# Natural History Museum deploys high-tech sensors to monitor urban biodiversity in London gardens



The Natural History Museum in London has activated a network of 25 high-tech sensors across its recently transformed five-acre gardens to monitor wildlife responses to the urban climate and environmental changes. This ambitious initiative forms part of the museum’s broader Urban Nature Project, which aims to develop new scientific tools and deepen understanding of biodiversity in urban settings. The sensors are designed to capture real-time data on temperature, humidity, sound, and environmental DNA, providing researchers with detailed insights into the variety of life forms inhabiting the gardens—from insects and frogs to microscopic organisms invisible to the naked eye.

These gardens, which wrap around the South Kensington building and opened last July with a £25 million redevelopment, serve as a living laboratory for urban nature study. They feature not only natural elements but also artistic installations such as a bronze dinosaur named Fern and a Hypsilophodon, enhancing public engagement. The green space is free to visit and has already welcomed five million visitors, showing strong public interest in urban biodiversity and conservation.

A critical feature of this initiative is the integration of the sensor data into a new Data Ecosystem supported by Amazon Web Services (AWS). This cloud-based platform aggregates environmental data—including underwater recordings, bird calls, and traffic noise—allowing researchers to analyze and share information quickly and accurately. The Natural History Museum aims to establish the gardens as one of the most intensively studied urban biodiversity sites in the UK, supporting scientific research that can inform conservation strategies and urban planning.

Beyond its scientific objectives, the Urban Nature Project also encompasses public education and community engagement. The site includes a nature activity centre that functions both as a space for scientific work and a training hub for future urban ecologists, alongside facilities for school workshops. This dual approach of monitoring and education reflects the museum’s commitment to equipping people across the UK with the tools and motivation to safeguard urban nature.

Early research using these sensors is expected to illuminate how urban wildlife is adapting to changing conditions, including climate change, and may reveal new information about species behavior, population shifts, and ecosystem health in the heart of London. By providing continuous, high-resolution environmental data, this project stands at the forefront of efforts to protect and restore biodiversity in increasingly urbanised landscapes.

### 📌 Reference Map:

* Paragraph 1 – [[1]](https://newswav.com/article/natural-history-museum-turns-on-sensors-in-high-tech-gardens-to-monitor-nat-A2509_anskUv), [[4]](https://www.nhm.ac.uk/about-us/urban-nature-project.html/), [[7]](https://news.sky.com/story/hi-tech-gardens-at-natural-history-museum-to-track-how-wildlife-reacts-to-climate-12711114)
* Paragraph 2 – [[1]](https://newswav.com/article/natural-history-museum-turns-on-sensors-in-high-tech-gardens-to-monitor-nat-A2509_anskUv), [[6]](https://www.independent.co.uk/climate-change/news/natural-history-museum-south-kensington-london-visitors-anthropocene-b2580623.html)
* Paragraph 3 – [[2]](https://www.aboutamazon.co.uk/news/aws/natural-history-museum-garden), [[3]](https://www.nhm.ac.uk/press-office/press-releases/natural-history-museum-announces-opening-date-of-transformed-gar.html), [[5]](https://www.workman.co.uk/history-museum-opens-gardens/)
* Paragraph 4 – [[4]](https://www.nhm.ac.uk/about-us/urban-nature-project.html/), [[6]](https://www.independent.co.uk/climate-change/news/natural-history-museum-south-kensington-london-visitors-anthropocene-b2580623.html)
* Paragraph 5 – [[1]](https://newswav.com/article/natural-history-museum-turns-on-sensors-in-high-tech-gardens-to-monitor-nat-A2509_anskUv), [[7]](https://news.sky.com/story/hi-tech-gardens-at-natural-history-museum-to-track-how-wildlife-reacts-to-climate-12711114)

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## Bibliography

1. <https://newswav.com/article/natural-history-museum-turns-on-sensors-in-high-tech-gardens-to-monitor-nat-A2509_anskUv> - Please view link - unable to able to access data
2. <https://www.aboutamazon.co.uk/news/aws/natural-history-museum-garden> - The Natural History Museum in London has transformed its five-acre site into a new urban garden, supported by Amazon Web Services (AWS). This garden features a network of 25 sensors that collect environmental data, including underwater recordings, bird calls, and traffic noise. The data is integrated into the Museum's new Data Ecosystem, built using AWS cloud technologies, enabling researchers to monitor and understand urban biodiversity and environmental changes. The initiative aims to make the Museum one of the most studied urban biodiversity settings in the UK.
3. <https://www.nhm.ac.uk/press-office/press-releases/natural-history-museum-announces-opening-date-of-transformed-gar.html> - The Natural History Museum has announced the opening date of its transformed gardens, which will serve as a living laboratory for monitoring urban nature. The gardens will house scientific sensors gathering environmental DNA and acoustic data to understand and protect urban nature. The data collected will be curated within the Museum’s new Data Ecosystem, built using Amazon Web Services (AWS) technologies, facilitating rapid and accurate sharing of biodiversity and environmental data.
4. <https://www.nhm.ac.uk/about-us/urban-nature-project.html/> - The Urban Nature Project by the Natural History Museum aims to equip people across the UK with the motivation and tools to safeguard nature in urban areas. The five-acre site in South Kensington has been transformed into a biologically diverse green space, serving as a living laboratory. The project develops new scientific tools and skills urgently needed to monitor, understand, and protect urban nature, including technologies for monitoring changes in urban environments.
5. <https://www.workman.co.uk/history-museum-opens-gardens/> - The Natural History Museum has opened its transformed gardens as part of the Urban Nature Project, responding to the need to monitor and record changes to UK urban nature. The gardens feature a network of 25 scientific sensors that gather environmental and acoustic data, including underwater recordings, insect wing buzz, bird calls, and traffic noise. This data helps researchers understand how urban nature is changing and supports its recovery.
6. <https://www.independent.co.uk/climate-change/news/natural-history-museum-south-kensington-london-visitors-anthropocene-b2580623.html> - The Natural History Museum in London has opened its new urban gardens, featuring a bronze dinosaur named Fern and a Hypsilophodon. The gardens are home to a variety of wildlife, including toad tadpoles, baby frogs, newts, mandarin ducks, dragonflies, lily pads, and duckweed. The museum has also built a nature activity centre in the garden that combines facilities for scientific work, a training space for future urban ecologists, and a hub for school workshops.
7. <https://news.sky.com/story/hi-tech-gardens-at-natural-history-museum-to-track-how-wildlife-reacts-to-climate-12711114> - The Natural History Museum is creating high-tech gardens full of sensors to study how wildlife reacts to climate change. The gardens will allow researchers to observe the types of life that inhabit these environments, from insects and frogs to microscopic organisms. Sensors installed across the site will monitor conditions like temperature, humidity, and sound, providing valuable data to understand and protect urban nature.