- Report any observed pollution incidents to local environmental authorities promptly
- Advocate for and support farmers who implement environmentally friendly farming techniques
- Contribute to water quality monitoring programmes or initiatives to collect data and identify pollution sources
- Advocate for and participate in the development of local policies and regulations aimed at protecting water quality
- Support infrastructure projects that enhance water treatment and purification processes

## **Personal Commitments of Residents**

- Minimise the use of single-use plastics to prevent them from entering waterways. Opt for reusable bags, containers, and bottles
- Dispose of household waste responsibly by recycling and using designated bins
- Avoid dumping or littering, especially near water bodies
- Join or organise local clean-up events to remove litter and debris from riverbanks and watercourses

- Use environmentally friendly household products to reduce the introduction of harmful chemicals into the water supply
- Dispose of hazardous chemicals, such as paint and cleaning products, according to local regulations
- Pick up after pets to prevent matter from contaminating water sources
- Avoid using harmful chemicals on lawns that can wash into water bodies
- Report any observed pollution incidents to local environmental authorities promptly
- Choose locally produced and sustainably sourced food to encourage responsible agricultural practices

# Appendix

## Environmental Task & Finish Group

### **Introduction**

### **Air Pollution**

### **Air Quality and Odour**

### **Light Pollution**

### **Waste and Recycling**

### **Rivers and Water Courses**

## **Introduction**

Penrith faces several environmental challenges that directly impact the well-being of its residents. From pervasive air pollution and disruptive odours to the intrusion of light pollution and the contamination of rivers and water courses, there is a complex web of environmental concerns. Issues related to waste management and recycling add to the environmental challenges facing Penrith.

Recognising the urgent need to safeguard the health and sustainability of the community, the Penrith Town Council is taking a proactive stance. In understanding the seriousness of these interconnected environmental issues the PTC is committed to playing a leadership role in initiating a range of comprehensive initiatives to address them effectively.

This task involves a robust commitment to thoroughly assess the root causes, discern the far-reaching impacts, and explore viable solutions for mitigating environmental damage in Penrith. Through a combination of research, collaboration, and strategic planning, this plan outlines actionable measures that not only alleviate the immediate consequences of pollution but also establish a foundation for a sustainable and resilient environmental future for Penrith.

This work will contribute to a comprehensive strategy for addressing environmental damage in Penrith, safeguarding public health, and enhancing the quality of life for residents.

The successful implementation of the group's recommendations will require close collaboration and sustained efforts from a range of partners and stakeholders.

# Air Pollution

The main task in addressing air pollution is to formulate a set of practical recommendations and policy measures to mitigate air pollution and improve air quality in Penrith, considering both short-term and long-term goals.

According to a report by the All-Party Parliamentary Group on Air Pollution, poor air quality causes up to 64,000 early deaths a year in the UK at a cost of £24 billion to the economy and the NHS. It is estimated that globally, 9 million people are dying prematurely each year from polluted air.

In December 2020, in London, a landmark coroner's verdict ruled that air pollution had been a cause of the death of nine-year-old Ella Kissi-Debrah in 2013 and that exposure to nitrogen dioxide from motor vehicles was the main problem. The coroner said that we needed to enforce World Health Organisation (WHO) air quality standards and develop a greater awareness of the public health risks among GPs and the public.

Following this case, Professor Sir Stephen Holgate, a special adviser on air pollution to the Royal College of Physicians, said: "Air pollution is an invisible killer, and it's easy for people to forget and ignore. It's essential that the public is given air pollution data for where they are thinking of buying or renting. In many cases like that of little Ella, it can be a matter of life or death." The WHO describes air pollution as a 'public health emergency'.

## Penrith - The Context

In June 2013, Eden District Council commissioned a detailed assessment of air quality in Penrith and Eamont Bridge and concluded that the levels of nitrogen dioxide within parts of Penrith town centre and Eamont Bridge exceeded the Government's annual mean air quality objective for this pollutant. As a result, they declared parts of Penrith town centre and Eamont Bridge Air Quality Management Areas (AQMA) and installed extra monitoring at points of most concern.

In 2021 Eden District Council's report on air quality stated, "Nitrogen dioxide and particulates continue to be the main pollutants of concern in the Eden area, mainly from transport and industry and the burning of fossil fuels."

Modelling created by Imperial College London (ICL) mapped real-world pollution levels recorded at more than 19,500 council monitors in every major town and city across the UK. The scientists at ICL were then able to calibrate to these real-world levels resulting in the most detailed and accurate national model ever created.

The pollution data highlighted levels of the toxic pollutants, Nitrogen Dioxide and PM2.5, exceeding limits set out by the World Health Organisation at several central locations in Penrith. The concentrations of NO2 are particularly alarming. Please see the table on 'Additional Information' which charts the air pollution modelling for Penrith.



## The Main Air Pollutants

The main types of air pollutants (not necessarily in Penrith) include Particulate Matter (PM2.5 and PM10), Ozone (O3), Nitrogen Dioxide (NO2), Sulphur Dioxide (SO2), Carbon Monoxide (CO), and Lead (Pb). Additionally, there are hazardous air pollutants like benzene, formaldehyde, and mercury.

Greenhouse gases like Ammonia (NH3), Methane (CH4), and Carbon Dioxide (CO2) are also present although their immediate impacts on human health are less direct. These gases play significant roles in environmental concerns such as climate change, affecting air quality and ecosystems. Reducing emissions of these gases is crucial to mitigate their long-term consequences.

## Sources of Air Pollution

The key sources of air pollution are road transport, aeroplanes, industry, power generation, residential heating and cooking, agriculture, construction, mining, waste management and natural sources.

Road vehicles, particularly diesel cars and wagons, are a major contributor to nitrogen dioxide (NO2) and particulate matter (PM) emissions. Agriculture is also a source of air pollution in rural areas. Penrith has the additional problem of odour emissions.

Indoor air pollution is also a significant concern, with approximately 900 harmful chemicals found indoors. These pollutants originate from various sources such as building materials, cleaning products, pet dander, tobacco, candles, incense, cleaning agents, air fresheners, flame retardants, perfumes, aerosol sprays, cooking appliances, heating devices, air-conditioning systems (which circulate pollutants), paints, solvents, and mould.

## Legal Standards

The UK was previously bound by European Union air quality standards, which set limits on the concentration of pollutants such as PM10, PM2.5, NO2, sulphur dioxide (SO2), lead, and ozone. Non-compliance with these standards has been a concern. The Government's **air quality objectives** can now be found here at [https://uk-air.defra.gov.uk/assets/documents/Air\\_Quality\\_Objectives\\_Update\\_20230403.pdf](https://uk-air.defra.gov.uk/assets/documents/Air_Quality_Objectives_Update_20230403.pdf)

All local authorities publish an annual air quality status report to fulfil their responsibilities in relation to Part IV of the Environment Act 1995.

At the time of writing, a new Clean Air Bill is being progressed as a private members bill by MP Geraint Davies, who chaired an All-Party Parliamentary Committee on Air Pollution.

## **Air Quality Monitoring**

The UK has an extensive air quality monitoring network that provides real-time data on pollutant levels. This data is used to assess compliance with air quality standards and inform the public. Many people are unaware that indoor air pollution can also be a problem.

## **Health Impacts**

The most dominant pollutants in the air we breathe, that have a direct adverse impact on our health, are PM2.5, PM10 and NO2. Though the health impacts of these air pollutants are very similar, there are also both subtle and significant differences.

PM2.5, or particulate matter with a diameter of 2.5 micrometres or smaller, is associated with several health risks, including respiratory and cardiovascular issues, increased mortality (especially in those with pre-existing conditions), harm to children and the elderly, cancer risk, and environmental damage. It can also lead to antibiotic resistance.

PM10, or particulate matter with a diameter of 10 micrometres or smaller, poses risks such as respiratory and cardiovascular health problems, lung function impairment, mortality, environmental impact, effects on pregnant women and babies, indoor air quality issues, asthma exacerbation, inflammation and social disparities.

NO2, or nitrogen dioxide, is a toxic gas emitted from various sources - vehicles are of particular concern. Its dangers include respiratory and pulmonary issues, asthma aggravation, increased susceptibility to infections, cardiovascular effects, risks to children and the elderly, environmental impact (acid rain, ozone layer depletion) and social disparities.

In summary, these pollutants have significant adverse effects on human health and the environment. Strict regulations and emissions controls are needed to mitigate these risks and protect public health.

## **Government Initiatives**

The UK government has introduced various initiatives to combat air pollution, including the Clean Air Strategy and plans to ban the sale of new petrol and diesel cars by 2035 (recently revised from 2030).

<https://www.gov.uk/government/publications/clean-air-strategy-2019>

## **Public Awareness**

There is growing public awareness of air pollution in the UK and campaigns promote actions such as walking, cycling, using public transport, and reducing personal emissions to mitigate its effects.

## Legislation

A new Clean Air Bill was first proposed in 2016 a full 60 years after the **Clean Air Act of 1956** which was introduced as a response to the great London smog of 1953.

The **Clean Air Bill** seeks to establish the right to breathe clean air;

- to make provisions to reduce indoor and outdoor air pollution, including greenhouse gases;
- to set minimum standards for air quality in workplaces, homes and public spaces;
- to require the monitoring of air quality;
- to require the Secretary of State to publish a strategy for reducing air pollution, including setting targets and measures for air quality, and to report to Parliament annually on the implementation of that strategy;
- to give powers to the Office for Environmental Protection to enforce legislation relating to air quality and the reduction of greenhouse gas emissions;
- to make provisions to reduce pollution from vehicles;
- to place a duty on the Secretary of State to encourage and facilitate forms of active travel and to publish a strategy for reducing emissions from transport;
- to require the Secretary of State to promote public awareness of the impact of air pollution on public health;
- to place restrictions on the use of wood-burning stoves in urban areas; and for connected purposes.

Progress with the Clean Air Bill is slow and it is uncertain that it will ever get through the legislative hurdles and become an act.

## Mitigation

Tackling air pollution is a critical challenge faced by many regions worldwide. To address this issue, it's important to consider a variety of strategies that have been successful in different contexts. However local Councils do not have the power or authority to introduce all that may be required.

Improving air pollution will only succeed as a collective effort that involves individuals, communities, non-governmental agencies, residents/community groups, and local and national governments working together.

We need greater awareness so that people who take their children to school know where they will face the highest risks from dangerous air pollutants. We also need to generate political pressure on local authorities, Members of Parliament and other representatives for change.

We need a holistic approach and a local and national fiscal and planning strategy that requires Council departments, schools, voluntary organisations and businesses to demonstrate their interconnected contribution to the reduction of harmful air pollutants.

The success of these measures relies on strong leadership, effective policy implementation, and active engagement from the community. Regular monitoring and assessment will help track progress and make necessary adjustments over time.

## **The Vision and Key Strategic Themes**

The vision is To create a healthier, cleaner, and more sustainable environment in Penrith by reducing air pollution through a comprehensive set of strategies and actions.

To reduce air pollution in Penrith, 7 key strategies have been identified as a starting point for developing a more detailed plan.

1. Raise public awareness and increase community engagement
2. Improve and encourage the use of public transport and walking and cycling routes
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7. Lobby for and support regulation and legislation

**Air Quality In Penrith** (Figures in red are World Health Organisation limits)

Location	PM2.5 (5mcg/m3 limit)	PM10 (15mcg/m3 limit)	Nitrogen Dioxide (10mcg/m3)
Market Square/Clocktower CA11 7AU	6.44mcg/m3	12.12mcg/m3	16.31mcg/m3
King Street CA11 7AJ	6.48mcg/m3	12.20mcg/m3	16.33mcg/m3
Corn Market CA11 7HS	6.62mcg/m3	12.36mcg/m3	16.88mcg/m3
Castlegate CA11 7HZ	6.48mcg/m3	12.06mcg/m3	16.56mcg/m3
Middlegate CA11 7PT	6.49mcg/m3	12.22mcg/m3	20.27mcg/m3
Stricklandgate CA11 7NH	6.71mcg/m3	12.71mcg/m3	23.79mcg/m3
Newton House CA11 9FY	5.97mcg/m3	11.63mcg/m3	10.92mcg/m3
Beacon Edge CA11 8BN	5.66mcg/m3	10.93mcg/m3	7.95mcg/m3
Scaws Drive CA11 8AZ	5.68mcg/m3	10.84mcg/m3	7.10mcg/m3
Victoria Road CA11 8HP	6.27mcg/m3	11.67mcg/m3	15.03mcg/m3
Kemplay Roundabout CA10 2BB	6.11mcg/m3	6.11mcg/m3	13.56mcg/m3
Ullswater Road CA11 7JQ	6.30mcg/m3	11.67mcg/m3	11.90mcg/m3
Brunswick Road CA11 7JU	6.32mcg/m3	11.80mcg/m3	14.10mcg/m3
Portland Place CA11 7QN	5.95mcg/m3	11.20mcg/m3.	14.66mcg/m3
Friargate CA11 7XR	6.17mcg/m3	11.59mcg/m3.	12.05mcg/m3
Carleton Avenue CA11 8RQ	5.87mcg/m3	11.02mcg/m3	8.26mcg/m3
Greystoke Road CA11 0BX	5.64mcg/m3.	10.73mcg/m3	7.50mcg/m3

Figures are taken in August 2023, Central Office of Public Interest, Imperial College London

## The ULEZ and CAZ

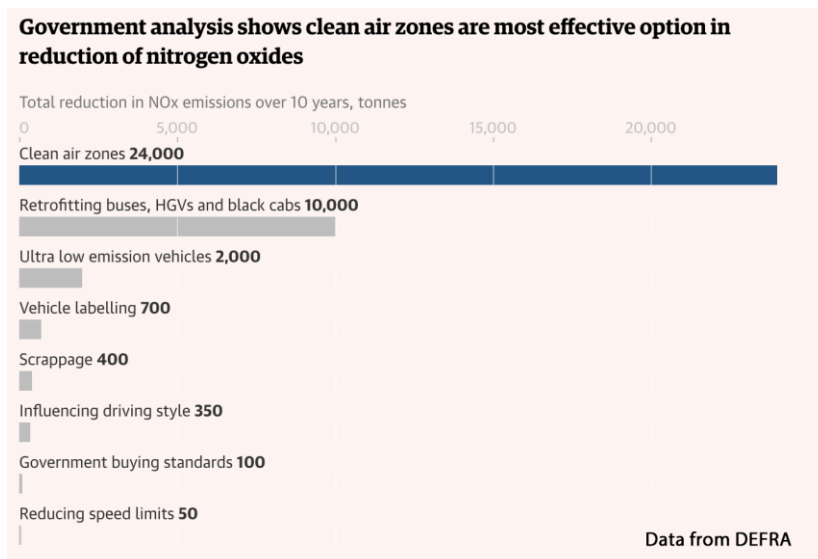
There are 15 clean-air zones in the UK: Portsmouth, London, Bath, Bristol, Birmingham, Sheffield, York, Bradford, Newcastle, Glasgow, Edinburgh, Aberdeen and Dundee. Clean Air Zones (CAZ) are defined geographical areas where certain types of vehicles are required to comply with emissions standards or pay a charge or a fine. In the UK, there are currently four classes of CAZ, ranging from only high-pollution, commercial vehicles, to all passenger vehicles.

The zones have 4 categories of restriction: In recent weeks and months, there has been a setback for clean-air zones. A by-election defeat for Labour in Uxbridge and South Ruislip was blamed on the expansion of the Ultra Low Emissions Zone (ULEZ) to outer London boroughs.

Class	Vehicle type
A	Buses, coaches, taxis, private hire vehicles
B	Buses, coaches, taxis, private hire vehicles, heavy goods vehicles (HGVs)
C	Buses, coaches, taxis, private hire vehicles, HGVs, vans, minibuses
D	Buses, coaches, taxis, private hire vehicles, HGVs, vans, minibuses, cars, the local authority has the option to include motorcycles

Therefore despite the desperate need for decisive action to address the public health crisis caused by polluted air, the financial costs to ordinary people to drive within these zones are proving to be an obstacle to progress - especially in the context of the current cost of living crisis. Curiously, opinion polling showed that there was significantly more support for action associated with achieving net-zero.

Overall support for ULEZ expansion, at just 35%, is much lower than the 59% approval for Net Zero. If Clean Air Zones emphasised the net-zero contribution as well as the public health messaging, the CAZ policy may have been more popular.



The [government's own evidence](#) shows that by far the most effective way to cut pollution is with clean-air zones where measures are designed to *deter* polluting vehicles in towns and city centres.

Data from DEFRA

## **Sustainable gardening and landscaping techniques**

Sustainable gardening and landscaping techniques aim to create and maintain outdoor spaces in an environmentally responsible and resource-efficient manner. These practices promote biodiversity, conserve water, reduce waste, and minimise the use of chemicals.

### **A few tips:**

**Native Plants:** Choose native plants that are adapted to your local climate and soil conditions. They require less water, fertilisers, and pesticides, and provide habitat for local wildlife.

**Composting:** Composting food, garden waste, and organic materials creates nutrient-rich soil amendments, reduces waste, and minimises the need for synthetic fertilisers.

**Mulching:** Apply organic mulch (such as wood chips or straw) around plants to retain moisture, suppress weeds, and improve soil health.

**Water-Efficient Irrigation:** Use drip irrigation, soaker hoses, or rainwater harvesting systems to deliver water directly to plant roots, minimising water wastage.

**Permaculture:** Permaculture principles emphasise designing landscapes that mimic natural ecosystems, maximising resource efficiency and sustainability.

**No-Dig Gardening:** Avoid digging the soil to preserve its structure and reduce erosion, nutrient loss, and carbon emissions.

**Wildlife Habitat Creation:** Incorporate features like bird feeders, insect hotels, and native plantings to attract and support local wildlife.

**Use of Recycled Materials:** Incorporate recycled or reclaimed materials for hardscaping, such as paths, patios, and retaining walls.

**Energy-Efficient Lighting:** Use LED or solar-powered outdoor lighting to reduce energy consumption and light pollution.

**Rainwater Harvesting:** Collect and store rainwater for use in irrigation, reducing the demand on local water supplies.

**Organic Fertilisers:** Use organic fertilisers to nourish plants while improving soil health and minimising chemical runoff.

**Selective Lawn Areas:** Limit the size of lawns and consider using alternatives like ground covers, native grasses, or wildflower meadows.

# Air Quality and Odour

Air quality and odour has frequently been raised as an issue with a growing number of complaints. Omega Proteins is largely perceived as the alleged main source of the odour. However, Omega argues that they are not responsible for all odour reports and that there are other sources.

Rendering is a process that converts waste animal tissue into stable, usable materials. Rendering can refer to any processing of animal products into more useful materials. The rendering process separates the fat from the bone and protein, yielding a fat commodity and a protein meal. The cooking and drying processes are the main sources of any odour emissions.

According to Aerosol and Air Quality Research volatile organic compounds (VOCs) contained in the waste gases emitted from rendering plants are complex and include organic acids, alcohols, aldehydes, amines, aliphatic hydrocarbons and aromatic hydrocarbons. VOCs could easily affect the ambient air quality of neighbouring communities, which often causes the neighbouring residents to report to the local environmental agencies.

The odours produced during thermal oxidation at animal rendering plants are primarily due to the release of various volatile organic compounds (VOCs) and chemical compounds associated with the decomposition of animal tissues and fats.

VOCs are responsible for the odour of pollutants. Some of the key compounds responsible for these odours include ammonia, amines, mercaptans, indoles and skatoles, fatty acids, aldehydes & ketones and hydrogen sulphide.

Thermal oxidisers are used to heat the waste gases to a temperature high enough to destroy compounds, including odours, within the gas stream. The combustion process generates emissions of water and Carbon Dioxide in addition to Nitrogen Dioxide, Particulates, Sulphur Dioxide and Carbon Monoxide. However, limits are placed on the emissions, within the Environmental Permit, on oxides of Nitrogen, Sulphur Dioxide, Carbon monoxide and Particulate Matter. Operators are expected to monitor the emissions as per the permit conditions and ensure they operate under the set Emission Limit Values.

There are sometimes questions about the effectiveness of thermal oxidisers in terms of the sufficiency of capacity to maximise their effectiveness.

There is an issue about what happens to the 'ambient' odour, which will be present in some indoor areas of a processing plant. These odours must escape or they would simply build and build until they reached an intolerable level.

The total amount of Carbon Dioxide emissions can vary depending on operational time and fuel. Carbon Dioxide emissions are regulated under the UK Emissions Trading Scheme. Details of this scheme can be found here <https://www.gov.uk/government/publications/participating-in-the-uk->



[ets/participating-in-the-uk-ets](#). The UK Emissions Trading Team have confirmed that Omega Limited Penrith is listed under Permit ID UK-E-IN-12716.

The permit for Omega Proteins Ltd, Wildriggs, Greystoke Road, Penrith, Cumbria, CA11 is EPR/HP3238AF, and can be found at <https://environment.data.gov.uk/public-register/industrial-installations/registration?easting=350015&northing=529662&name-search=&number-search=&local-authority=&address-search=&postcode=CA11+0BX&dist=1>

# Light Pollution in Penrith

In confronting the pressing issue of light pollution in Penrith, a holistic and forward-thinking approach is required which involves the development of a set of pragmatic policy measures and actions that not only serve to mitigate the immediate impact of excessive artificial light but also lay the groundwork for sustainable solutions.

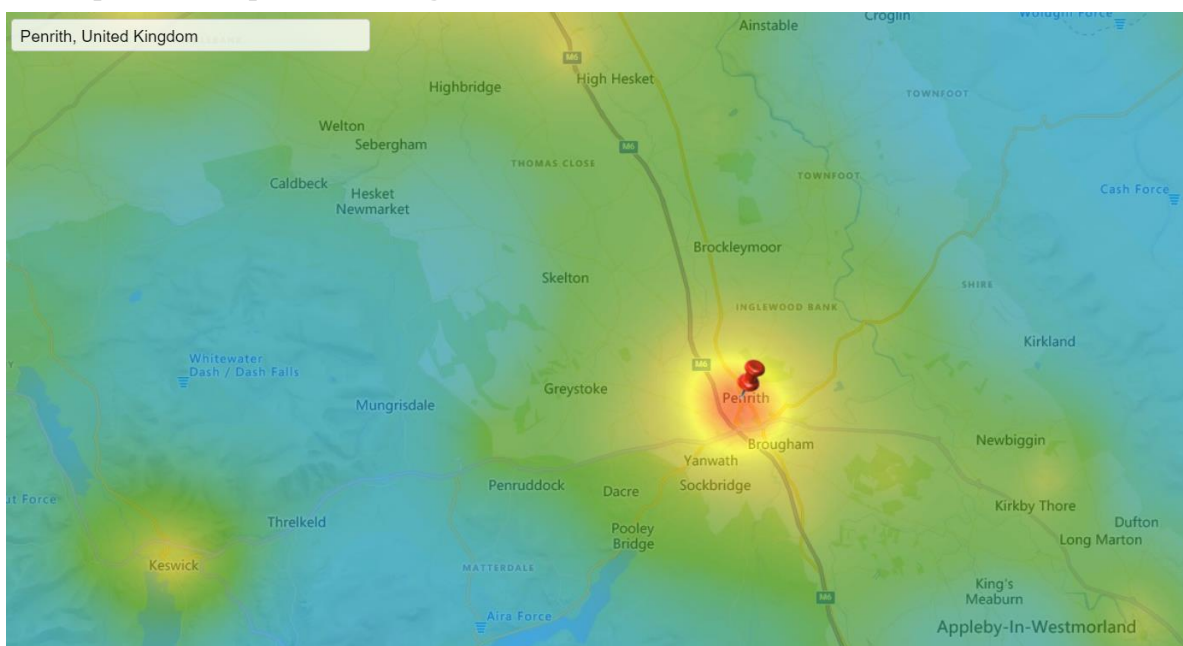
Striking a balance between short-term actions and long-term goals is paramount to ensure a sustainable and adaptive strategy.

The scope of this work involves the immediate alleviation of light pollution but also the integration of measures into an overarching policy framework of the town council. This strategic approach not only addresses the urgency of the current situation but also ensures the sustained effectiveness of our interventions as Penrith evolves and grows

The focus of this work extends beyond the technical aspects of light reduction as it must also consider the diverse perspectives on the issue and the needs of the community whilst fostering a sense of ownership and collaboration. Also, a comprehensive strategy requires a robust system of ongoing monitoring to ensure, enabling continuous improvement.

The commitment of the town council is to seek to mitigate the immediate impacts of light pollution and to foster a resilient and sustainable future for Penrith through strategic planning and community engagement our intention is guide Penrith towards a future where the night sky is preserved, the well-being of residents is prioritised, and the community thrives in harmony with its natural environment.

## Summary of Key Findings Source : NASA VIIRS ([lightpollutionmap.info](http://lightpollutionmap.info))



From the map, it is clear Penrith is a very bright town. Previous councils have developed policies to try to reduce pollution - point street and footway lighting downwards and using motion sensors and LED lights. But there is room for further work.

Light pollution impacts human health; artificial lighting in particular affects sleep patterns and is linked with fatigue, headaches, stress, anxiety and even cancer.<sup>1</sup>

Migratory birds and raptors use moonlight and starlight for navigation. Millions of birds die every year from collisions with buildings after being led astray by artificial lighting; migration patterns are also disturbed when seasonal cues are missed.<sup>2</sup>

Light pollution has many different effects on insects, and it changes how they live. It affects things like how they mate, feed, move around, grow, and even when they're born. Most invertebrates like to be awake at night or partly at night. But even those that usually come out in the daytime can have problems when there's too much light at night. In some places, night-time pollination visits to flowers have gone down by 62%.<sup>3</sup>

The flip side of this conversation is that dark-skies initiatives can be a great opportunity to bring investment to an area. A 2022 National Geographic study found that dark-sky tourism was bringing an estimated £25m revenue to Northumberland – home to the first UK Dark Sky Park. There are now more than 16 other such sites round the UK.<sup>4</sup>

Conversations with Dark Skies representatives from Friends of the Lake District have highlighted a number of actions that can and have been undertaken by councils, It is clear that work done to reduce Penrith's light pollution could be of benefit to many and we are keen to collaborate with others to find ways to do this.

## **Who needs to be involved?**

- Penrith Town Council
- Westmorland & Furness Council
- Environment Agency
- Public Health: From what was Environment and Community Services (Environment and Regulatory Services section)  
<https://cumbria.gov.uk/elibrary/Content/Internet/535/41576162038.PDF>
- [darksky.org](https://darksky.org/) (<https://darksky.org/>)
- Friends of the Lake District.
- Local Businesses and Industries (e.g. BID, Chamber of Trade)
- Penrith Action for Community Transition (PACT)
- Cumbria Action for Sustainability (CAfS)
- Community/Resident Representatives

## Sources

1. <https://education.nationalgeographic.org/resource/light-pollution/>
2. <https://darksky.org/resources/what-is-light-pollution/effects/wildlife-ecosystems>
3. <https://www.buglife.org.uk/campaigns/light-pollution>
4. <https://www.nationalgeographic.co.uk/travel/2022/01/why-travellers-are-embracing-dark-sky-tourism-for-2022>

# Waste and Recycling In Penrith

## Introduction

Efficient recycling and waste management are an important part of the web of environmental sustainability and community well-being. An effective approach to recycling and waste management is not merely a procedural necessity but an essential component of responsible and forward-thinking governance.

At its core, a robust waste management system not only mitigates the environmental impact of accumulating waste but also safeguards public health, preserves natural resources, and contributes to economic resilience.

It also involves a commitment to responsible consumption and waste reduction, laying the foundation for an economy where materials are repurposed, recycled and reintegrated into the production cycle.

As we navigate an era defined by resource scarcity and environmental fragility, our approach to recycling and waste management is a vital commitment to sustainable living.

This document outlines initial strategies, policies, and community engagement initiatives that collectively pave the way toward a more sustainable and resilient future.

## Background information

An Eden Task and Finish Group, led by an Eden District Councillor, have previously conducted a review of waste management in Eden as existing contracts were nearing expiration. In response, a comprehensive report recommended bringing waste collection in-house through a Local Authority Trading Company (LATCO). This innovative approach would allow for tailored solutions across different areas of Eden, with an initial partnership considered to leverage external expertise.

However, with the advent of the Westmorland & Furness Council (W&F), these plans were abandoned and existing contracts were extended for five years to ensure service continuity. Notably, the lead Councillor for this initiative no longer holds a role in the governance of Waste and Recycling (W&R) under the new council.

Historically, household waste and recyclables were managed separately in Eden, with different contractors handling each stream. The challenges in waste collection led to varied operations and philosophies among the old district councils, particularly in Westmorland and Furness. A crucial aspect to be clarified under the W&F Council is how waste disposal will be managed.

Despite criticisms of recyclable waste collection, personal experiences indicate that the service has been dependable from a householder's perspective. Mike Eyles suggests that when W&F makes decisions about waste management, it presents an opportune time for the Penrith Town Council (PTC) to define its vision for recyclable waste collection in the town. Collaborating with existing contractors like Cumbria Waste could be explored to retain their foothold in Eden's largest town.

Our work in relation to Waste & Recycling has allowed us to present the following information directly from Westmorland & Furness Council regarding questions around the current operating arrangements:

Westmorland & Furness Council have a Refuse Contract with Urbaser for the weekly collection of blue refuse sacks, the items covered in the contract includes the collection of Bulky Waste, WEEE and Clinical Waste. The collection of an animal carcass from the streets. The emptying of litter bins and the removal of litter/fly tipped material from Recycling Centres, and the removal of abandoned vehicles.

Westmorland and Furness Council has 3 contracts with Cumbria Waste Recycling – Kerbside Bag and Box Collections, Kerbside Garden Waste Collections and Bring Site Collections.

All collections are fortnightly for the Kerbside Recycling, and for the Garden Waste collections (except they change to monthly for the 3 months in winter)

#### Kerbside Recycling

- a. Hessian Sack for Paper/Card
- b. Hessian Sack for Plastic
- c. Box for Cans and Glass
- d. Kerbside Garden Waste
- e. 240litre Wheeled Bin for Garden Waste

A Recycling Calendar that confirms the materials that can be collected can be accessed via:

[https://content.govdelivery.com/attachments/UKPENRITH/2024/05/10/file\\_attachments/2874424/GB23\\_GW4.pdf](https://content.govdelivery.com/attachments/UKPENRITH/2024/05/10/file_attachments/2874424/GB23_GW4.pdf)

There is an ongoing process for any basic changes that are deemed required, they would be raised and agreed with the Assistant Director and a Change Notice through the relevant contract would be issued. The last significant review was carried out just prior to 2012 for the start of the new contracts.

Westmorland and Furness Council is committed to improving and harmonising many of its services, to ultimately ensure that services are all delivered in the same way, and to the same consistent standard, across the whole of the new authority area. This is a large undertaking with a service as large as waste and recycling – and it is not something that would happen immediately. It requires

robust and careful planning to ensure that providing the very best services for our communities, that meet their needs and deliver the best value for money.

The need to harmonise waste and recycling has already been identified as a priority and, since 1 April 2023, much work has already started to consider the challenges, practicalities and impacts of the various options that will need to be considered by the new administration. Westmorland and Furness Council have engaged expert analysis of the various options.

Westmorland and Furness Council have also received clarity around the Government's 'Simpler Recycling' national strategy. This was published in October last year, and it outlines expectations around things like food waste collections and the range of recycling that should be collected, including cartons and flexible plastics. Following the publication of the strategy, the Government launched a consultation exercise and we are expecting to receive the finalised strategy soon, incorporating consultation feedback.

For major changes such as the harmonisation work, both Parish and Town Councils will be a consultee and able to provide comments that would be considered in the decision making process.

Two Bring Sites are located in Penrith

1. Morrisons Supermarket, Brunswick Road, Penrith
2. Sainsbury's Supermarket, Kilgour Street, Penrith

The same materials as on the calendar list can be collected, plus Textiles, and Cartons (at Morrisons)

Frequency of Collections are as follows:

- a. 4 days/week for Paper/card
- b. 2 days/week for plastic/cans/glass
- c. Once every 4 weeks for Textiles
- d. Monthly for Cartons

Following the Local Government Reorganisation, the system of paying Recycling Credits no longer exists.

All residents in Penrith are entitled to receive a Kerbside Garden Waste Service. Some rural areas have historically, for various reasons, not been provided with this service. As noted above the Garden Waste collections in Penrith are fortnightly, with separate Calendars for specific areas. The collections days are split over the full fortnight. An example of a Penrith Calendar is as attached. As noted previously the contractor is Cumbria Waste Recycling.

# **Rivers and Water Courses**

Rivers and water courses weave through landscapes, serving as lifeblood for ecosystems and communities alike. The vitality of these water bodies, however, faces an ominous threat in the form of pollution.

We have collective responsibility to preserve the purity of our rivers and water courses. In acknowledging the intrinsic value of our aquatic ecosystems, we need a strategy aimed at making them free from pollution. From industrial discharges to urban runoff and agricultural effluents, the challenges are diverse and complex.

This plan suggests practical measures to combat pollution. By adopting innovative solutions, fostering community engagement, creating robust policies and actions, we aim not only to mitigate the immediate threats and also to lay the groundwork for a resilient and sustainable aquatic environment.

Protecting local rivers and watercourses from pollutants is a collective responsibility that individuals and communities can actively contribute to.