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**ARUP** 

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3 November 2014

Dear Kevin

Crown Hotel - Barangaroo, Sydney

This letter records the expected reduction in car park ventilation for the Crown Hotel project proposed to be reflected in BASIX certification for the project, following discussions between the Department of Planning and Arup.

## **Background**

Background to the proposal is that the car park ventilation will be designed through an engineered approach which will result in reduced air flows compared to Deemed to satisfy code complaint solution. This reduction in car park ventilation would perform more efficiently than the systems prescribed in Basix.

As discussed and recorded in minutes for the meeting conducted on the 5<sup>th</sup> of February, 2014 between the Department of Planning and Infrastructure, Crown and Arup the following approach has been agreed:

"Car park ventilation design will be based on an engineered approach to reduce air flows. This will go beyond what is allowed in Basix. Arup to provide calculations to demonstrate air flow reduction against the code complaint solution. Department of Planning to include algorithm to account for benefit in Basix. It was discussed that this could be done via a percentage reduction in car park number proportional to flow reduction".

A final CFD modelling is to be undertaken in the following design stages. It is anticipated that the reduction in air flow required for the car park will exceed 50%. Even though modelling has not yet been completed, the design team can confirm that as a minimum the car park ventilation design will achieve a minimum reduction of 50% compared to the DTS solution. As a result, we would ask to have an algorithm included in the Basix certificate which allows for reduction in air flow by 50%. Once CFD modelling is completed a report

can be provided that confirms car park ventilation has been reduced by a minimum of 50% in order to be granted Construction Certificate.

Yours sincerely

Alex Rosenthal

Associate

Haico Schepers, Arup Josef Seidler - Crown Jason Redgrave - Crown Kristjan Young -Crown