Te Pae
The Christchurch Convention Centre

Te Pae Christchurch Convention Centre

RIGGING GUIDELINES AND SPECIFICATIONS

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1. OVERVIEW

Te Pae Christchurch Convention Centre is a fully equipped production venue with extensive rigging infrastructure to accommodate a wide range of events. This rigging manual outlines venue specific rigging plans and specifications. For further information please contact your dedicated Event Coordinator.

Te Pae Christchurch comprises three seismically separate buildings; the Auditorium, Exhibition Hall and Administration building. Within the public spaces of the Plenary and Exhibition Halls, steelwork is provided to support a flexible arrangement of rigging including banners, lighting and sound systems.

Detailed rigging diagrams have been prepared showing the rating of each loading point. The following sections describe the key loading parameters and the associated limitations for each of the key spaces.

1.1. In-House Rigging

Te Pae Christchurch has a highly skilled, qualified and professional Audio-Visual (AV) Production team. Te Pae Christchurch's AV Production department has exclusive rigging rights in all spaces within the venue. All primary, bridling and secondary* rigging must be completed by the Te Pae Christchurch AV Production team.

*Te Pae Christchurch may authorise specific contractors to complete some secondary rigging, this must be authorised in writing by the AV Production Manager 10 days before event pack-in.

1.2. Access Equipment

Te Pae Christchurch has a full inventory of access equipment including scissor lifts, boom lifts and forklifts. The venue has exclusive use of all equipment. Specific contractors can become authorised users for specific equipment by contacting Te Pae Christchurch's AV Production department.

Contractors will need to complete a comprehensive induction and will be issued with a venue and machine specific licence to be able to use Te Pae Christchurch machines in Te Pae Christchurch buildings.

1.3. Outside Rigging Equipment

On occasion, where Te Pae Christchurch may not have equipment capacity to meet a rigging request, the venue will organise external equipment from authorised suppliers.

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2. AUDITORIUM RIGGING

Te Pae Christchurch Convention Centre's Auditorium is fully equipped to host a range of different events. The Auditorium offers a full rigging system with a total load capacity of 32t.

The Auditorium is intended for hosting presentations and associated events. The inclined seating bowl faces a stage, and the rigging systems have been provided to accommodate a range of stage operational configurations, including division of the auditorium into two separate spaces.

Above the stage, an extensive rigging grid provides flexibility for rigging of video screens, stage lighting, loudspeakers, masking drapes, backdrops, etc. Discrete point loads can be suspended either from the overhead hoist beams, or directly from the rigging grid floor.

Figure 1 describes the general layout of the rigging steelwork provided, while Figure 2 outlines an indicative layout for the winch system that the rigging steelwork has been designed to accommodate.

The proscenium wall divides the main and forestage areas and extends below the stage rigging grid. While the wall has been designed to support motorised house curtains. A suspended catwalk is provided above the seating area to form a lighting bridge. The lighting bridge can be used to mount lighting systems from the points provided and provide a clear view of the stage.

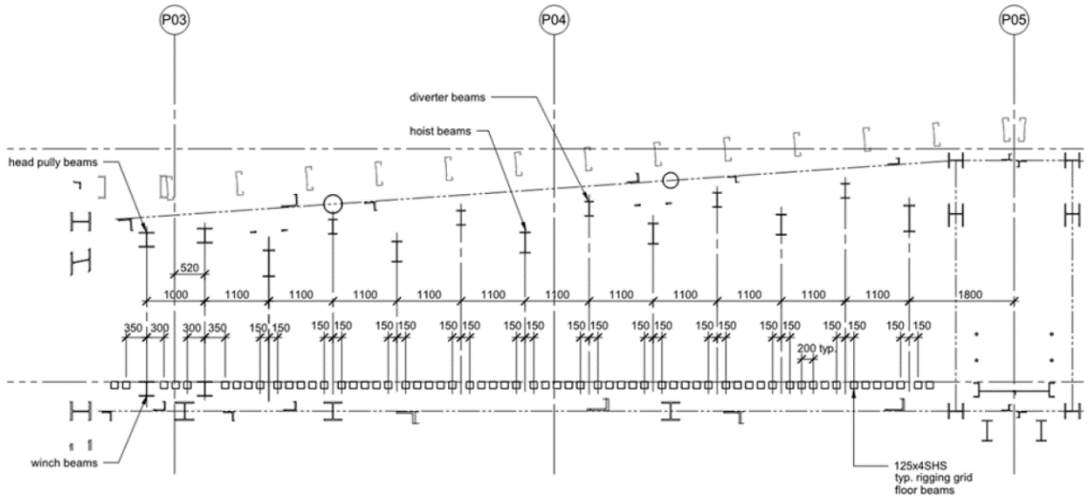

Fig 1. Stage rigging grid – Structural Rigging Elements

2.1. Rigging Diagram

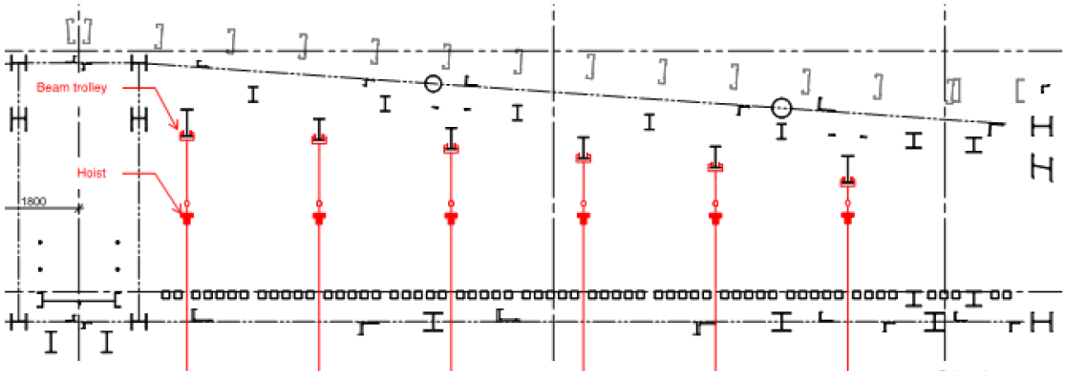

Fig 2. Stage Rigging Grid – rigging hoist example

2.2. Loading Restrictions

The following describes the specific loading restrictions applicable to the Auditorium. These should be read in conjunction with the Rigging Diagrams in Appendix A.

2.2.1. Auditorium Load Capacity (Maximum Limits):

- Maximum load for Auditorium [1,2] 32,000 kg (total)
- Maximum load either side of centreline [1,2] 16,000 kg (total each side)

Notes:

1. Calculation of the loads applied must include the weight of all rigging elements (including chains, battens, trusses, spreader frames, hoists, winches, etc.
2. Calculation of the load applied to each side must include the sum of the reactions from all rigging elements within that side (including rigging points, hoist beams, winch system, etc. - but excluding curtain beams).
3. Details of the various rigging points and load restrictions are provided on the Rigging Diagrams in Appendix A. Loads shall be suspended from the designated rigging locations only.
4. A summary of the various rigging locations is outlined in the table below.

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2.2.2. Auditorium Loading Points

Loading Point	Location	Max Point Load (1)	Load Limit (1)	Bridling
Rigging Grid Floor	Bottom chord level	100 kg	280 kg/m^2	Not permitted
Diverter Beams	Top chord level	250 kg	500 kg/m (6)	Not permitted
Head Pulley Beams (2)	Top chord level	1,000 kg	2,500 kg/m (2,5)	Not permitted
Winch Beams (2)	Bottom chord level	1,000 kg	2,500 kg/m (2,3,4)	Not permitted
Hoist Beam Type 1	Top chord level	1,500 kg	3,000 kg	Not permitted
Hoist Beam Type 2	Top chord level	1,500 kg	3,000 kg	Not permitted
Hoist Beam Type 3	Top chord level	1,000 kg	2,000 kg	Not permitted
Light Rigging Points	Catwalks		500 kg	Not permitted
Heavy Lighting Bars	Catwalks	80 kg	80 kg/m	Not permitted
Heavy Curtain Beam (6)	Proscenium wall	30 kg	30 kg/m	Not permitted

1. All mechanical rigging systems must apply a dynamic factor of 1.2 or less.
2. If a proscenium curtain is suspended from any rigging element other than directly from the proscenium wall, the weight of the curtain must be included in the calculation of the total load supported by that rigging element with respect to the load limits outlined above.

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3. EXHIBITION HALL RIGGING

3.1. Overview

The main Exhibition Hall comprises a series of roof trusses supporting a lightweight roof above. The room has no ceiling and is subdividable by operable walls that run along designated truss lines. A subdividable portion located at the western end comprises a lowered ceiling beneath the floor slab of the L02 banquet room servery above.

Within the main hall the bottom chord of the trusses incorporates a series of discrete loading points (at approximately 9m x 8m centres) from which heavy loads can be suspended via hangers or bridles. The bottom chords of the trusses and the light rigging beams specifically identified on the rigging diagrams can be used for suspension of lighter items.

Beneath the trusses, curtain rails are provided around the perimeter of the Exhibition Hall, and along both sides of each operable wall. Lighting bars are also provided on the underside of the catwalks along the north and south walls of the Exhibition Hall. Figure 5-1 describes the layout of curtain rails and lighting bars along the north side of the Exhibition Hall behind the operable wall track.

In the lowered height portion in the Dobson Rooms a series of lighting bars and discrete loading points are provided in the ceiling.

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3.2. Rigging – North and South Walls

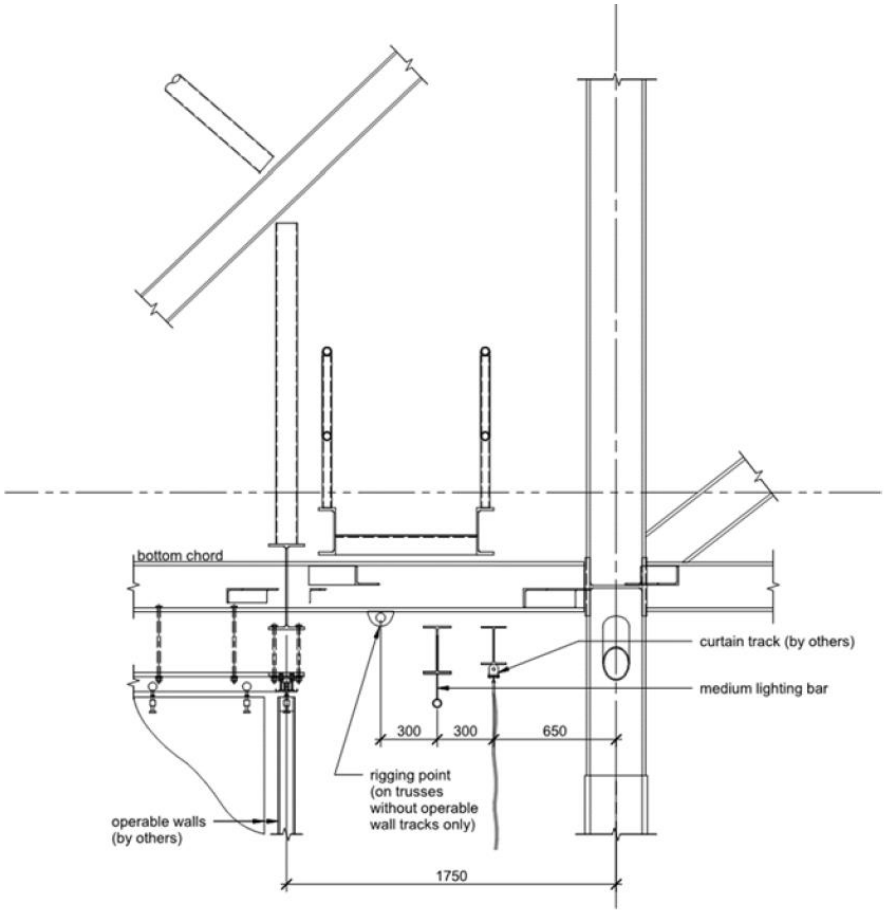

Fig 3. Rigging at north and south walls of Exhibition Hall

3.3. Exhibition Loading Points

Loading Point	Location	Load Limit (1)	Bridling
Heavy Rigging Point	Bottom chord level	2,000 kg	Not permitted
		1,000 kg	Up to 45º
Light Rigging Points	Lowered ceiling	500 kg	Not permitted
Light Rigging Beam	Bottom chord level (2)	200 kg	Not permitted
Medium Lighting Bar	Top chord level	3,000 kg	Not permitted
Hoist Beam Type 2	Under catwalks and lowered ceiling	50 kg/m	Not permitted
Heavy Curtain Beam	Perimeter of Exhibition Halls	30 kg/m	Not permitted

1. All mechanical rigging systems must apply a dynamic factor of 1.2 or less.
2. The light rigging beams include the truss bottom chords and I-section beams specifically identified on the rigging diagrams only. With regards to the truss bottom chords, the 200 kg load limit applies to the unsupported span of the bottom chord between any two vertical web members. For clarity, loads cannot be suspended from the circular hollow sections or angles forming the bottom chord bracing plane.

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4. BANQUET ROOMS

4.1. Overview

The Rivers Rooms and Conway Rooms located on Level One are provided with closely spaced rigging points (to provide flexibility) and a grid of lighting bars (to enable lighting of tables). The majority of the steelwork required to support these loads is suspended below bottom chord level.

4.2. Loading Restrictions

The following describes the specific loading restrictions applicable to the banquet rooms. These should be read in conjunction with the Rigging Diagrams in Appendix A.

Banquet Room Load Capacity (maximum limits):

- Maximum load for Banquet Room[1,2] 10,000 kg (total)
- Maximum load per truss [3] 3,000 kg (total)

Notes:

1. This represents the total allowable load for the Waitaki Room. The total includes the sum of the loads suspended from both sub-dividable portions of the Waitaki Banquet Room.
2. This represents the total allowable load for the Rakaia Room. The total includes the sum of the loads suspended from each of the five sub-dividable portions of the Rakaia Room.
3. Calculation of the load applied to each truss must include the sum of the reactions from all rigging elements supported by that truss (including rigging points, lighting bars, etc).

Details of the various rigging points and load restrictions are provided on the Rigging Diagrams in Appendix A. Loads shall be suspended from the designated points only. A summary of the various loading points is outlined in below.

4.2.1. Banquet Room Loading Points

Loading Point	Location	Load Limit [(1)]	Bridling
Light Rigging Points	Bottom chord level	500 kg	Not permitted
Medium Lighting Bar	Bottom chord level	50 kg	Not permitted

1. All mechanical rigging systems must apply a dynamic factor of 1.2 or less.

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5. MEETING ROOMS

5.1. Overview

This section applies to the Bealey Rooms only (the level one meeting rooms are covered by the 'Banquet Rooms' section above, and the ground floor meeting rooms within the lowered ceiling portion of the Exhibition Hall are covered in 'Exhibition Hall' above).

Lighting bars are provided in the meeting rooms for flexible fixing of lighting, banners, etc. The location of the lighting bars are outlined in the Rigging Diagrams in Appendix A.

5.2. Loading Restrictions

The following describes the specific loading restrictions applicable to the Bealey Rooms. These should be read in conjunction with the Rigging Diagrams in Appendix A.

Loads shall be suspended from the designated points only. A summary of the various loading points is outlined in the table below

5.2.1. Meeting Room Loading Points

Loading Point	Location	Load Limit (1)	Bridling
Medium Lighting Bar	Various	50 kg/m	Not permitted

1. All mechanical rigging systems must apply a dynamic factor of 1.2 or less.

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6. PRE-FUNCTION AREAS

6.1. Overview

The pre-function areas are provided with lighting bars in dedicated locations to enable lighting of key areas, or suspension of banners or similar. The locations of the lighting bars are outlined in the Rigging Diagrams in Appendix A.

6.2. Loading Restrictions

The following describes the specific loading restrictions applicable to the pre-function areas. These should be read in conjunction with the Rigging Diagrams in Appendix A. Loads shall be suspended from the designated points only. A summary of the various loading points is outlined in the table below.

6.2.1. Pre-Function Loading Points

Loading Point	Location	Load Limit (1)	Bridling
Light Lighting Bar	Various	25 kg/m	Not permitted
Hanging Eyelet	Exhibition Hall upper level	75 kg	Not permitted

1. All mechanical rigging systems must apply a dynamic factor of 1.2 or less.

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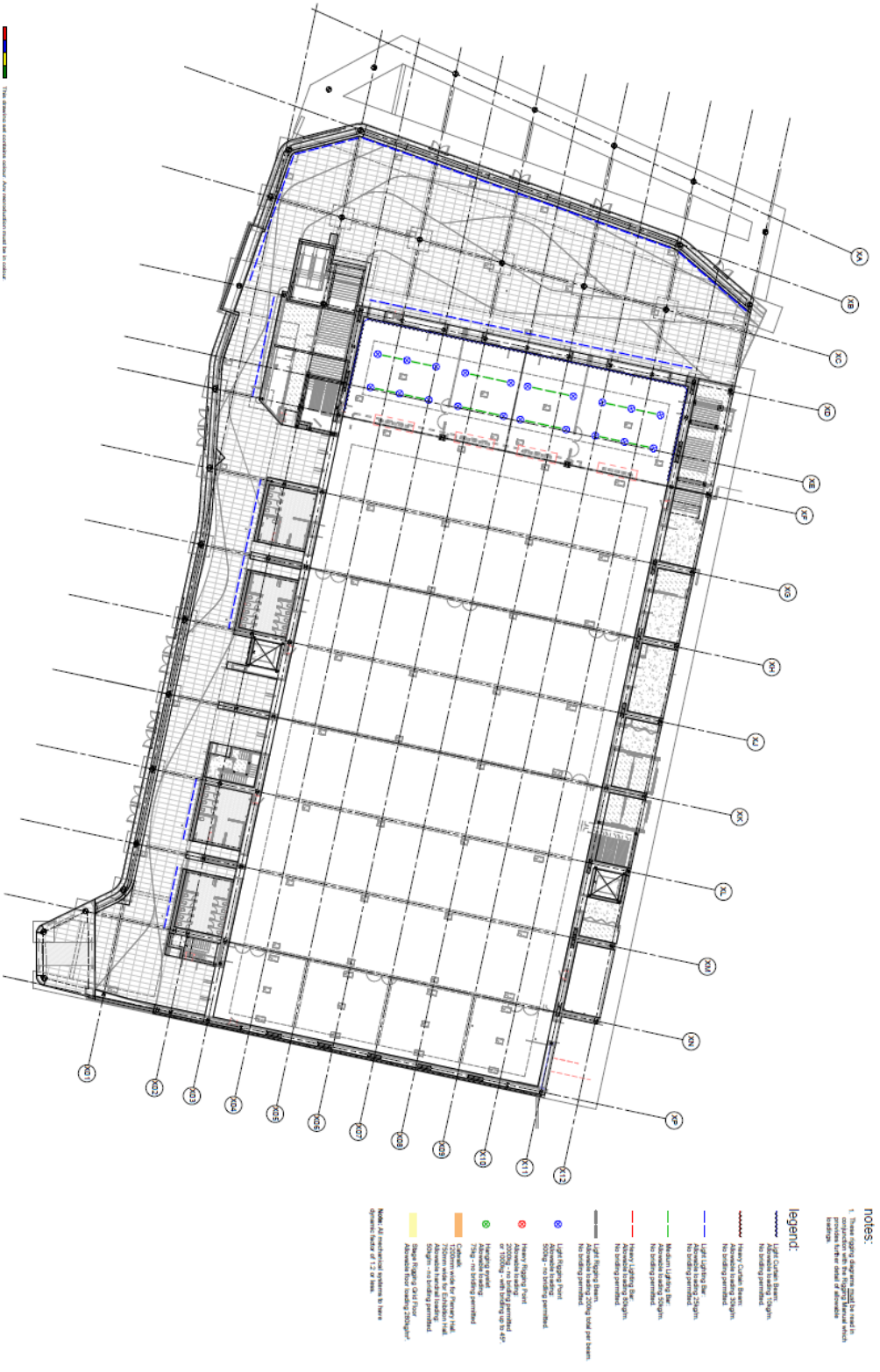
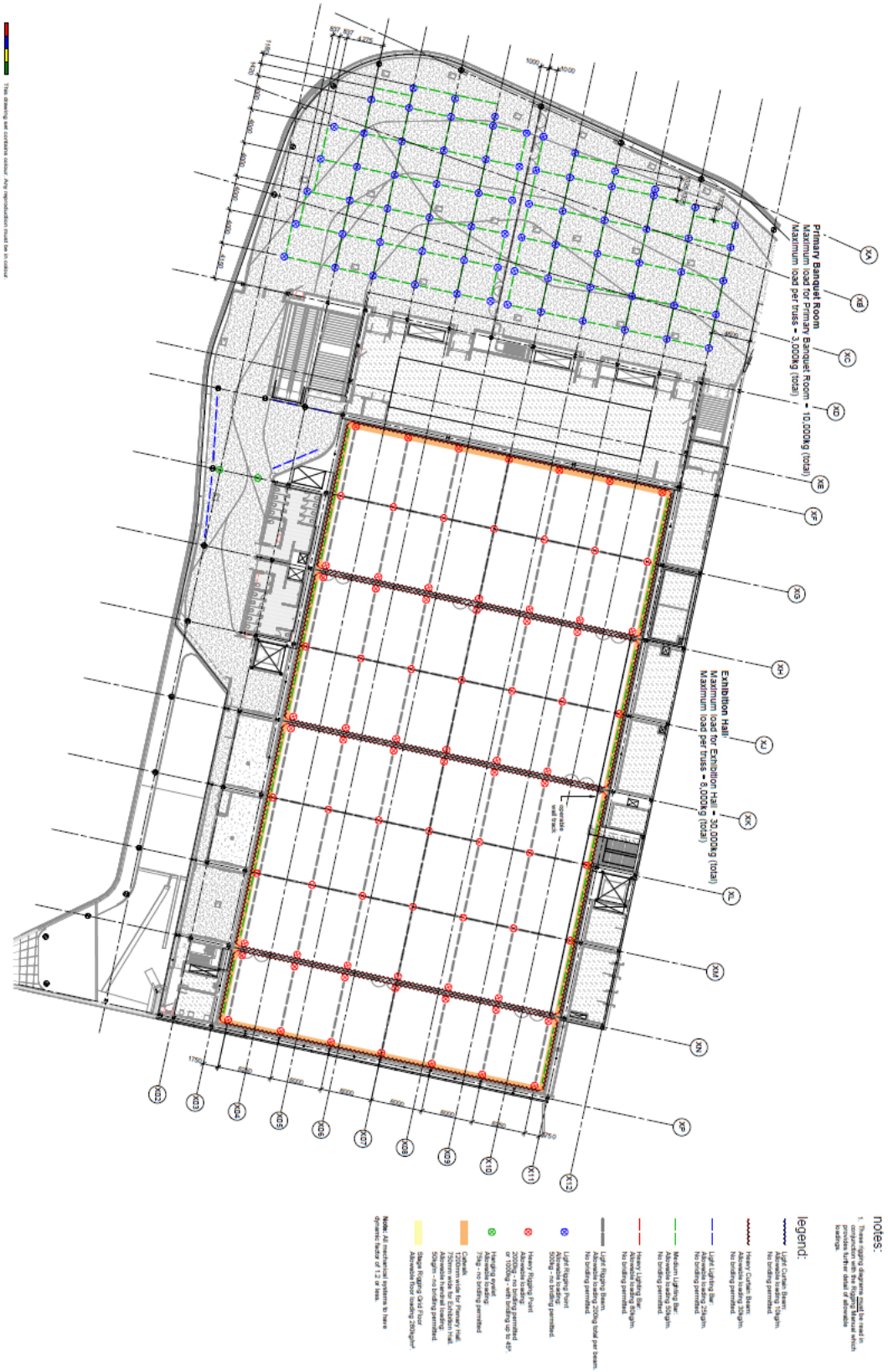
APPENDIX A: RIGGING DIAGRAMS

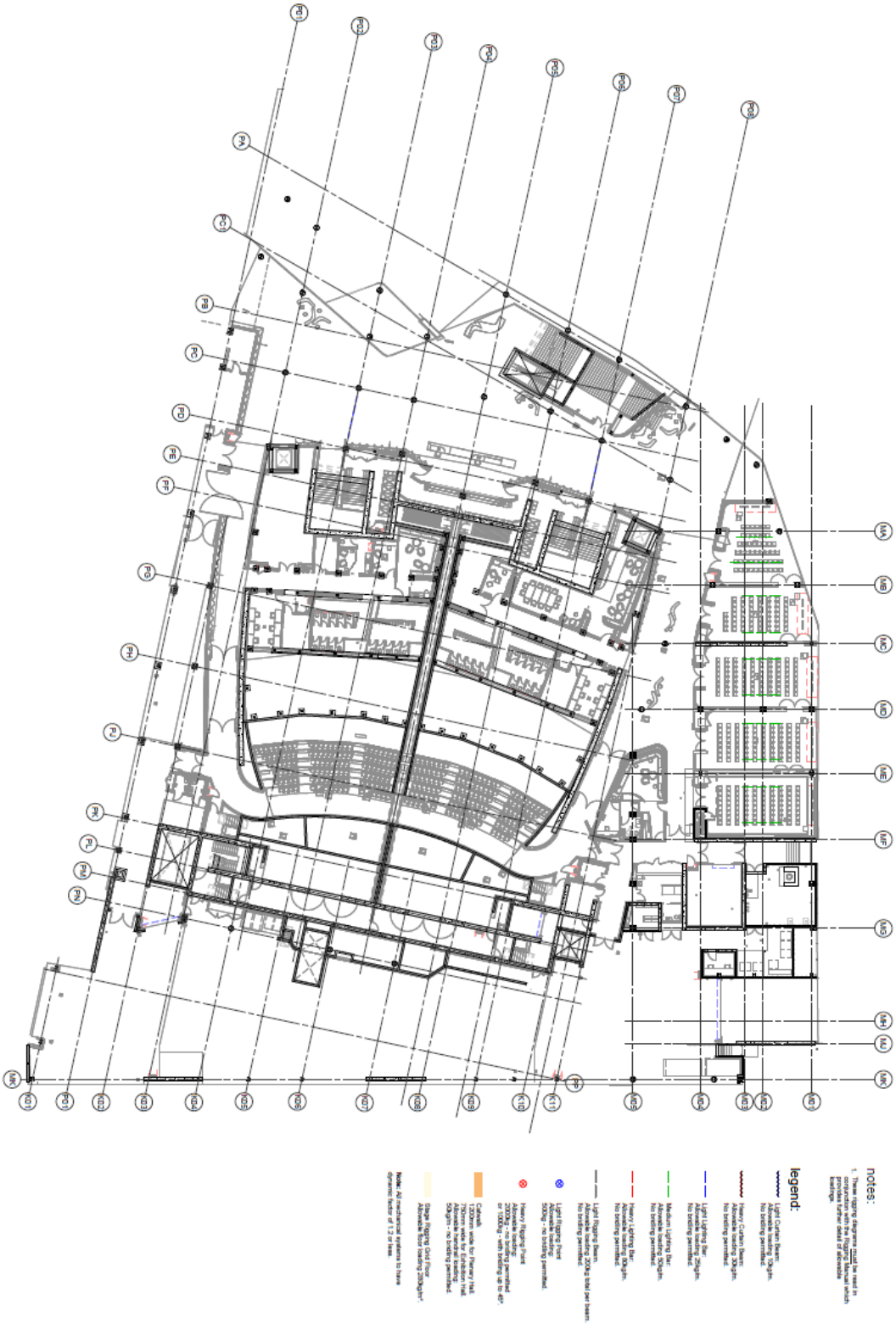
Dobson Rooms and Exhibition Hall Pre-Function Area



Banquet Halls and Exhibition Hall



Auditorium Pre-Function Area



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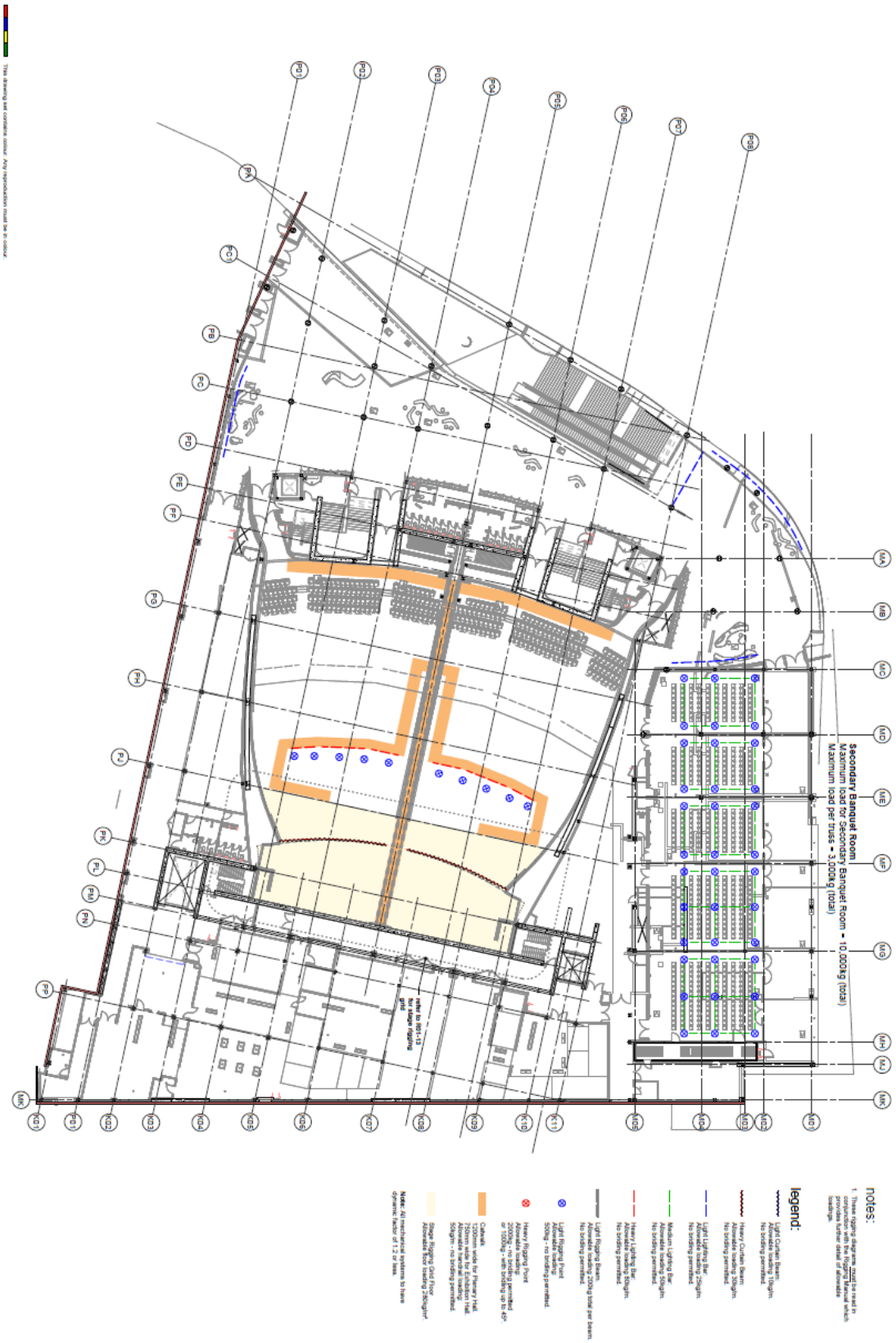
Auditorium


Secondary Banquet Room
Maximum load for Secondary Banquet Room = 10,000kg (total)
Maximum load per truss = 3,000kg (total)
legend:
notes:

Auditorium Stage House

notes:

1. These rigging diagrams must be read in conjunction with the Rigging Manual which provides further detail of allowable loadings.

legend:

- Light Curtain Beam: Allowable loading 10kg/m. No bridling permitted.
- Heavy Curtain Beam: Allowable loading 30kg/m. No bridling permitted.
- Light Lighting Bar: Allowable loading 20kg/m. No bridling permitted.
- Medium Lighting Bar: Allowable loading 30kg/m. No bridling permitted.
- Heavy Lighting Bar: Allowable loading 50kg/m. No bridling permitted.
- Light Rigging Beam: Allowable loading 200kg total per beam. No bridling permitted.
- Light Rigging Point: Allowable loading 500kg - no bridling permitted.
- Heavy Rigging Point: Allowable loading 2000kg - no bridling permitted or 1000kg - with bridling up to 45°.
- Catwalk: 1200mm wide for Plenary Hall, 750mm wide for Auditorium Hall. Allowable handrail loading 50kg/m - no bridling permitted.
- Stage Rigging Grid Floor: Allowable floor loading 2000kg/m².
- Fly Positions
- Chamber Beam: Allowable loading 500kg/m.
- Head Pulley Beam: Allowable loading 1250kg/m. (2500kg/m per pair)
- Head Beams
- Hoist Beam Type.

Type	Maximum Point Load	Maximum Total Load Per Beam
1	1500kg	3000kg
2	1500kg	3000kg
3	1000kg	2000kg

Note: All mechanical systems to have dynamic factor of 1.25 or less.