Federation Square Lighting

Stage 2 Lighting Concepts

APRIL 2024

ARUP

Masterplan Re-Cap

VISION:
"The lighting design will help activate the wider Precinct to be a place for community, a hub for culture and events and celebrate the unique architecture *after dark*."

Light plays an important role in creating a positive and safe experience for people in the urban environment after dark. Arup was commissioned in November 2019 to create a lighting masterplan for the site, to guide the night time environment for the next 20 years. The lighting masterplan aims to provide the foundation of holistic night time vision for Federation Square where light and darkness is well balanced to meet functional and aesthetic requirements.

The masterplan is intended to illustrate an integrated approach to the lighting treatment of various areas and elements of the Precinct and to provide a basis for both design guidance and technical reference for future lighting design interventions. The masterplan was developed and authored thorough analysis via site surveys, and client and stakeholder consultations. It explains good night time design principles and develops an informed lighting strategy.

This document makes recommendations of future design implementation criteria and provides some technical background information. Areas of implementation staging are identified with their level of importance and practicality. These suggestions are prepared post completion of Stage 1 lighting implementation which encompasses the Main Plaza facades, Atrium building, The Edge and connecting elements such as stairs leading into precinct.

It is recommended that this document is read in conjunction with the lighting masterplan to fully understand its intentions and justification of decisions.

Response to the lighting masterplan:

The external lighting plays a key role in establishing the identity and experience of the proposed development. This section presents the external lighting strategy for the proposed development and sets out the design strategy, parameters and standards specific to the exterior lighting design. The quality of experience is as important 'after dark' as it is during the daylight hours. This is particularly the case in the winter months or in areas where there is a low surrounding ambient light level.

After dark, exterior lighting will reveal the prominent structures and pathways, creating an exciting and safe environment. The approach to the lighting design for the proposed development focuses on the quality of the overall experience not only for users of the site but also for visitors. It is also relevant to views obtained of the site from a distance, and views outside from inside the buildings of the site.

The lighting design achieves a careful integration of light with the various streetscape, landscape and architectural features comprising the proposed development:

- To create a safe, secure and accessible environment for visitors and staff
- To create a highly sustainable design through the use of sustainable technologies such as high performance LEDs and appropriate lighting control systems.
- Creating an appropriate ambience and mood and providing a dynamic and pleasing image.
- Promoting legibility through the illumination of major features including landmarks, edges, nodes, paths, gateways and the enhancement of key vistas.
- Contributing to the high quality design and history of the scheme.

Scope Areas

- South Façade of NGV, Terrace at South of NGV and Pathway from NGV to Carpark – above area and covered area underneath.
- NGV East façade and Russel street Extension
- Transport hotel building

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Atrium to Carpark

Masterplan Design guide:

- Facade lighting creates a sense of boundary, reveals the heritage identity and contributes to the overall illumination of space by reflected light.
- Light integrated into seating blocks creates comfortable and inviting space to dwell as well as contributing to sense of direction
- Internal glow of Deakin Edge building provides a vista and a direction towards entry to the building
- Functional lighting to be of low glare and directional where required

Lighting approach:

1. Reuse existing façade lighting brackets to uplight heritage fabric. Use highly precise and effective light optics
2. Integrate handrail lights at level change to provide functional illumination and guide guests through the space
3. Light built into balustrade along the edge of pathway to create a clearly defined boundary, soft light at human scale with option for colour variation when events take place. Visual connecting element between carpark and Edge
4. Use existing light pole locations to mount spotlights for façade illumination. Disconnect existing lights built into poles to reduce strong glare and high light contrast.
5. Pathway received indirect reflected light from façade and edge light to create a soft ambient feel. No need for direct downlights.

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Atrium to Carpark

Masterplan Design guide:

- Maintain good vertical illumination from the glowing art wall.
- Reduce the glare and brightness of downlights. Create rhythm to guide users through the space.

Lighting approach:

1. Remove strong batten lights creating harsh contrast to the rest of the areas being lit at lower levels. Use linear uplights behind the mesh to uplight the ceiling, create a continuous soft light with option of dynamic colour change
2. Use compact can downligts to create pools of light and cast light onto wall to bring light to vertical surface and create visual boundary
3. Existing light boxes provide soft ambient light. Future opportunity for dynamic art display, shadow play and colour change. Not part of current project.

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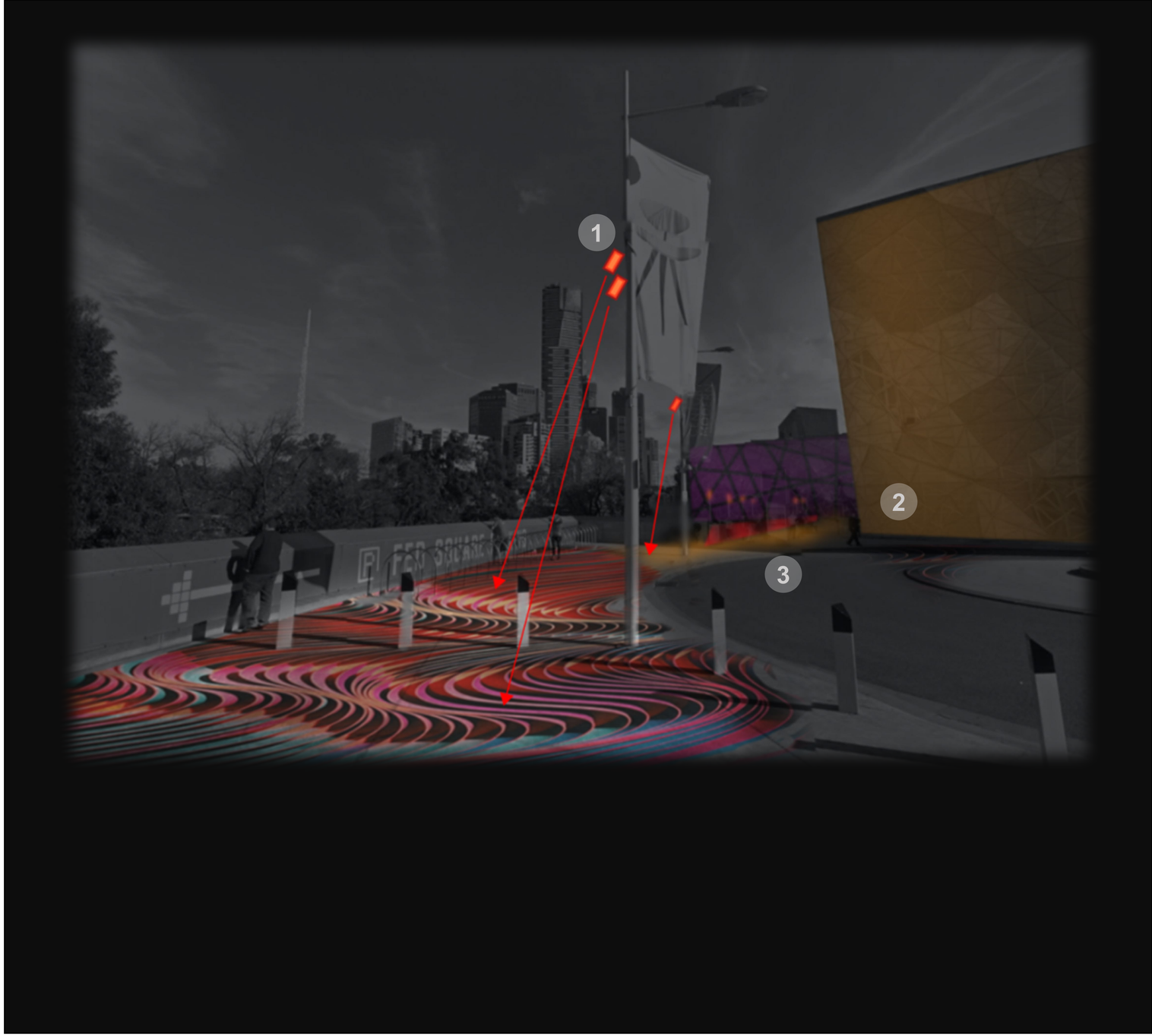
Atrium to Carpark

Lighting approach:

1. Create a link all the way to carpark entry via gobo projections on the pathway. Links into balustrade lighting further down leading into Edge and NGV entry. Use existing gobo projectors mounted on street pole lights.
2. Façade uplighting from existing lighting locations
3. In distance soft light along balustrade guiding further towards entry. Colour coding as an opportunity to create a link to the event program.



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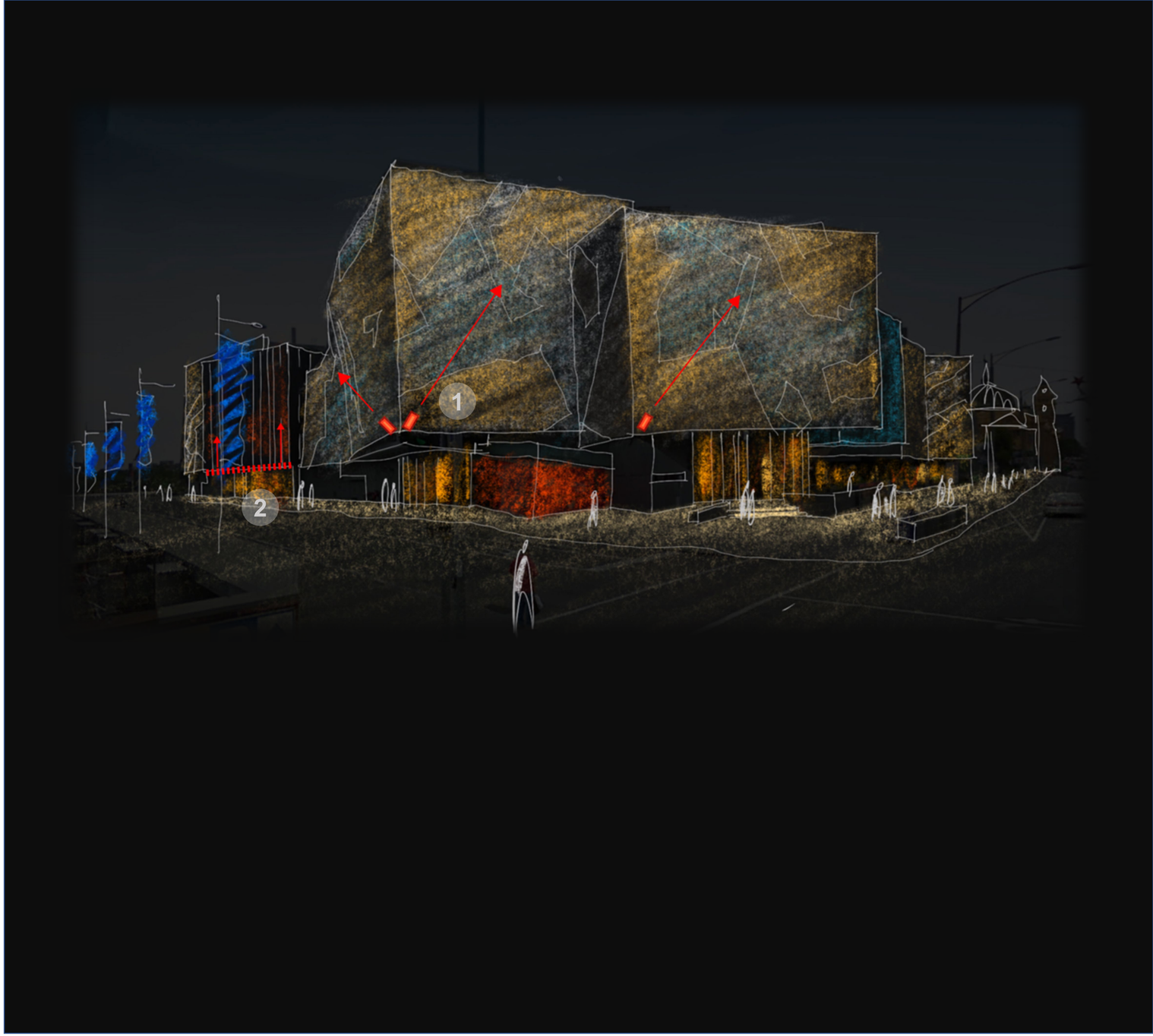
NGV building

Masterplan Design guide:

- Front lighting revealing the façade fabric across the majority of the Precinct perimeter. Visible from afar and creates a memorable image of the place.
- Discreetly integrated light elements between the glazing and outer metal panels for the NGV entry will create a contrasting visual effect to the rest of the façade.
- Perimeter lighting under the canopy provides functional light layer for the movement along the pathways but do not overpower the perception of façade lighting
- Tall lighting columns along the street form a boundary and provide functional illumination, using standard CoM approved streetlights. Customised pole design and integrated luminous elements guide the visitors into the Precinct and revitalise Russell St.
- Integrated lighting into awnings creates a sense of boundary, contributes to pathway lighting and invites to explore the interior spaces of each tenancy.

Lighting approach:

1. Replacement of existing façade lights to LED luminaires with defined optics for good coverage of the façade front
2. Backlighting to Crossbar building elements at the back entry to NGV to align the lighting effect with the rest of the complex and to provide better readability of perforated mesh.



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Transport Hotel

Masterplan Design guide:

- Illuminated Transport Hotel becomes a Landmark for the Precinct seen from strategic city location points and a guiding element marking entry into Green line

- Discreetly integrated light elements between the glazing and outer metal panels result in layering effect created by the existing façade. It reinforces the geometric pattern of the building while sitting as a background to the architectural character of the space. It shall work in harmony with the interior lighting. Light colour shown on the image is indicative only and subject to programming for various occasions

Lighting approach:

1. Floodlights to light front of façade located on new outreach arms at the corners of the building façade mesh.
2. Perimeter linear up-lights behind the mesh to create a back glow similar to Crossbar building approach.

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