INDUSTRIAL AND COMMERCIAL NOISE CONTROL

NOISE CONTROL CRITERIA

To ensure that the emission or intrusion of unwanted or distracting noise is kept to acceptable levels, consideration should be given to the following:

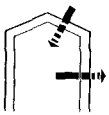
1. Exclusion of outside and overhead noise by insulating the building structure and use of acoustic baffles.

2. Preventing neighbourhood noise nuisance by insulating the building structure.

3. Reduction of transmitted noise through pipes and air conditioning ductwork by the use of acoustic linings or claddings.

4. Reduction of airborne and structure-borne noise from adjacent rooms via pipes, ducts and services generally by the use of acoustic sleeves at wall penetration points.

5. The reduction of reverberation times and ambient noise levels by the use of noise absorbing linings to interior surfaces.

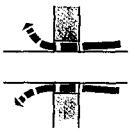


1. Overhead noise from outside the building

2. Preventing neighbourhood noise nuisance



3. Noise transmitted along services



4. Room to room noise via service penetrations



5. Reverberation and reflected noise within rooms

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HOUSING & PLANNING
14 OCT 1999
Ref: 102/1/99

BUILDINGS GENERALLY

EXTERNAL WALLS

Rockwool Cladding Roll U/F or Cladding Roll Alu-faced, used as the thermal insulant between profiled steel sidewall cladding and steel sheet liner panels, provides a good sound insulation barrier. An average weighted sound reduction index (Rw) of 37 dB can be expected (see diagram 1).

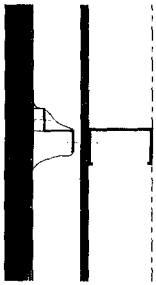
ROOFS

A commercial flat roof incorporating 150 mm Rockwool Hardrock with a single ply waterproof membrane has been shown to achieve an average weighted sound reduction index of 44 dB (SRL Ltd test report No. C/6487/405/1). This construction is particularly suitable for buildings close to airports (see diagram 2).

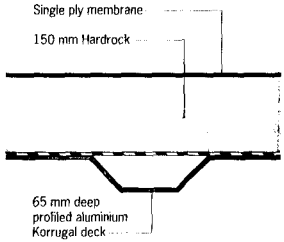
Alternatively, 80 mm Hardrock in a similar roof construction will achieve 38 dB (University of Salford test reference No. 90/4/18).

INTERNAL PARTITIONS

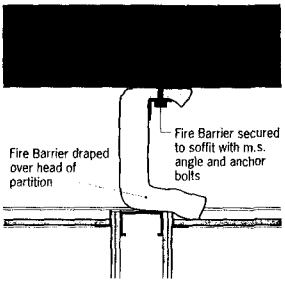
The integrity of sound reducing partition constructions can be maintained above suspended ceilings by the use of Rockwool Fire Barrier (see diagram 3). A single layer of Fire Barrier will improve the room to room performance of the ceiling by approx. 12dB, and by approx. 16 dB when a double layer is used.



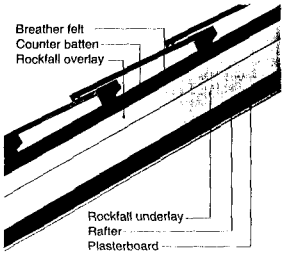
1. Sidewall cladding with Rockwool Cladding Roll and Rock-lam Thermal Break strips - Noise reduction = 37 dB



2. Flat roof detail, Stansted airport with Rockwool Hardrock Roofing Board - Noise reduction = 44 dB



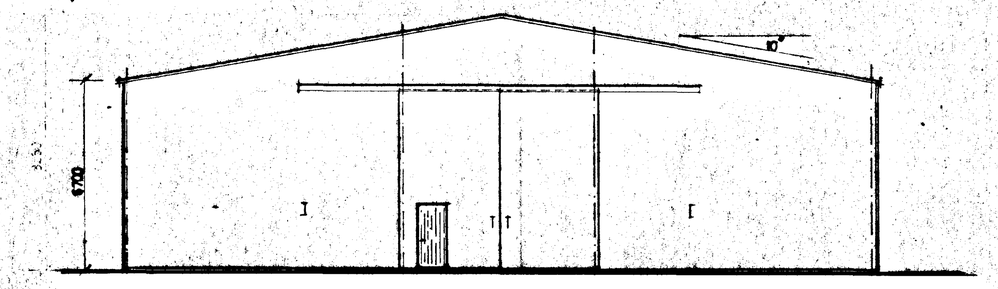
3. Rockwool 50mm Fire Barrier in void above sound-resisting metal stud partition - Room to room noise reduction of ceiling improved by12 dB using one layer of Fire Barrier, and by 20 dB using two layers of foil-faced Fire Barrier.



4. Rockfall System II giving a U value of 0.25 W/m²K will achieve a noise reduction of 40 dB.

DETERMINED
PLAN

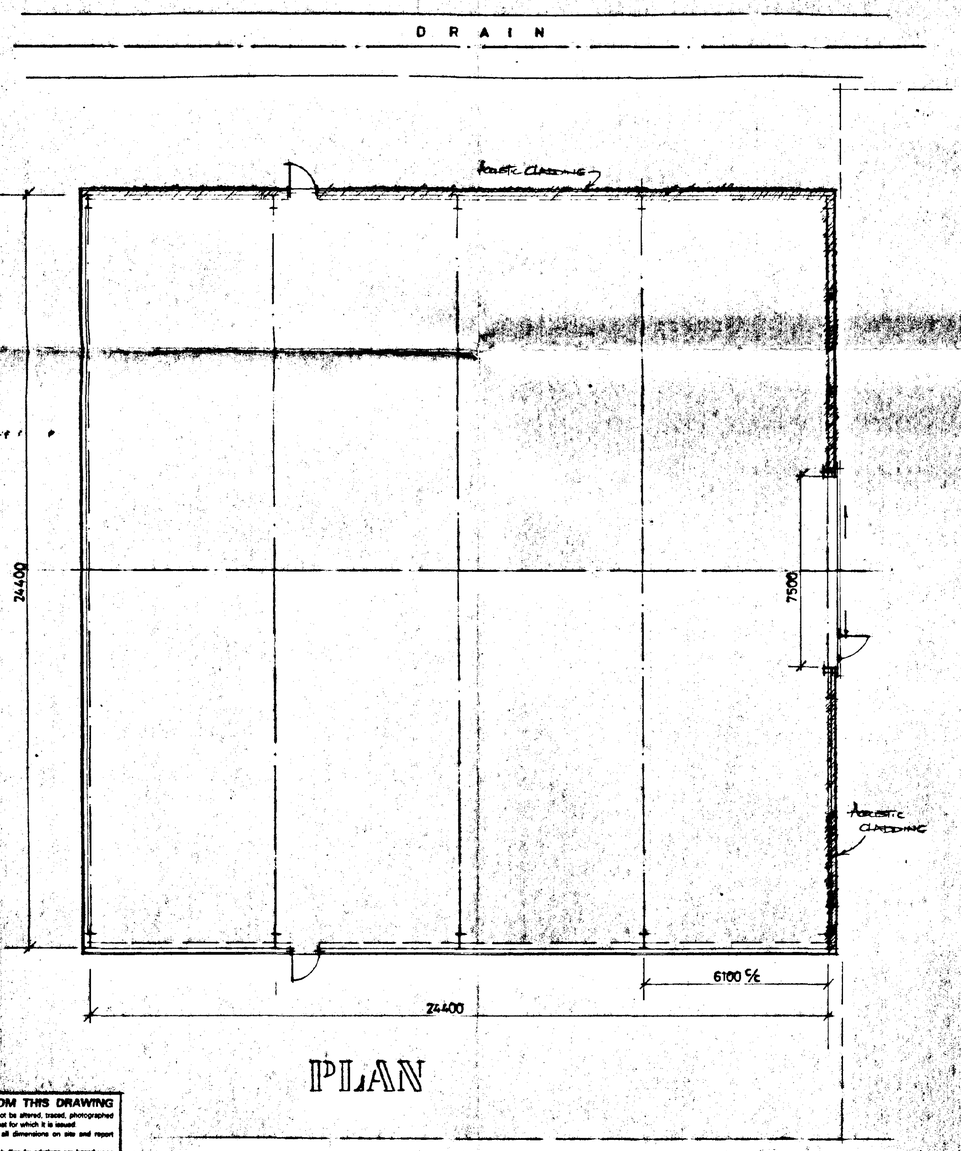
EXTERNAL MATERIALS	
WALLS & ROOF	PLASTIC COATED STEEL - LIGHT GREY
TRIMS & DETAILS	DARK GREY



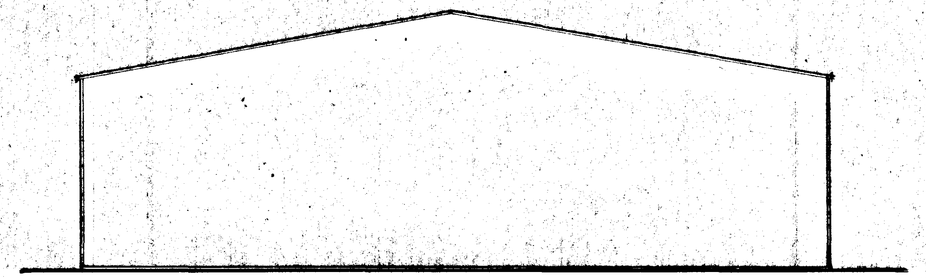
FRONT (EAST)



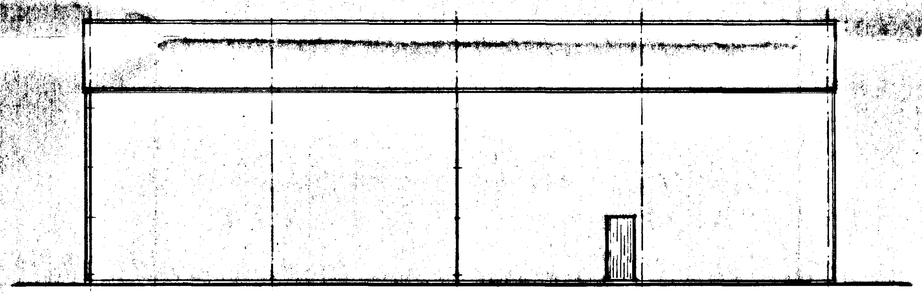
SIDE



PLAN



REAR



SIDE (NORTH)

Plastic coated steel cladding to North & East elevations to be acoustically insulated with Rockwool system giving noise reduction of 37dB – installed to manufacturers requirements.

DETERMINED PLAN

SOUTH HOLLAND DC
HOUSING & PLANNING
14 OCT 1999
Ref: 1223/99

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PROJECT:
AGRICULTURAL WORKSHOP & COMBINE HARVESTER STORE
BOG DROVE
HOLBEACH DROVE

CLIENT:
MESSRS P & S.M. JOHNSON

SCALES:	DATE:
1/100	JAN 1999
G.R.MERCHANT	DRAWING No.: PSMJ.03 A

REVISIONS:
A

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The General Contractor is to check all dimensions on site and report discrepancies to the Architect.
All details shown on this drawing including foundations are based upon typical site conditions related to the area. No responsibility can be accepted for abnormal conditions which may be discovered during construction unless reported to the Architect so that design amendments may be considered. Site soil surveys are recommended in respect of foundations to establish specific site conditions before foundation work is undertaken.

SIGMAT 1217