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## 14.00 Ceilings

### 14.01 Generally

Suspended ceilings shall be provided in all occupied areas in buildings unless noted otherwise in the SDF's.

The minimum acceptable ceiling height throughout all GU buildings shall be 2,700mm, with a minimum clearance from the top of the ceiling grid to the lowest soffit of floor or roof structure over of 400mm.

Where ceilings with different types of drop-in tile occur within the building, the same grid suspension system should be used throughout, and shall be the grid utilised for the predominant ceiling system.

Suspension hanger rod fixing clips shall be anchor bolt fixed to concrete soffits or screw fixed to steel roof structure. The use of 'shot' fixings is strictly prohibited.

### 14.02 Mineral Fibre Tile Suspended Ceiling Systems

Mineral fibre tile suspended ceiling systems shall be Armstrong, USG or CSR systems including tiles and prefinished steel grid suspension system.

The ceiling tiles shall be equivalent to Armstrong Fine Fissured RH99 HumiGuard Plus 1200 x 600 x 16mm thick medium texture square edged board tiles suitable for both internal air conditioned and non air conditioned spaces. Any change to the ceiling tile type to suit particular acoustic requirements, must be approved by the Superintendent.

The suspension system shall be equivalent to the Armstrong PeakForm PRELUDE 24 XL<sup>2</sup> hot dipped galvanised steel two way exposed suspension system comprising main runners, cross tees and shadowline wall angles. The main runners shall be suspended and accurately levelled on 5mm dia. galvanised steel rod hangers, all in accordance with the manufacturers printed instructions and recommendations. Additional hangers shall be provided at all light fittings and air conditioning registers. Main and cross runners shall not be notched over the wall angle trim at the ceiling perimeter, but attached to the trim using the standard system purpose made clip. The wall angle trim shall be mechanically fixed to the wall framing or structure, not adhesive fixed to the wall lining.

The University requires a 30 year warranty from the manufacturer of the ceiling system against ceiling panel sagging and warping, and rusting of the grid components.

Where ceiling tiles are subject to uplift from wind or air flow from mechanical systems, they shall be secured by use of hold down clips. In these situations, the suspension system shall also incorporate down bracing to prevent movement of the grid.

### 14.03 Vinyl Faced Fibre Cement Tile Suspended Ceilings

Ceilings to all toilets, showers, food preparation kitchens (not tea making kitchenettes) and laboratories shall have 1200 x 600 x 6mm thick vinyl faced fibre cement ceiling tiles equivalent to those manufactured by APB Allboards.

If the suspension system is not the same as for the mineral fibre tile ceilings, then it shall be a 'Rondo' or approved equal prefinished exposed steel grid T bar system installed in accordance with the manufacturers written instructions and recommendations.

### 14.04 Flush Plasterboard Ceilings

This type of ceiling shall be avoided unless required for specific applications such as PC3 laboratories. If used for aesthetic reasons in building foyers etc. subject to the approval of the

Superintendent, adequate access to the ceiling space must be provided for maintenance and future equipment and services installations.

Flush plasterboard bulkheads at changes in levels of tile ceilings are acceptable, and shall be framed with metal stud framing, fixed to the soffit over and adequately braced.

Plasterboard linings shall be installed strictly in accordance with the manufacturer's printed instructions including providing control joints as appropriate. Particular attention shall be made to setting of the joints to provide a clean seamless surface.

The suspension system for flush ceilings shall be equal to the Rondo fully concealed system comprising top cross rails and furring channels clip fixed to the rails at centres nominated in the manufacturers printed instructions. Shadowline wall angle trims shall be provided to the ceiling perimeter. The suspension system shall be supported on 5mm min. dia. galvanised steel threaded rod hangers at centres to suit the weight of the ceiling. The use of spring clips on the hanger rods for adjustment purposes is strictly prohibited. The wall angle trim shall be mechanically fixed to the wall framing or structure, not adhesive fixed to the wall linings.

#### **14.05 Ceiling Mounted Fixtures**

Where fixtures or fittings such as light fittings, speakers, thermal alarms etc are to be mounted on the ceiling tiles, approved timber backing pieces shall be provided which shall span full width of the tile to provide bearing on the ceiling grid. Timber backers shall not be bonded to tiles.

Data projectors shall not be supported off the ceiling grid, but from the slab soffit or steel roof framing above.

#### **14.06 External Soffit Linings**

Soffit linings shall be prefinished materials such as 'Colorbond' profiled metal sheeting or metal faced cladding systems. The use of timber or metal section battening is prohibited.

Painted fibrous cement, adequately fixed and sealed against the ingress of moisture and corrosion, is acceptable only for soffits not more than eight meters above the ground.

Soffit design and selection of materials shall be carried out with a view to minimising spider webs and insect nesting which is an ongoing problem on most GU campuses.

The installation of light fittings and other fixtures in profiled metal sheeting shall be avoided.

#### **14.07 Plant Room Ceilings**

All concrete slab soffits over Plant Rooms, Lift Motor Rooms and accessible Service Cupboards shall be painted.

Plant rooms on upper levels under a steel framed roof do not require a ceiling, however perimeter walls must extend up to and be sealed to the underside of the roof, and the roof insulation shall extend over the plant room.

#### **14.08 Equipment and Servicing Access**

Wherever access is required to the ceiling to service or remove equipment, the ceiling shall be designed for easy removal including the removal of T bars.

In flush ceilings, access panels shall be a minimum of 900 x 900mm and shall be an approved proprietary hinged metal panel with frame and budget lock, opening downward. Lift out panels will not be acceptable.

#### **14.09 Pelmets**

Pelmets shall only be used where curtains are nominated on the Space Description Forms. In this instance, the pelmet shall be recessed into the ceiling.

Pelmets are not required where roller blinds are used.

#### **14.10 Timber Feature Ceilings**

The use of timber in ceilings shall generally be limited to foyers, lift lobbies, reception areas and commercial tenancies. The use of proprietary modular perforated plywood or slat ceiling panels which are supported on standard suspension systems and which can be easily removed for the maintenance of services in the ceiling space, are preferred. The size and weight of ceiling panels should be limited to what can be handled by a single person standing on a step ladder.