

THE BENEFITS OF THE NORWOOD WALL AND CEILING SYSTEM



Norwood design and manufacture precision walls, walk on ceilings and door-set systems for cleanroom and high specification manufacturing facilities. All products are manufactured from high grade galvanised steel with a Tata antibacterial vinyl applied to the face. The systems have been utilised recently by amongst others Jaguar Land Rover, Rolls Royce and AstraZeneca. The systems offer a high degree of off-site construction which guarantees a high quality finish to consistent tolerances whilst offering the end user a large degree of future flexibility as all components are relocatable. Each high profile project can be bespoke designed to suit the client's specific requirements.

Acoustics:

Norwood has in conjunction with ARUP Engineers designed acoustic enclosures for many applications including education, high specification manufacturing facilities, offices, prison interview rooms and cleanroom manufacturing facilities. The solid and glazed wall panels are tested from 35dB up to 65dB. The wall thickness varies from 80mm to 200mm dependant on the acoustic and fire requirements.

A recent scheme at Leeds Academy required science and IT facilities to carry sound reductions of up to 65Db whilst also accommodating the reduction of sound reverberation within the rooms. Norwood also developed sound absorption panels incorporating a series of holes formed into the outer skin of the wall with a sound absorbing foam bonded to the inside of the panels which reduced significantly hard noise within the areas.

Antibacterial Panel Finish:

All Norwood products are provided with a Tata antibacterial finish applied to a galvanised substrate. The finish kills bacteria on contact and the substrate removes any chance of corrosion when used in accordance with the supplier's warranty.

Benefits:

- Antibacterial
- Easily cleaned
- Sunlight proof
- Scratch resistant
- Guaranteed finish throughout
- Durable finish



Off-site Construction:

All Norwood products are designed and manufactured specifically to suit the client brief and building removing any requirement to cut the panel on site which eliminates the need for multi trades.

All Norwood wall, ceiling, door-set and glazing components are designed and manufactured in house under strict guidelines. The systems are continuously developed to suit individual client requests. The product is manufactured within the 70,000sq. /foot state of the art manufacturing facility based just outside Manchester city centre, using the highest quality Amada machines.

All products are manufactured using CAD/CAM machines which work within tolerances of $\pm 0.4\text{mm}$ which offer the highest precision engineering and remove any issues relating to site labour tolerances or quality of workmanship.

Relocatability and Ease of Repair:

The Norwood systems are designed for ease of build and complete future flexibility. We recognise the immediate impact of construction within confined spaces means even with stringent quality controls damage occurs. As such Norwood systems are built in two stages. The first stage incorporates the framework of the walls and ceilings allowing mechanical, electrical and flooring contractors to complete their work local to space divisions, prior to the finished outer skins being fixed on completion of the scheme.

Norwood has also recognised that the space created initially will rarely remain static through the life of the building. The Norwood system is fully demountable and relocatable. In addition the panels are modulated which allows solid panels to be changed for glazed panels or door-sets, so not only is the space reconfigured easily the actual use of the areas can be easily adapted to suit new processes. In the event of damage during the use of the facility, in house maintenance teams can easily remove the effected panel and install replacement panels.

Fire:

Norwood has developed fire rated solid and glazed construction walls to suit resistance to integrity and insulation. All of Norwood's tests are carried out independently under the guidance of certified fire consultants. All certification is available but we also look to develop the test documents to become client specific where possible. Norwood systems are tested to varying levels up to 60 minutes for integrity and insulation.



Environmental:

At Norwood we are constantly improving our environment practices. The CAD/CAM machines within the factories work on an average waste output of only 4%. All sheet steel is ordered project specific and cut to exact sizes from the coil.

All programmes developed for production are developed to work within specific waste parameters which recognise areas over and above those acceptable and utilise the spare material for standard small components.

As the systems are manufactured to exact size the waste from site consists of only the protective film supplied to the face of all the components, which is removed when the scheme is at handover stage.

Load and Impact Tested:

As many of Norwood's projects have either been in heavy traffic areas or heights exceeding five meters all of our systems are tested independently for load and impact. The load and impact tests involve an overall weight of up to 3000kg being applied uniformly to the walls and individual swing tests for impact. Our systems are tested to heavy duty which is the equivalent of hand railing systems.

Contained Power and Data:

Norwood has developed systems to incorporate power and data supply within the walls to remove the need for raised access floors or dado trunking. All walls and ceilings are pre-manufactured to accommodate any number of services making the installation of services on site quicker and the product with no ledges or unsightly trunking visible, which offers a flush internal finish.

