

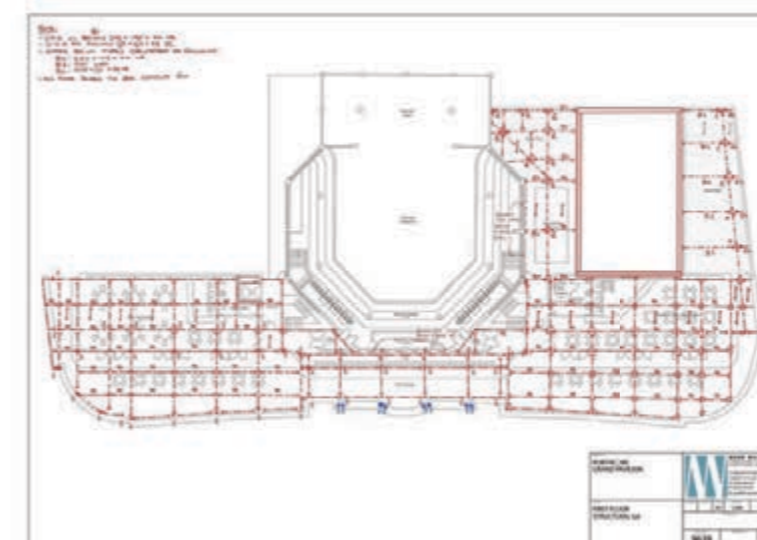
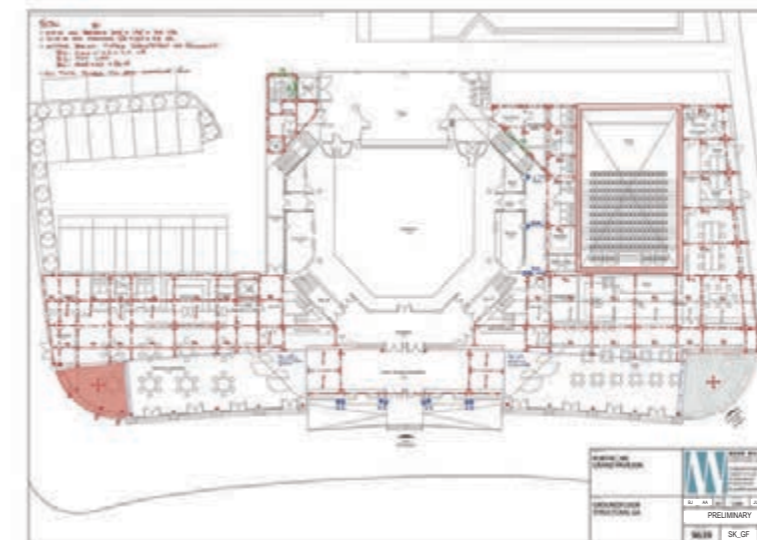
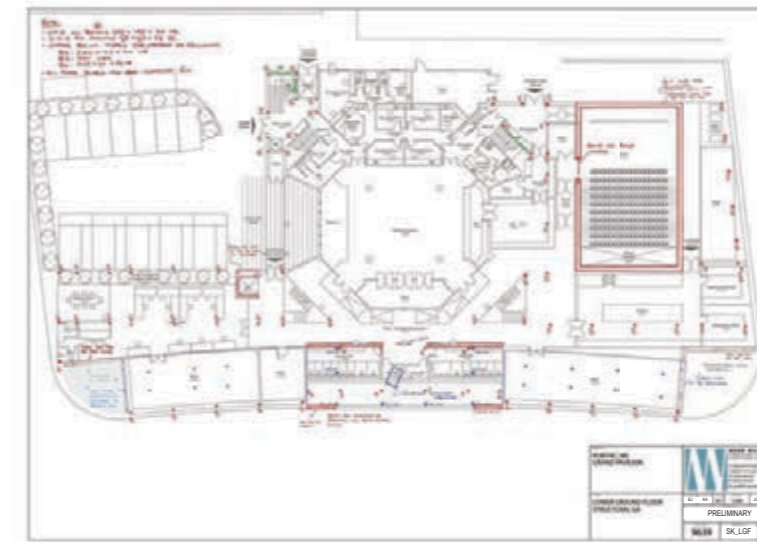
8.0 STRUCTURAL STRATEGY

8.1 STRUCTURAL PRINCIPLES & APPROACH

Mann Williams have developed a structural strategy based on the principle of retaining as much of the existing concrete construction and minimising demolition, both safeguarding existing fabric and saving on the significant embodied carbon already within the existing building.

As an overview, the strategy comprises piled raft foundations to the variable bedrock level beneath, with a primary steel frame entirely independent of the historic building. Diaphragm concrete floors combined with the walls of the lift shaft and studio theatre provide stability structures against the site's high wind loading.

Concrete block walls to the studio theatre provide acoustic mass to prevent noise break-out, whilst presenting an opportunity to specify blocks with high recycled content and low embodied carbon. Areas of existing concrete structure inherently necessary for demolition are to be re-used, as far as possible, as recycled aggregate for external works.



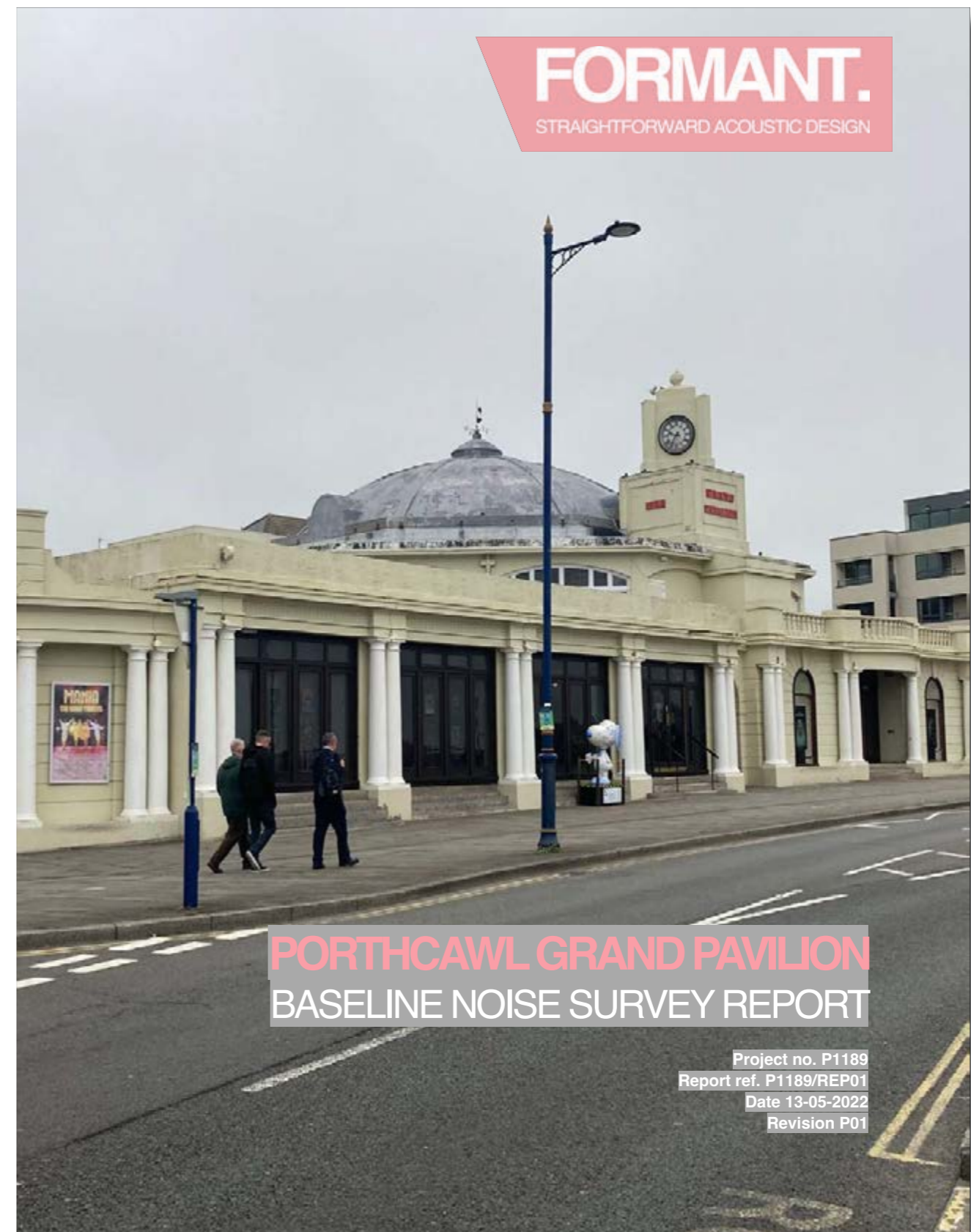
9.0 ACOUSTIC STRATEGY

9.1 ACOUSTIC PRINCIPLES

Formant have been appointed, as specialist acousticians, to develop an acoustic brief, prepare a baseline noise survey and advise on the specific acoustic requirements for internal room acoustics, including upgrading the performance of the existing auditorium and advising on the new studio theatre, as well as considering noise break-out in close proximity to residential accommodation.

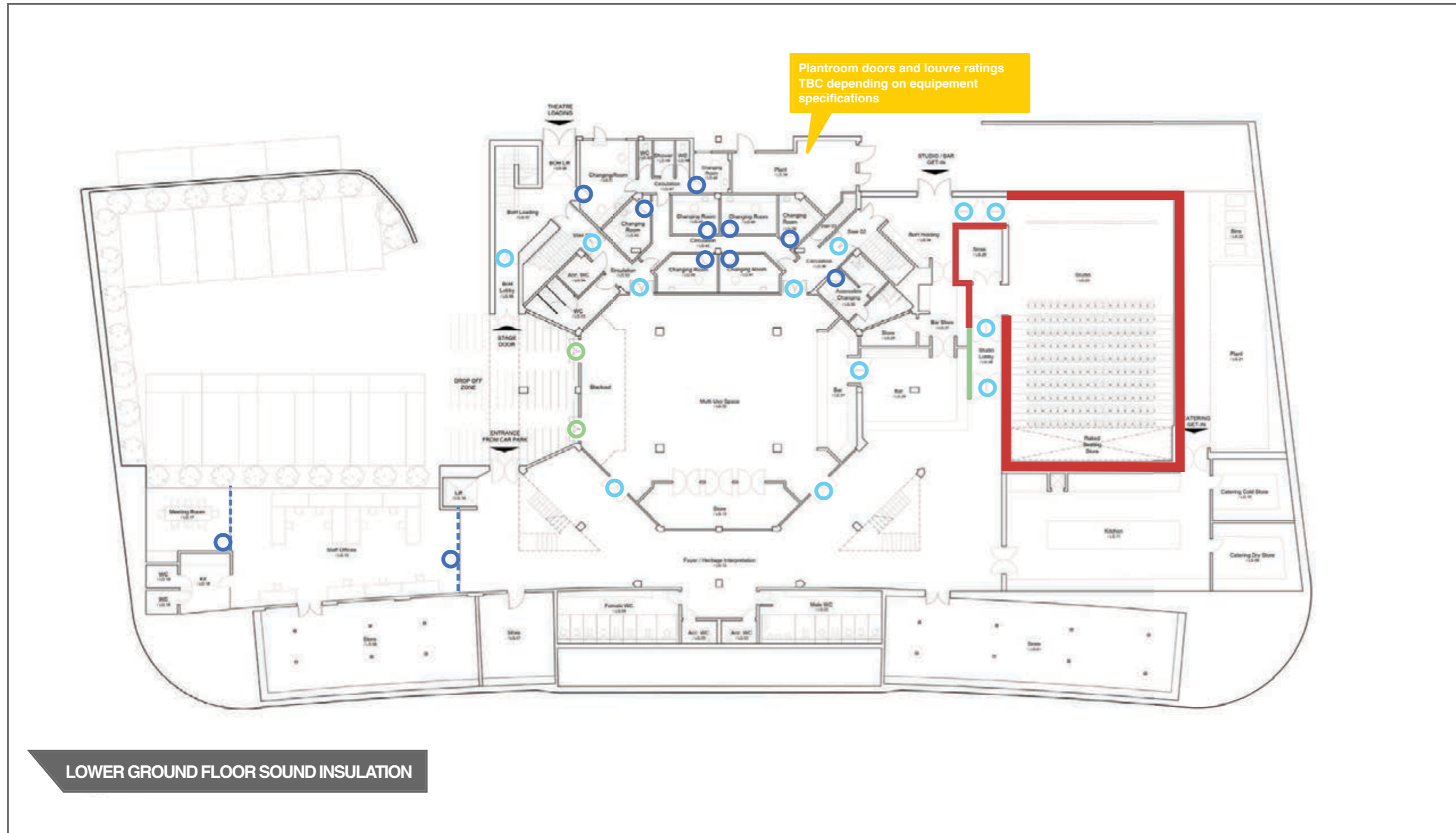
The following pages present the acoustic strategy for each space as coordinated with the developed proposal, considering room performance, protection from noise break-out and mitigating cross-contamination of noisy events to ensure sufficient operational flexibility.

For full reports and drawings, refer to appendices,



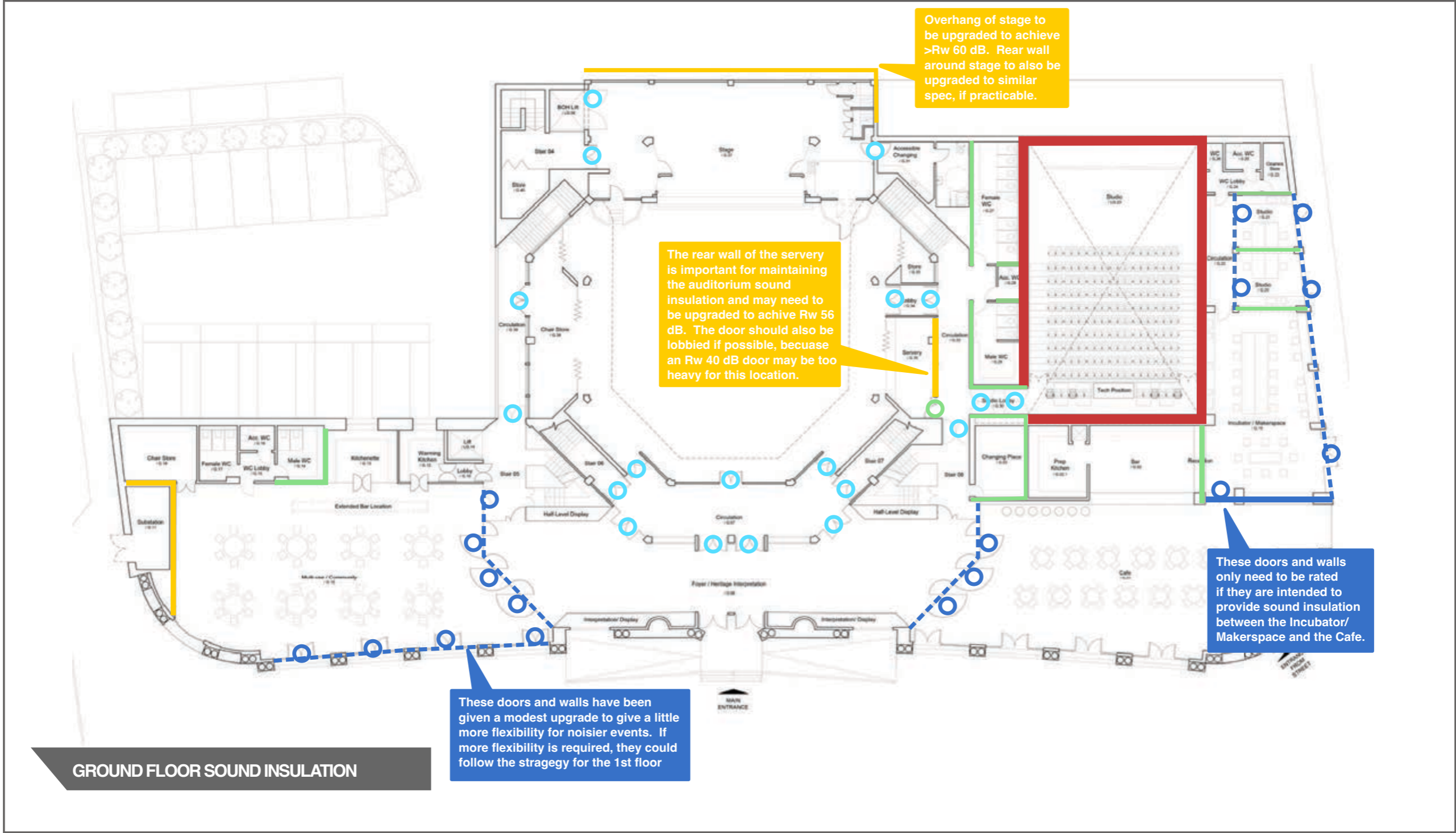
9.2 ACOUSTIC STRATEGY PLANS

PARTITIONS/BUILDING ENVELOPE	GLAZING	DOORS	NOTES:
Rw 40 dB	Rw 38 dB	Rw 30 dB	Un-marked partitions or other elements are either retained elements which we assume will not be changed as part of the refurbishment, or they do not require a minimum acoustic rating. * Low frequency performance is also critical for the auditorium walls, so the final specification may exceed Rw 67 dB.
Rw 45 dB	Rw 43 dB	Rw 35 dB	
Rw 50 dB	Upgrade to Rw 50+ dB	Rw 40 dB	
Rw 56 dB			
Rw 67 dB*			

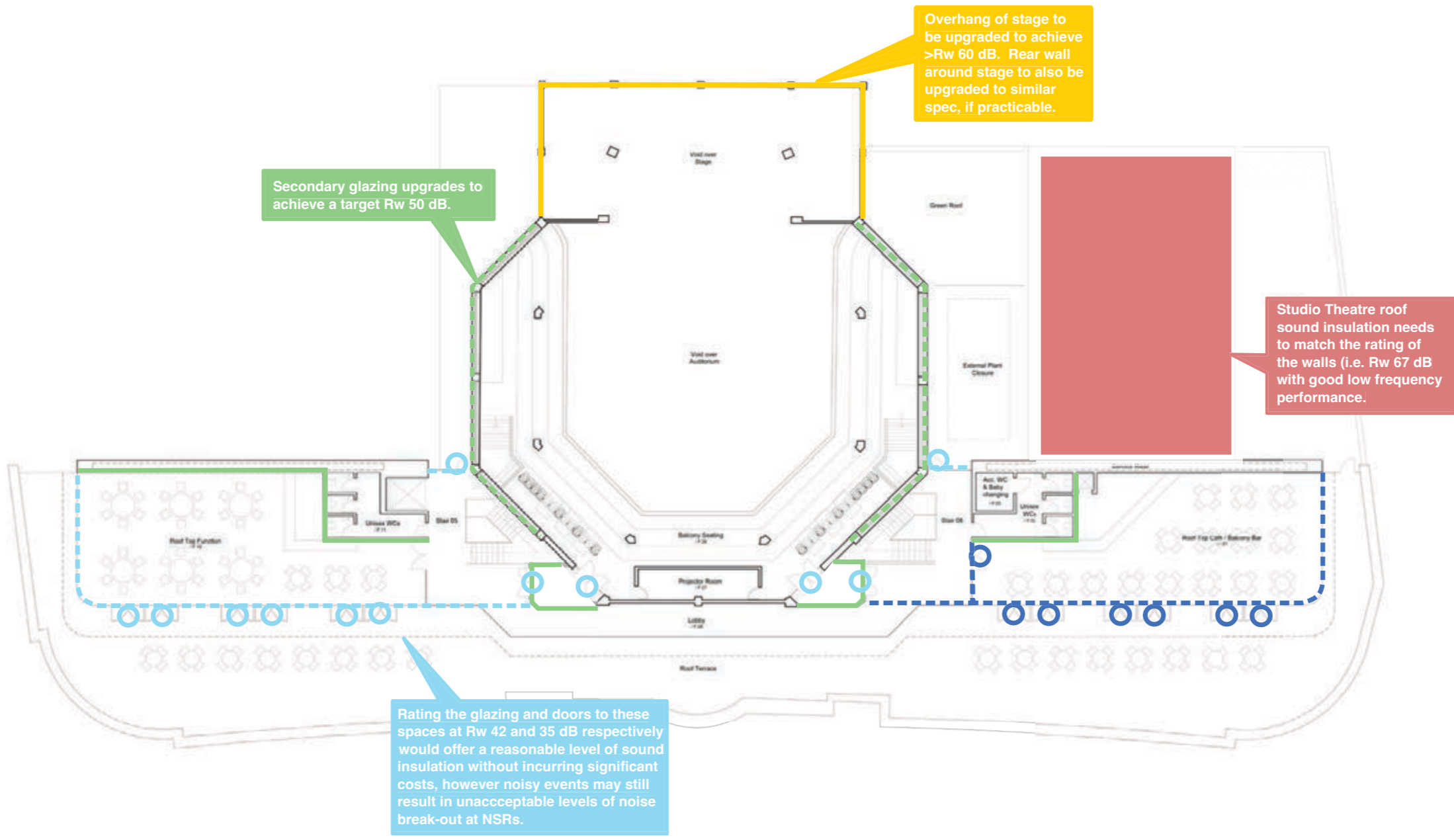


LOWER GROUND FLOOR SOUND INSULATION

PARTITIONS/BUILDING ENVELOPE	GLAZING	DOORS	NOTES:
Rw 40 dB	Rw 38 dB	Rw 30 dB	Un-marked partitions or other elements are either retained elements which we assume will not be changed as part of the refurbishment, or they do not require a minimum acoustic rating. * Low frequency performance is also critical for the auditorium walls, so the final specification may exceed Rw 67 dB.
Rw 45 dB	Rw 43 dB	Rw 35 dB	
Rw 50 dB	Upgrade to Rw 50+ dB	Rw 40 dB	
Rw 56 dB			
Rw 67 dB*			

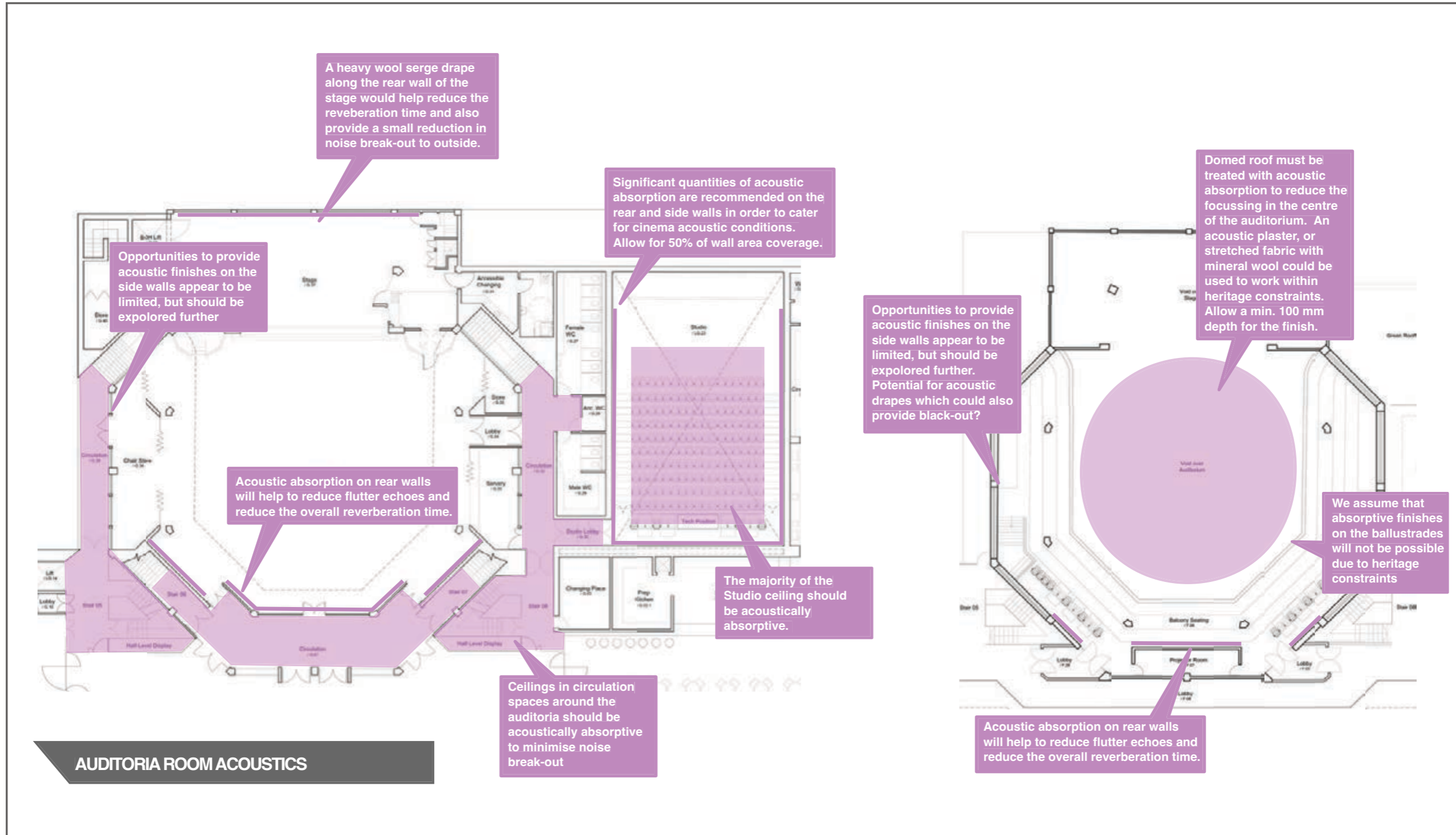


PARTITIONS/BUILDING ENVELOPE	GLAZING	DOORS	NOTES:
Rw 40 dB	Rw 38 dB	Rw 30 dB	Un-marked partitions or other elements are either retained elements which we assume will not be changed as part of the refurbishment, or they do not require a minimum acoustic rating. * Low frequency performance is also critical for the auditorium walls, so the final specification may exceed Rw 67 dB.
Rw 45 dB	Rw 43 dB	Rw 35 dB	
Rw 50 dB	Upgrade to Rw 50+ dB	Rw 40 dB	
Rw 56 dB			
Rw 67 dB*			



FIRST FLOOR SOUND INSULATION

PARTITIONS/BUILDING ENVELOPE	GLAZING	DOORS	NOTES:
Rw 40 dB	Rw 38 dB	Rw 30 dB	Un-marked partitions or other elements are either retained elements which we assume will not be changed as part of the refurbishment, or they do not require a minimum acoustic rating. * Low frequency performance is also critical for the auditorium walls, so the final specification may exceed Rw 67 dB.
Rw 45 dB	Rw 43 dB	Rw 35 dB	
Rw 50 dB	Upgrade to Rw 50+ dB	Rw 40 dB	
Rw 56 dB			
Rw 67 dB*			



AUDITORIA ROOM ACOUSTICS

10.0 CONCLUSIONS

10.1 PUBLIC BENEFITS

The delivery of the Grand Pavilion's redevelopment forms a critical part of the wider regeneration of Porthcawl. It's vision enables the beneficial repair of the Grand pavilion, to arrest its current decline, and provide a viable and sustainable future for its original use.

To do so necessarily requires a careful balance between the essential provision of new facilities commensurate with contemporary needs, without distracting from the character of the historic building. The proposals described within this report have therefore evolved from a detailed analysis of the building's significance, form and historic evolution, as set out in the accompanying Heritage Impact Assessment.

The proposals have been informed by an open and collaborative process of consultation that has involved regular meetings with Bridgend County Borough Council, Awen Cultural Trust, BCBC Conservation, CADW, the Theatre's Trust, C20 Cymru and community user groups. The consultations have been engaging and fruitful, and have contributed to the evolution of the scheme which achieves the following key benefits:

Financial Viability

These proposals have been developed in consultation with both the building owner (Bridgend County Borough Council) and Awen Cultural Trust, and experienced cultural and theatre operator, as necessary to ensure the long-term viability of the historic building.

Heritage Led Development

With an existing maintenance liability and continued exposure to the seafront climate, the Grand Pavilion is at risk of further decline. The proposals set out within this report will enable the repair of the building and provide an attractive facility for the benefit of a wide public audience, from both Porthcawl and the wider region. This will safeguard the building for future generations and encourage increased public engagement and appreciation of the heritage assets of Porthcawl.



10.2 QUALITY OF LIFE AND SENSE OF PLACE

As noted within this report, and the accompanying Heritage Impact Assessment, the delivery of the principles established in these proposals draw upon the social significance of the Grand Pavilion and its place within the town's industrial heritage to create a development that is distinctive, specific, and positively reinforces the identity of Porthcawl. By encouraging public access to spaces of community involvement, culture and the arts, the proposals encourage broad local interaction with heritage and benefit wellbeing and quality of life.

Traditional Building Materials

The repair and conversion of the Grand Pavilion will require the use of traditional building techniques and materials which will assist in sustaining and developing the local conservation skills base.

Employment Opportunities

In addition to the potential employment opportunities generated by the project's construction phase, by ensuring the development and long-term sustainability of the Grand Pavilion, the proposals offer the potential for increased employment within the catering, learning, and cultural sectors. Furthermore, by increasing the capacity and reach of the Grand Pavilion, the proposals will also strengthen the demand for local services.

To achieve these benefits unavoidably requires a level of intervention. However, as noted throughout this document, the design approach has been evolved from a knowledge and respect for the site and its history. The proposed interventions are therefore deferent, subservient, and resonant with the character of Porthcawl and the specific site context. Most importantly, though, the proposals also ensure not just the Grand Pavilion's continued use, but also its reinforcement as a symbol of the cultural energy and diversity of Porthcawl and the region.



APPENDICES

Architecture

239541-PUR-01-ZZ-DR-A-0070_PI_Planning - Site Sections
239541-PUR-01-B1-DR-A-0100_PI_Planning - Existing - GA Lower Ground Floor Plan
239541-PUR-01-00-DR-A-0101_PI_Planning - Existing - GA Ground Floor Plan
239541-PUR-01-RF-DR-A-0103_PI_Planning - Existing - GA Roof Plan
239541-PUR-01-ZZ-DR-A-0110_PI_Planning - Existing - North Elevation
239541-PUR-01-ZZ-DR-A-0111_PI_Planning - Existing - East Elevation
239541-PUR-01-ZZ-DR-A-0112_PI_Planning - Existing - South Elevation
239541-PUR-01-ZZ-DR-A-0113_PI_Planning - Existing - West Elevation
239541-PUR-01-ZZ-DR-A-0120_PI_Planning - Existing - GA Section A-A
239541-PUR-01-ZZ-DR-A-0121_PI_Planning - Existing - GA Section B-B
239541-PUR-01-ZZ-DR-A-0122_PI_Planning - Existing - GA Section C-C
239541-PUR-01-B1-DR-A-0130_PI_Planning - Demolition - Lower Ground Floor
239541-PUR-01-00-DR-A-0131_PI_Planning - Demolition - Ground Floor
239541-PUR-01-01-DR-A-0132_PI_Planning - Demolition - First Floor
239541-PUR-01-ZZ-DR-A-0140_PI_Planning - Demolition - North Elevation
239541-PUR-01-ZZ-DR-A-0141_PI_Planning - Demolition - East Elevation
239541-PUR-01-ZZ-DR-A-0142_PI_Planning - Demolition - South Elevation
239541-PUR-01-ZZ-DR-A-0143_PI_Planning - Demolition - West Elevation
239541-PUR-01-RF-DR-A-0050_PI_Planning - Site Location Plan
239541-PUR-01-ZZ-DR-A-0211_PI_Planning - Proposed - East Elevation
239541-PUR-01-ZZ-DR-A-0210_PI_Planning - Proposed - North Elevation
239541-PUR-01-ZZ-DR-A-0212_PI_Planning - Proposed - South Elevation
239541-PUR-01-ZZ-DR-A-0213_PI_Planning - Proposed - West Elevation
239541-PUR-01-RF-DR-A-0203_PI_Planning - Proposed - GA Roof Plan
239541-PUR-01-B1-DR-A-0200_PI_Planning - Proposed - GA Lower Ground Floor
239541-PUR-01-00-DR-A-0201_PI_Planning - Proposed - GA Ground Floor
239541-PUR-01-01-DR-A-0202_PI_Planning - Proposed - GA First Floor
239541-PUR-01-01-DR-A-0102_PI_Planning - Existing - GA First Floor Plan
239541-PUR-01-ZZ-DR-A-0220_PI_Planning - Proposed - GA Section A-A
239541-PUR-01-ZZ-DR-A-0221_PI_Planning - Proposed - GA Section B-B
239541-PUR-01-ZZ-DR-A-0222_PI_Planning - Proposed - GA Section C-C
239541-PUR-01-ZZ-DR-A-0223_PI_Planning - Proposed - GA Section D-D
239541-PUR-01-ZZ-DR-A-0224_PI_Planning - Proposed - GA Section E-E

Heritage

PorthcawlGrandPavilion_HIA_02Aug23

Acoustics

Porthcawl Grand Pavilion Stage 2 Acoustic Markup
REPO1 Porthcawl Grand Pavilion - Baseline Noise Survey Report

Ecology

P2296 Grand Pavilion Preliminary Roost Assessment (Acer Ecology)

