

# ACOUSTIC & VIBRATION SOLUTIONS FOR GYM AND SPORTS FLOORING



  
Regupol®

**CMSDANSKIN**  
ACOUSTICS



# THE IMPORTANCE OF SOUND CONTROL IN GYMNASIUMS

Nobody goes to a gym to sit still. It's an environment designed to encourage high levels of activity.

## All very energetic... ...but far from quiet.

And because the floor takes the brunt of the impact, this should always be the main design focus. While sports flooring can often deliver the required rebound, acoustic and resilient performance and at the same time meet aesthetic requirements, this is not always the case. Especially when a gym is situated in a mixed-use development adjacent to residential dwellings or delicate businesses, or sensitive fitness equipment is at risk of damage.

This is where CMS Danskin Acoustics comes in. If our standard sports flooring can't achieve the necessary sound reduction, our expert technical team can advise on the specification of a wide range of specialist acoustic and vibration control systems – balancing performance, aesthetics and budget.

Plus, as we also provide solutions to treat walls and ceilings, we can deliver a holistic design approach to sound control for the complete gym environment - reducing reverberation times and absorbing noise generated from members' exercise activity.

### WHY WORK WITH US?

**Getting the specification right** – there's no testing standard or building regulation which specifically governs sound control in gym environments. By using our subjective testing service, you can strike the right balance between acoustic performance and budget. No over engineering, simply solutions which are fit for purpose.

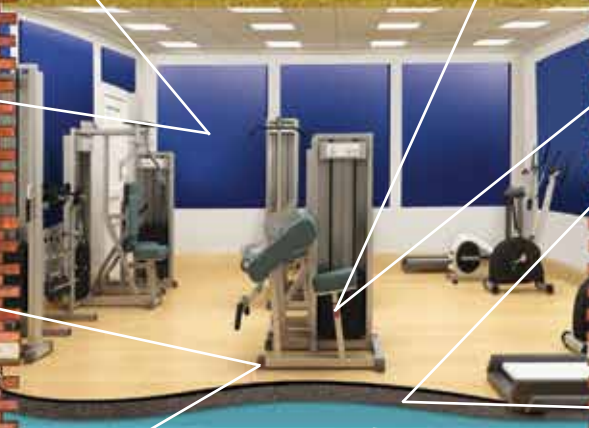
**Proven products for gym environments** – we have one of the most extensive product ranges for sound control in gym including:

- **free weights areas**
- **functional areas**
- **sports flooring**
- **accessories**
- **reverberation treatments**

From everroll® sports flooring and Regupol® impact sound systems, through to high performance building isolation with floating floors – **we've got it covered.**

**More than a supplier** – we don't just design, manufacture and deliver market leading products. Instead, we work with the entire supply chain and project teams to ensure a smooth path from conception to completion. This includes attendance at project meetings and site supervision, where required.

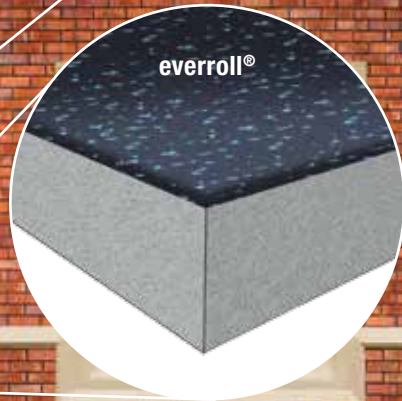
# SOLUTIONS TO GYM PROBLEM AREAS



**SuperPhon®  
Acoustic Wall & Ceiling  
Panels**



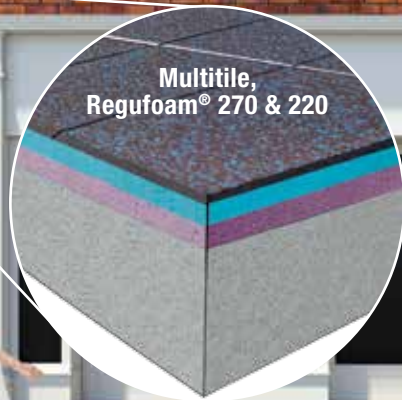
**Impact Washers**



**everroll®**



**Vibration Isolation  
Pads**



**Multitile,  
Regufoam® 270 & 220**

# EVERROLL® — PERFORMS AS GOOD AS IT LOOKS

The specialist resilient flooring for fitness environments, **everroll®** not only helps to minimise impact sound – its shock absorbing and anti-slip properties are also designed to protect gym members during workouts.

A wide range of colours makes **everroll®** the sports flooring of choice for projects where aesthetics and corporate brand are as important as performance.

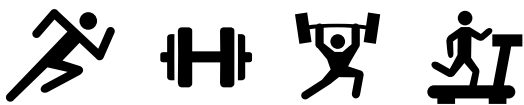
Available in standard rolls.



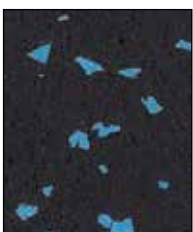
Image shown is everroll®.



Image shown is Puzzletile.



## COLOURWAYS



Black/Blue



Black/Blue/Grey



Black/Grey



Black/Orange



Black/Purple



Black/Beige

More colours available on request.



# EVERROLL® MULTITILE – TAKING THE WEIGHT STRAIN

Designed specifically for use in free-weight and lifting areas, **everroll® multitile** offers high levels of shock absorption – protecting the subfloor from damage while providing gym members with a cushioning and comfortable training area.

As a multi-purpose tile, **everroll® multitile** is easy to install and is laid with a V-groove joint finish. Aesthetically, **everroll® multitile** offers a superior appearance as the surface finish is non-reflective – maintaining consistency of colour in all lighting conditions.

## MATERIAL COMPOSITION

PUR bonded and moulded rubber tile with a 4mm **everroll® compact** top layer.

## THICKNESS 27mm

(23mm black base layer + 4mm **everroll® compact** top layer).

## DIMENSIONS OF TILE

1,000 x 500mm, including “appearance joint” for square design.



**everroll® multitile** (27mm) - the multipurpose tile product, easy to install and perfectly suitable for weight rooms and similar areas where impact sound absorption is critical.

## FORCE REDUCTION Approximately 38.5%

NB: The Force Reduction rating is expressed as a relative percentage (bare concrete slab = 0% reduction) of the force that is not reflected when applied to a resilient surface. The higher the reduction rating, the more “forgiving” the surface.

## EDITION 4.0 HIGH DEFINITION SURFACE FINISH

**New surface finish:  
no light reflections, brilliant colours**

- Clean, uninterrupted floor colours
- Superior appearance: the colours are retained in all lighting conditions
- No light reflections
- Aids its use in sports facilities through excellent visibility of floor markings

## GLOSS LEVEL

**everroll®** surfaces with the new **edition 4.0 finish** achieve values between 0.0 – 0.3 on a scale of 1 to 100 GU (gloss units)





# EVERROLL® KOMBI – FAST TRACK SPORTS FLOORING

Designed for sprint and speed training applications, **everroll® kombi** is a double layer, point-elastic sports flooring solution which protects athletes' joints by absorbing energy.

Impact and slip resistant, **everroll® kombi** is suitable for use with underfloor heating. Offering ease of installation, the material can also be 'lined' with polyurethane on-site to achieve a professional track finish.

## MATERIAL COMPOSITION

Point-elastic, double-layer sports flooring made from PUR bonded rubber crumb and EPDM granulate.

## STANDARD THICKNESS

8mm

## DIMENSIONS OF ROLLS

Width: 1,250mm  
Lengths: 10m / 15m / 20m



## BENEFITS

- Adequate force reduction rating for sprint and speed training
- Protects subfloors
- Impact sound and shock absorbent
- Impact resistance meets industry standard
- Slip resistant
- Suitable for underfloor heating
- Easy installation
- Can be "lined" with polyurethane line paint on site



**everroll® kombi** – typically consists of a 4mm thick elastic layer and a 4mm thick EPDM top layer.

**FORCE REDUCTION** = approximately 18.9%

NB: The force reduction rating is expressed as a relative percentage (bare concrete slab = 0 % force reduction) of the force that is not reflected when applied to a resilient surface.

The higher the force reduction rating, the more "forgiving" the surface.

**IMPACT RESISTANCE** 8Nm

This impact resistance rating meets the universally applicable minimum requirement for sports floorings of 8Nm.







# SPORTS CARPET – VERSATILITY IN ACTION

A versatile sports surface, the **Sports Carpet** is primarily designed to meet the safety and performance demands of speed, agility and quickness (SAQ) activities – but is also commonly used for tennis, hockey, football and multi-use games areas.

The material construction means a prowler/sled can be used for pushing and pulling drills without damaging the surface.

When combined with elastic underlay it is also suitable for high intensity plyometric activity.

## BENEFITS

- Versatile multi-sport product
- Needle-punch
- Sand dressed
- UV stable
- Medium ITF pace rating
- UK manufactured



## THICKNESS

10mm (6mm pile height).

## DIMENSIONS OF ROLLS

Width: 2000 or 4100mm  
Lengths: To order



## COLOURWAYS



Terracotta



Yellow



Summer Green



Autumn Green



Blue



Navy

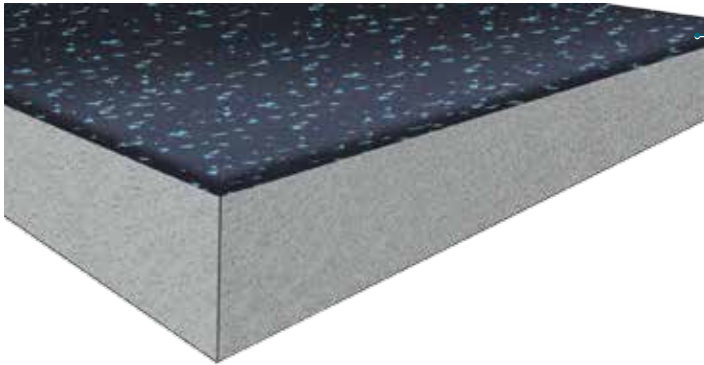


Black



# STANDARD GYM

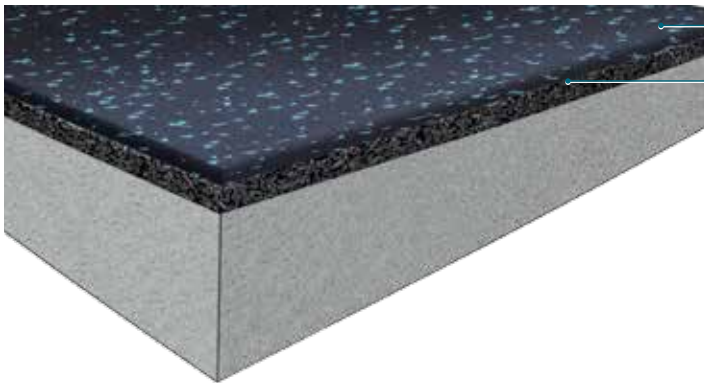
## General Gym Flooring Multi Purpose Use



10mm **everroll®**



## Free Weights Areas (sub floor protection required)

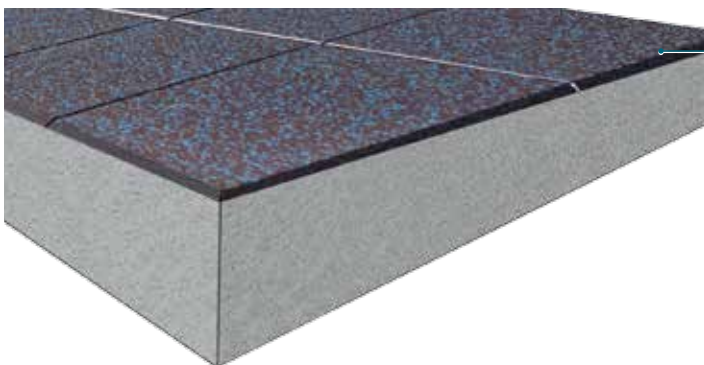


10mm **everroll®**

10mm or 15mm **Shock Pad**



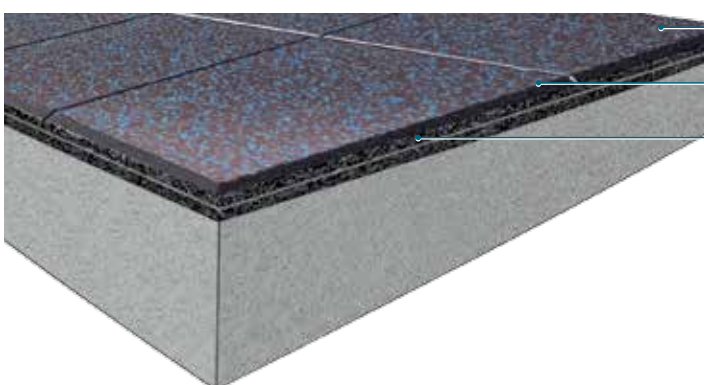
## Free Weights Areas (sub floor protection removable/moveable)



27mm **Multitile**



## Free Weights Areas (Acoustic Issues)



27mm **Multitile**

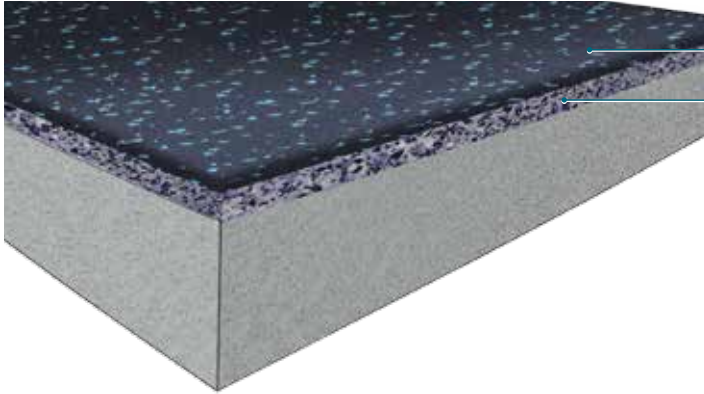
17mm **Vibration 300 (dimpled)**

17mm **Vibration 300 (dimpled)**

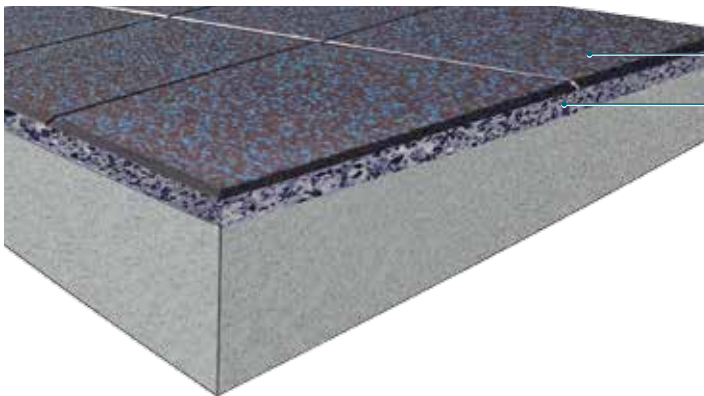


# FLOOR DETAILS

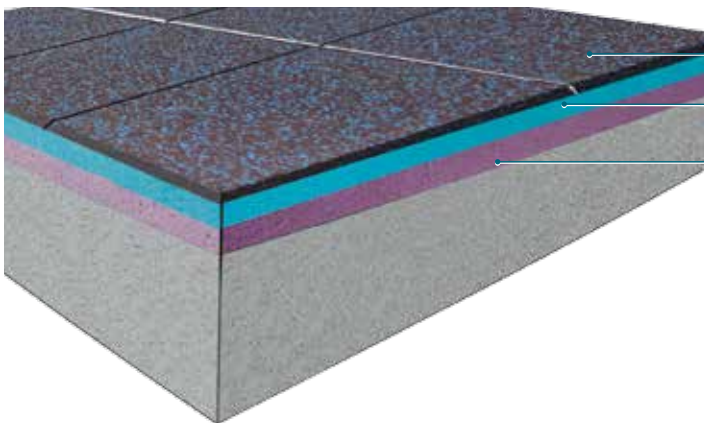
## Free Weights Areas (Acoustic Issues) High Performance



10mm **everroll®**  
40mm **Regupol® 40/80**



27mm **Multitile**  
40mm **Regupol® 40/80**

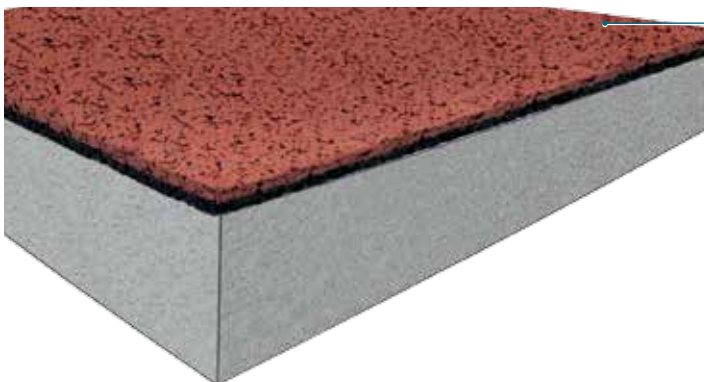


27mm **Multitile**  
25mm **Regufoam® 270**  
25mm **Regufoam® 220**



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## Sprint Track



**Regupol® Kombi 4+4**



# GYM FLOORING

To assist with the creation of a high quality gym environment which will perform and be protected over time, CMS Danskin Acoustics offers a range of accessories which complement the standard sports flooring range. These include:

## RAMP EDGES

Facilitate wheelchair access, negates the need for a step and reduces the danger of stumbling at the edge of the floor.

- Quick easy to install
- Hard wearing
- Negates the need for a step



## REGUPOL® REGUBOND 100 FLOORING ADHESIVE

Can accept heavy traffic after 24 hours which means fitness equipment can be installed promptly after the sports flooring is laid.

Packaged in a 15 kg plastic bucket.



## REGUGYM® PU CONTACT ADHESIVE

A two part adhesive developed specifically for use with the **everroll®** range.

Packaged in tin drums – Part A 17kg and Part B 3kg.



# ACCESSORIES



## RESISTANCE IMPACT MACHINE WASHERS

Reduce the impact and structural noise caused by resistance machines at source making for a better training environment and reducing the risk of noise complaints from neighbours. Can be retrofitted or installed during the machine manufacture.

- Easy to install
- Reduces impact noise at source



## GYM VIBRATION ISOLATION PADS

For use under various types of fitness equipment. Provides excellent shock isolation and vibration properties.



- Standardised or bespoke design to fit a majority manufacturers products
- Low profile design
- Easy to install

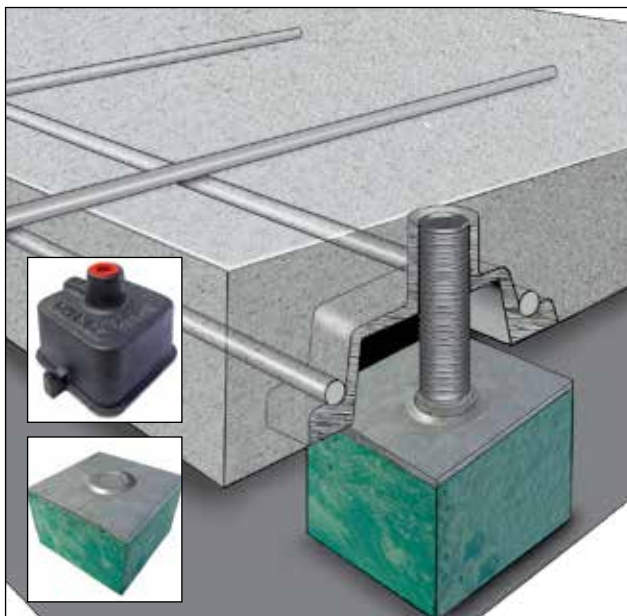
# HIGH PERFORMANCE SYSTEMS

Where standard sports flooring cannot achieve the required level of impact sound control to protect sensitive fitness equipment, or there is a risk of noise and vibration transfer into adjacent retail units or residential dwellings – CMS Danskin Acoustics can provide guidance on the specification of high performance isolation systems.

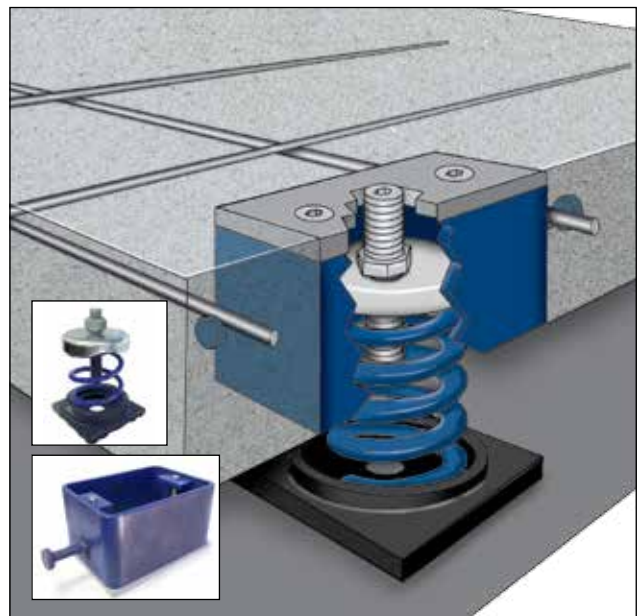
## KINETICS® FLOOR LIFT MOUNT (FLM) / KINETICS® LSM MOUNT

Typically used where free weight areas are situated over a retail or residential space, CMS Danskin Acoustics provides a full design service and on-site support.

### FLM MOUNT (PAD)

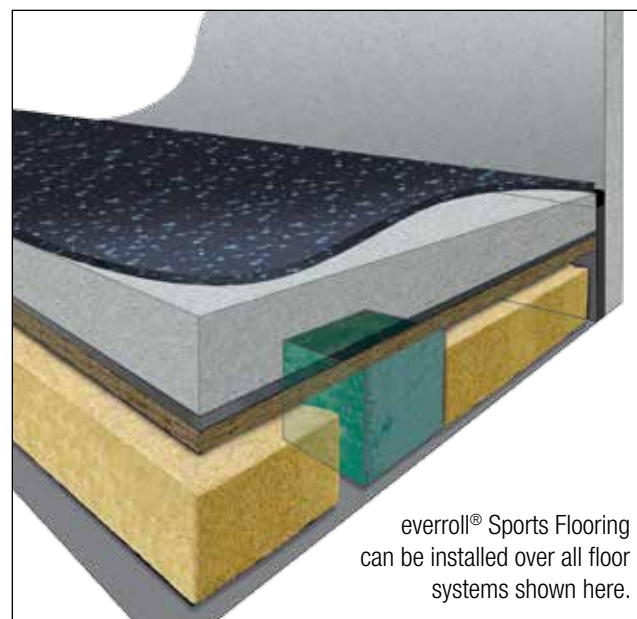


### LSM MOUNT (SPRING)



## KINETICS® RIM SYSTEM

The **Kinetics® RIM System** is widely used for mixed-use developments where gyms are located on the first floor or above. When used in conjunction with ceiling and wall separation products, **Kinetics® RIM System** is an essential component of 'room within a room' isolation approach.





# REVERBERATION TREATMENTS

Problem reverberation in gym environments is most prevalent in areas where there are high levels of airborne sound and hard reflective surfaces, such as sports halls, dance studios and spin spaces. These reverberation times can be effectively reduced using absorptive solutions.

## SUPERPHON® WALL AND CEILING ACOUSTIC PANELS

Offering up to Class A absorption, this range of wall and ceiling acoustic panels provides a highly aesthetic solution for reducing reverberation times and can be retrospectively installed where remediation may be required.

While 75 standard fabric colours are available across two ranges, **SuperPhon®** can be manufactured to a bespoke specification with impact resistant and hygienic solutions available.



## FADE® ACOUSTICAL PLASTER

Where the objective is to achieve seamless sound absorption without the use of visible panels, the **Fade® Acoustical Plaster** system provides an excellent solution.

As a spray applied plaster system, **Fade®** can reduce reverberation times in spaces even where there are curved angles or arching domes.



# BANNATYNE GYM MAIDA VALE



For illustration purposes only.

## THE CHALLENGE

Located in a mixed-use development with apartments directly above the gym facilities, Bannatyne Health Club Maida Vale, was faced with a Noise Abatement Order following a series of complaints from residents occupying the dwellings above. In a bid to remediate the situation, CMS Danskin Acoustics was brought in to trouble shoot the cause of the nuisance noise.

## THE SOLUTION

An initial site visit by the CMS Danskin Acoustics technical team identified the 'free weight' area as the source of the impact noise. Inspection of the floor treatment confirmed that a generic sports flooring tile product had been installed, yet this would not offer sufficient levels of absorption for the impact of free weights hitting the ground.

Recognising that a bespoke specification would be required to achieve the necessary sound reduction, CMS Danskin Acoustics commissioned Pace Consult to conduct subjective testing on-site using a range of acoustic system build-ups.

To resolve the Noise Abatement Order as swiftly as possible and to protect against any further complaints, the highest performing floor-build up was installed as follows:

- **Regufoam® 220**
- **Regufoam® 190**
- **FX75 Tile**
- **10mm High Impact Mat**

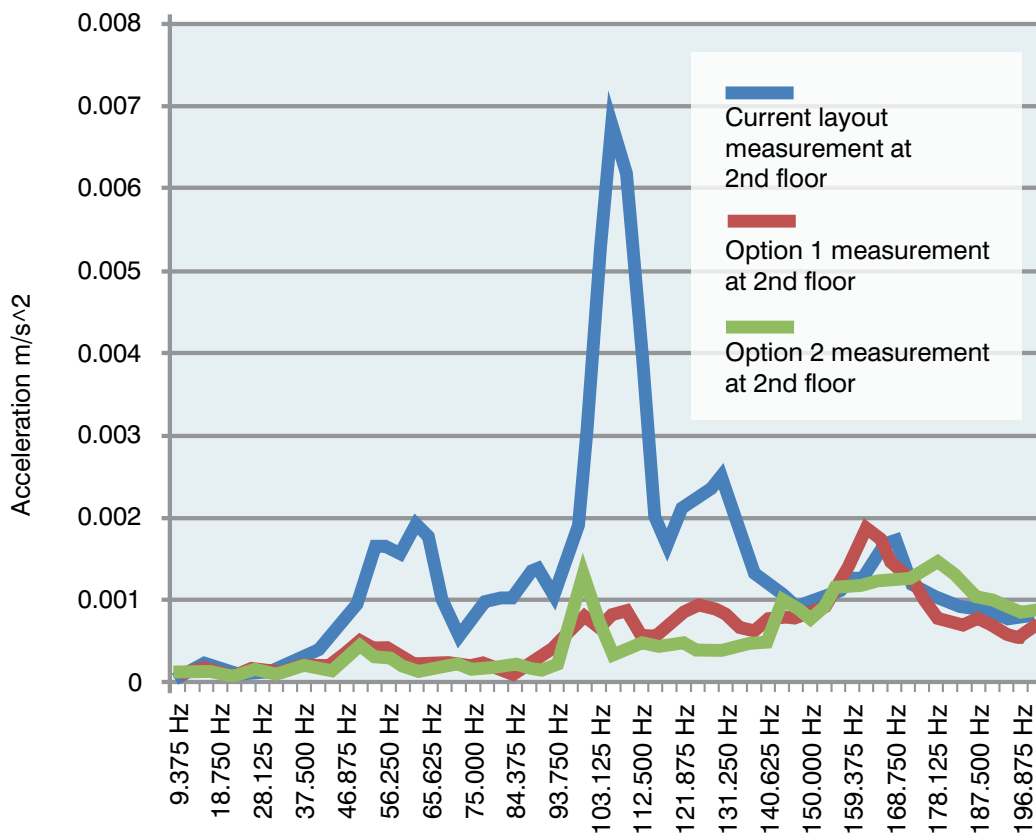
The combination of these materials delivered a highly absorptive, durable and resilient construction which reduced the noise generated in the free weights area to a level deemed acceptable by the Council

– leading the Noise Abatement Order to be withdrawn.

Martin Jones, Managing Director, Pace Consult, comments:

**“Remediation in gym environments is more common than many realise. In the absence of any legislative standards, the specification of acoustic treatments is left very open. That’s why subjective testing is crucial in any mixed-use development, it’s the only way to be confident the products specified will deliver the exact acoustic performance required.”**

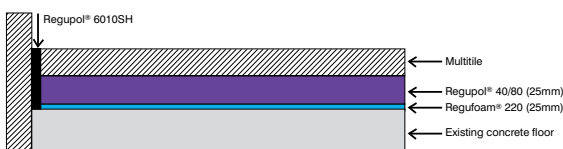
# ACOUSTIC PERFORMANCE & TESTING



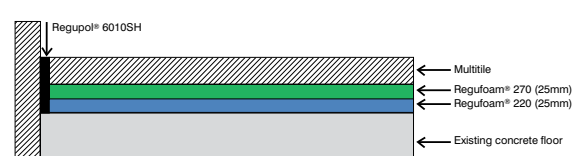
Vibration measurements of 3 different layouts undertaken in second floor flat\*

For illustration purposes only.

Option 1



Option 2



## SUBJECTIVE TESTING

Subjective testing is a key ingredient to ensure that facilities, wherever located, do not cause a nuisance and/or disturbance to the surrounding occupants. More and more gymnasiums are being designed and built, many of which are located in already occupied buildings whether that be residential or commercial and this can itself be problematic due to the activities that take place, particularly so in the 'free weights' area. The noise and vibration generated from the dropping of weights, etc. can be very problematic and can often result in noise abatement orders and remedial works can often be costly, but in many cases essential.

To avoid such problems 'subjective testing' should be carried out by independent acoustic consultants to ensure the noise and structural vibrations generated are assessed and adequately treated to avoid any potential complaints. This is a process whereby several samples of acoustic and vibration materials are built up off the floor with weights then dropped from a specific height, generally waist height to determine the forces applied. From this the resultant values can be assessed to determine the most effective build-up to achieve the desired natural frequency or ambient noise levels.

### The aim of the subjective tests are:

- To identify the noise levels in surrounding areas due to typical worst case impacts on the floor slab, without any acoustic/vibration treatment.
- To measure the improvement in noise control when a simplified floor treatment is applied.
- To review the suitability of a simplified isolation floor build-up to comment its suitability in place.

\*Independent test report available on request.

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CMS Danskin Acoustics products are part of the  **SIG** PERFORMANCE TECHNOLOGY range

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