

# Temporary Dust and Noise Solutions Provided at a Glasgow Leisure Centre

During live renovations, RVT provided an effective solution to control dust and noise.

July 2021



## Client:



## Location:

Scotstoun Leisure Centre,  
Glasgow

## Featured Product Range:



Dustex® Dust  
Control Solutions

## Introduction

Glasgow Club Scotstoun is one of the biggest leisure facilities in the city, home to the National Badminton Centre, Scotstoun Stadium and Scotstoun Squash Centre. Following consultation with customers and the local community, a planned improvement project began with the pool area.

Renovation works carried out include a new poolside health suite, more locker and storage space, and a renovated changing village. As part of the internal refurbishment project, City Building Glasgow needed to demolish parts of the old changing area and cut into existing concrete slab for drainage.

## The Challenge

The changing facilities were located in the middle of the leisure centre with no direct outside access. As this refurbishment involved activities that produced large amounts of airborne dust and noise, a solution was required to protect the workers on site as well as members of the public in the leisure centre, which remained live throughout the project.

## Case Study Key Facts

- Glasgow Club Scotstoun, one of the biggest leisure facilities in the city, is undergoing poolside renovations
- Refurbishment works were taking place centrally whilst parts of the building remained live
- As works involved demolition and cutting, dust and noise solution were required to protect workers and the public
- RVT installed 2 Dustex WandaFilta Fit Out Kits to capture dust and create a negative pressure system
- Soundex Acoustic Curtains between the work and public areas reduced noise to the adjoining areas

City Building (Glasgow) LLP were specifically looking for a negative pressure system to be built into their temporary hoarding around the internal demolition area. They approached RVT early to get a tailored solution and best practice advice.

## The Solution

RVT carried out a thorough site survey which included assessed drawings and calculating air volumes. We recommended 2 Dustex Wandafilta Plus Fit Out Kits which each include a capture hood, Ventex® CF 300M, 300mm ducting and a WandaFilta Plus Filtration unit. By using a Ventex® 300CF & Wandafilta Plus within the contained area, RVT effectively captured the dust at source and created a powerful negative pressure that ensured zero dust migration to the live area.

The dust was filtered through 3 levels of filter media (including HEPA) before being re-circulated into the work area. The window between the work area and cafe were then lined using Soundex Acoustic Curtains, which significantly reduced the noise travelling to the live adjoining areas.



**"CBC's initial engagement on discussion of works allowed for both parties to agree on the best kit to enable works whilst not over specifying. The kit performed well and gave a secondary barrier to the amount of dust and noise created from the cutting of the slab and complied with the HSE Guidelines on dust and noise. The overall experience in RVT was a good one and would be recommended for any future refurbishment jobs where there will be excessive noise and dust."**

**- Construction Manager, City Building Glasgow**

## Understanding positive and negative pressure?

When dust is created in an enclosed area, harmful particles become airborne. The dust then spreads into surrounding areas via access points, such as windows, doors and keyholes.

### Negative Pressure



Extracting air from an area creates lower pressure (weight) of air in that area. This means that air can flow into the room but cannot escape unless it is extracted.

### Positive Pressure



Air is forced into an area faster than it can leave. This increases the pressure (weight) of air inside the room, meaning that unfiltered air cannot enter the room.

## Applying the 3Cs Methodology to Noise and Dust Control



Capture  
Contain  
Control

### Dust Control

**Capture the hazard** - Position the dust extraction unit as close as possible to the activity to ensure the dust is captured at source.

**Contain the hazard** - The work area should be contained as much as possible to prevent dust/fume migrating into surrounding environments.

**Control the hazard** - Negative pressure can be applied to prevent dust migration further.



#### Dustex® WandaFilta Fit Out Kit

- Can move up to 6000m<sup>3</sup>/hr of free air.
- Ideal for heavy demolition and concrete alterations.
- Fans are subject to a TExT before each hire to ensure optimum performance.

### Noise Control

**Capture the hazard** - Position the acoustic barrier close to the noise source (fully enclosing it if possible) to maximise the acoustic shadow area.

**Contain the hazard** - Block the line of sight by ensuring the noise barrier is seamless. You may wish to consider whether an enclosure would be more suitable for fully containing the noise.

**Control the hazard** - Use high quality noise barriers, with high sound attenuation, to absorb excessive noise. Screening reflective surfaces like walls may also help to reduce noise bouncing the sound over the barriers.



#### Soundex Acoustic Curtain

- Provides up to 98% sound absorption and a noise reduction of up to 32.9dB.
- Eyelets for easy suspension, a wipe clean surface made of a fire-resistant material.
- Fold-and-lay-flat design enables easy storage and transportation.