



# EcoDuct

Revolutionary Ductwork Systems



CLEAN AIR



SAVES ENERGY



SAVES TIME



CUTS COSTS



SAVES WEIGHT



SAVES SPACE



ULTRA AIRTIGHT



CUTS CO2



BREEAM



COMPLIANT







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# Introduction

**EcoDuct: innovative, high performance, non-metallic pre-insulated ductwork systems that save energy, cut costs, reduce environmental impact and deliver clean, uncontaminated air.**

**A quiet revolution is happening...**

**COVID, other airborne pathogens, CO2, rising energy costs, stringent new building regulations and ESG strategies are driving big changes in the Heating, Ventilation and Cooling industry.**

**EcoDuct is ready!**

**EcoDuct products are light, single fit, quick to install, with easy manual handling, fully compliant, with health and safety benefits and the robustness and longevity of conventional metal ductwork.**

**EcoDuct is the only UK manufactured fully compliant ductwork rated as Class D at 2,500 Pa for leakage and pressure resistance.**

**Our proven ductwork technology offers market leading sustainability credentials which are already attracting major customers including:**

- Santander International Bank - Isle of Man - Commercial
- The Island - Commercial
- Bawtry Swimming Pool - Leisure
- ALDI - Retail
- Nike – Multiple Sites
- Hodgson High School - Education
- Nutrition Group - Clean room – Healthcare
- GRH Foods – Food Processing
- Russell Hall Hospital – Healthcare
- HY Hotel - Leisure



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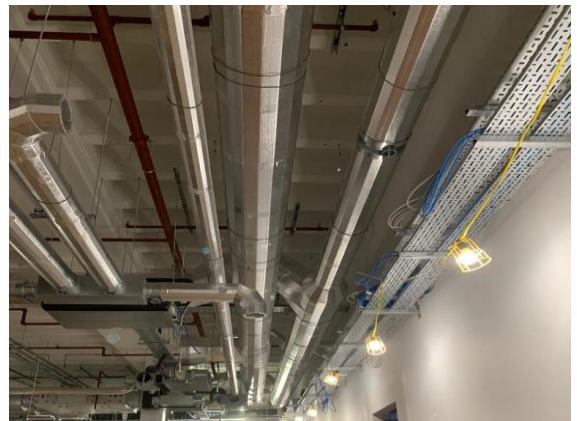
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# Why EcoDuct?

EcoDuct is an innovative UK developed and manufactured, non-metallic pre-insulated air duct that has multiple technical, sustainability and environmental advantages over traditional GSS ducts with insulation and delivers optimal thermal and airflow efficiency.

EcoDuct is widely regarded to be the most sustainable and cost-effective HVAC ductwork system in the world. We are the only UK manufacturer of phenolic pre-insulated ductwork that comes in all shapes, sizes and colours and is suitable for indoor and outdoor applications – from large public, commercial and industrial to small scale residential – for new build, refurbishment and use in services modules.

In an industry in which rigorous new standards and higher consumer demands are emerging, EcoDuct offers unrivalled energy efficiency, environmental and sustainability credentials. Our innovative design delivers meaningful operational carbon savings and a reduction of the embodied carbon footprint (CO<sub>2</sub>) in every building in which it is installed. EcoDuct is fully compliant with the major international building assessment programmes – **BREEAM**, **LEED**, The International **WELL** Standard and **NABERS** Design for Performance.



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# Environment and Sustainability

The built environment relies on high energy consumption and products with high CO2 emissions. In an industry in which rigorous new standards and higher consumer demands are emerging, EcoDuct offers unrivalled energy efficiency, environmental and sustainability credentials.

EcoDuct offers a reduction in the use of high CO2 products, a reduction in energy consumption, an increased use of recycled material, a reduction in site wastage and recovery after re-use at the end of the life cycle. In summary, we strive to achieve optimal cradle-to-cradle circularity in the HVAC process, a critical component of building services.

## EcoDuct products have been developed with 5 clear objectives:

1. **Improve the performance** – airflow, thermal efficiency and fire/smoke properties – of air delivery systems.
2. **Savings in embodied carbon** – reduce the CO2 footprint of HVAC systems (initial tests for the LCA indicate an unprecedented reduction of up to 75%).
3. **Savings in operational carbon** – reduce the energy consumption of HVAC systems (initial tests show a saving of up to 45%).
4. **Optimisation of the IAQ/IEQ** - of any property in which EcoDuct is installed, for the health and wellbeing of all occupants.
5. **Ensure full compliance** - with all relevant building regulations and standards in the UK and EU - to effectively remove risk from this important component of a building's HVAC system.

## The Unrivalled EcoDuct Environmental Credentials Include:

- ✓ Reduced embodied and operational carbon
- ✓ Optimal cradle-to-cradle circularity – recycle, reuse, recover
- ✓ CC/HFC and HFC free; negligible VOCs
- ✓ Zero Ozone Depletion Potential (ODP)
- ✓ Low Global Warming Potential (GWP)
- ✓ Zero asbestos, formaldehyde and chlorine
- ✓ Supports enhanced EPC and ESOS certifications/assessments
- ✓ Consistent with ESG principles, with sustainability at the core
- ✓ Close to zero wastage on site and in production process
- ✓ Enhanced compliance with BREEAM, LEED, WELL, NABERS and other environmental ratings programs



# Cradle to Cradle Circularity

Apart from the unrivalled environmental credentials that EcoDuct is able to offer, the company has recently introduced the following initiatives to **optimise cradle-to-cradle circularity (recover, recycle, re-use)**. They are all unique and unprecedented in the HVAC sector:

1. Buy-back scheme covering both materials delivered to site (equals zero waste on site) and recovery and re-use of materials at the end of the life of the mechanical plant (on demolition or refurbishment)
2. Product quality warranty, subject to approved installation and on-going maintenance
3. Detailed embodied carbon calculations showing the actual savings for a specific installation

Furthermore, all our raw materials are sourced in the UK and all our manufacturing is done in our factory in Blackpool. As such, EcoDuct is part of the **Made in Britain** programme that maximizes local sourcing, minimizes delivery distances and is generally more sustainable and supportive of the local economy.

The installed cost of EcoDuct should always be less than the equivalent metal ductwork plus insulation, and this cost saving increases as the complexity of the installation and air delivery requirements increase. **Critically, this makes EcoDuct one of the very few innovative and sustainable products in the construction sector that also generates immediate and on-going (whole-of-life) cost savings, meaning there is NO NET ZERO PREMIUM WHEN USING ECODUCT.**

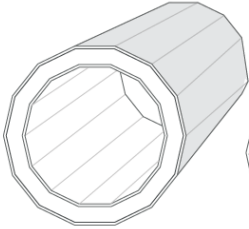




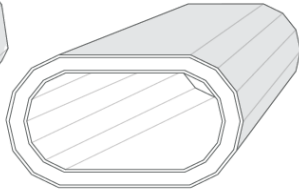
# All Shapes, Sizes and Colours

EcoDuct is the only UK manufacturer of pre-insulated phenolic ductwork system that offers all shapes and sizes – circular, flat oval, square, rectangular and even triangular – and colours/finish effects. EcoDuct also fabricate all accessories such as FCU plenums and grille boxes.

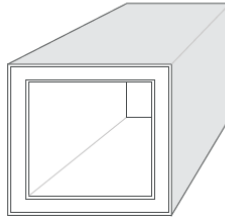
CIRCULAR



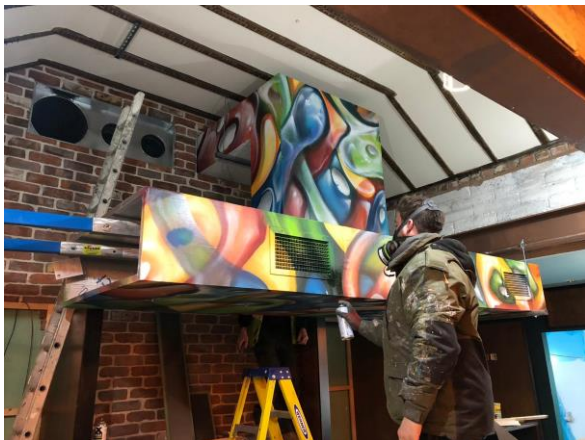
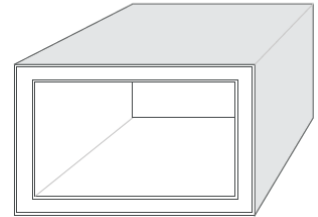
FLAT OVAL



SQUARE



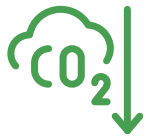
RECTANGULAR





# Benefits of Using EcoDuct

EcoDuct is an innovative and unique UK manufactured, non-metallic pre-insulated air duct that has multiple technical and environmental advantages over traditional GSS ducts and delivers optimal airflow efficiency.



**Up to 75% lower CO<sub>2</sub> footprint**  
 Less use of scarce, diminishing resources



**Up to 45% energy saving**  
 Lower heat/ cooling loss



**Greater flexibility**  
 Widest range of shapes, sizes and colours



**Cleaner Air**  
 More sterile air, fewer pathogens. better IAQ



**Cost and time savings**  
 Single installation and lower whole of life cost



**Up to 85% lighter**  
 Quicker to install, only requires simple fixings



**Space Saving**  
 Up to 30% saving



**Increased airtightness and pressure resistant**  
 Class D at 2500pa



**Improved Performance**  
 Enhanced airflow and thermal efficiency



**Optimal IEQ**  
 Delivers clean, uncontaminated air

**Better for the environment, health, wellbeing and for business**

# Applications

- ✓ **Anywhere that insulated ductwork is required:**
  - 1.1. *Primary supply*
  - 1.2. *Secondary supply AKA FCU discharge*
  - 1.3. *Return air (with a heat recovery system)*
- ✓ **Open to view/exposed ductwork in retail or office areas with no false ceiling -**  
*Can come with aesthetic laminate in any RAL colour or effect. Standard finish is the reinforced aluminium foil facing, and standard additional colours are white, black, grey, stucco, matt black.*
- ✓ **External ductwork with our weatherproof laminate (instead of PIB and a metal cladding) –**  
*A single application as opposed to up to 5 separate applications with metal ductwork*
- ✓ **Ductwork in plant rooms that require additional protection –**  
*Comes with additional strengthening laminate*
- ✓ **Ductwork in risers that is typically large and difficult to install –**  
*Can come with additional strengthening laminate*
- ✓ **Applications where un-contaminated IAQ is critical –**  
*Medical and sterile environments such as hospitals, surgeries, labs and clean rooms, schools and universities where sterility and noise are vitally important*
- ✓ **Pool halls and leisure centres or marine environments where EcoDuct is not affected by moisture, chlorine or sodium chloride -**  
*EcoDuct is rated to Corrosion Category 5 and does not require anti-corrosive treatments prior to installation*
- ✓ **Large and high-level ductwork installed in steel structure buildings such as in factories and distribution/logistic centres, sports stadia and arenas and large processing facilities.**
- ✓ **Modular applications where speed and consistent quality are important considerations.**
- ✓ **Where specialized ductwork is required, such as non-ferrous (x-ray rooms, etc, stainless steel, double sided insulated ducts, etc).**
- ✓ **Data centres and other applications where the quantity and quality of conditioned air is of paramount importance.**
- ✓ **Any building that has space and/or weight problems and where savings are required.**

# Suitability

## **EcoDuct is suitable for ALL insulated ductwork in:**

- Commercial Developments
- Industrial Developments
- Data Centres
- Public Buildings
- Residential Developments (Passivhaus compliant)\*
- Off-site Modular (Prism, etc)

## **EcoDuct is suitable in ALL areas:**

- Roof/external ductwork (with weatherproof laminate)
- Risers and plant rooms
- Exposed open-to-view ductwork in retail/office applications (with aesthetic coloured laminate)

## **EcoDuct is suitable for ALL development types:**

- New build – Cat A and Cat B
- Retrofit – Cat A and Cat B



**\*Increased use of MVHR and air-source heat pumps requires insulated ductwork. Phenolic is a far safer material than Class E polystyrene.**





# Compliance

Growing awareness amongst specifiers is driving higher customer expectations. EcoDuct is fully compliant with existing and emerging industry standards, including:

- ✓ DW144: BESA 2016 – as applicable to pre-insulated ductwork (pressure resistance, leakage, strengthening rods, vanes)
- ✓ SMACNA – HVAC Duct Construction Standards
- ✓ ASHRAE – Duct Design and Construction
- ✓ BS 5422: 2009 – Thermal Insulation Standards
- ✓ BS EN 13501-1: 2018 – Fire Classification of Construction Products
- ✓ BS EN 14314: 2015 – Thermal Insulation Products
- ✓ BS 5970: 2012 Thermal Insulation of Ductwork
- ✓ BS 9999: 2017 Fire Safety in the Design, Management and Use of Buildings
- ✓ British Standards and CEN compliant (ISO 9001, 14001, 45001)
- ✓ Approved Document B:2022 Fire Safety in Buildings
- ✓ Approved Document L: Conservation of fuel and power
- ✓ TIMSA-HVAC Compliance Guide – Insulation of Ductwork
- ✓ Non-domestic Heating, Cooling and Ventilation Compliance Guide - Insulation of Ductwork
- ✓ A and A+ ratings in BRE Global Environmental Profiles January 2010
- ✓ European Ventilation Standard EN1886 Air Leakage Class L1(M)



# Q and A

*Please request a copy of our full Q&A document for more information*

## **Q1. How long has EcoDuct ductwork been on the market?**

EcoDuct arrived in the market in 2018 when a new high-precision razor cutting 5-axis machine was developed able to fabricate ductwork using less materials in a quicker time and producing a more robust product, with greater airtightness and pressure resistance.

## **Q2. What type of material is used?**

EcoDuct ductwork fabricated using rigid phenolic insulation board (KoolDuct) instead of insulated galvanised steel ductwork. The insulation panel is cut in such a way as to allow it to be formed into a complete circular or flat oval duct and sealed with a heavy duty reinforced foil tape.

## **Q3. Does the product(s) conform to HVCA specification DW/144?**

The DW144 specification covers only metal ductwork and governs, inter alia, air leakages and pressures. As detailed in the test report, EcoDuct exceeds these DW/144 specifications and the BS standards (BS EN 13403:2003 - Ventilation for Buildings – Non-metallic Ducts – Ductwork made from insulated duct boards)

Furthermore, EcoDuct is installed only by qualified and certificated installers, and the installation methodology for EcoDuct ductwork is fully in accordance with the stipulations of DW144 in relation to supports, access doors etc.

## **Q4. What is the range of sizes that EcoDuct can do, in particular what is the largest size?**

EcoDuct has no size limitations. 100mm to 2,000 mm is standard in circular. The EcoDuct fabrication process can be scaled up to make any duct size required.

## **Q5. How is EcoDuct cleaned?**

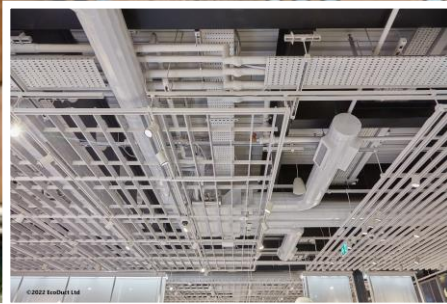
There is the same cleaning process using access hatches as with metal ductwork. Where access doors are required, there is a simple installation process – please see our detailed EcoDuct Installation Guide for further details.

## **Q6. Where should EcoDuct NOT be used?**

EcoDuct should not be used where fire rated ductwork is specified and for commercial kitchen extract ductwork where the excessive oil build-up requires robust scrubbing to clean that may damage the internal surface.

# Nike Live Store – Battersea Power Station

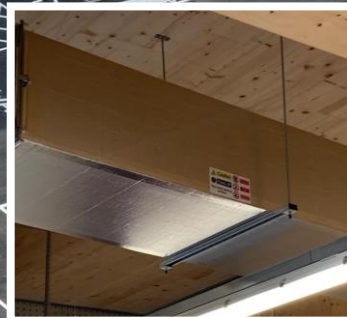
Client – 21 Degrees Ltd  
Mechanical Design Consultant - Hyphen



Case Studies

# Aldi – Leamington Spa

Client – Recarb Engineering Ltd  
Mechanical Design Consultant - BMT





# GRH Foods - Snowdonia

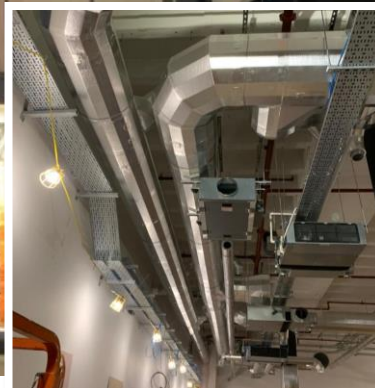
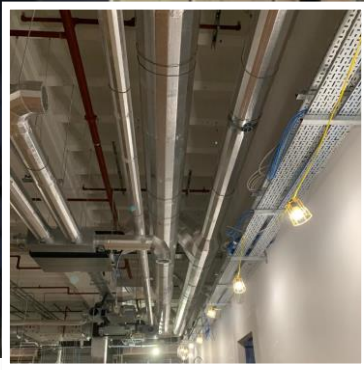
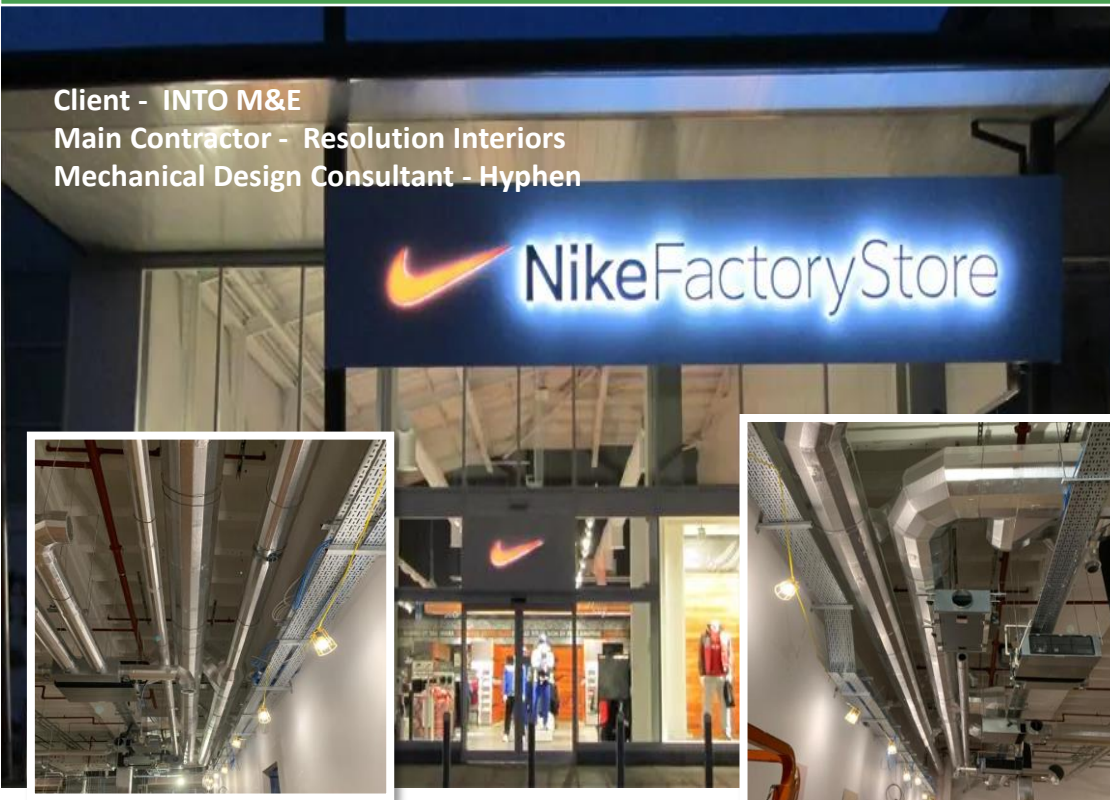
Client – Holders Ltd  
Main Contractor – DD Cooling Ltd  
Mechanical Design Consultant – D&B



# Case Studies

## Nike Live Store – Bromley

Client - INTO M&E  
Main Contractor - Resolution Interiors  
Mechanical Design Consultant - Hyphen





Client – DD Cooling Ltd  
Mechanical Design Consultant – D&B



## Case Studies

### Santander International Bank – Isle Of Man



Client - Stewart Clague Services Ltd  
Mechanical Design Consultant - March Consultants

# Contact Us

## North

EcoDuct Ltd  
Lancaster House,  
Amy Johnson Way,  
Blackpool  
FY4 2RP

Tel: +44 (0)1253 834514

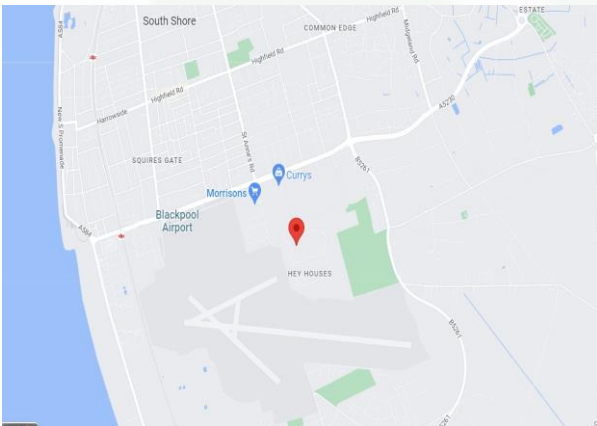
[www.ecoduct.co.uk](http://www.ecoduct.co.uk)

## South

EcoDuct Ltd  
38 Hampton Road,  
Twickenham  
TW2 5QB

Tel: +44 (0)20 8894 2244

[sales@ecoduct.co.uk](mailto:sales@ecoduct.co.uk)







# EcoDuct

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