

LOVE

AIR

QUALITY

2024

[Enquire Here](#)

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About

Who We Are
Air Quality Lead
Director
Vision
Working Groups

LOVE DESIGN STUDIO

Air Quality Services

2024

We work with teams in the built environment to create sustainable buildings and promote ethical business practices.

“Love Design Studio was founded on the idea of embracing different points of view and developing a culture of diverse thinking. We believe in assembling a broad team of personalities and backgrounds to ensure that Love Design Studio exceeds customer expectations by drawing on the breadth of our team's experiences and ideas.”

Andy Love, Director

“I am an avid environmentalist and have spent my years in consultancy specialising in the Air Quality field. My interest in air quality is deeply related to my personal experience and upbringing; London has historically been an extremely polluted city, and those already suffering from high levels of deprivation are often the most at risk.

Improving air quality, through the reduction of exposure and emission release, is critical to improving the health and wellbeing of populations and a key step in the pursuit of a healthier and equitable urban centres”.

Connor Rusby

Air Quality Lead





“In 2024, Love Design Studio is placing a heightened focus on ‘Improving Air Quality’.

Although we have been actively contributing to reducing the UK's reliance on fossil fuels and fortifying our built environment against a changing climate, we recognise that air pollution poses the most significant environmental risk to public health. Better air quality is not just a goal for our environment but a critical imperative for child development and the well-being of vulnerable populations.”

Andy Love

Director

2020

Founded

Love Design Studio was founded in 2020 in the lead up to Glasgow's COP 26.

12

Team

The true value of Love Design Studio comes from its employees. The team of 12 each bring a diverse range of expertise and experience, making Love Design Studio an exciting & adaptable company to work with.

+200

Projects

We already boast an impressive array of projects of all types, shapes and sizes.

+50

Services

Love Design Studio work across a broad range of environmentally related scopes and services.



Vision

Our vision is to support the UK in its transition to net zero carbon and help stimulate a green economy.

Love Design Studio aims to inspire businesses across all sectors to adopt a purpose-driven approach. We aim for a world where economic success and environmental well-being coexist, generating a lasting and meaningful positive influence.



Process

At Love Design Studio, we pride ourselves on being sustainability leaders across different fields, that's why we have developed eight key areas. Our team of experts brings a wealth of knowledge to every project, encompassing everything from energy optimisation to zero-waste solutions.



Value

Our values extend beyond ensuring sustainability is at the forefront of building design and business practices; we are also about building a diverse team of thought leaders and professionals with high-calibre technical abilities, adaptability, and great communication skills. This commitment ensures Love Design Studio delivers excellence to our clients, combining expertise with a dynamic and inclusive approach..

LDS Working Groups

LDS has a team structure based on eight working groups each with a group lead.

Click on each button to the right to find out more.



Planning
Services



Energy &
Retrofit



Zero-Waste



ESG &
Wellbeing



Environmental
Design



Air Quality



Nature &
Physics



Certification

2

Air Quality Services

[Enquire](#)

[Air Quality Impact Assessment](#)
[Air Quality Positive Design](#)
[Air Quality Monitoring](#)
[Indoor Air Quality](#)
[Site Suitability](#)

“Although the burden of air pollution is heterogeneous, its impact is ubiquitous”

World Health Organisation, (2022).

01

Air Quality Impact Assessment

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Poor Air Quality is a major global challenge and is a key factor in the 'Triple Planetary Crisis' earth is experiencing. Love Design Studio are committed to putting human health first through air quality conscious design.

Air pollution is the largest cause of disease and premature death in the world – it is estimated 4.2 million deaths occur every year as result of exposure to ambient air pollution. Health impacts associated with pollution are varied and complicated, ranging from lung disease to dementia, but these impacts go beyond human health. Elevated pollution levels can lead to the destruction of ecosystems and atmospheric processes.

Air quality continues to grow as a focus in the planning and urban development spheres. The National Planning Policy Framework, Regional and Local Policy requirements mandate air quality assessments to be submitted with planning applications. Air quality impact assessments can be submitted as a **standalone planning report**, or within wider **Environmental Statements**.





The Love Design Studio Air Quality team have extensive technical experience in addressing air quality issues for new developments. The team has a proven record - ensuring new developments meet air quality requirements and the health of site users is put first.

From concept to design, to planning and eventually to occupancy; the Love Design Studio Air Quality team can ensure air quality is a material consideration and the health of site users is safeguarded.

We work collaboratively with project design teams, most critically; acousticians, transport specialists and architects. Through collaborative design developments can achieve the highest possible air quality in amenity areas and at locations of sensitive use. Cross disciplinary mitigation measures can lead to cost savings and maximised positive impact for the wellbeing of future site users, and ensure projects are best-in-class with respect to environmental design.

We have worked with a wide range of clients, from local authorities to housing associations. We have helped secure planning approval for major projects in the capital, including hotels, schools, offices, residential and care settings.

02

Air Quality Positive Design

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“Technical air quality expertise should inform **every stage** of the design process to **maximise air quality benefits**”

Mayor of London –
Air Quality Positive Guidance



Air quality positive is an ethos that puts air quality at the forefront of design decisions. This will vary project to project, but early dispersion modelling and baseline appraisals can be used to inform siting, orientation and massing. This can be started as early as site acquisition. Technical work can develop along with the design of a project.

In London, 9,400 premature deaths are attributed to poor air quality and a cost of between £1.4 and £3.7 billion a year to the health service.

Improving air quality should always focus on the removal of exposure in the first instance; removing sensitive receptors from sources of emissions will always be more effective than mitigation. This can be achieved most effectively, and affordably, by early consideration of air quality constraints. Air quality positive statements are required for major development in London; however, Love Design Studio are dedicated to utilising this 'best practice' approach on all projects with sensitive use.

03

Air Quality Monitoring

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40%

Reduction in the new PM_{2.5} air quality target value from previous



Monitoring

Air quality monitoring is a critical part of air quality assessment and management. Monitoring can be used to establish baseline conditions, compare concentrations against health based legal objectives, assess operational impacts and inform mitigation measures. Monitoring is also often used to manage risk of construction dust release.



Types of Air Quality Monitoring

The Love Design Studio Air Quality team can offer a range of air quality monitoring to suit project's needs. Monitoring studies can be long- or short-term in nature and used for a variety of purposes, from planning applications and dispersion model verification to exposure assessments and more informal data collection. Monitoring can focus on specific pollutants of concern or consider the full suite of key pollutants.

Air quality monitoring can be used to monitor the efficacy of mitigation measures and are sometimes required to discharge planning conditions and S106 agreements. Indoor air quality monitoring can be used to meet building certifications such as BREEAM, WELL and LEED.

Passive

The most used passive monitors are diffusion tubes. Which record average nitrogen dioxide (NO₂) concentrations over a standard exposure period (typically 1-month). They can be processed to give longer term concentrations, which can be compared to UK air quality objectives. These monitors are extremely low cost, straightforward to set up and widely used across the UK.

Automatic

Automatic monitoring sites provide more accurate and higher temporal-resolution measurements than diffusion tubes. Automatic sites can record concentrations of NO₂, PM₁₀, PM_{2.5} and O₃. Automatic sites require some form of power supply.

Indoor Air Quality Monitors

Air quality has been linked to reduced productivity and wellbeing in workplaces and long-term exposure to high pollutant concentrations in a dwelling may increase risk of health issues. There are monitors and sensors that are specifically made for indoor air quality monitoring; these can be used to better understand the pollutant concentrations across a newly developed, or refurbished, project for both commercial or even residential use.

04

Indoor Air Quality

Enquire

Indoor Air Quality Planning

Poor air quality has been shown to impact productivity, cognitive performance, and overall wellbeing and is considered one of the leading causes of 'sick building syndrome' (SBS). SBS is a phenomenon by which people suffer a range of symptoms, including fatigue, aches and skin rashes when spending prolonged time in a particular building; this can lead to significant productivity losses and therefore cost burden.

On average, people in the UK spend 80-90% of their time inside buildings. Given the high proportion of time spent indoors and the effects of poor indoor air quality, it is critical that indoor pollutant concentrations are minimised to ensure a healthy and productive building and wider population.

Love Design Studio can assess indoor air quality for offices, using monitoring and advise on mitigation where needed.

We have prepared BREEAM indoor Air Quality Plans for commercial and residential developments across the UK, ensuring projects meet the HEA02 – Air Quality credits. We can also support other certifications, including:

- WELL
- AirRated
- SKA Rating
- LEED

Indoor Air Quality Monitoring

Love Design Studio can help advise, design and support the development of an indoor air quality monitoring network. We can assist with the development of monthly reports for indoor networks and analyses monitoring data to identify key trends and mitigate against poor indoor air quality.



05

Site Suitability

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Site Suitability Assessments

Planning regulations stipulate Air Quality Assessments to consider the suitability of a site and determine whether future site users are at risk of exposure to poor air quality. In the event there is a risk of exposure, mitigation of proven efficacy is required to achieve planning permission.

Designing and installing mitigation on a scheme with a frozen design is, at best, expensive and sometimes not possible.

Site suitability assessments can be conducted at any stage of a project lifecycle; from as early as site identification and pre-acquisition. Early assessments can be high level, affordable and completed efficiently. Results from these assessments can be used to inform decision making at the earliest possible stage and minimise the financial and planning risks associated with exposure to poor air quality.

This issue will continue to grow in importance with the introduction of the stringent PM_{2.5} air quality targets in 2023, which is currently exceeded across large regions in the UK.

Love Design Studio can utilise the most up to date technical modelling software, air quality monitoring information and industry best practice to appraise sites of all sizes in the UK.

Case Studies



Hackney Wick
Hotel & Workspace
London Legacy Development Corporation

Uxbridge Road, Hayes
Hotel, Gym & Industrial Use
London Borough of Hillingdon

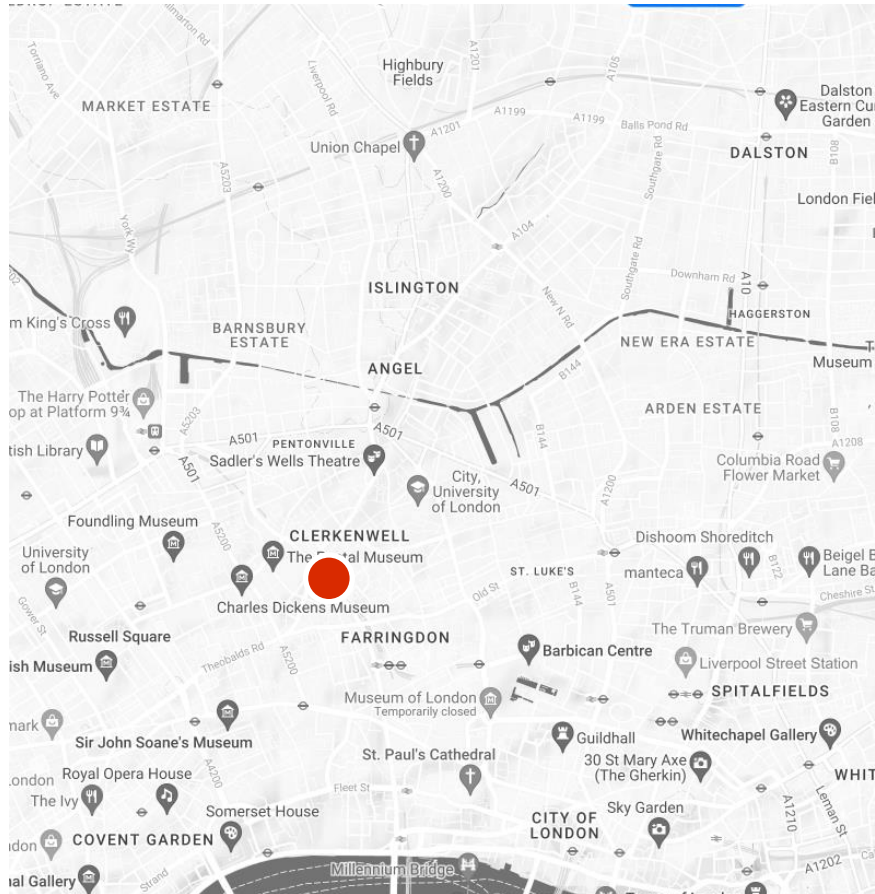


Knights Road
Residential & Employment Space
London Borough of Newham

Malden Road
Existing Petrol Station change of Use to
Residential & Coworking Space
London Borough of Camden



Victoria Road
Residential
London Borough of Havering



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