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By email
26 February 2025

City of Parramatta Council

Your ref Riverside Theatres
Our ref 296335-00
File ref \\global\australasia\SYD\Projects\296000\296335-00 Riverside Theatre SSD\Work\Internal\5_Work\Fire Engineering\CO-Correspondence

Dear Sir/Madam

Riverside Theatres

SSDA Letter – Fire Safety Engineering

Introduction

Arup is providing fire safety engineering consultancy services on the Riverside Theatres redevelopment project. The project is currently progressing through the Detailed Design (DD) stage. A fire safety strategy is being developed in collaboration with the wider project team.

This letter has been prepared by Arup for City of Parramatta Council (CoPC). It should be read alongside the BCA Report (produced by DC Partnership (DCP)) and the other SSDA documentation for the project, which provides further context. This letter summarises the fire safety upgrade strategy in support of the State Significant Development Application (SSDA) for the redevelopment of Riverside Theatres at 351-353 Church Street, Parramatta.

The Riverside Theatres redevelopment project is development for the purposes of an entertainment facility with an estimated development cost of more than $30 million. It is state significant development in accordance with Schedule 1, Clause 13 of the State Environmental Planning Policy (Planning Systems) 2021. The development is considered state significant as the proposed works are estimated to have a development cost exceeding $30 million.

Site Description

Riverside Theatres is situated upon the lands of the Dharug people. It is located within the City of Parramatta Council Local Government Area within Sydney's Central River City (refer to Figure 1).

The site comprises Lots 1 and 2 DP 740382. The site contains the existing Riverside Theatres, originally constructed in 1988 and modified since. The site also contains a small at-grade car park to the west adjacent to Marsden Street and accessed from Market Street.

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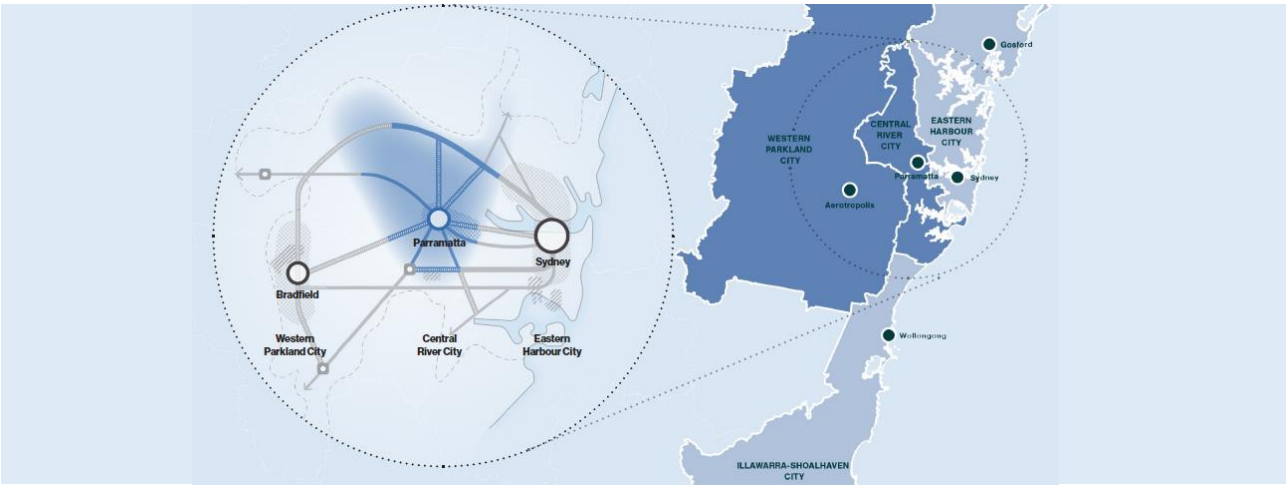

Figure 1: Context plan.

The site is bordered by Church Street in the east, the Parramatta River in the south, Marsden Street to the west and Market Street to the north (refer to Figure 2).

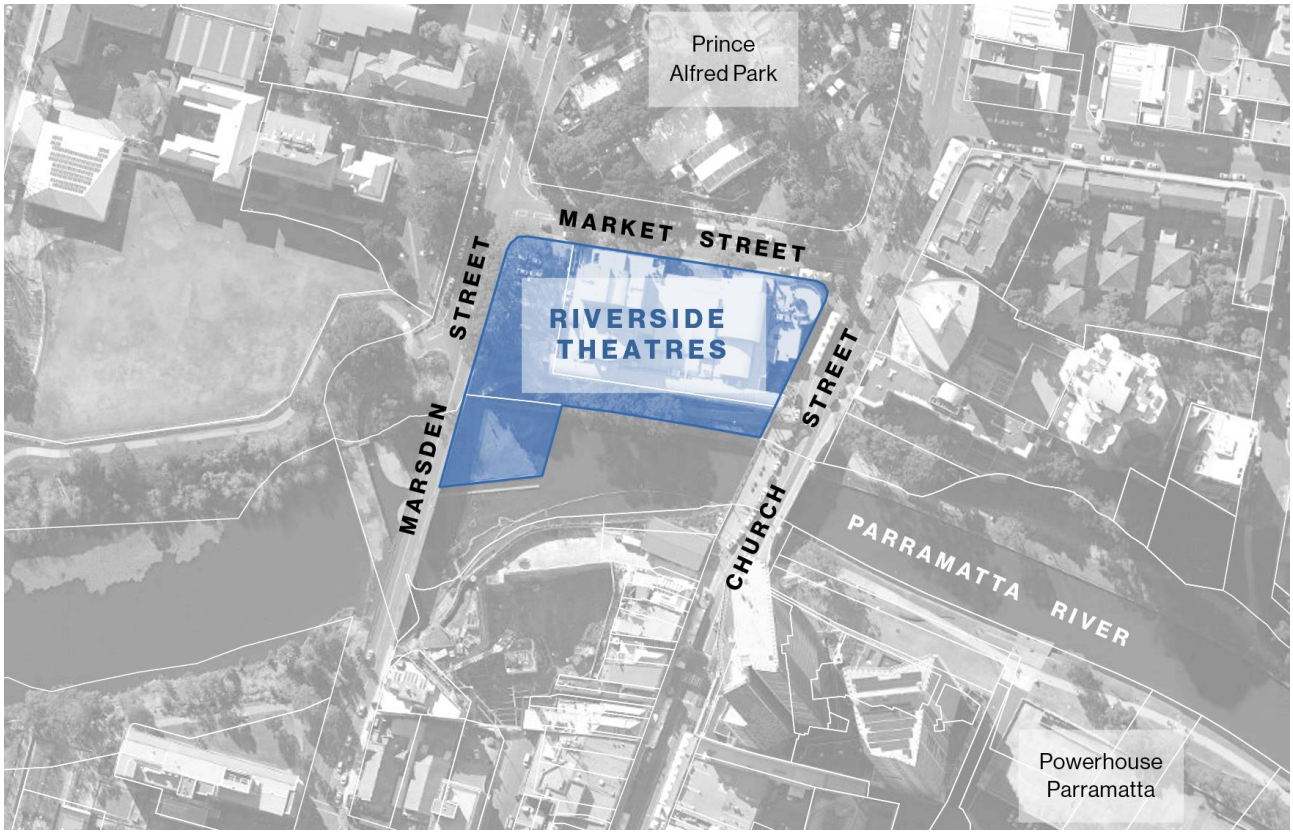

Figure 2: Riverside Theatres redevelopment site boundary.

Overview of Proposed Development

This SSDA seeks consent for the design, construction and operation of the redeveloped Riverside Theatres. Specifically, approval is sought for the following:

- Site preparation works, including site services and infrastructure works, earthworks and the erection of site protection hoardings and fencing.
- Retention of the existing 761-seat Playhouse Theatre and demolition of all remaining buildings on the site.
- Construction of new front of house foyer spaces including:
  - New public entries facing Parramatta River and Church Street;
  - Food and beverage 'theatre' bars;
  - Arrival and gathering space;
  - Function spaces; and
  - Amenities.
- Construction of new theatre spaces including:
  - A 1,500 seat Lyric Theatre;
  - A 324 seat Studio Theatre with retractable seating; and
  - A 100 seat Cinema/Rehearsal space with dedicated entry from the public domain.
- Refurbishment of interiors to the 761 seat Drama (Riverside) Theatre.
- Construction of a new loading dock with access from Market Street.
- Construction of back of house spaces including:
  - Staff offices and amenities;
  - Central kitchen;
  - Dressing rooms;
  - Technical production spaces; and
  - Storage, cleaning and support spaces.
- Landscaping and public domain works including:
  - A new landscape between Riverside Theatres and the river foreshore;
  - An enhanced upper level pedestrian connection between Church and Marsden Streets;
  - An enhanced landscape treatment to the Marsden street interface;
  - A new lower level pedestrian and cycle connection connecting to existing paths east and west; and
  - A riverfront café integrated within the landscape terraces.

Full details of the proposed development are set out in the Architectural Drawings and Landscape and Public Domain Drawings accompanying the DA.

Assessment Requirements

The Department of Planning, Housing and Infrastructure (DPHI) has issued Secretary's Environmental Assessment Requirements (SEARs) to the applicant for the preparation of an Environmental Impact Statement (EIS) for the proposed development. This report has been prepared having regard to the SEARs for the provision of a Fire Engineering Report.

Fire Safety Upgrade Strategy

Comply with the NCC wherever feasible

The proposed redevelopment of Riverside Theatres is a part-reuse and part-new build scheme comprising of approximately 16,600 m^2 of gross floor area. The vast majority is new-build.

The fire safety design of the development will generally satisfy the Performance Requirements of the Building Code of Australia (BCA) by complying with the Deemed-to-Satisfy (DtS) Provisions. There are also some aspects of the design that will be developed using performance-based fire engineering to achieve compliance with the Performance Requirements of the BCA. The fire engineering design adopted will develop Performance Solutions to demonstrate compliance with Performance Requirements of the BCA. The project will therefore proceed through Fire and Rescue New South Wales (FRNSW)'s FEBQ (PBDB) process. The intent is that the appointed contractor will finalise the FEBQ and develop the FER.

Summary of potential Performance Solutions

Some of the departures from the DtS provisions, which are proposed to be addressed via fire engineered Performance Solutions, are outlined below:

- **Fire resistance levels and compartmentation:** The building is proposed to have construction elements with a Fire Resistance Level (FRL) generally in accordance with the DtS Provisions of the BCA, however there are structural steel elements within the fly tower of the Lyric Theatre which have the potential to have a reduced FRL and that are not masonry or concrete encased. The Lower Ground retail space will also have a rationalised FRL. Some back of house compartmentation will be rationalised to enhance functionality. Each theatre space will be its own fire compartment to minimise risk of fire spread and to facilitate a phased evacuation strategy. Performance Solutions will be developed to omit use of full height fire safety curtains to the theatres.
- **Egress:** The egress design for the development will be performance-based to meet both functional requirements for general use and the Performance Requirements of the BCA for safe egress for all occupants.
- **Smoke control:** The design for smoke control will be performance-based to enable safe egress of all occupants and acceptable conditions for fire fighters. The building will be sprinkler-protected throughout to minimise fire and smoke development.

Partial conformity approach for the existing Playhouse Theatre's secondary structure

The existing structure of the Playhouse Theatre is proposed to be retained. As described in Mott MacDonald's *NCC Compliance Approach – Structure (RevA)* dated *11 November 2024* this structure was designed in the mid-1980s, with construction completed in the late 1980s. Due to the change in structural design codes, there are various aspects of the existing structural design which could not be certified as compliant with the current NCC 2022.

The Playhouse Theatre structure is predominantly concrete, with the exception of the auditorium roof which is a steel truss system. The structural codes changed in 1988 to include requirements for

seismic loads / earthquake actions before they were subsequently rewritten in the early 1990s after the 1989 Newcastle earthquake. The seismic load case often became the governing lateral load case.

It is not currently known whether the existing structure in the Playhouse Theatre achieves a Fire Resistance Level (FRL), i.e., compliance with the DtS FRL requirements of the current NCC is unknown.

Mott MacDonald's *NCC Compliance Approach* raises that the existing concrete and steel structure within the Playhouse Theatre may not achieve FRL compliance. This will be confirmed in subsequent project stages. It is proposed that the following approach is followed for the existing concrete and steel structure within the Playhouse Theatre:

- Primary structure is to achieve an FRL in line with the DtS provisions of the BCA (i.e., 120-minutes). This will require remedial work if the existing condition is insufficient.
- For the secondary structure:
    - If the secondary structure achieves the DtS FRL; the below does not apply.
    - If the secondary structure is found to not achieve the DtS FRL;
        - So long as the loading on this structure is no greater than the current as-built scenario, a dispensation is being sought for partial conformity to the BCA such that no remedial works or Performance Solution is deemed necessary.
        - If the loading on this secondary structure increases, either the DtS FRLs shall be achieved through remedial works, or additional structural and fire engineering assessment will be needed to support a rationalised FRL through a Performance Solution.

Conclusion

Within this letter, specific attention has been given to the fire safety design items that impact upon planning and hence SSDA issues for the building. At this stage of the design, other fire safety aspects of the building appear to be in accordance with the DtS provisions of the BCA. It is anticipated that additional departures from the DtS Provisions of the BCA may arise as the design develops; however, it is not expected that they would affect the building layout, hence they would not impact the approval of the State Significant Development Application.

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Yours sincerely

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