CRONE ARCHITECTS
KENGO KUMA AND ASSOCIATES

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10th March 2017

ASHLEIGH RYAN
LEVEL 23, DARLING PARK TOWER 2,
201 SUSSEX STREET
SYDNEY, NSW 2000, AUSTRALIA

Project: **Wanda Sydney Project – Wanda Vista, Sydney (Tower B)**
1 Alfred Street, Sydney

Reference: **D/2016/1529 City of Sydney Assessment Response 24.02.2017**

Dear Ashleigh,

On behalf of the combined Kengo Kuma and Associates and Crone team, we would like to respond to council's concerns as detailed in the letter received 24th February. Please refer below in conjunction with updated drawings and revised material samples board.

Materials

Sandstone

Kengo Kuma and Associates and Crone Architects with the assistance of ARUP Facades have researched various options in the last 6 months for the hotel tower façade. These investigations have included but were not limited to, Glass Fibre Reinforced Concrete, Terracotta, Limestone and Granite. The basis of this research was to determine the most appropriate material to clad the tower.

A Sydney sandstone building has always been Kengo Kuma and Crones vision, and Piles Creek Cream sandstone from Gosford Quarries was the nominated sandstone at ground. Due to the softness of Sydney sandstone, stone twice the thickness, hence twice the quantity of stone is required than if it was another stone or another cladding material. Kengo Kuma and Crone would not consider the use of sandstone for the entire tower as it is an inefficient use of material for a resource in limited supply. We have responded to council comments by extending the use of sandstone up portions of the podium façade, strategically placed to key in to the alternative material. No alternative material will ever match Sydney sandstone due to the character of the material and its process of oxidization over time. Our focus was to select a material that achieved the closest colour and textural harmony with the selected material, while still ensuring a suitable longevity for the facade.

GFRC can be described as 'Normal' concrete reinforced with glass fibres. It is composed of a cement: sand (typically 1:1) matrix with 2-5% volume of glass fibres added. It has been used since the early 1970s in the form of cladding panels, common in the City of Sydney . It has good durability over 30+ years. As with any product poor detailing without due consideration for high thermal expansion rates have historically caused issues of failure and porosity on some project, these issues are resolved through good detailing and appropriate product specification and are not directly related to the material itself.

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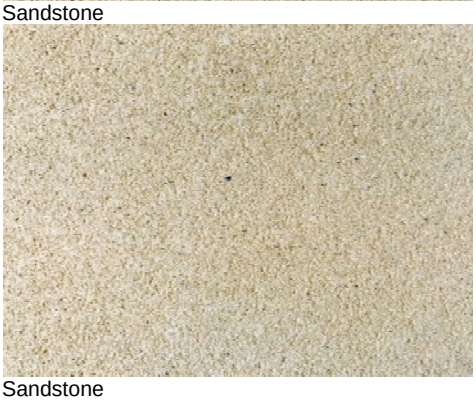
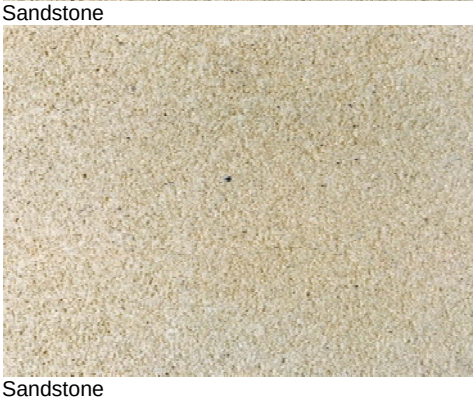
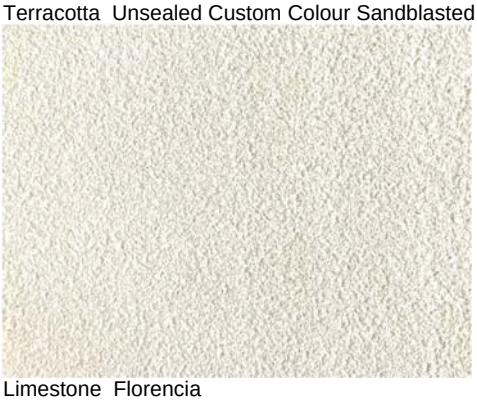
Sandstone


GFRC Custom texture and colour


Sandstone


Terracotta Unsealed Custom Colour Sandblasted


Sandstone


Limestone Florencia

As GFRC is sand based it enables the best match to sandstones natural granular texture, and colour. The colour match will be to a sandstone that has passed a 3 month oxidization period. This will enable a colour match to the stones likely final colouration, as oxidation pass this point is less significant. This approach gives the design team the confidence that the colour and texture of the GFRC will match the sandstone. Investigations into granite indicated that there were no products that were able to achieve a reasonable colour or textural match, as such this product has been rejected by the design team. Limestone forencia sandblasted is the best match to piles creek cream in a natural stone, but is a lighter less yellow tone. Terracotta unsealed and custom coloured can achieve a close colour match, but even with a sandblasted finish reads flat with little variation.

Kengo Kuma and Associates and Crone Architects are supportive of GFRC as it achieves the closest material match in a suitably durable product and system.

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Glazing

We note council concerns regarding reflectivity, and to respond to council concerns KKAA & Crone propose the Visualite 65S-0, with a reflectivity of 12%. With regard to glass tint we wish to advise that Visualite 65S-0 has a VLT of 64%, and a high level of clarity with no body tint, and a slight yellow grey tone as a result of the performance coat. This clarity is supported and any subtle tones in the performance coat sit comfortably with the buildings overall colouration.

Proposed Tower B Glazing	Visualite 65S-0
VLT Visual Light Transmittance	64%
Rv(ext) External reflectivity	12%
SHGC Solar Heat Gain Coefficient	0.28
U-Value	1.65

Refer materials sample board.

Miscellaneous Design Issues

Ground Level Retail

The retail facade has undergone development based on council feedback and based on service constraints and realized structural oportunities. The proposal repositions structure to align with the above pixel setout. These structural columns are proposed to be clad sandstone, within the tenancy and externally. These sandstone columns help to define both the pixel and the rhythm of structure. The longevity of these sandstone elements will be maintained over time, while the 3 part infill of glass and charcoal grey aluminium blades can adjust to suit changing retail needs. As with the retail entry doors, the northern hotel lobby entry doors are recessed the same 1200mm aiding in defining entry and exposing sandstone externally. These strategies in combination asisit in giving order into the façade, and use sandstone to give that order. Retail 5 and the associated fire stairs are adjusted slightly to achieve the necessary 3.8m basement clearance heights. Retail 6 is proposed as a trifold façade to maximize retail activation.

Canopy and Lobby Entry

The lobby entry and the canopy must be considered as a composition. With the deletion of the sandstone from the canopy, Kengo Kuma and Crone concur with councils assessment that the lobby glass should extend the full length of the lobby, this will help council achive its desire for a contiguous open appearance of the lobby entry. In relation to sandstone behind the glass line of the lobby this will not be addressed here, but will form part of a sperate response.

Window Openings

The incorporation of a window in the façade of each hotel room provides guests the opportunity for fresh air and a sense of connection to the external. An awning window was proposed from a weather and safety perspective. Larger panel openings in private hotel rooms would not be supported by our client due to risk in high wind scenarios and the risks to finishes in the hotel rooms themselves.

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The architecture of the Wanda Sydney Project Tower B is crisp at its top and features greater levels of animation as the tower extends down and out to the podium floors, additional animation should not be the driver for operability. As the top of tower bar on level 24 and the level 25 roof terrace feature external areas open to the sky, it is not considered necessary for further fresh air or sense of openness to be provided. We concur that there exists greater opportunity for operability at the podium levels. The addition of larger operable awning windows have been incorporated into the façade in the podium levels, including the pool, spa ballroom, VIP banquet, and specialty restaurant. These areas have been selected as they are directly above terraced zones, removing any risk of fall of materials. Due to intake and exhaust locations, some restrictions exist on opportunities for window openings above these terraces.

We underscore that the current design is conceptually and qualitatively consistent with that of the original competition design, to the best of our capacity, and thank you for your ongoing consideration.

Yours faithfully,

Crone Partners Pty Ltd & Kengo Kuma and Associates