Terrain acoustic dB12 is a triple layer pipe system with specially developed co-polymer polypropylene layers and acoustically engineered fittings that effectively dampen both airborne noise and sound transmitted through the building structure. dB12 is easy to install and is especially well-suited to large, multi-occupancy buildings such as apartment developments, student accommodation and hotels.

Within this Technical Bulletin we will talk about how noise and sound is generated and transmitted within drainage systems. The diagrams below show how both airborne noise and sound transmitted through the building structure are generated.

-Waste strikes the walls of the vertical stack.
-Waste strikes the walls of when the pipework transitions from vertical to horizontal.
-Necessary for offsets and base of stack.

-Airborne noise is generated by the movement of waste within the pipe which is then propagated by the air.

-Solid borne noise is caused by the vibration propagated from the pipe into solid objects which then transfer vibrations into the air as sound.

**Key**

- Solid borne noise
- Airborne noise
How Terrain Acoustic dB12 can help
Terrain acoustic dB12 is an engineered, triple layer system which helps to restrict the transfer of airborne noise generated by the flow of waste, into the surrounding air.

Technical characteristics of Terrain Acoustic dB12

1. Outer layer
   - Copolymer polypropylene
   - Elevated impact resistance at low temperatures
   - Excellent resistance to atmospheric agents
   - Blue, RAL 5015

2. Intermediate layer
   - Copolymer polypropylene
   - Elevated impact resistance at low temperatures
   - Excellent resistance to atmospheric agents
   - Blue, RAL 5015

3. Inner layer
   - Copolymer polypropylene
   - Elevated mechanical and abrasive resistance
   - Smooth surface
   - Blue, RAL 5015

Lagging pipe work will also aid in restricting the transfer of airborne sound.

In compliance with Building Regulations part E, whenever the drainage system passes through a habitable space it must also be lagged with a minimum of 25mm mineral.

Terrain dB12 rubber lined brackets should also be used. These restrict the vibrations, generated within the pipe work, from transmitting into the building structure.