

**Design Note 4: Dance Studio**





A dance studio can be used for a variety of activities.

## Dance Studio

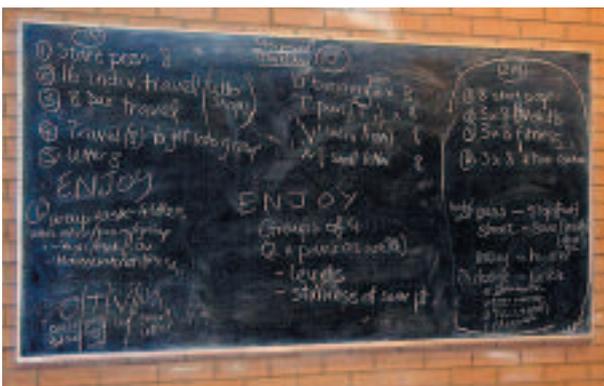
### Use

This space will be used by the school and community primarily for movement and dance. A dance studio is a much better teaching environment for these activities than a gymnasium or sports hall. A dance studio can also be used for other activities such as yoga, martial arts, aerobics, circuit training, keep-fit and other exercise disciplines.

### Suggested Dimensions

Length: 15m      Width: 15m  
Height: 4.5m minimum ceiling height

A room this size will be sufficient to accommodate a range of classes for the most common school and community uses. The studio should be well proportioned: a square or rectangular shape enables a clear sense of orientation to be maintained. Pillars, over-elongated spaces and walls which are not square should be avoided. The recommended minimum headroom of 4.5m will accommodate exercise and dance disciplines as well as the majority of martial arts.



The above dimensions will be appropriate in most schools, but it is important that the specific user requirements for this space are determined before finalising its dimensions. Dance studios are generally spaces for creative work and concentration and it is important that the technical requirements for the studio can be met in an environment which is inspiring. The proportions of the space are therefore of great importance.

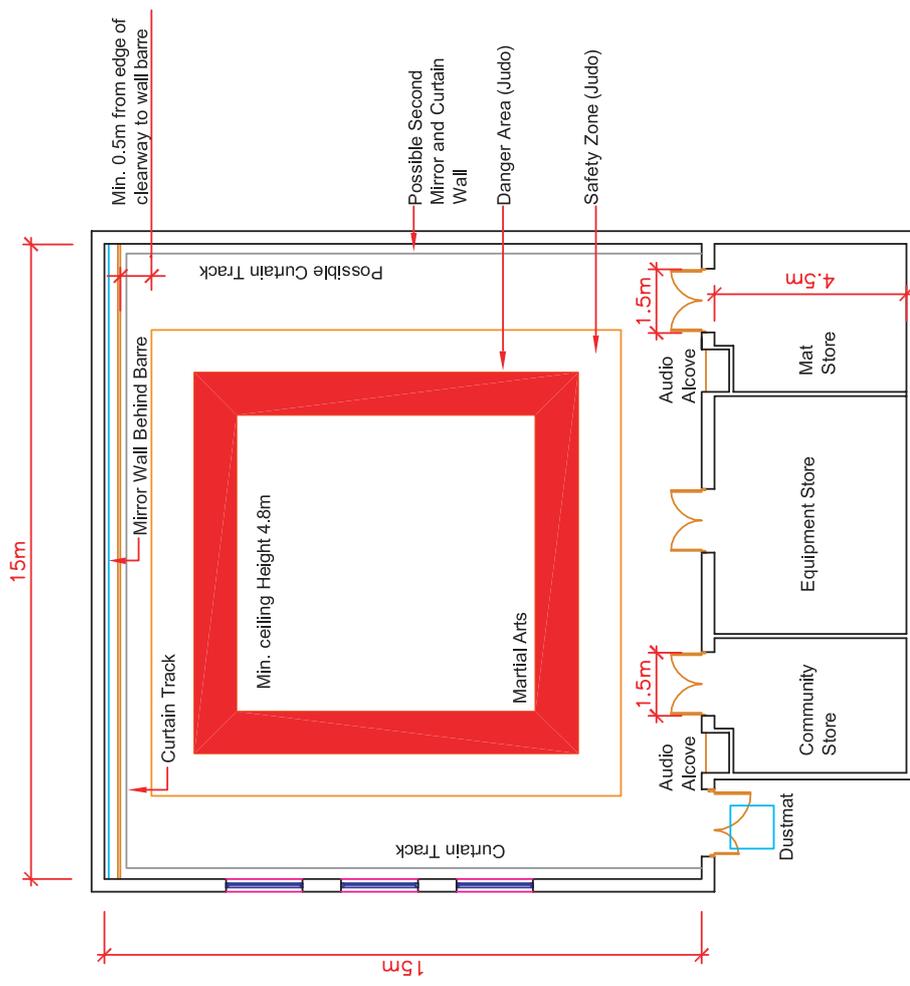
### Floor

Movement and dance activities are generally practiced in bare feet or in dance shoes which have little or no absorption to cushion impact. In order to avoid stress to back or limbs, or even permanent injury, it is therefore essential that a sprung or semi-sprung flooring system is provided. There is no specific standard for floors for movement and dance activity, but a floor complying with BS:EN14904 is likely to prove suitable and the smooth warm finish of wood is ideal. In addition, the floor should be low-slip, easily cleaned and unpolished.

If tap or other hardshoe dancing is to be undertaken then the permanent floor finish can be overlaid with a temporary surface suitable for that particular discipline. Additional storage space and extra set-up time between sessions should be taken into consideration.

Because many activities are barefoot and some involve lying on the floor it is particularly important that the dance studio floor is kept clean and in good condition. Adequate steps should be taken to eliminate the introduction of grit on the floor as this will cause damage to the surface. Precautions should include:

- Providing full-width grit-trap mats outside the studio entrances;
- Sealing any masonry walls which may emit grit; and
- Regular floor cleaning in accordance with the manufacturer's instructions.



Possible View to Landscaped Area

## Drawing 04: Dance Studio



## Walls and Ceiling

Plain light walls with a smooth finish provide a good background for filming, receive projected images well and are restful on the eye. Sharp edges or corners to wall projections should be avoided.

## Acoustic Considerations

The acoustic requirements of dance studios are particularly critical because of the need to achieve good music reproduction and ensure intelligibility of speech. Low reverberation times (maximum 1.5-1.8 seconds at 500 Hz) are essential. The level of noise transmission to and from the studio to adjoining spaces (including above and below) must be controlled by careful selection of materials and forms of construction. The sound attenuation of partitions should be sufficient to ensure the maintenance of a noise level of NR30 in the studio when noisy activities are taking place in adjacent spaces. Partitions should be taken up through suspended ceilings to the floor or roof decks and be well sealed. Equipment stores can sometimes act as sound buffers between the studio and adjacent noisy/quiet spaces. Users with hearing impairment may benefit from a hearing enhancement system or induction loop.

## Environment

### Lighting

Lighting provides an important opportunity to enhance the quality of the space. The introduction of natural light helps in this regard, and is best achieved by a north light over the mirrors. This allows light to fall to the front and the sides of the participants when facing the mirror, producing a clear, well-illuminated image. Large areas of glazing on the wall opposite the mirrors will throw the participant's image into silhouette and should be avoided.

Diffused lighting using walls and ceilings as reflective surfaces will help to reduce glare. Additional windows may be useful for ventilation and providing a view out, but these should have blinds to protect privacy and block direct sunlight. If the room is on the ground floor, it may be possible to arrange for a secured landscaped area to be formed outside such a window which will contribute to the ambience of the space.

Lighting design should integrate with natural lighting, take account of the large area of mirrored surface and provide 300 lux at floor level. Consideration should also be given to any requirements for specialist lighting such as colour filters for spot lights and lighting for performances. An indirect or semi-indirect lighting scheme using a mixture of tungsten and fluorescent fittings can create a softer and warmer atmosphere, and the use of dimmers, part switching and some adjustable spots may also improve ambience. The use of pendants is not recommended. Because of the multi-function use of this space, lighting controls should be within the dance studio. These should be available to staff or instructors only, perhaps via key switches or behind a locked panel. The position of any coloured spotlights/disco lights should be carefully considered to avoid possible clash with emergency fire alarm flashing lights.

### Heating and Ventilation

Ideally, a temperature range of 15°C to 24°C is required to cater for the likely range of disciplines. The optimum operating temperature for activities such as aerobics or step will be

around 17°C to 18°C, rising for the less vigorous disciplines up to around 24°C for yoga. Air conditioning should be considered where heat gains are likely to be high and strict temperature control is needed.

The space may be used intermittently and the number of occupants and degree of activity may vary considerably. The temperature and humidity controls must therefore be capable of wide variation and have the capacity to react swiftly. The heating system should be quiet enough not to interfere with communication.

The ventilation system must be able to cope with considerable amounts of metabolic heat, body odours and humidity. At least 10 to 12 air changes per hour are required, rising to as much as 15 for the most vigorous activities. The system should run quietly, including any fans that may be attached to convectors, and should be designed for a NR level of no more than 30.

## Fixtures and Fittings

### Doors

The entrance doors should open outwards and be wide enough to allow a piano and any other large items of equipment required in the studio.

### Mirrors

Wall mirrors greatly assist in the teaching and practice of many movement and dance disciplines. One long wall of the studio should be fitted with glass mirrors along its length from near floor level to a height of at least 2m. A second mirrored wall at right angles is also of assistance to enable participants to check their side view. Alternatively, this wall may be left bare for receiving projected images. If the studio is to be used for martial arts, the mirror walls, including any dance barres, will require to be protected with foam padding (for which storage space will have to be provided).

### Dance Barres

Dance barres provide useful support during warm up and training, particularly for ballet. Custom made brackets allow two barres to be provided: one at 0.914m from floor level for children aged up to 12-14, and a second at 1.067m for adult use. The taller barre should have a diameter of 45mm, and the lower barre 32mm. Both should be a minimum distance of 250mm from the wall. Where floor supports are provided they should be fixed to the structural floor base leaving floating floors to move independently. Floor sockets may be required for portable dance barres for smaller children.

### Curtains

Curtains and tracking around the perimeter of the space will improve sound absorption, conceal mirrors when required and ensure privacy if the studio has windows.

## Other Fixtures and Fittings

- A portable platform or staging for teaching.
- Power sockets, flush with the wall face and at low level, for cleaning, sound amplification and other equipment.
- Video, DVD and audio equipment with remote control.





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