

EDUCATION

Ceiling solutions
that enhance
learning environments

Inspiring Great Spaces®

Armstrong®
CEILING SOLUTIONS

A **BETTER** LEARNING ENVIRONMENT

Acoustics present a major challenge to educational institutions. Intelligibility and concentration are acoustical performance demands that our teachers need today, to improve their working conditions as well as their student's



4 CRITERIA

TO MAKE THE RIGHT CHOICE

▲ Acoustical Comfort

In the school environment, no two spaces have the same acoustics. The appropriate point of equilibrium between intelligibility and concentration, which depends on the intended use of the space, must be located.

▲ Visual Comfort

A bright environment makes everything clearer...

In a school, the main objective is to make the best possible use of daylight to avoid having to use electricity. The ceiling can play a crucial part in optimising light reflectance which can allow energy savings, in case of indirect lighting.

▲ Safe & Healthy Environment

Certain environments, such as kitchens, laboratories and cloakrooms, need particular attention with regard to cleaning and humidity resistance.

Temperature variations during the holiday periods also give plenty of scope for moisture to penetrate the tiles and cause damage. Ceilings must therefore have good resistance to high levels of moisture.

▲ Cost Effective Solutions

Pupils come and go but ceilings must stay intact for many years. It is important to choose strong materials capable of withstanding degradation, maintenance work and climatic changes, as a cost effective solution.

Armstrong has the broadest portfolio of ceilings with **high recycled content**, up to 80%. Armstrong exercises care in the selection and use of raw materials for our products and is committed to ensuring all products conform to or exceed **safety, environmental and quality** standards.



WHATEVER YOUR SPACE REQUIREMENTS, **WE LISTEN!**

DO YOU
KNOW

How do you make yourself clearly understood?

Armstrong's standard range of medium-density ceilings strikes an outstanding balance between both sound attenuation and sound absorption, blocking unwanted noise from outside while enhancing sound quality inside.

Ideal for classrooms.

How to guarantee the discretion of your conversations?

Armstrong's dB range of higher-density ceilings minimises noise transfer between rooms, keeping conversations private and occupants happy.

Ideal for private offices.

How to not be disturbed by noise?

Armstrong's OP range of lower-density ceilings controls excessive sound reflections, offering customers optimal levels of sound absorption.

Ideal for canteens & libraries.



Classrooms

On any given day, thousands of students are unable to understand one out of every four spoken words in classrooms due to inadequate acoustics. Poor lighting and glare in the classroom can also cause eye strain and fatigue.

Ceiling tiles with balanced acoustic performance and high light reflectance create better and brighter spaces for students to learn, and teachers to teach.

SOLUTIONS

- ▲ ULTIMA+
- ▲ DUNE eVo
- ▲ DUNE eVo MAX
- ▲ METAL Clip-In
Extra Microperforated
- ▲ METAL Lay-In
- ▲ METAL Hook-On

PERFORMANCES



Libraries, Canteens, Auditoriums

Multipurpose spaces change from cafeterias to auditoriums, requiring different acoustical and durability needs, depending on use.

Noise reduction is key and can be accomplished with ceilings with balanced acoustics to absorb sound and keep it from traveling to adjacent areas. These areas are also great places to mix it up with design options. Metal, wood or floating ceiling solutions such as acoustic canopies and vertical baffles can add personality to schools.

SOLUTIONS

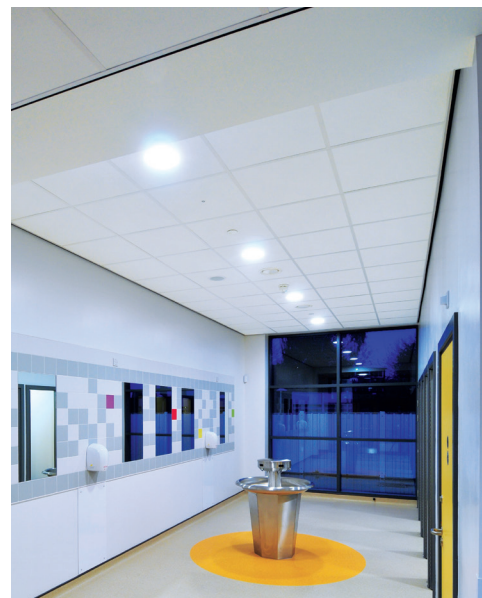
- ▲ ULTIMA+ OP
- ▲ PERLA OP 0.95 & OP 1.00
- ▲ SIERRA OP
- ▲ METAL Clip-In
Extra Microperforated
- ▲ METAL Lay-In
- ▲ METAL Hook-On

FLOATING CEILINGS:

- ▲ Canopies & Baffles

PERFORMANCES





Entryways, Corridors, Individual Offices

School corridors hum with activity as they usher students from classroom to classroom and connect key areas of your project. In these busy spaces of early education and secondary schools, noise control and durability are key.

Help reduce unwanted noise coming from busy corridors with ceiling tiles with balanced acoustics that offer sound absorption and sound blocking performance.

SOLUTIONS

- ▲ ULTIMA+ dB & Planks
- ▲ DUNE eVo dB
- ▲ PERLA dB
- ▲ METAL Corridor with Premium B15

PERFORMANCES



Kitchens

Ceilings for school kitchens and food preparation areas have to meet guidelines, and be easy to maintain.

Select ceiling tiles that meet the needs for food preparation and processing areas that are easy to clean and maintain. A high light reflectance tile is also appreciated to brighten the environment.

SOLUTIONS

- ▲ BIOGUARD Acoustic
- ▲ ULTIMA+ OP
- ▲ PERLA OP 0.95 & OP 1.00
- ▲ SIERRA OP
- ▲ METAL Unperforated
- ▲ METAL Lay-In
- ▲ METAL Clip-In

PERFORMANCES



Humid Areas, Toilets, Cloakrooms

Toilet and shower facilities in schools are affected by demanding humidity conditions.

Ceiling tiles suitable for high humidity areas should be selected for these specialist areas in order to perform adequately in these extreme conditions.

SOLUTIONS

- ▲ HYDROBOARD
- ▲ NEWTONE
- ▲ CERAMAGUARD
- ▲ METAL Unperforated
- ▲ METAL Lay-In
- ▲ METAL Clip-In

PERFORMANCES



YSTALYFERA WELSH MEDIUM COMPREHENSIVE SCHOOL

ARCHITECT/CLIENT

Neath Port Talbot County Borough Council

MAIN CONTRACTOR

Dawnus Construction

CEILING CONTRACTOR

SAM Drylining

COUNTRY

United Kingdom

Ambition

For a new £12.5 million secondary teaching block in South Wales, this 19-month project needed to realise an institution fit for the 21st century – as well as meeting BREEAM “Excellent” and BIM Level 2 standards. But the real ambition was to create a space where sight and sound are at the core of the learning experience – and not a distraction.

Achieved

2,000 m² of Metal D-H 700 Microperforated floating ceilings, Axiom Knife Edge Canopies and Axiom Classic Profiles, with Ultima⁺ Vector tiles, Metal MicroLook 8 tiles in Oak wood-effect finish, and Cradle to Cradle Certified™ Perla tiles: all combined to create contemporary, open and bright spaces that would help students focus.

Crucial to this was the passage of noise between areas while still enabling tutors to be heard throughout each classroom – as well as boosting the structure’s thermal qualities, ensuring the building performs as well as it looks.

“The ceiling rafts in the classrooms complied with sound and visual requirements but also allowed us to use the exposed structural slab as thermal mass.”

Spokesperson, Neath Port Talbot County Borough Council



ROYAL HOLLOWAY UNIVERSITY OF LONDON

ARCHITECT

Associated Architects

CLIENT

University of London

MAIN CONTRACTOR

Osborne

CEILING CONTRACTOR

Rosguill Developments

COUNTRY

United Kingdom

Ambition

A 10,000m² expansion to a prestigious university library, the Emily Wilding Davison Building saw Associated Architects design a state-of-the-art library and student support hub. Key to this ambition was to reflect the history in which the site is steeped – avoiding overshadowing the 1881 Grade 1 Listed Founders Building, while creating an innovative and inspiring study environment for one of the top 30 universities in the UK.

Achieved

This project required an approach that was as respectful as it was striking – a contemporary contrast and complement to its surroundings. It also required a huge commitment to sustainability, with Passivhaus levels of air tightness and thermal performance securing an “Excellent” BREEAM rating.

1,000m² of custom Metal B-H 300, Rg 2516 and Plain linear planks on a 300mm C-Profile, Metal R-H 200 ceiling tiles and custom Metal W-H 1100 wall panels formed the core of the solutions, alongside Cradle to Cradle Certified™ Perla OP 0.95 Mineral tiles in white. Combined, this performed to sound absorption Class A while being 85% light-reflectant, creating a brighter, better and more open indoor environment – all while safeguarding sustainability and easy maintenance requirements for the future.

From the architects’ vision to a fully installed reality, the solution shows how eye-catching design can shape the perfect space for quiet study and inspiring discovery.

“As well as providing a neat and crisp aesthetic, we chose a self-finished material to avoid unnecessary maintenance – especially relevant for tall spaces where access requires special equipment.”

Joe Belcher, Associated Architects



TOULOUSE UNIVERSITY LEARNING CENTER

ARCHITECT

V2S Architectes

CLIENT

Université Toulouse 1 Capitole

CEILING CONTRACTOR

Massoutier Jacky & Fils

COUNTRY

France

Ambition

A demanding project to thoroughly transform the 1960s-era library and amphitheatre of the University of Toulouse had a core ambition of retaining the building's existing structure while totally renovating the interior rooms – without altering room size or roof height – and all to a right budget.

Achieved

Optima L Canopies and Baffles were specified to enhance the high ceiling design as well as improve the acoustic performance while creating an appealing, high-quality aesthetic.

The improved acoustic comfort created by the reduction of reverberation transformed the experience of occupants. Meanwhile, the close collaboration between the architect and Armstrong throughout the project meant that this cost-effective solution could be delivered and installed within exceptionally short lead times, enabling the team to achieve their ambition and transform the building quickly, with the minimum of disruption.



MAZARYK UNIVERSITY AUDITORIUM

ARCHITECT

Ing. arch. Peter Davídek

CLIENT

Mazarykova Univerzita

MAIN CONTRACTOR

U1 s.r.o.

COUNTRY

Czech Republic

Ambition

Based in Brno, Masaryk University – the second-largest university in the Czech Republic – is a highly prestigious institution delivering excellence across a range of faculties, from law to medicine, science to the arts. A project to reconstruct the Masaryk University Auditorium, therefore, needed to blend the practicality of a learning environment with the prestige of its history and achievements.

Achieved

Using 100m² of Metal R-H 215 Extra Microperforated tiles with acoustic fleece, the project team created a ceiling with a modern, elegant and minimalist design that perfectly complements the surrounding architecture.

Balancing this, the solution also provided outstanding acoustic performance – crucial for an auditorium space. With this system in place, not only was conversational noise attenuated and absorbed, but sound could be easily directed from the front to the back – making it easy for professors, lecturers and guest speakers to hear and be heard.



PARSONS TOWER NEWCASTLE COLLEGE

ARCHITECT

RedBox Design

CLIENT

Newcastle College

MAIN CONTRACTOR

BAM Construction

CEILING CONTRACTOR

Bill Mordue Interiors Ltd

COUNTRY

United Kingdom

Ambition

An unparalleled range of acoustic ceiling solutions from Armstrong has helped transform a 1970s tower of teaching into an “exciting and stimulating environment to reflect 21st century education.”

Achieved

Key spaces such as the ground-floor reception utilised linear metal plank solutions with integral light fittings (B-H 300 Microperforated with OP19 acoustic infill) to create a dynamic light and airy feel to the main visitor experience, suspended acoustic rectangular and square canopies on a black plasterboard background (Optima L Canopies) provided variety and interest to the main refectory, and classrooms benefited from the additional reflected light from white metal ceilings (Metal MicroLook 19 Microperforated with OP19 acoustic infill) throughout for background lighting.

The 7,000m² of Armstrong solutions used at Newcastle College include Axal Vector METal LAY-In tiles, Dune Max Tegular, Parafoam Hygien and Nevada Black Board mineral tiles, black Mesh Metal tiles, B-H 300 Metal planks, MicroLook 16 Microperforated Metal tiles and Optima L Canopies. In addition, Armstrong's Axiom Vector transition provided a seamless transition between plasterboard, their acoustic finishes and Metal Axal Vector tiles.

“The ceilings are fundamental to the visual appearance of all key spaces, providing the architect with a varied palette of functional options and visual effects. More about rejuvenating the building than a simple superficial refurbishment, the work has given the building a new lease of life, extending its usable life by 30 to 40 years.”

Sean Gallagher, RedBox Design



CRADLE TO CRADLE®

DESIGN, BY NATURE

Armstrong Ceiling Solutions has become the first ceiling tile manufacturer in Europe to achieve Cradle to Cradle® certification.

Cradle to Cradle® reframes design as a positive, regenerative force. Our certification helps customers purchase and specify products that are designed for recycling using manufacturing processes which minimise water consumption, adopt renewable energy strategies and acknowledge social responsibility.

Part of a new generation of sustainable and acoustic ceilings, these have been Cradle to Cradle Certified™.



MATERIAL HEALTH

Every ingredient must be safe and not harmful to health or the environment.

At Armstrong we design ceiling products that are safe & healthy for humans and the environment from production to use to reuse.

We know the chemical ingredients of every material in our products, and we continue to innovate and optimise towards safer materials.



MATERIAL REUTILISATION

Designing products made with materials that come from and can safely return to nature or industry. Armstrong mineral fibre ceiling tiles are designed for recycling.

Our unique ceiling recycling programme recovers old ceiling tiles from buildings and recycles (upcycles) them into new ceiling tiles in our own manufacturing facilities.

We use up to 5% rapidly renewable materials with recycled content between 30% and 64%, including post-consumer recycled content in the form of newsprint and old ceiling tiles recovered from the market.

Mineral fibre ceiling tiles are 100% recyclable and can be safely recycled at the end of their life.



RENEWABLE ENERGY & CARBON MANAGEMENT

Envisioning a future in which all manufacturing is powered by 100% clean renewable energy.

Armstrong is committed to decreasing the environmental footprint of its operations through energy reduction.

We continue to increase the percentage of renewable energy used in our ceiling tile and suspension system plants and have a strategy and investment programme designed to reduce our use of fossil-fuel based energy.



WATER STEWARDSHIP

Manage clean water as a precious resource and an essential human right.

Water is crucial to Armstrong's operations and we continue to manage our use of water in a responsible and sustainable manner, systematically reducing our consumption of this valuable natural resource.



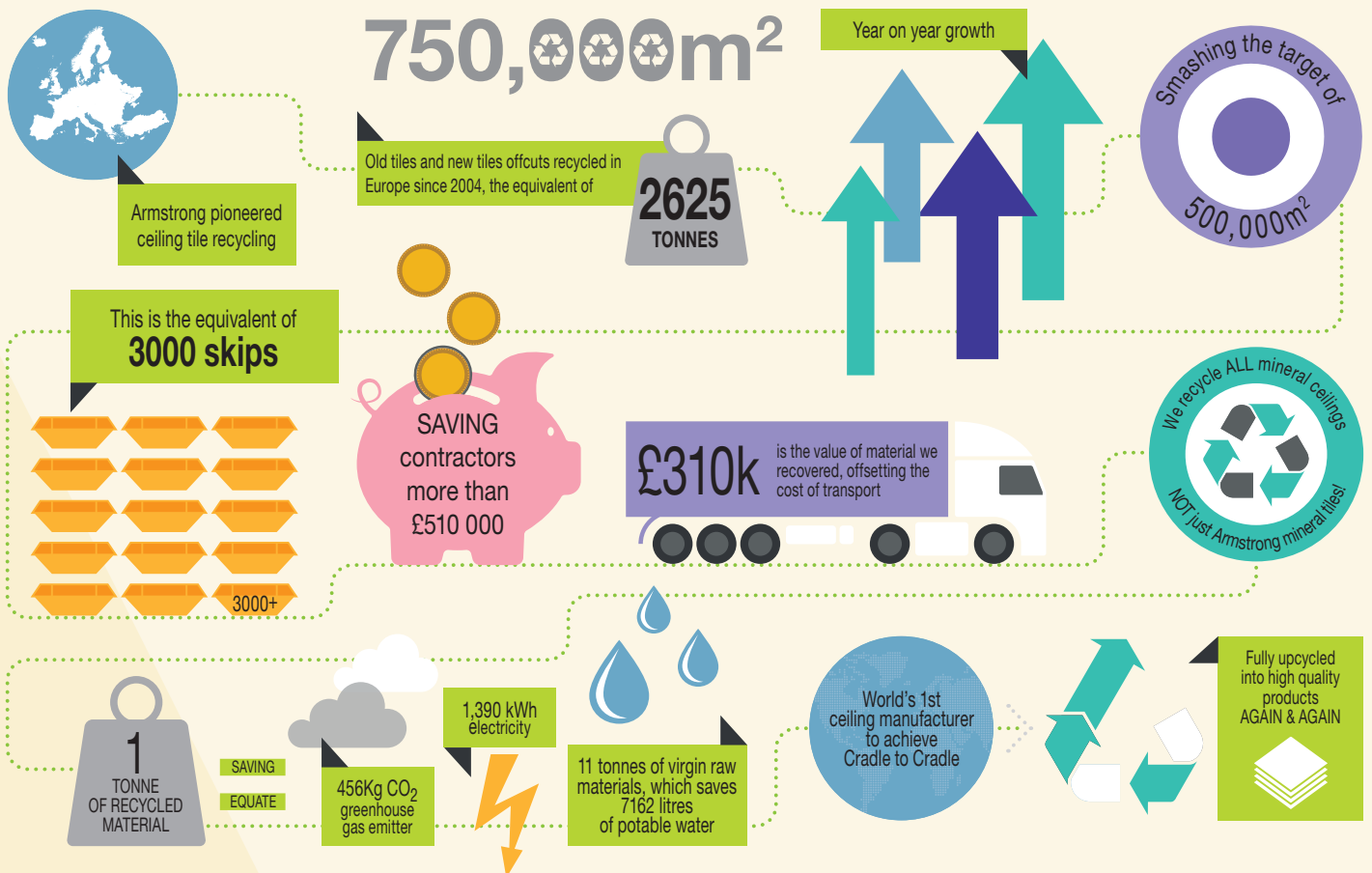
SOCIAL FAIRNESS

Conduct business responsibly, respecting the health, safety and rights of people and the planet.

Armstrong is actively involved in a number of social projects that impact the local community around its plants.

As a responsible manufacturer we are certified under the ISO 14001 Environmental Management System designed to protect, reduce and ultimately enhance our management of scarce resources and the wider environment.

ARMSTRONG RECYCLING PROGRAMME



We offer a full acoustical ceiling tile recycling service during demolition, construction and renovation stages of your project.

- ▶ No minimum quantities of ceilings – we can match our service to your needs.
- ▶ End-of-Life and Off-Cut recycling programmes for new build and renovation projects.
- ▶ We recycle ALL mineral fibre ceiling tiles manufactured wafter the 1st of January 2000 – making recycling easier than ever.
- ▶ Now in partnership with national distributors to support your local recycling needs – easy access to local help and advice.
- ▶ Download the Armstrong End-of-Life and Off-Cut Recycling Brochure.
- ▶ Contact us for Terms & Conditions and more information about our Armstrong ceiling recycling programmes.

Benefits of Recycling with Armstrong

- ▶ **No landfill fees or skip costs.** We will pick up your old ceiling tiles.
- ▶ **No minimum quantities.** We will support you in diverting your waste from landfill.
- ▶ **End-of-Life and Off-Cut recycling programmes** for new build and renovation projects.
- ▶ Recycling ceilings contributes to **LEED®, BREEAM, HQE, DGNB and Ska credits** by including ceiling recycling in your construction waste plan.

A BETTER LEARNING ENVIRONMENT

From an inspiring college lobby to a versatile classroom, use the room selector option to find our recommended products for creating better learning environments.

To access ceiling recommendations for your next education project, visit www.armstrongceilings.co.uk/education

ARMSTRONG TECHNICAL SALES

Harman House
1 George Street
Uxbridge
Middlesex
UB8 1QQ
United Kingdom

Phone: +44 (0)800 371849

Fax: +44 (0)1895 274287

Hours: 9:00 – 17:00 Monday to Friday

www.armstrongceilings.co.uk

www.armstrongceilings.ie

Inspiring Great Spaces®

Armstrong®
CEILING SOLUTIONS