



# Sydney Metro City & Southwest

## Pitt Street South Over Station Development:

### Shadow Study

<b>Applicable to:</b>	Sydney Metro City & Southwest
<b>Author:</b>	Virtual Ideas
<b>Owner</b>	Sydney Metro
<b>Status:</b>	Final
<b>Version:</b>	3
<b>Date of issue:</b>	August 2018
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# 1. SEARs Shadow Study

Pitt Street South OSD Concept State Significant Development Application

## 1.1 Background

This document was prepared by Virtual Ideas and includes a description of the processes used to create the shadow study and illustrate the accuracy of the results.

Virtual Ideas is a highly experienced 3D visualisation company which commonly prepares material for court use, and is familiar with the court requirements to provide 3D visualisation media that will communicate the design and visual impact. Our methodologies and results have been inspected by various court appointed experts in a variety of cases and have always been found to be accurate and acceptable.

In conclusion, it is my opinion as an experienced, professional 3D architectural and landscape renderer that the images provided accurately portray the level of visibility and impact of the built form.

Yours sincerely,  
Grant Kolln

A handwritten signature in black ink, appearing to read 'G. Kolln'.

## 1.2 Description of collected data

To create the 3D model and establish accurate reference points for alignment to the photography, a variety of information was collected. This includes the following:

Architectural design of proposed building envelope

Created by: GHD Woodhead

Format: Revit model

Surveyed data

Created by: CMS Surveyors

Format: DWG file

Site photography

Created by: Virtual Ideas (VI Photos)

Format: JPEG file

Surveyed 3D city model

Created by: AAM

Format: 3DS Studio Max file

Approved DA building envelopes

Supplied by: GHD Woodhead

Format: Revit model

Notes on images

The diagram is also showing the indicative building massing at the following addresses for the purpose of visual assessment of the future surrounding city shadowing:

- Greenland Centre, 115 Bathurst Street
- 116 Bathurst Street



## 1.3 Methodology

### 3D Model

Using the imported surveyed data into our 3D software (3DS Max), we then imported the supplied 3D model of the proposed building envelope and relevant DA approved building massings.

### Alignment

The positions of the real world photography were located in the 3D scene. Cameras were then created in the 3D model to match the locations and height of the position from which the photographs were taken from. They were then aligned in rotation so that the points of the 3D model aligned with their corresponding objects that are visible in the photograph.

Renderings of the building massing were then created from the aligned 3D cameras and montaged into the existing photography at the same location. This produces an accurate representation of the scale and position of the new building envelope with respect to the existing surroundings.

In conclusion, it is my opinion as an experienced, professional 3D architectural and landscape renderer that the images provided accurately portray the level of visibility and impact of the built form.

Yours sincerely,  
Grant Kolln

A handwritten signature in black ink, appearing to read 'G. Kolln'.

## 1.4 CV of Grant Kolln, Director of Virtual Ideas

### Personal Details

Name: Grant Kolln  
DOB: 07/09/1974  
Company Address: Suite 71, 61 Marlborough St, Surry Hills, NSW, 2010  
Phone Number: 02 8399 0222

### Relevant Experience

2003 - Present Director of 3D visualisation studio Virtual Ideas. During this time I have worked on many visual impact studies for legal proceedings in various different types of industries including architectural, industrial, mining, landscaping, and several large public works projects. This experience has enables us to create highly accurate methodologies for the creation of our visual impact media and report creation.

1999 - 2001 Project Manager for global SAP infrastructure implementation - Ericsson, Sweden

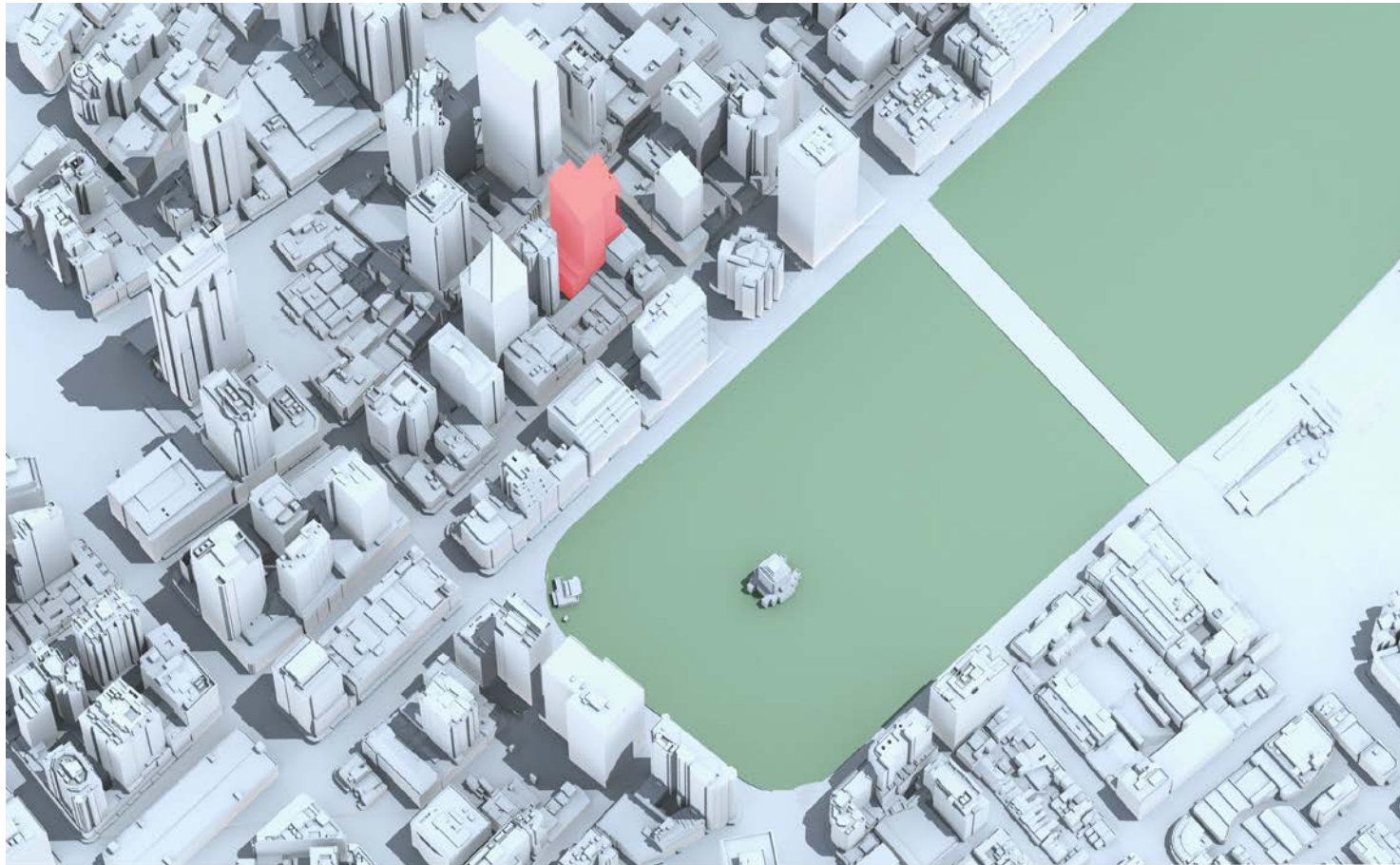
1999 - 1999 IT Consultant - Sci-Fi Channel, London

1994 - 1999 Architectural Technician, Thomson Adsett Architect, Brisbane QLD.

### Relevant Education / Qualifications

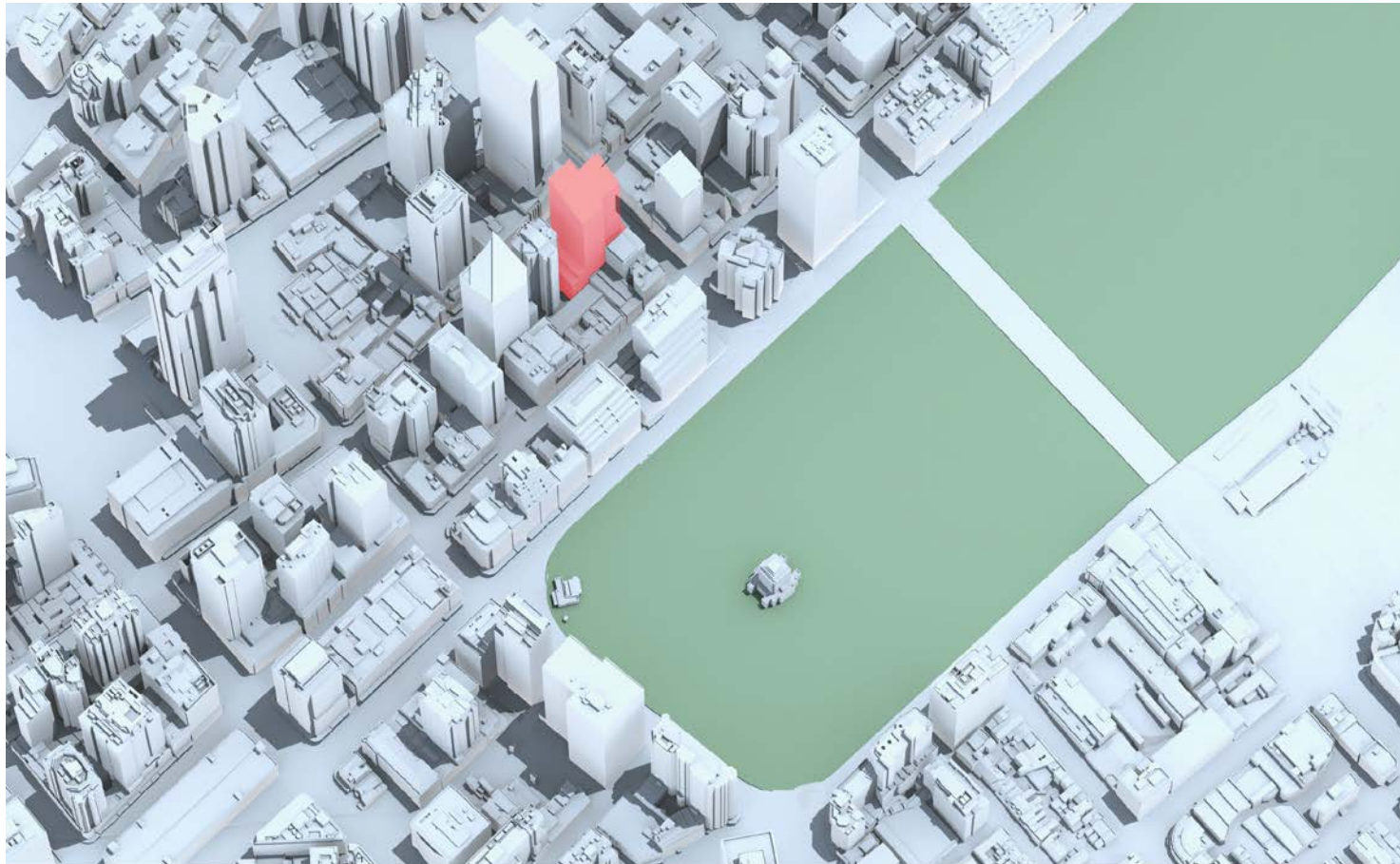
1997 Advanced Diploma in Architectural Technology, Southbank TAFE, Brisbane, QLD

## 1.5 SEARs Shadow Study




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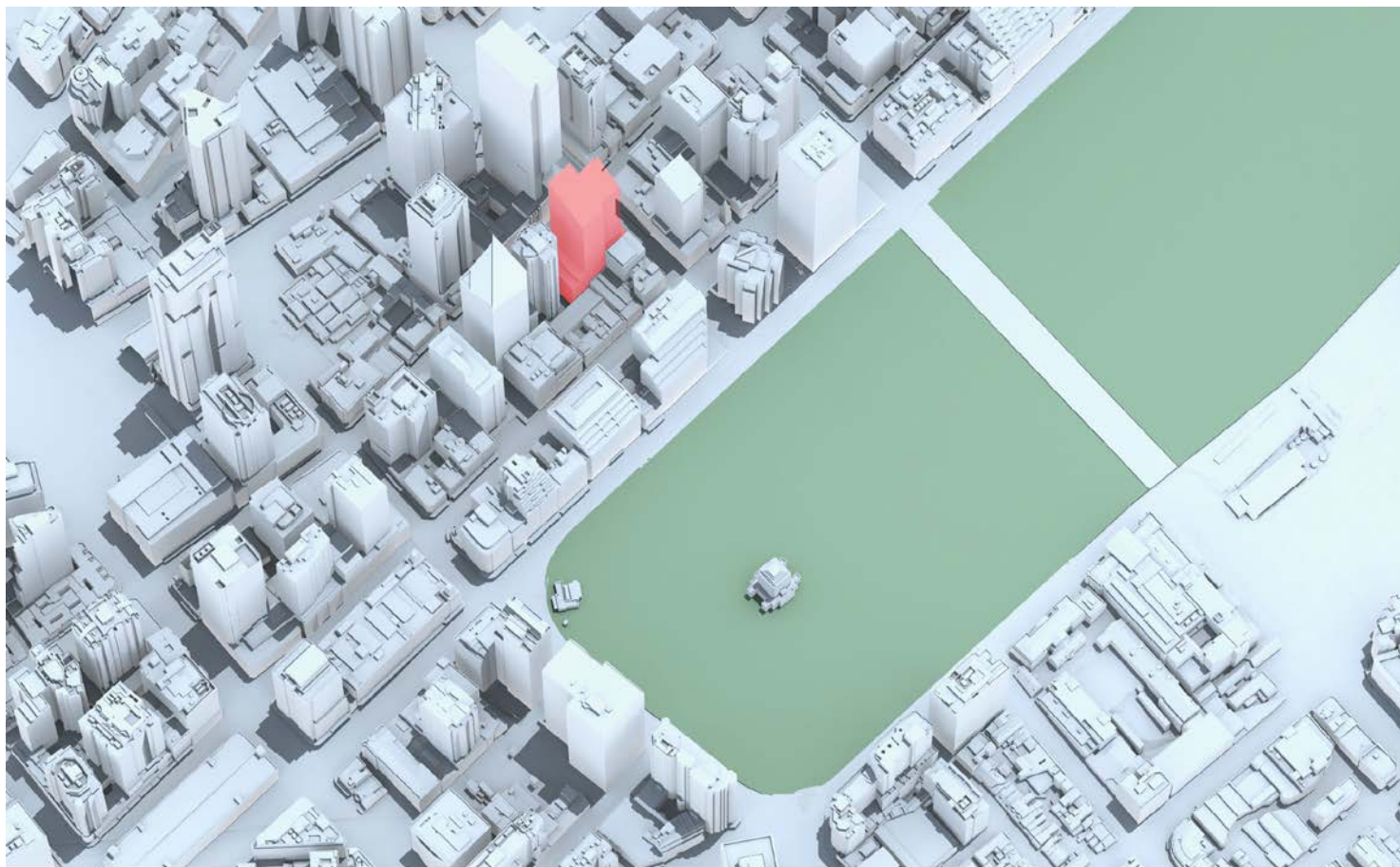
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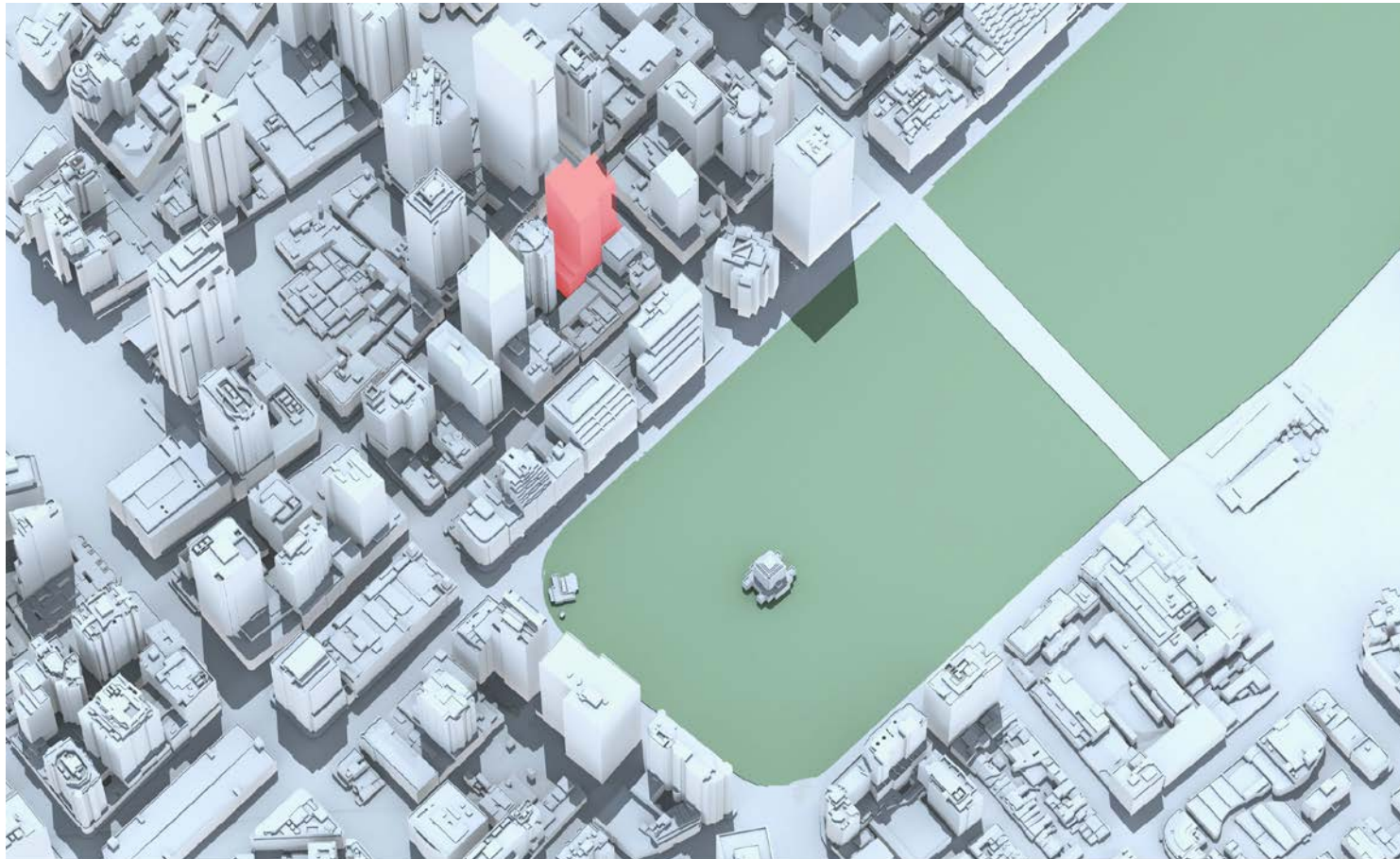
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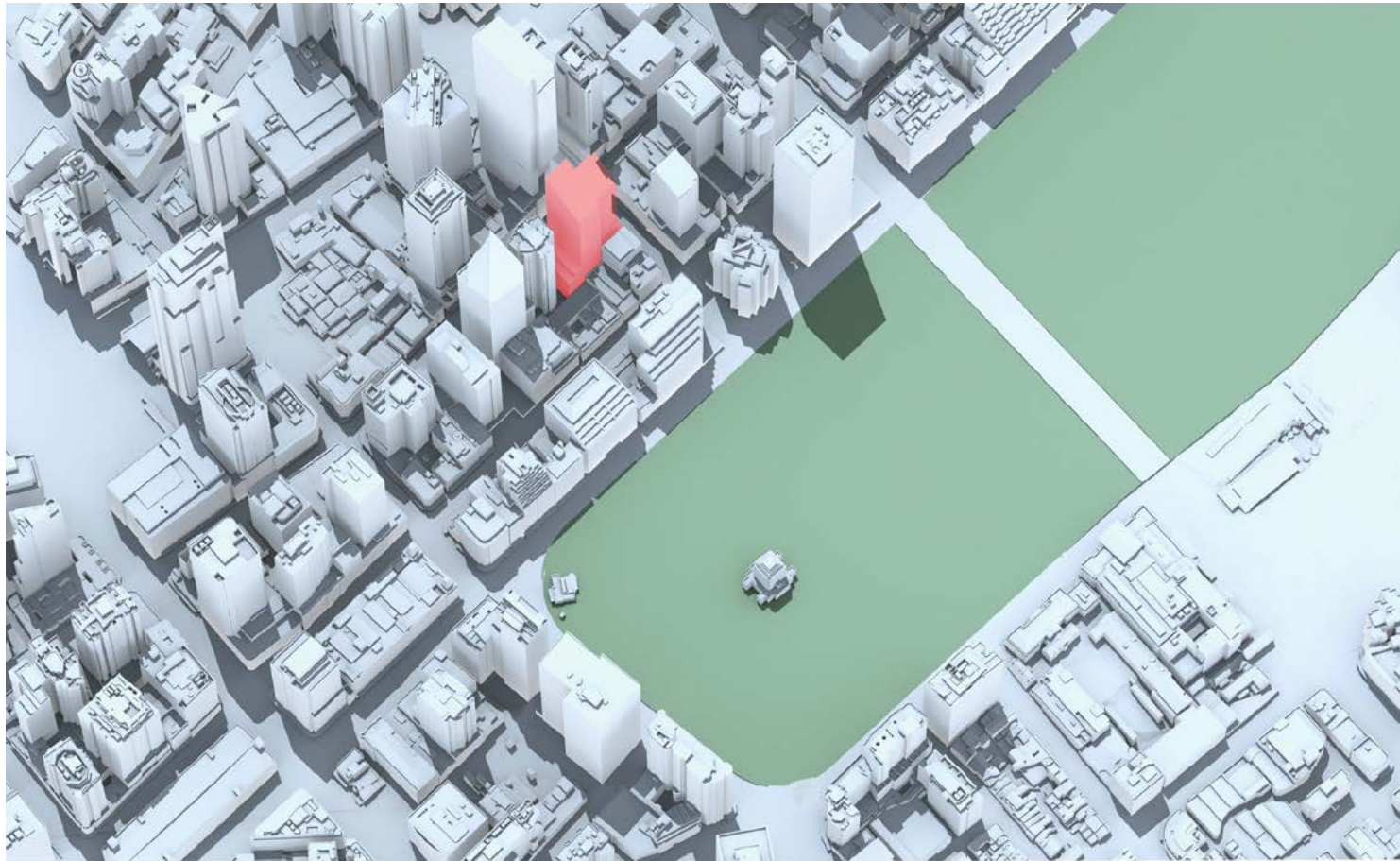
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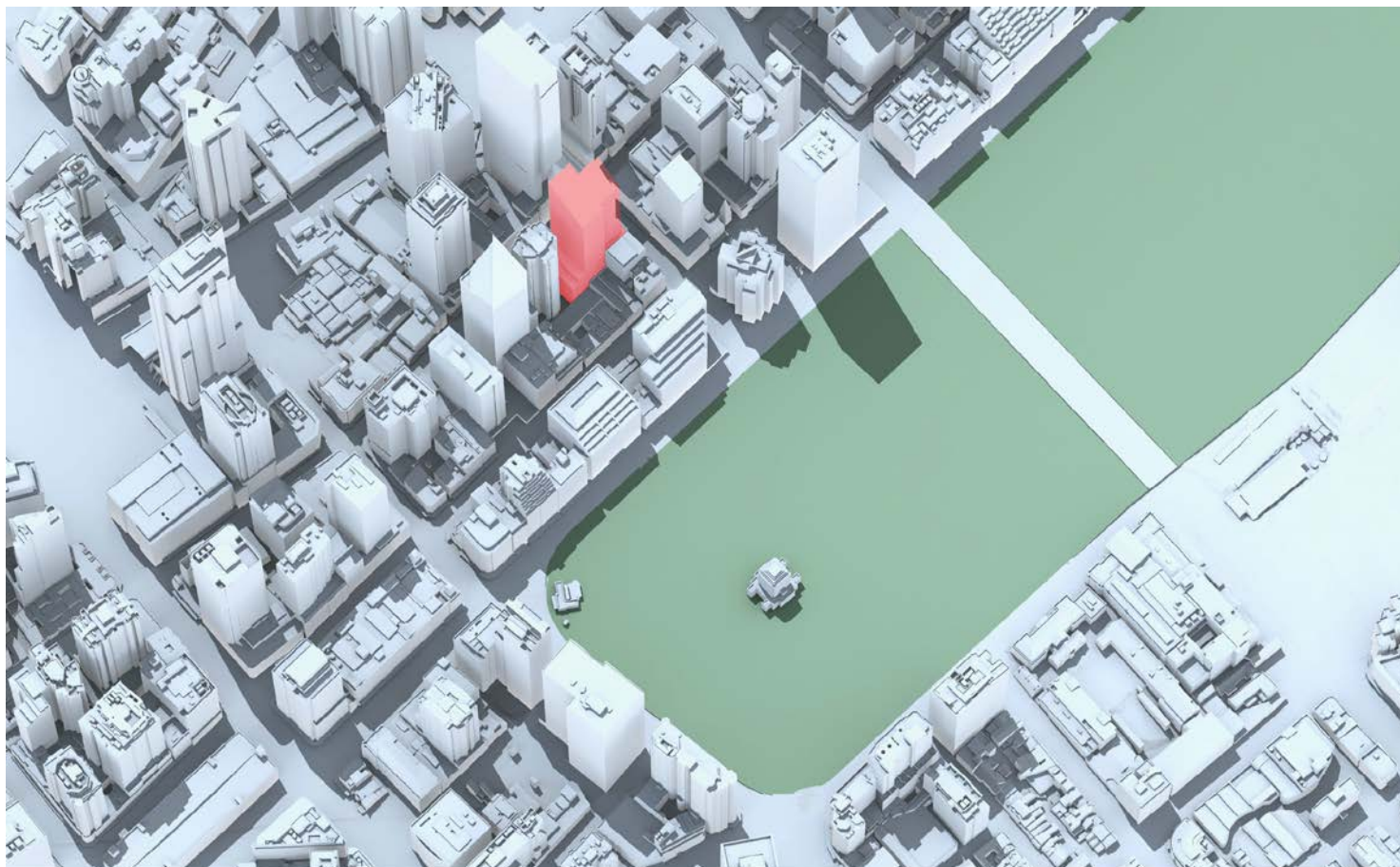
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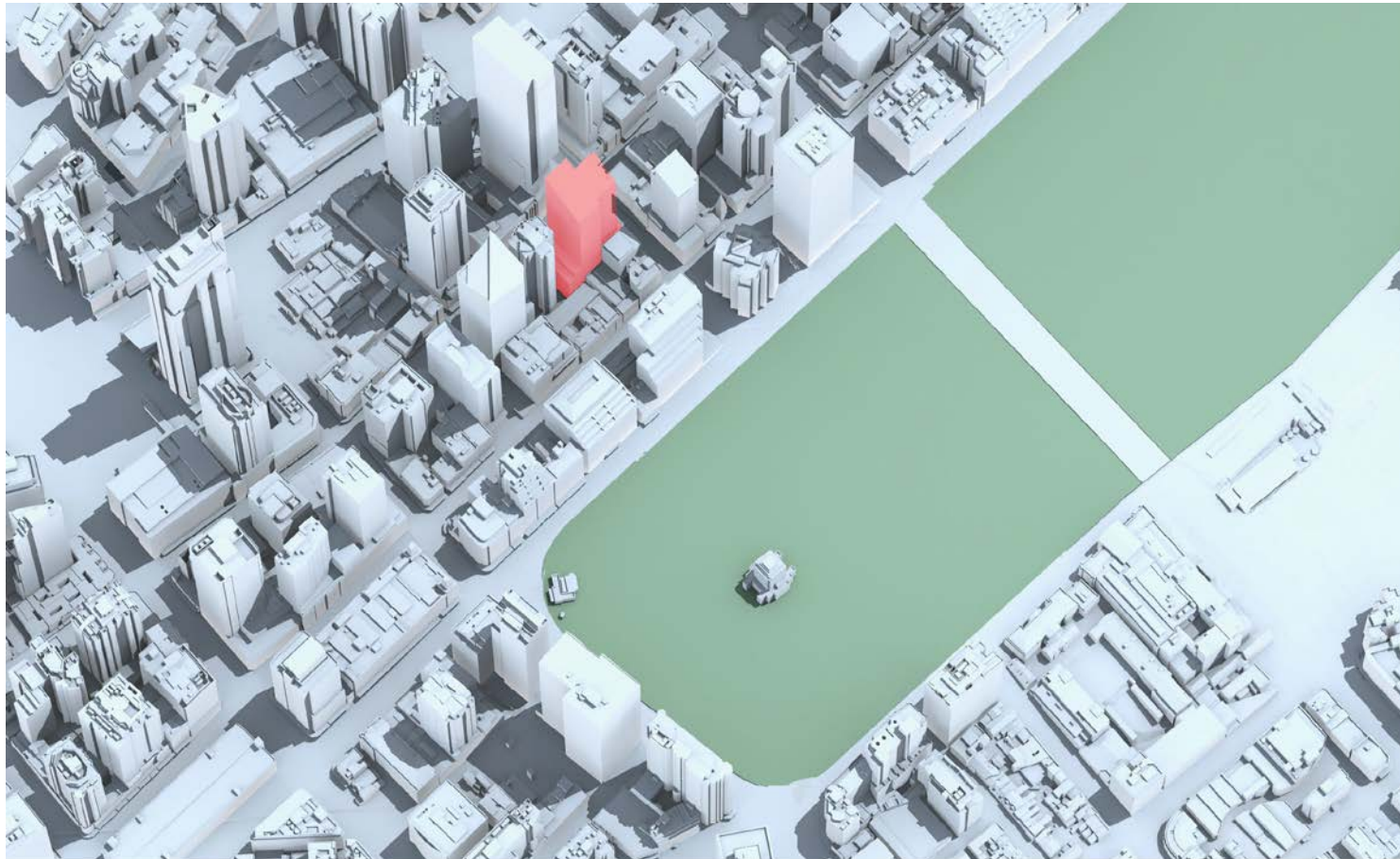
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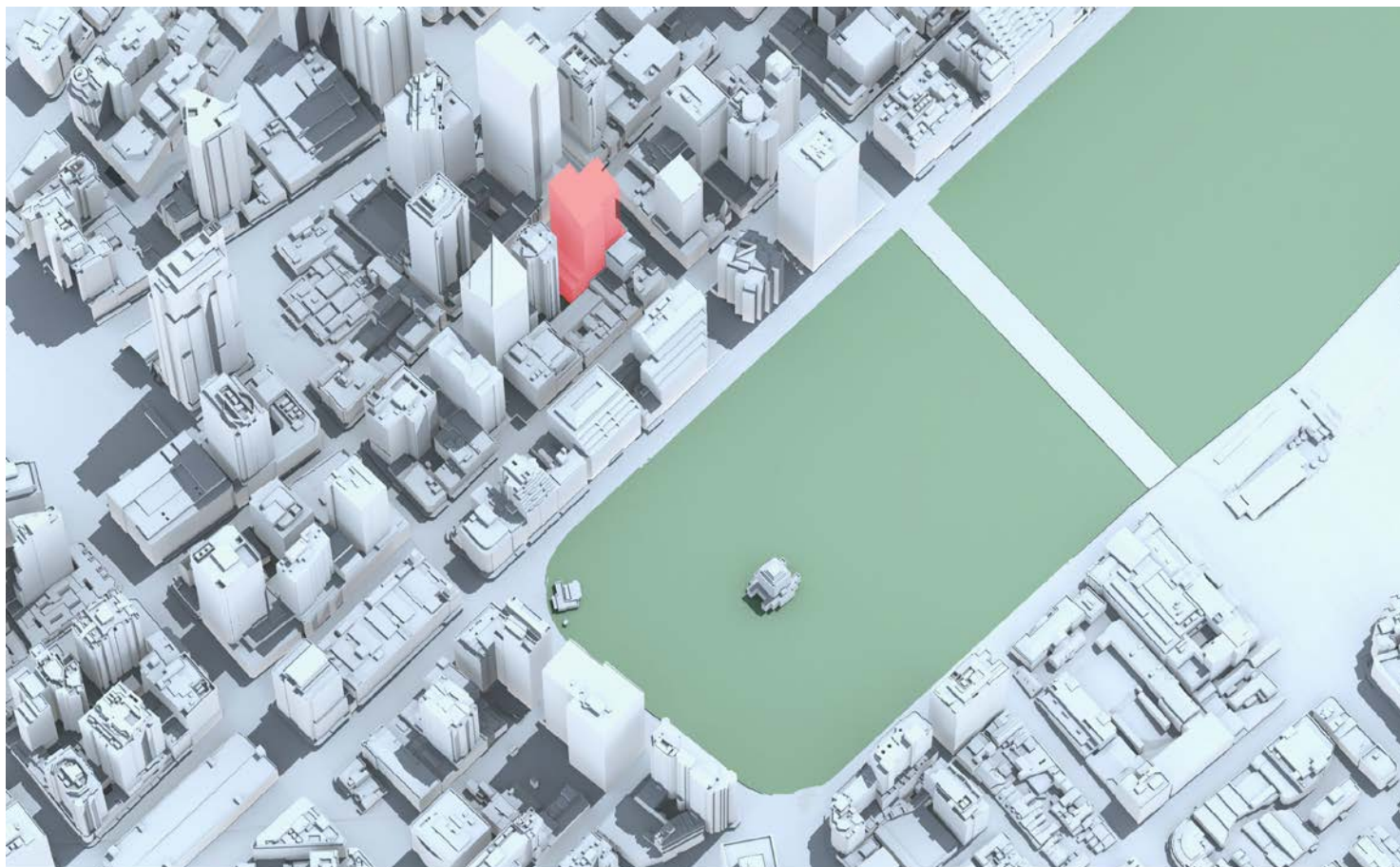
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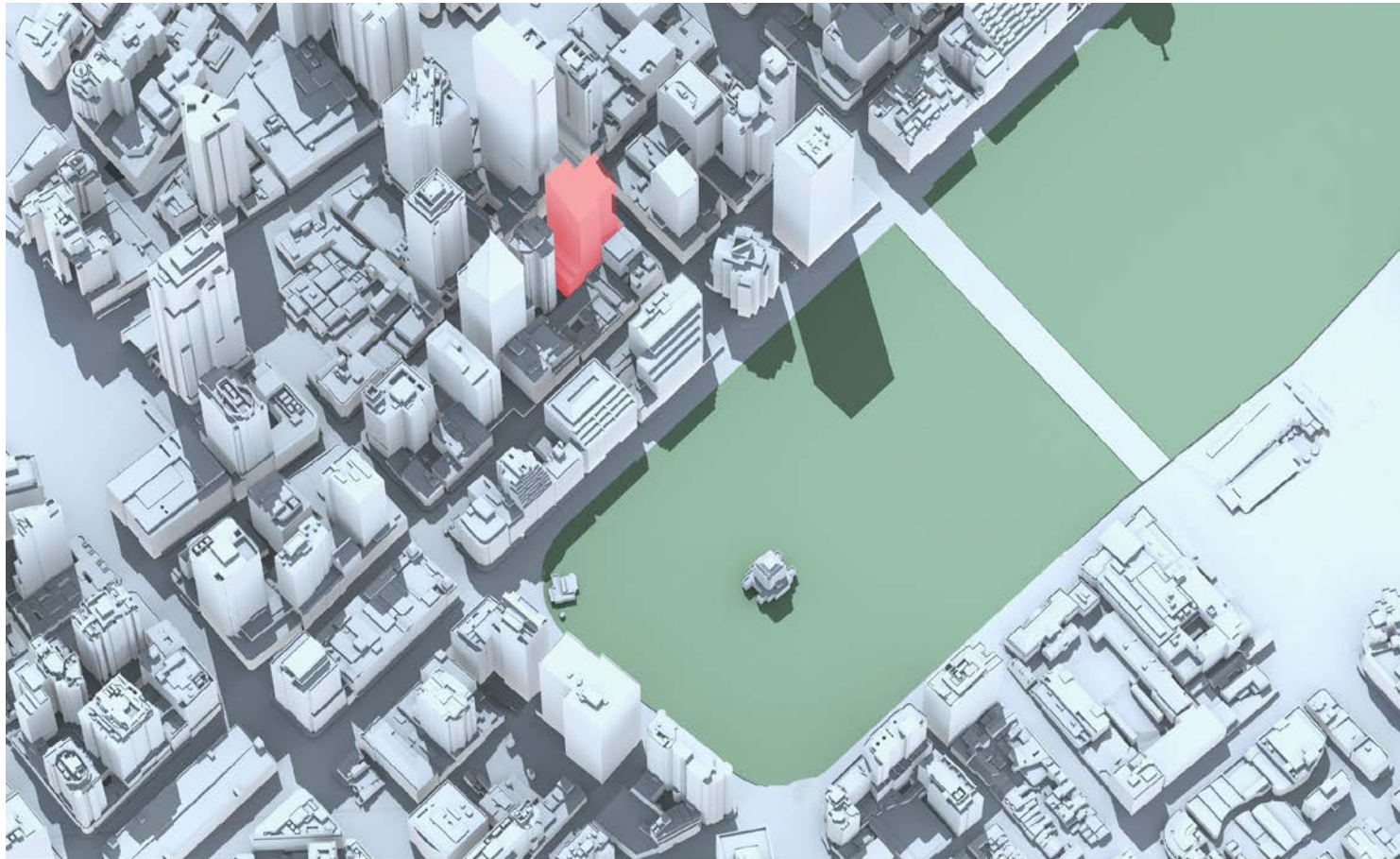
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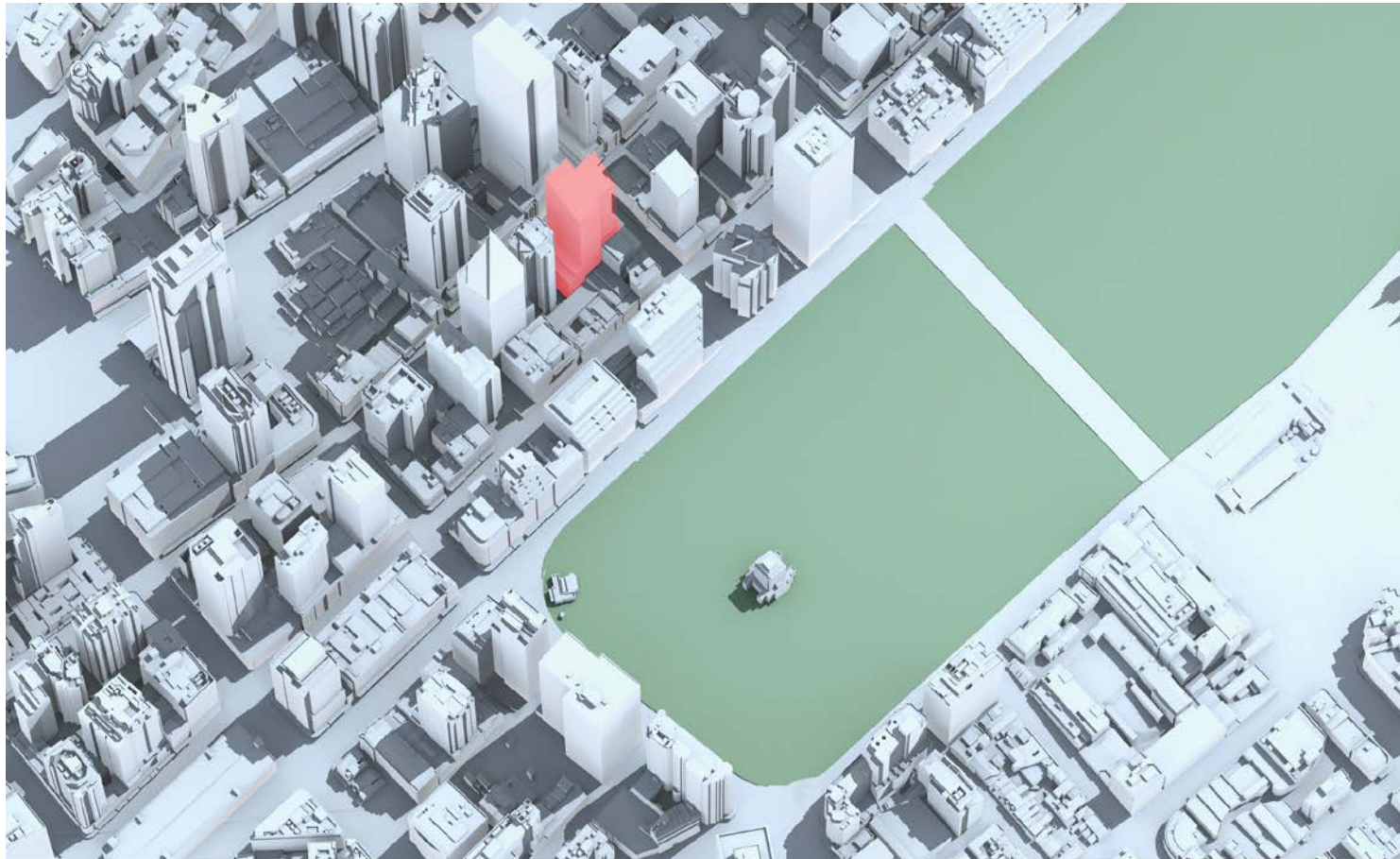
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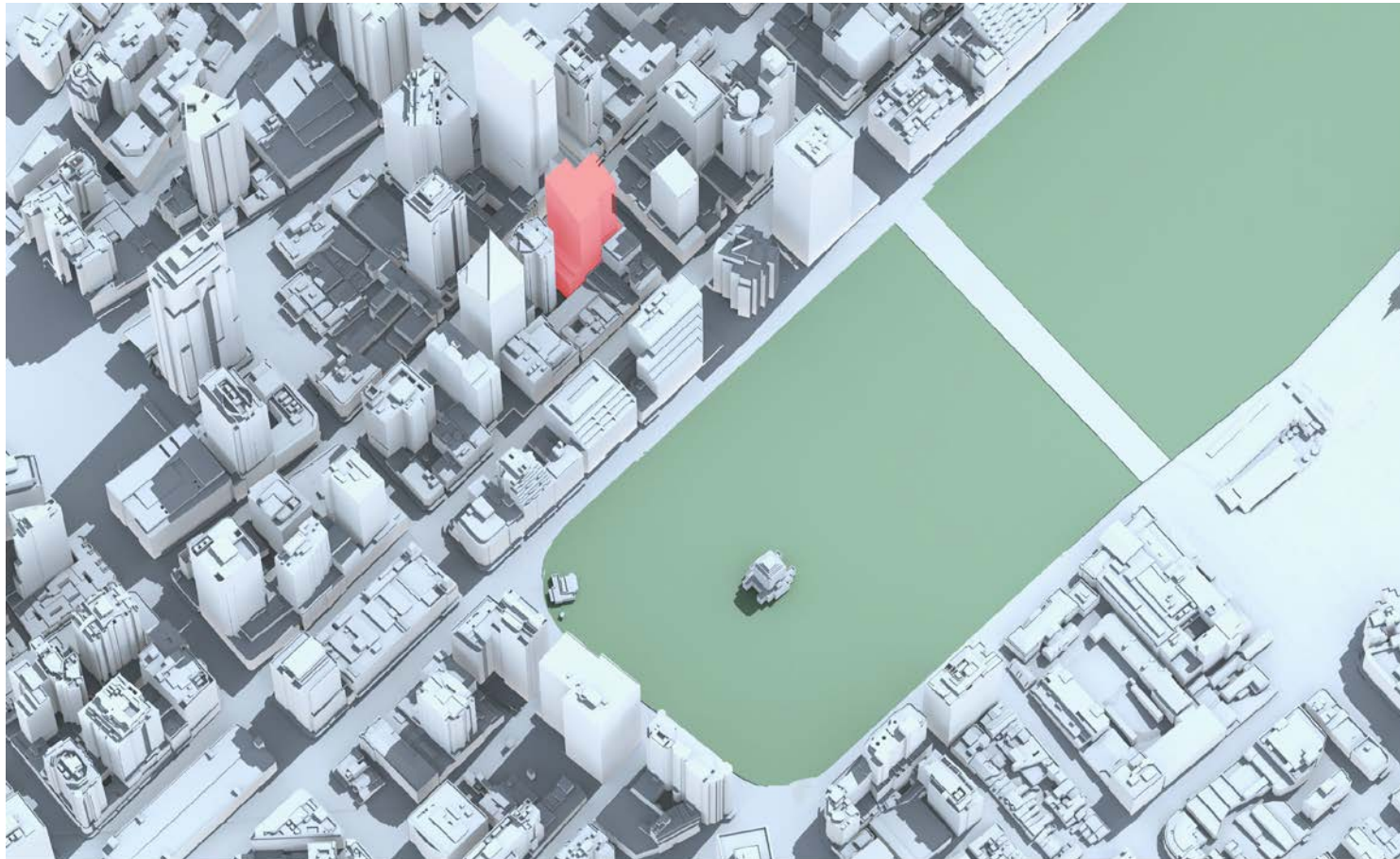
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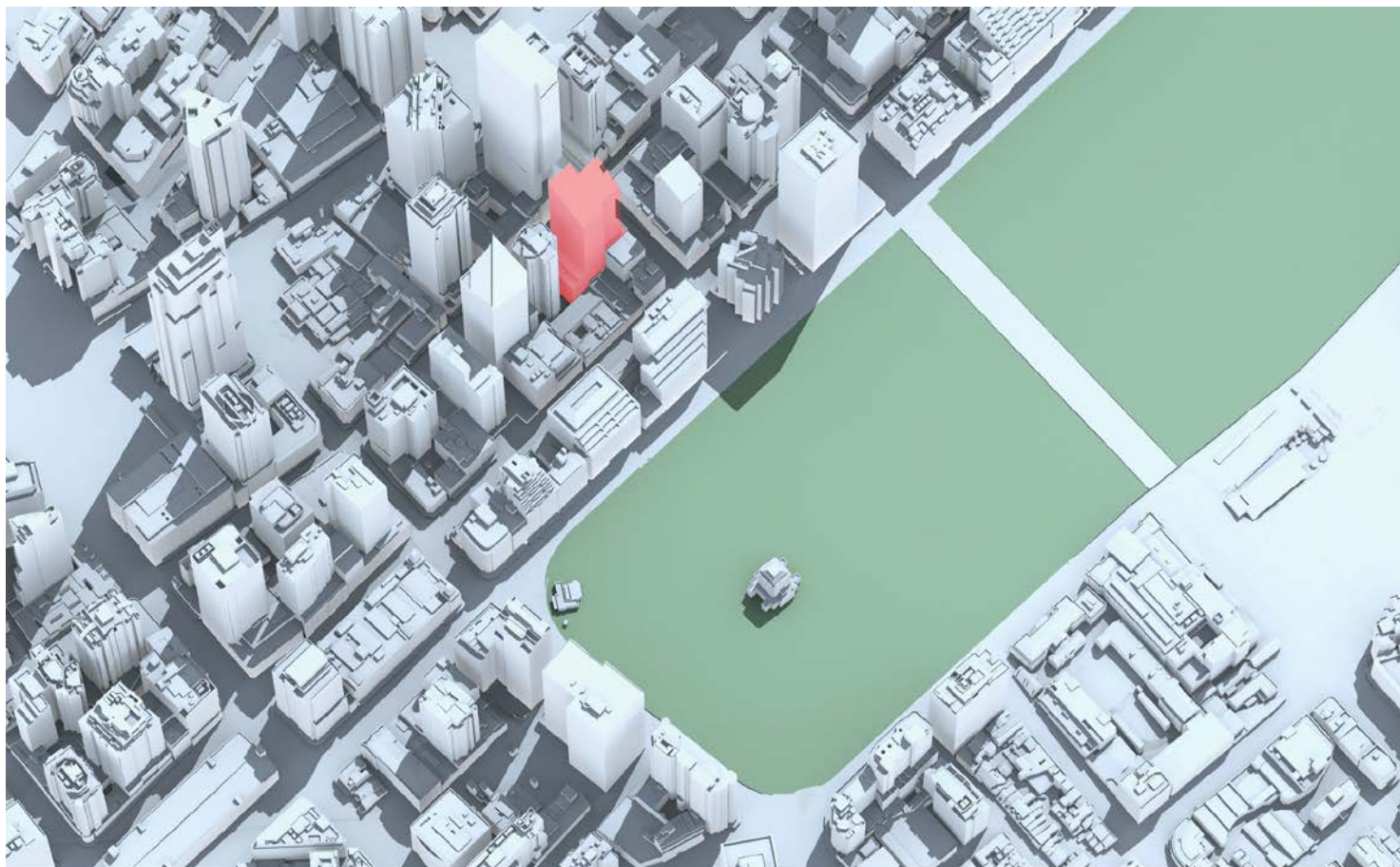
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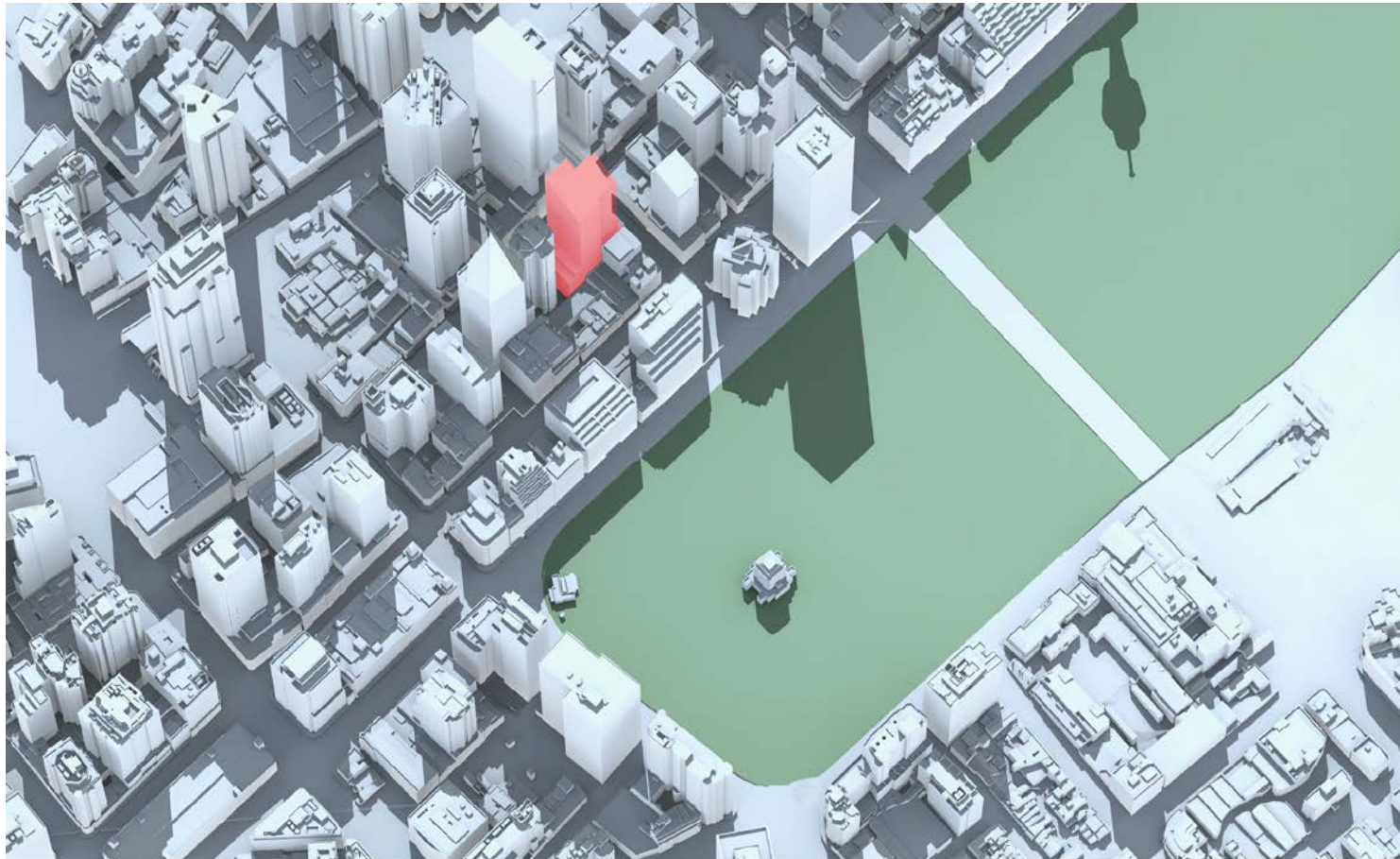
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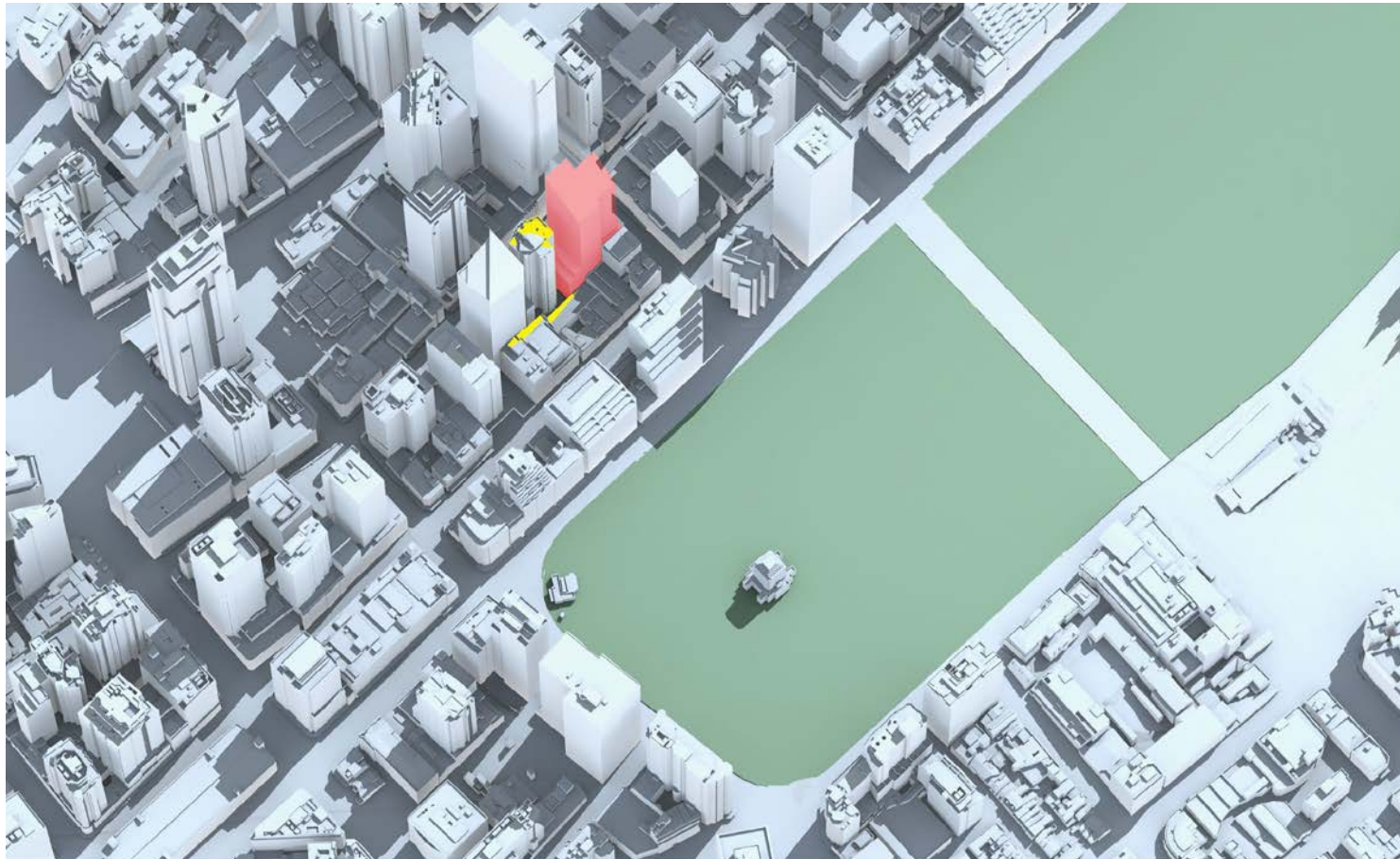
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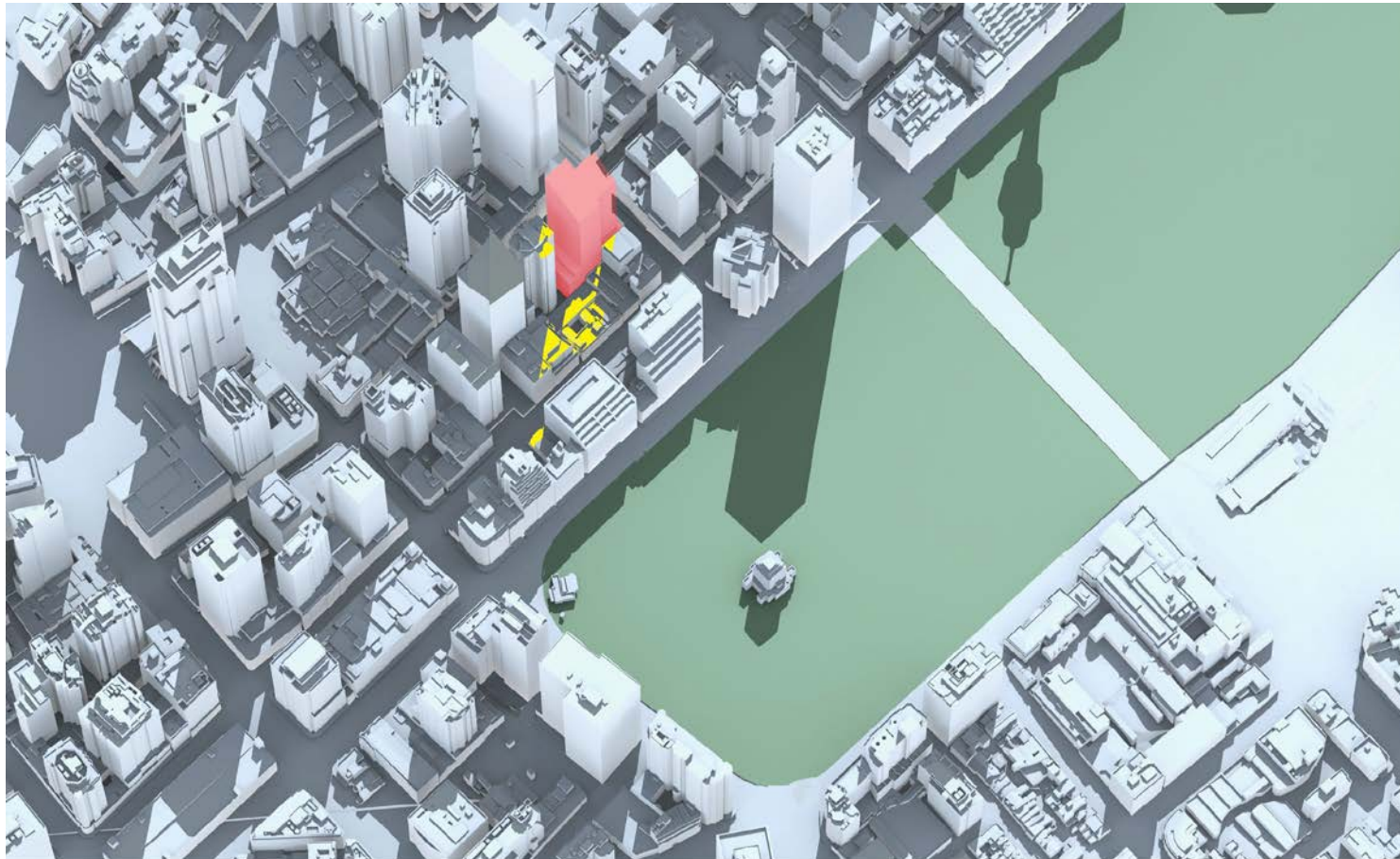
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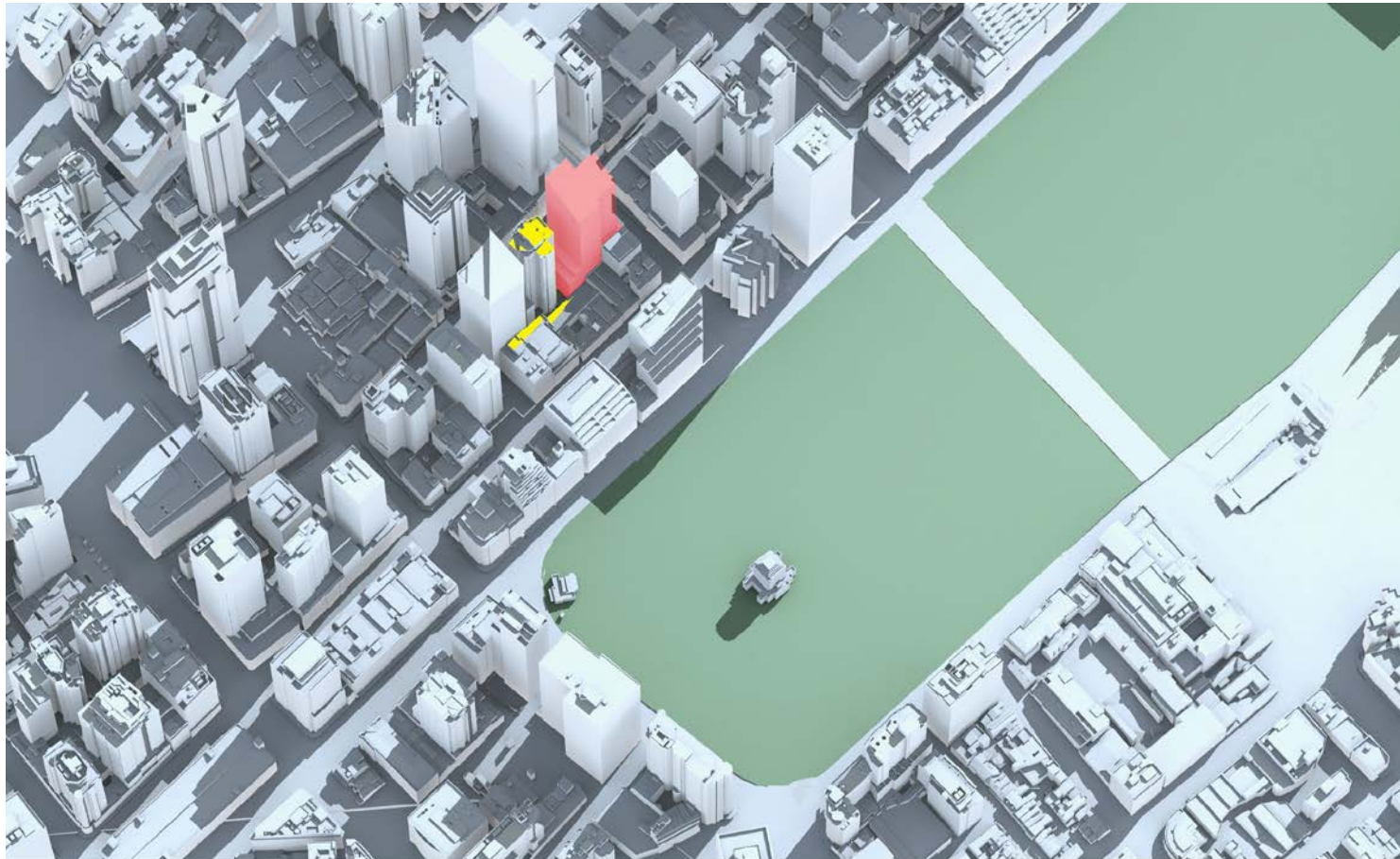
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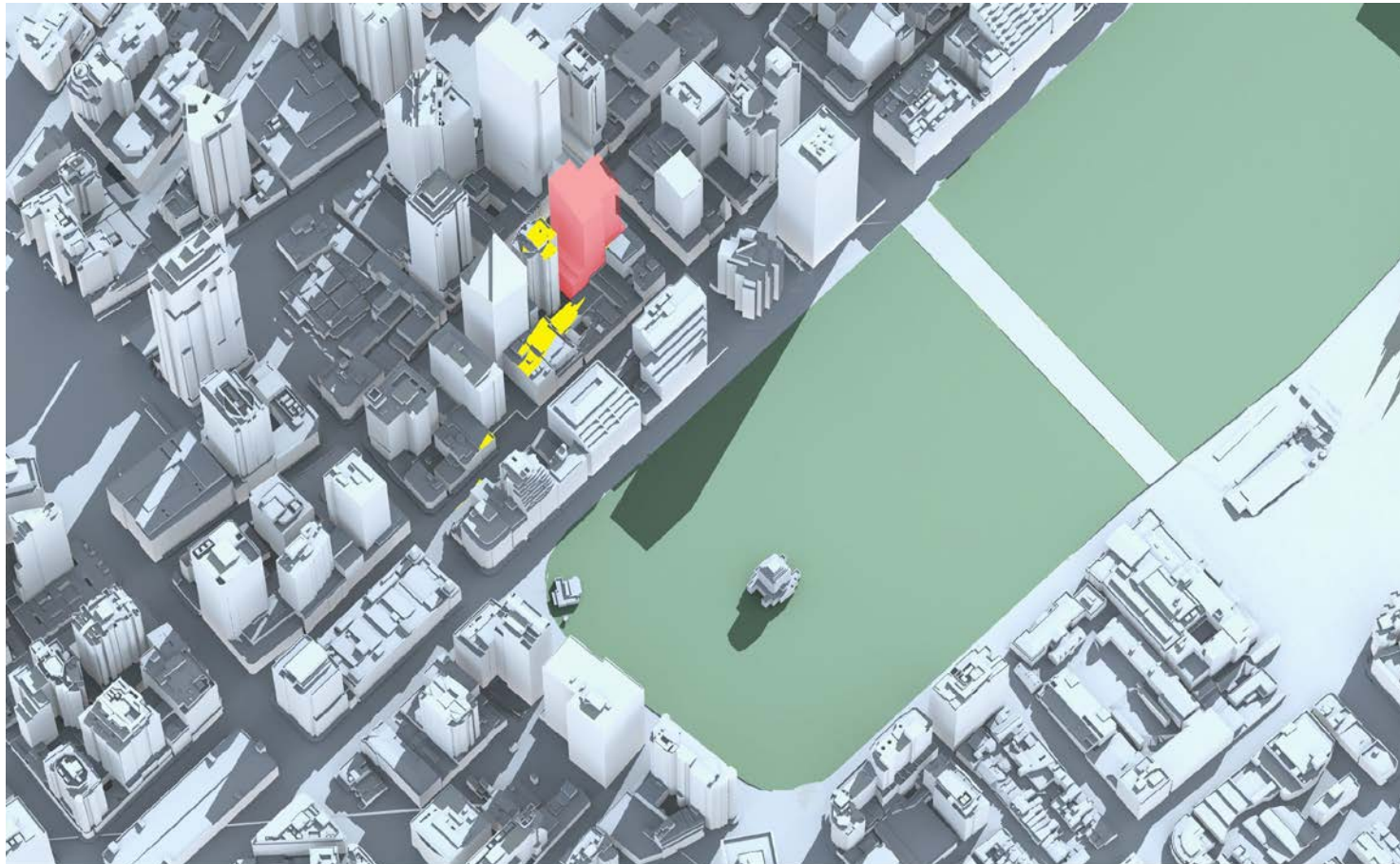
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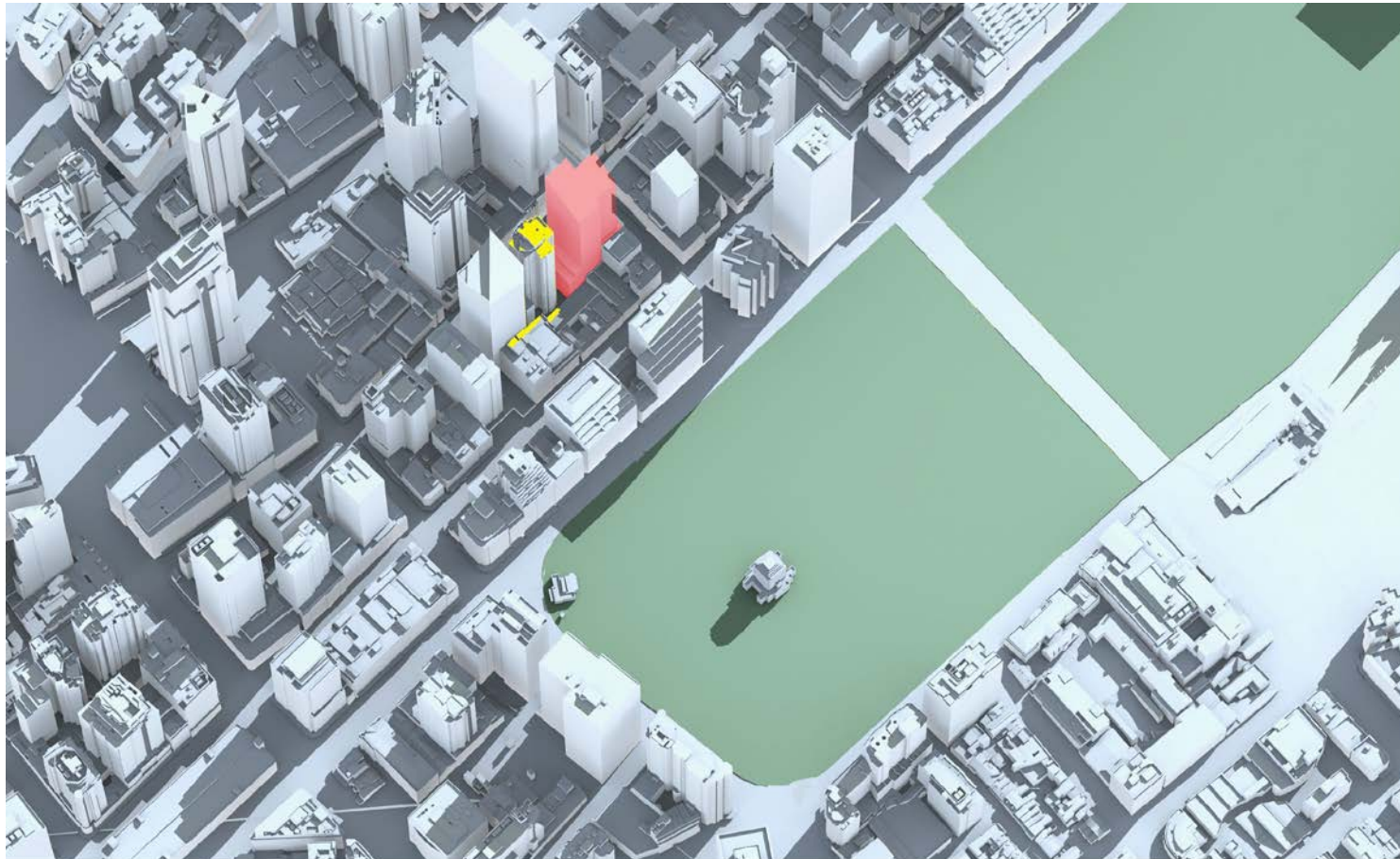
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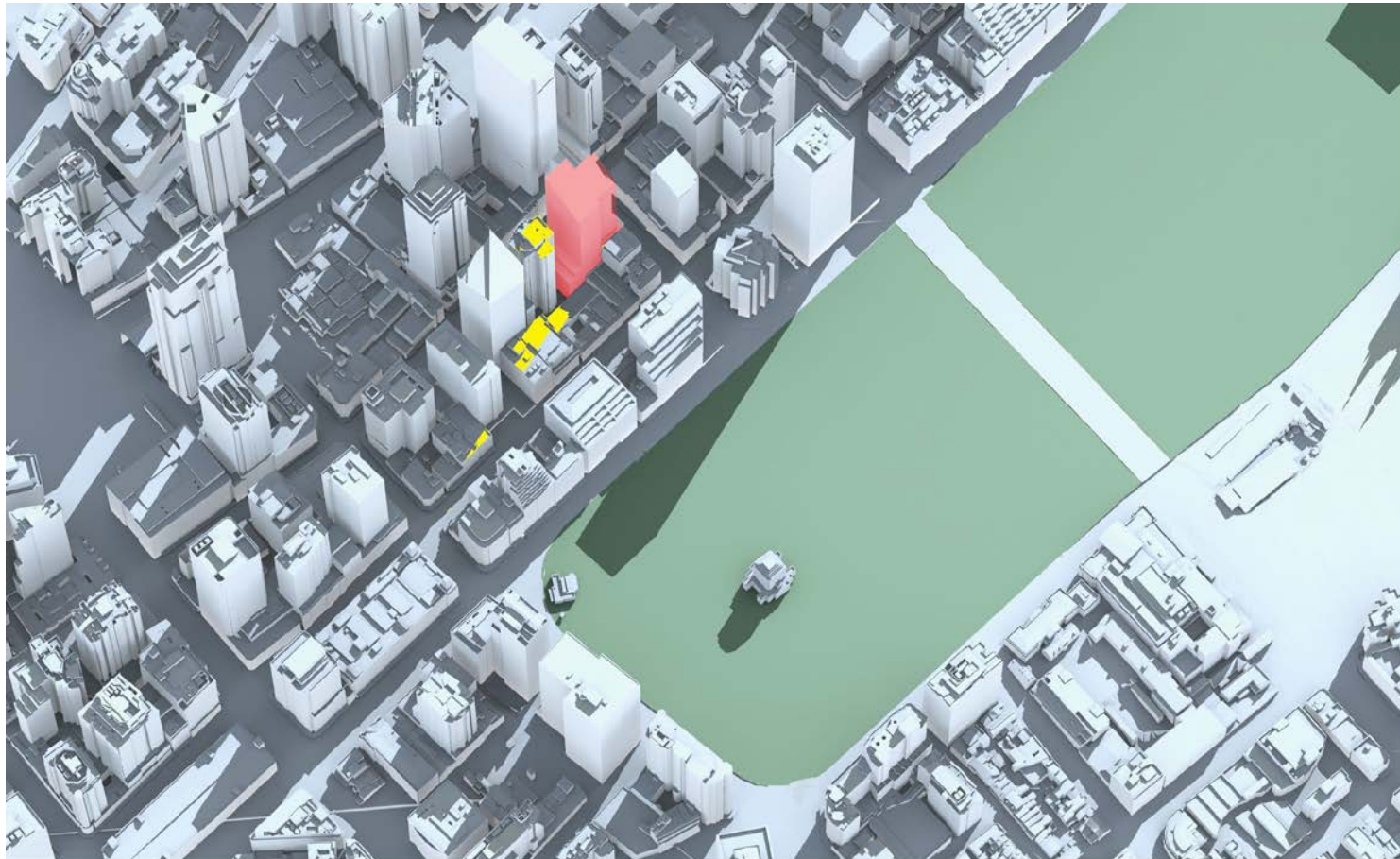
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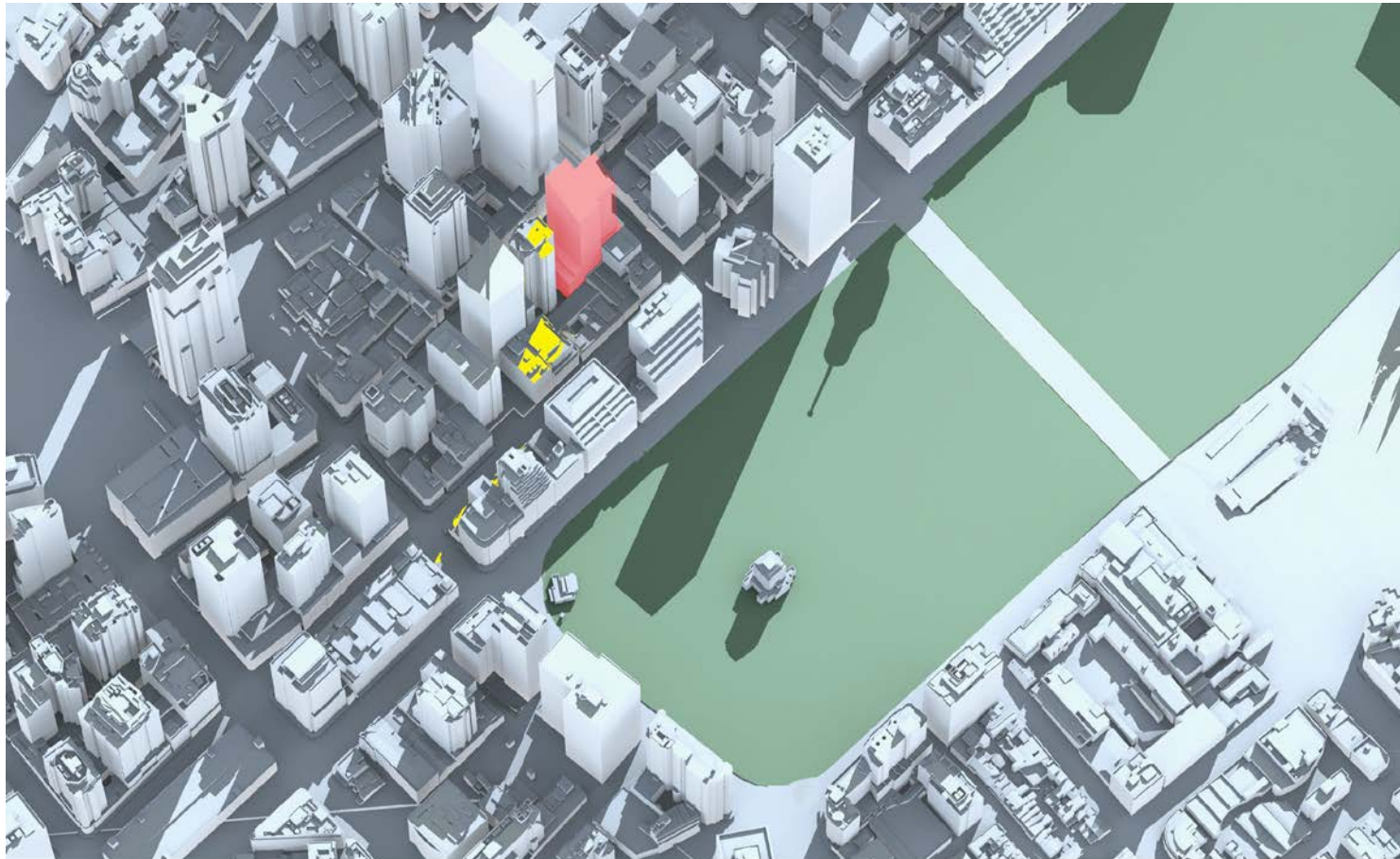
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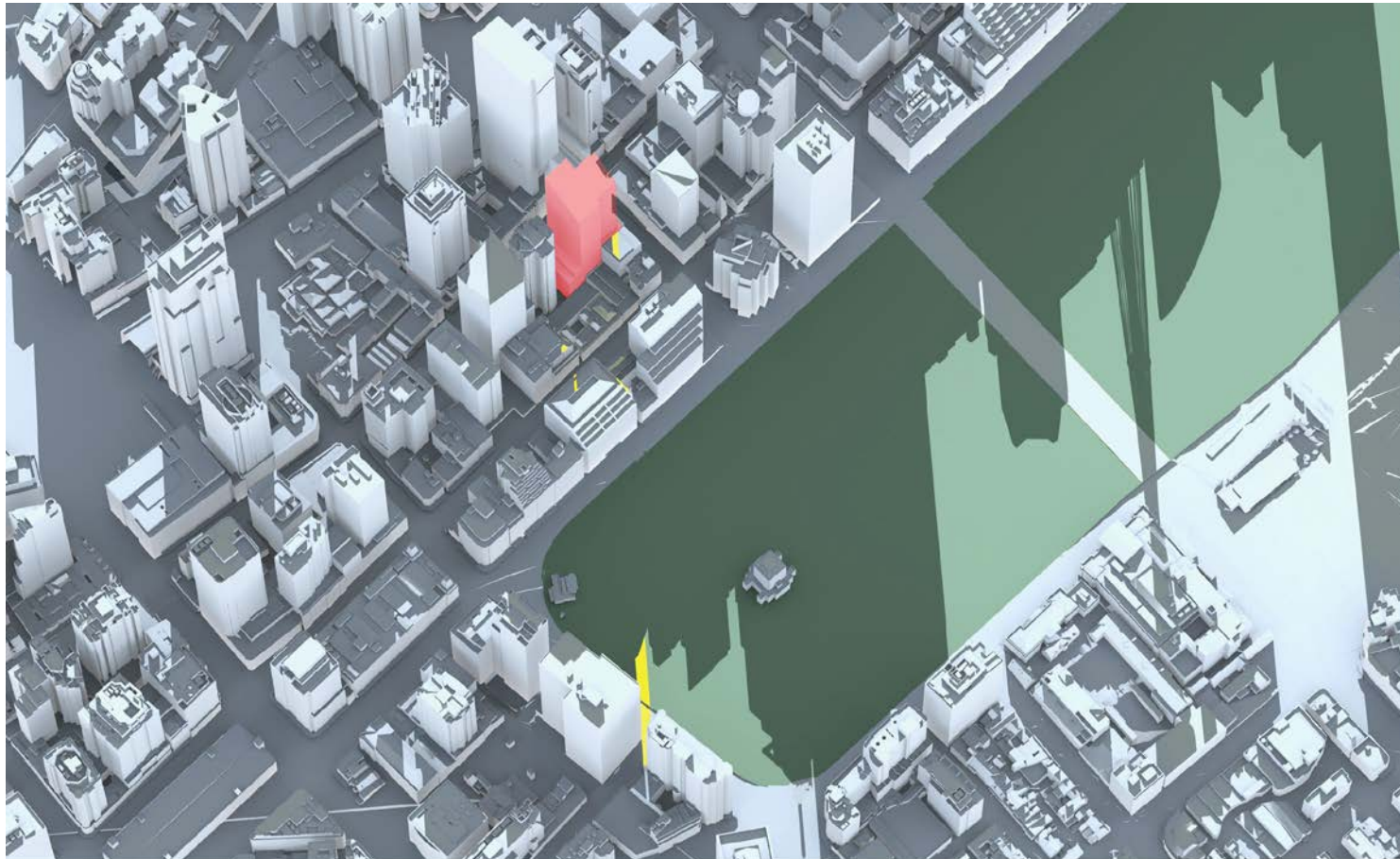
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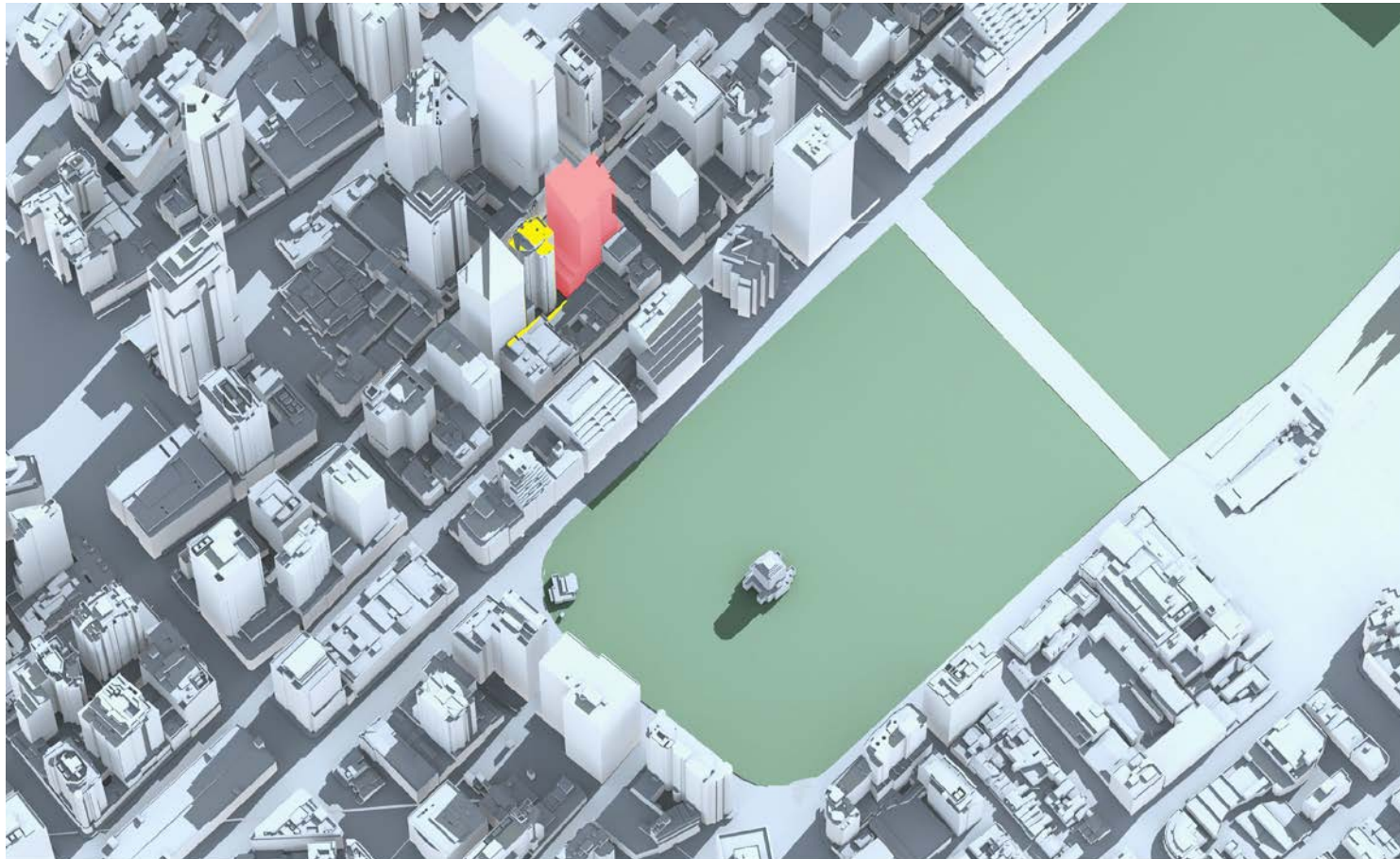
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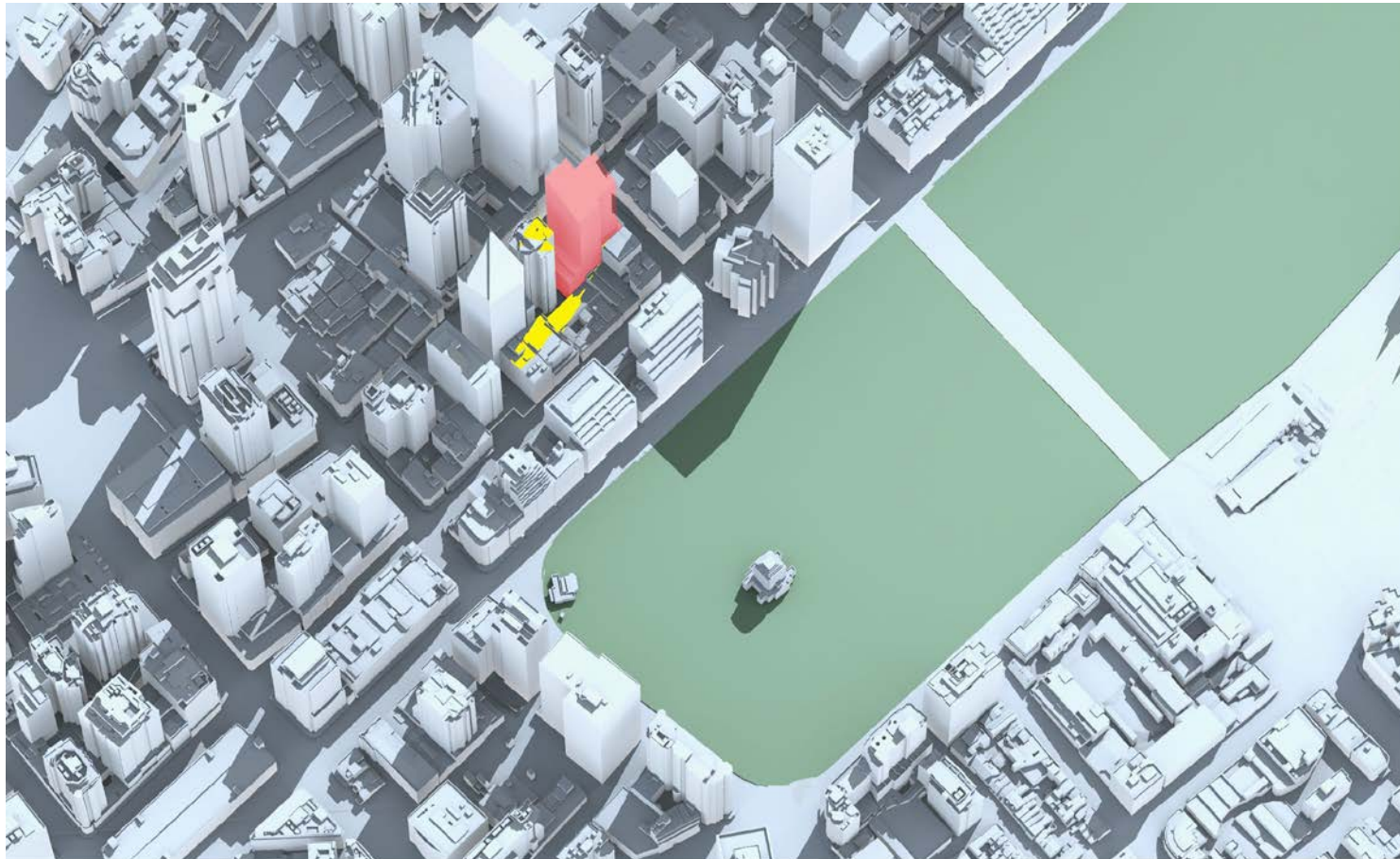
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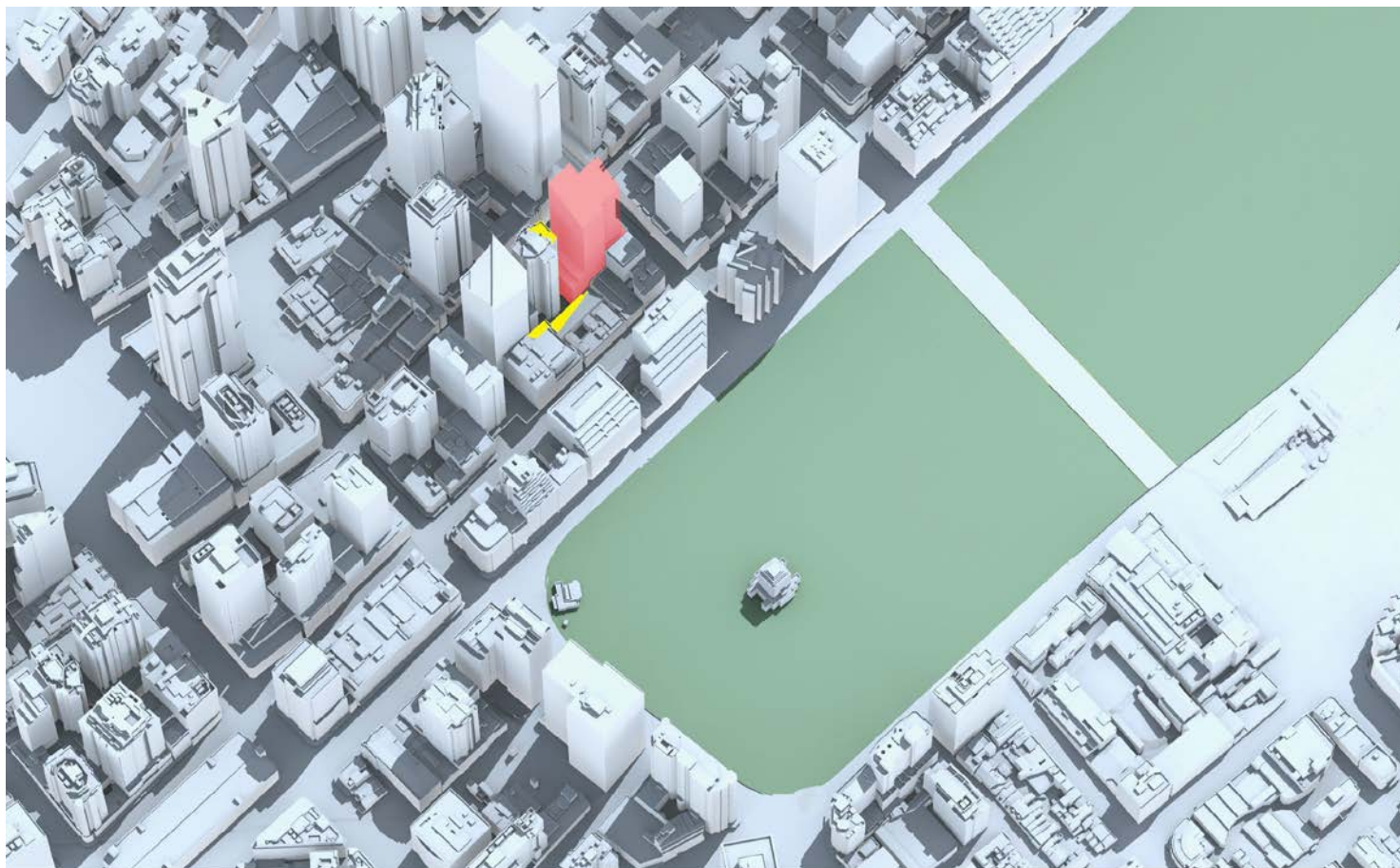
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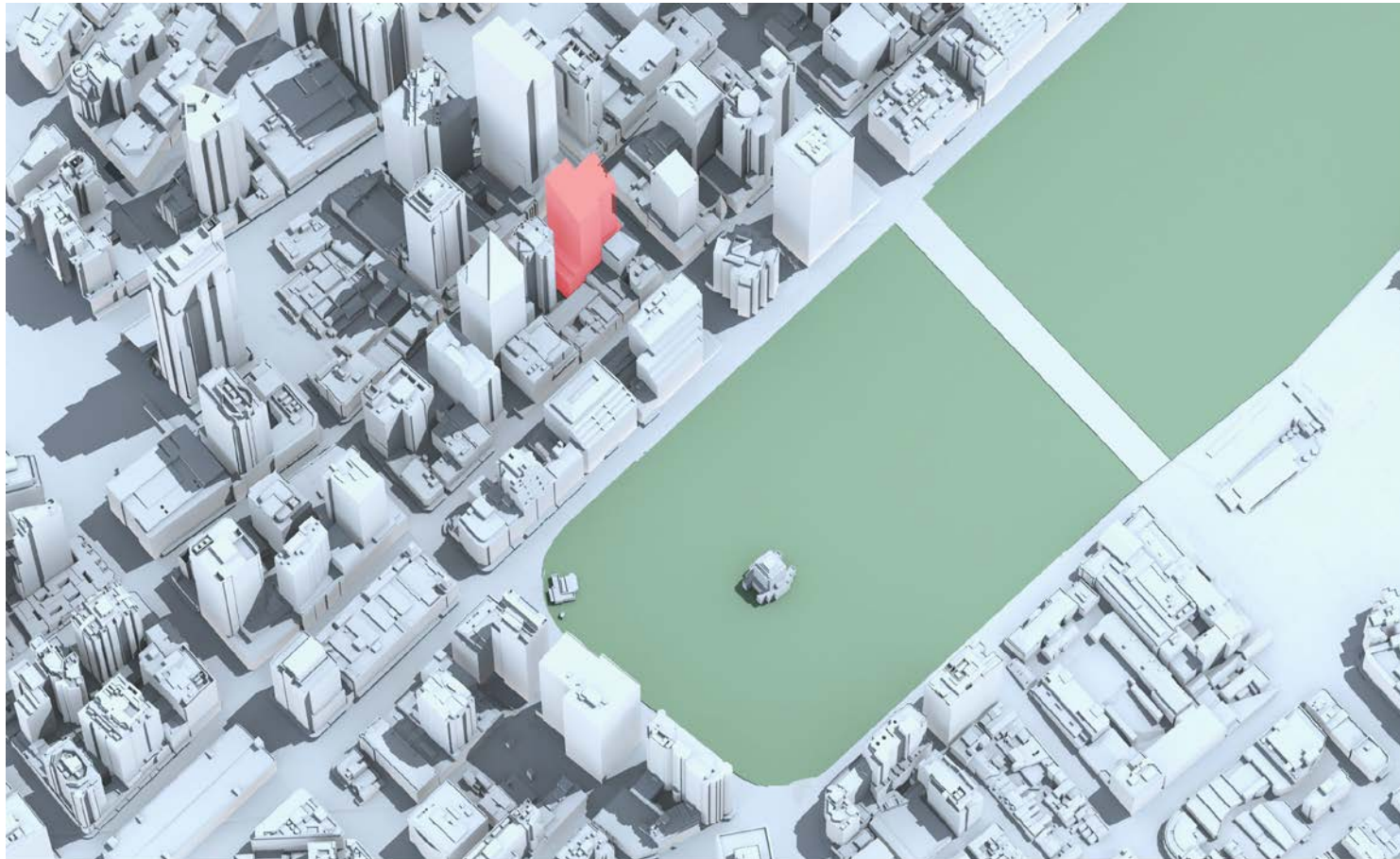
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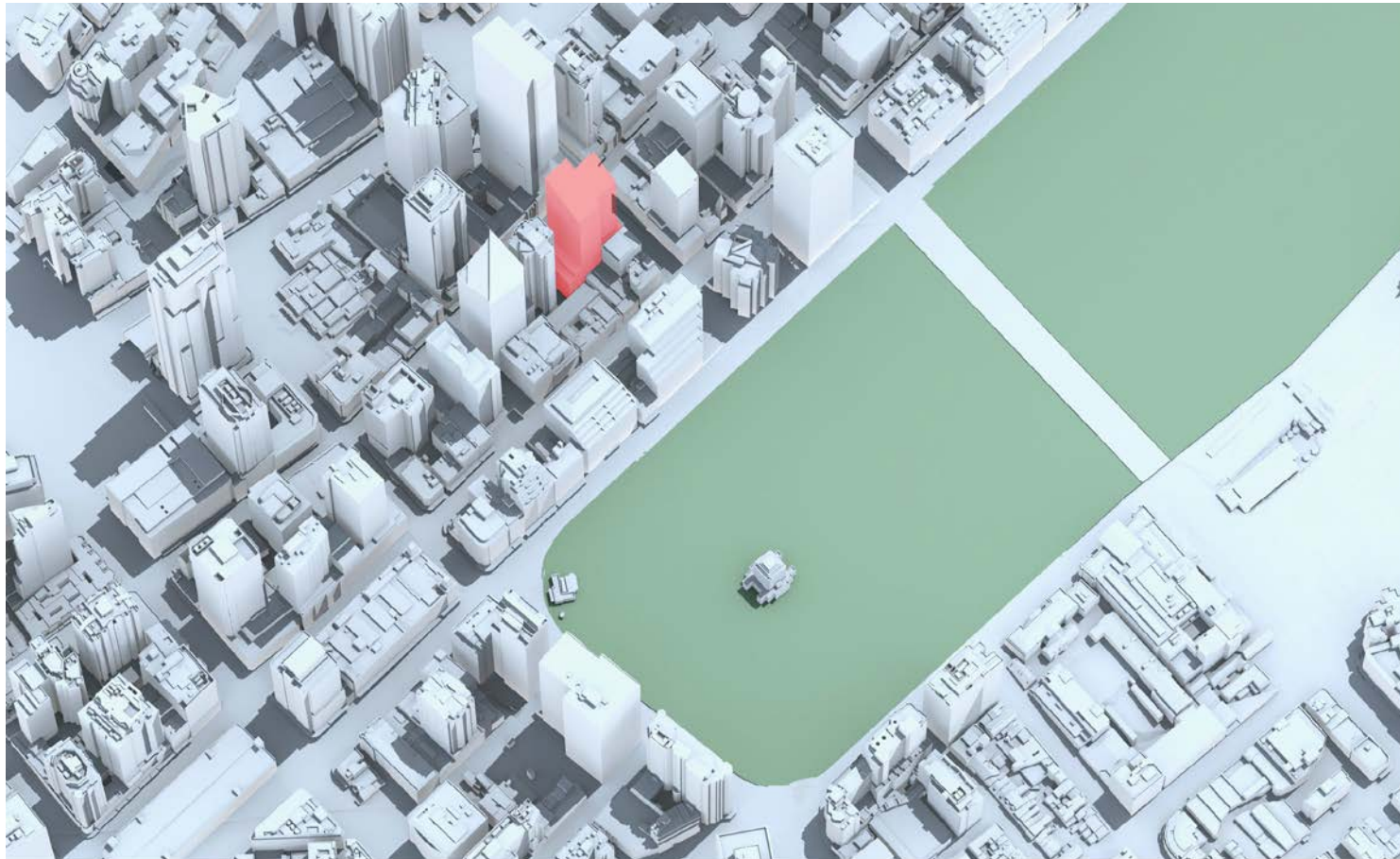
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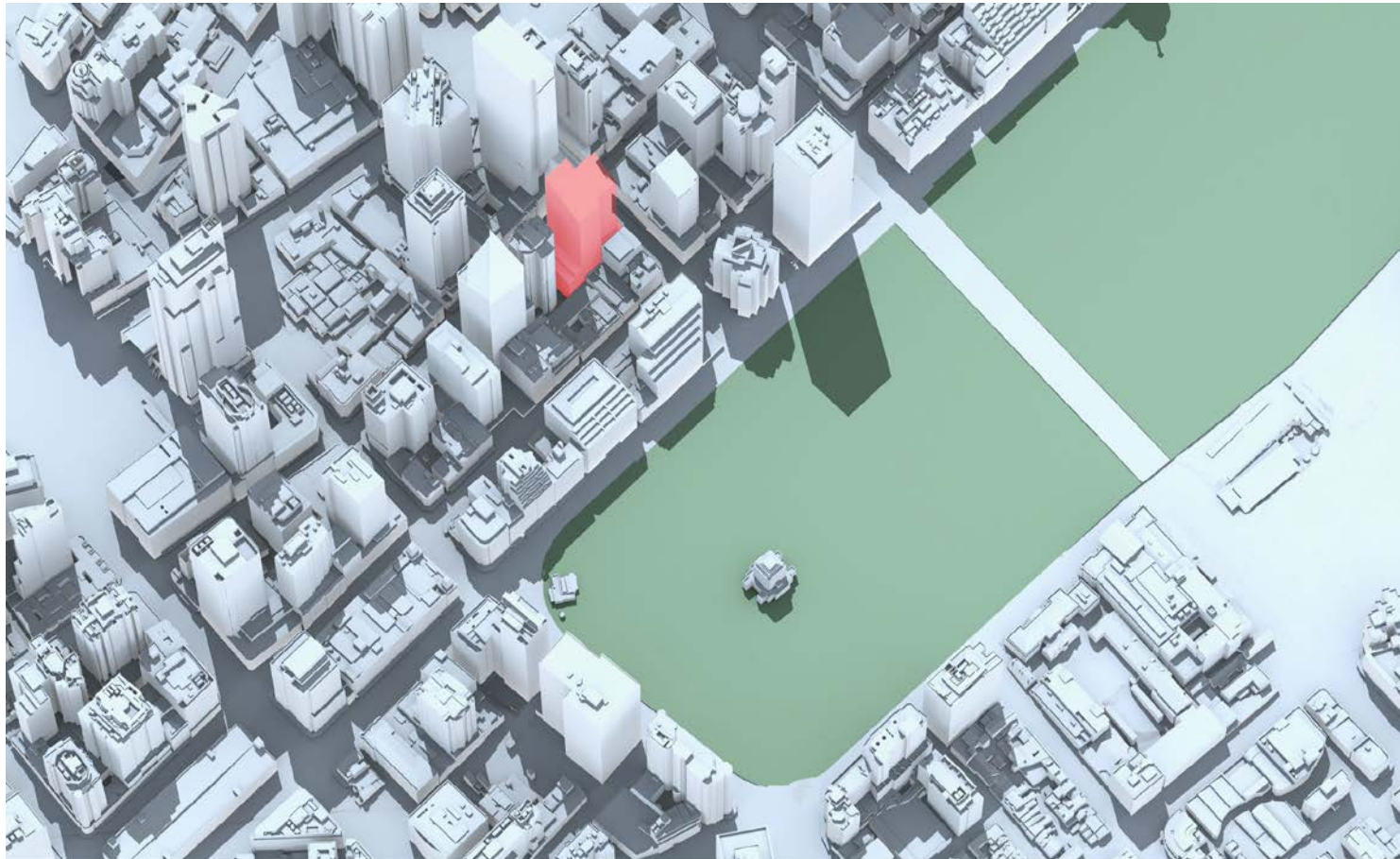
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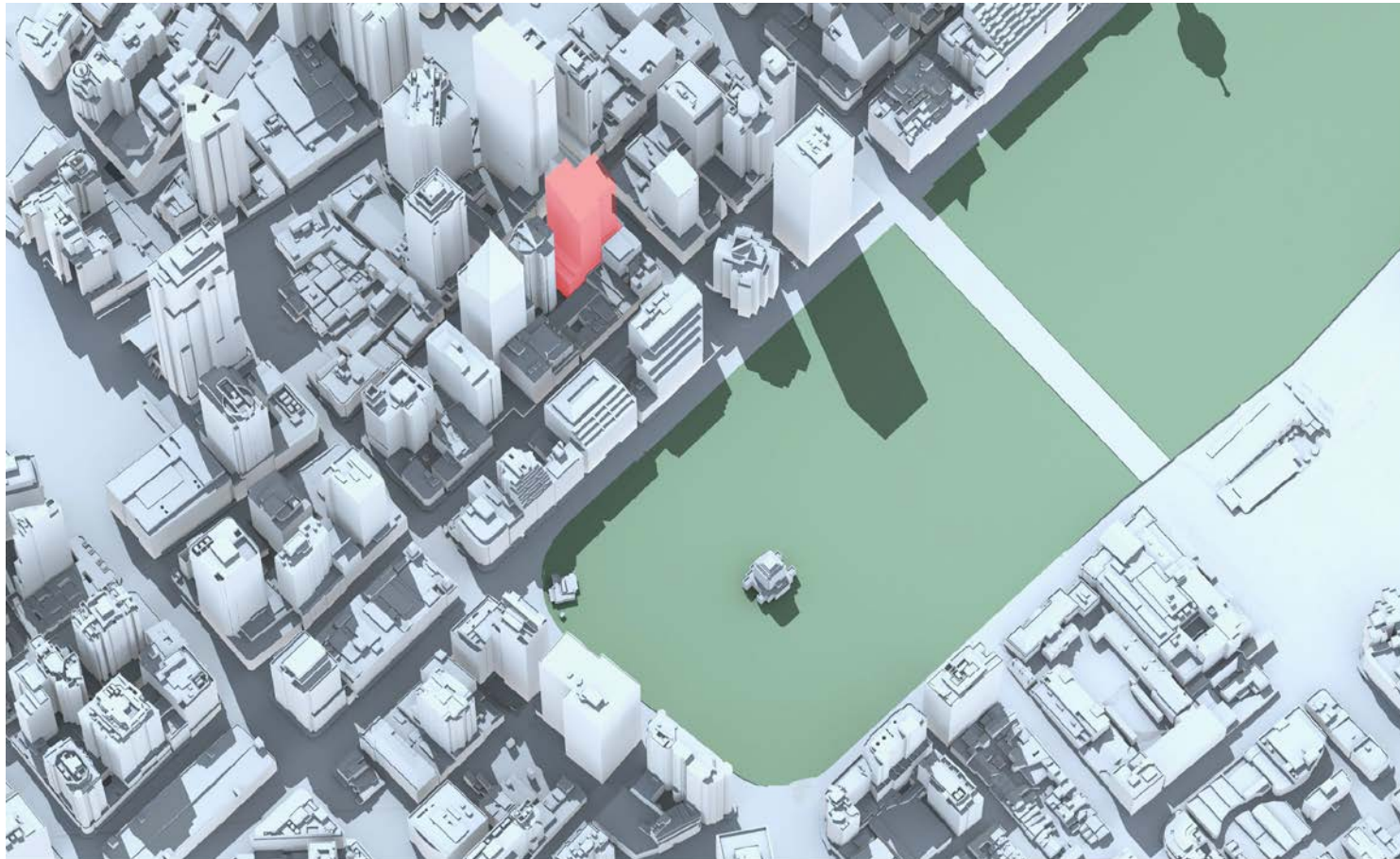
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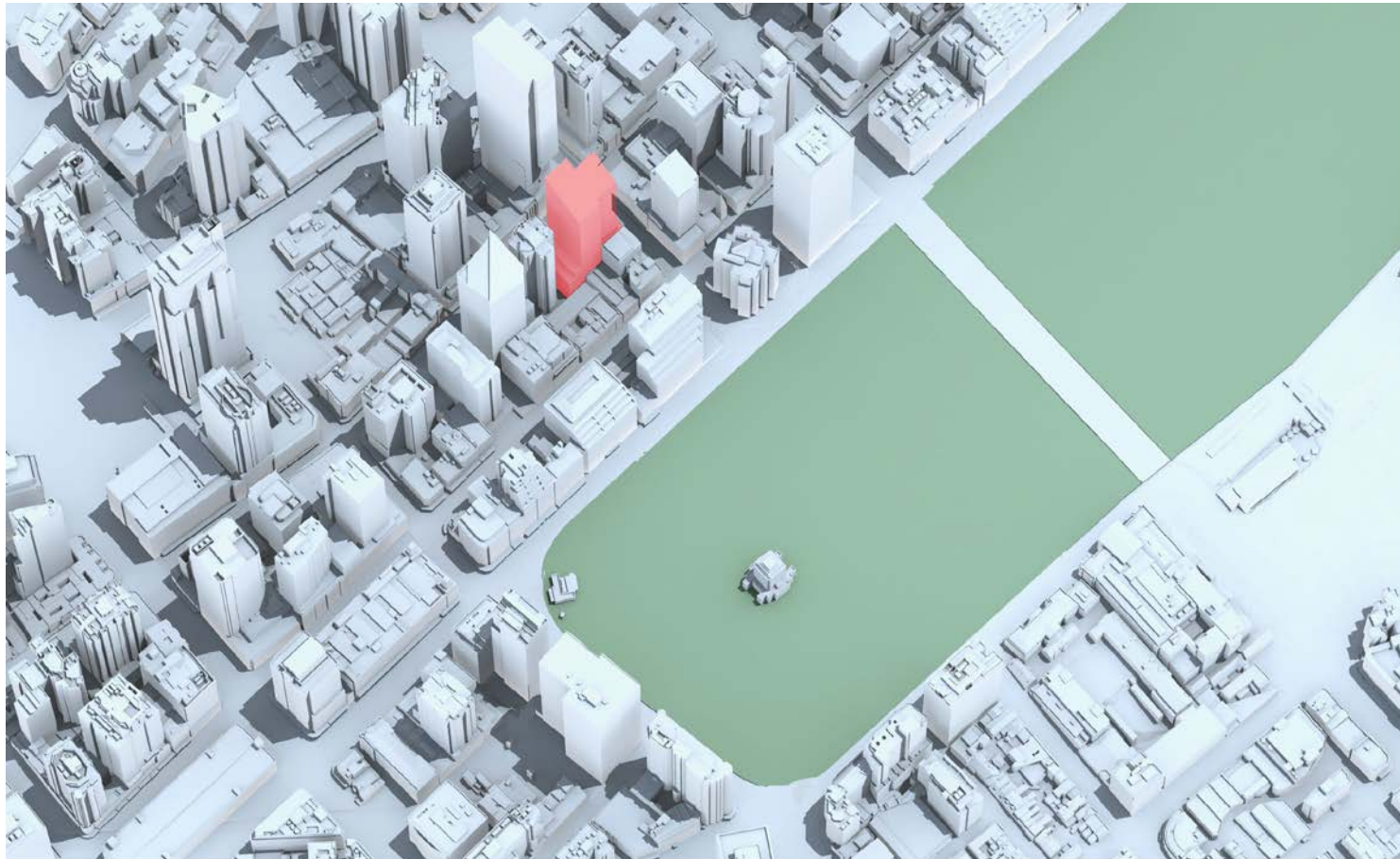
 Pitt Street South OSD Envelope	 Additional Shadow cast by Pitt Street South OSD Envelope	 Hyde Park	 Shadow cast by existing City of Sydney buildings
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**Pitt Street South OSD Shadow Study      October 21      15:00PM      AEDT**

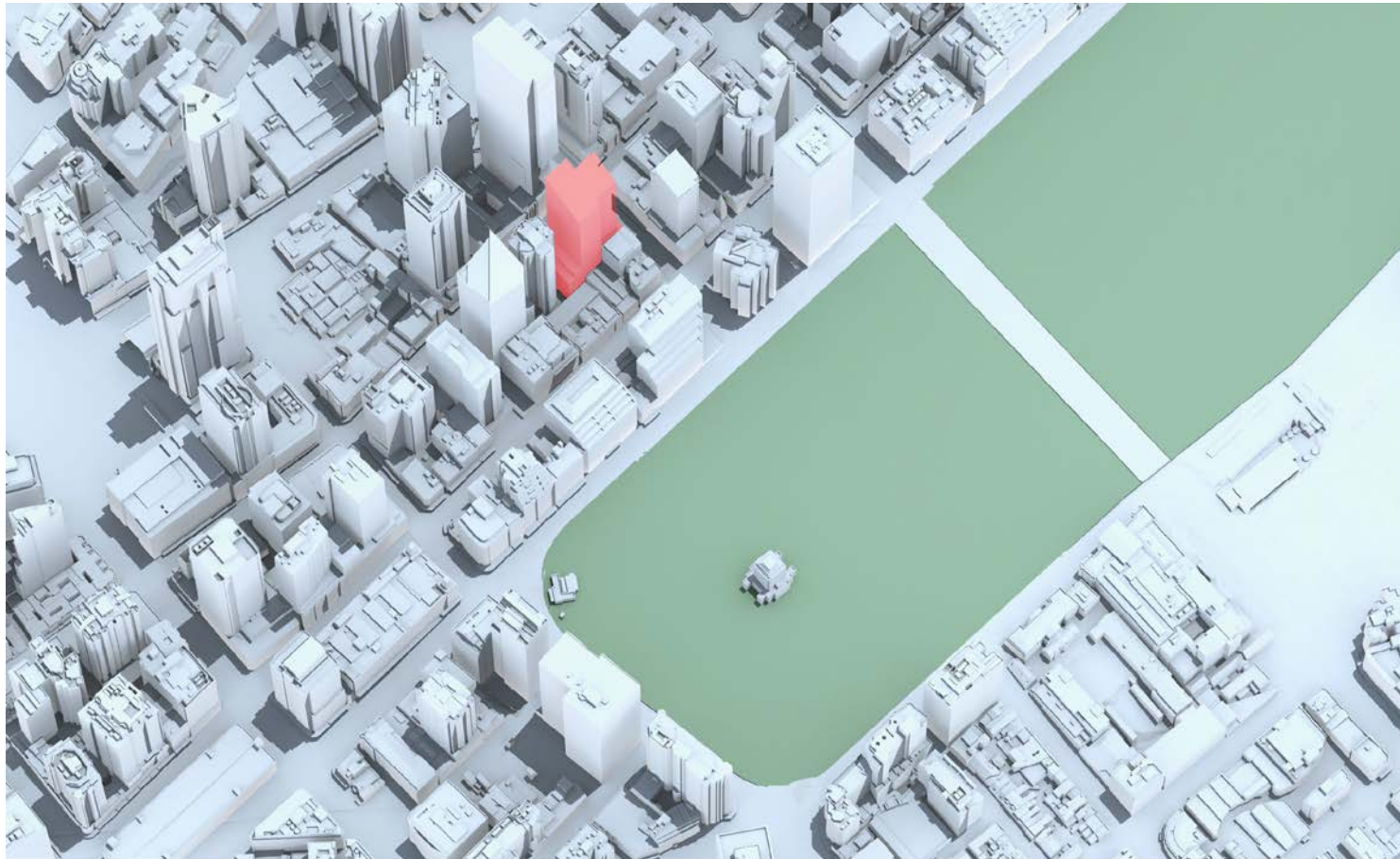
 Pitt Street South OSD Envelope	 Additional Shadow cast by Pitt Street South OSD Envelope	 Hyde Park	 Shadow cast by existing City of Sydney buildings
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**Pitt Street South OSD Shadow Study      November 21 12:00PM      AEDT**

 Pitt Street South OSD Envelope	 Additional Shadow cast by Pitt Street South OSD Envelope	 Hyde Park	 Shadow cast by existing City of Sydney buildings
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**Pitt Street South OSD Shadow Study      November 21 12:30PM      AEDT**

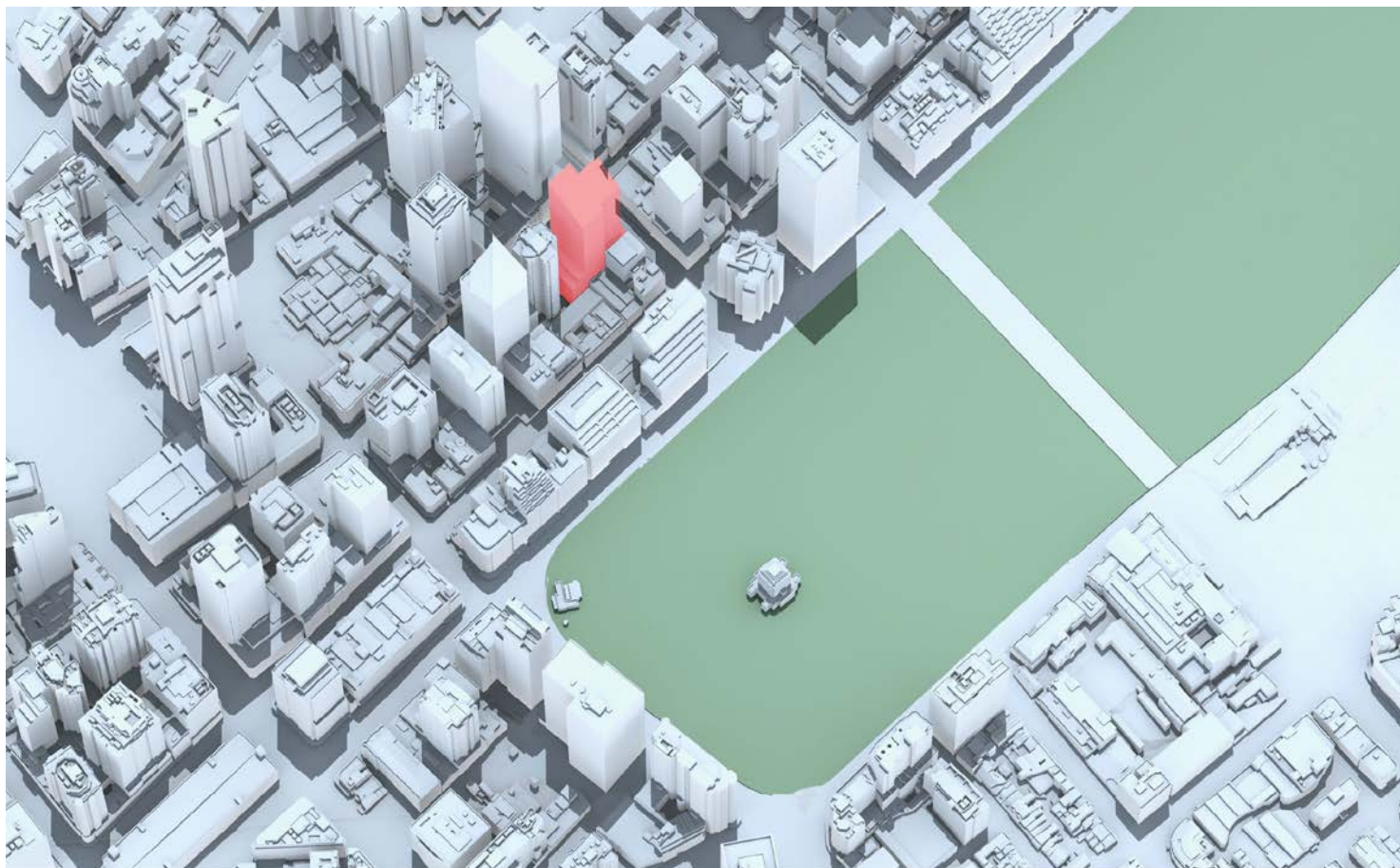
 Pitt Street South OSD Envelope	 Additional Shadow cast by Pitt Street South OSD Envelope	 Hyde Park	 Shadow cast by existing City of Sydney buildings
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**Pitt Street South OSD Shadow Study      November 21 13:00PM      AEDT**

 Pitt Street South OSD Envelope	 Additional Shadow cast by Pitt Street South OSD Envelope	 Hyde Park	 Shadow cast by existing City of Sydney buildings
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**Pitt Street South OSD Shadow Study      November 21 13:30PM      AEDT**

 Pitt Street South OSD Envelope	 Additional Shadow cast by Pitt Street South OSD Envelope	 Hyde Park	 Shadow cast by existing City of Sydney buildings
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**Pitt Street South OSD Shadow Study      November 21 14:00PM      AEDT**

 Pitt Street South OSD Envelope	 Additional Shadow cast by Pitt Street South OSD Envelope	 Hyde Park	 Shadow cast by existing City of Sydney buildings
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**Pitt Street South OSD Shadow Study      November 21 14:30PM      AEDT**

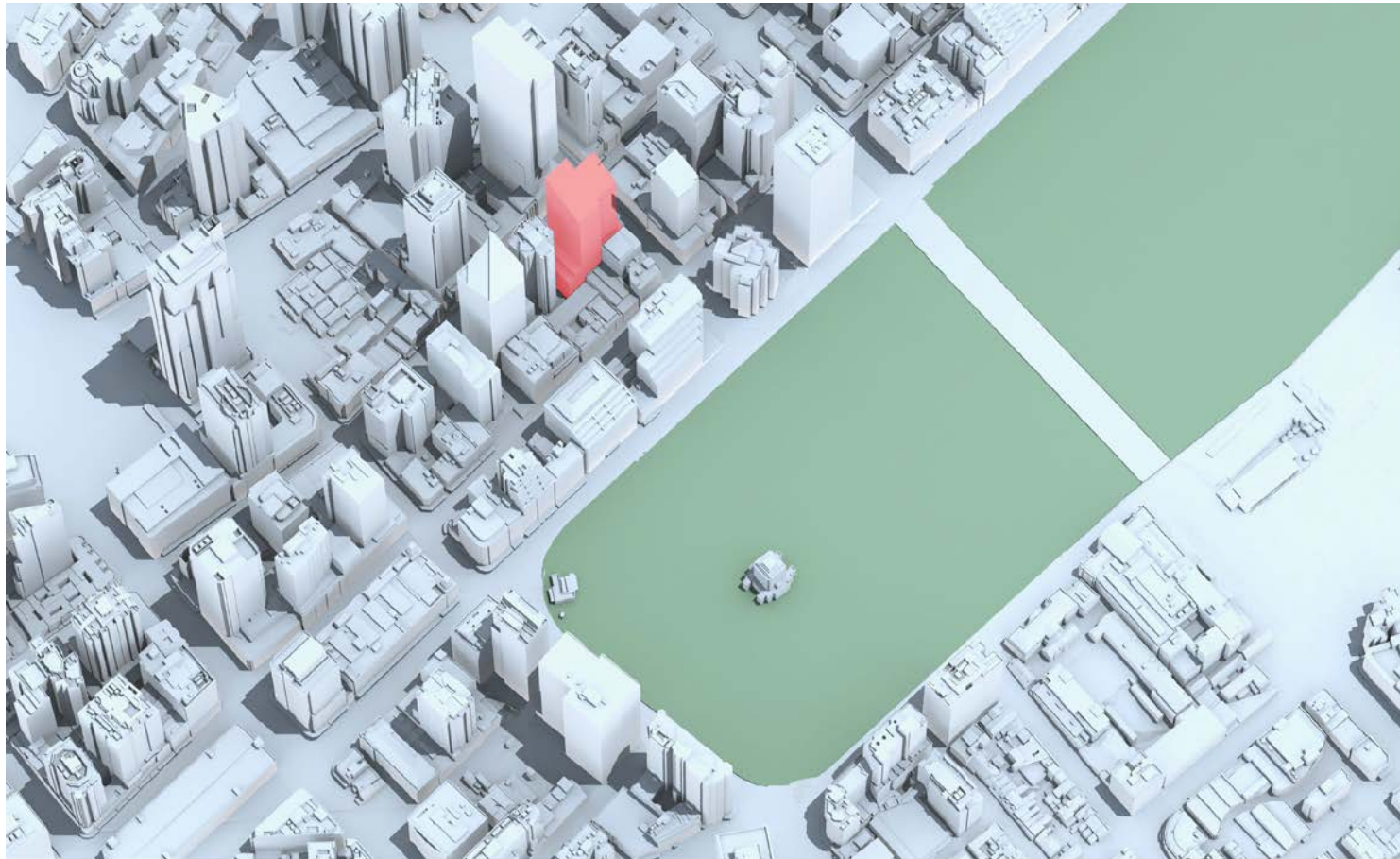
 Pitt Street South OSD Envelope	 Additional Shadow cast by Pitt Street South OSD Envelope	 Hyde Park	 Shadow cast by existing City of Sydney buildings
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**Pitt Street South OSD Shadow Study      November 21   15:00PM   AEDT**

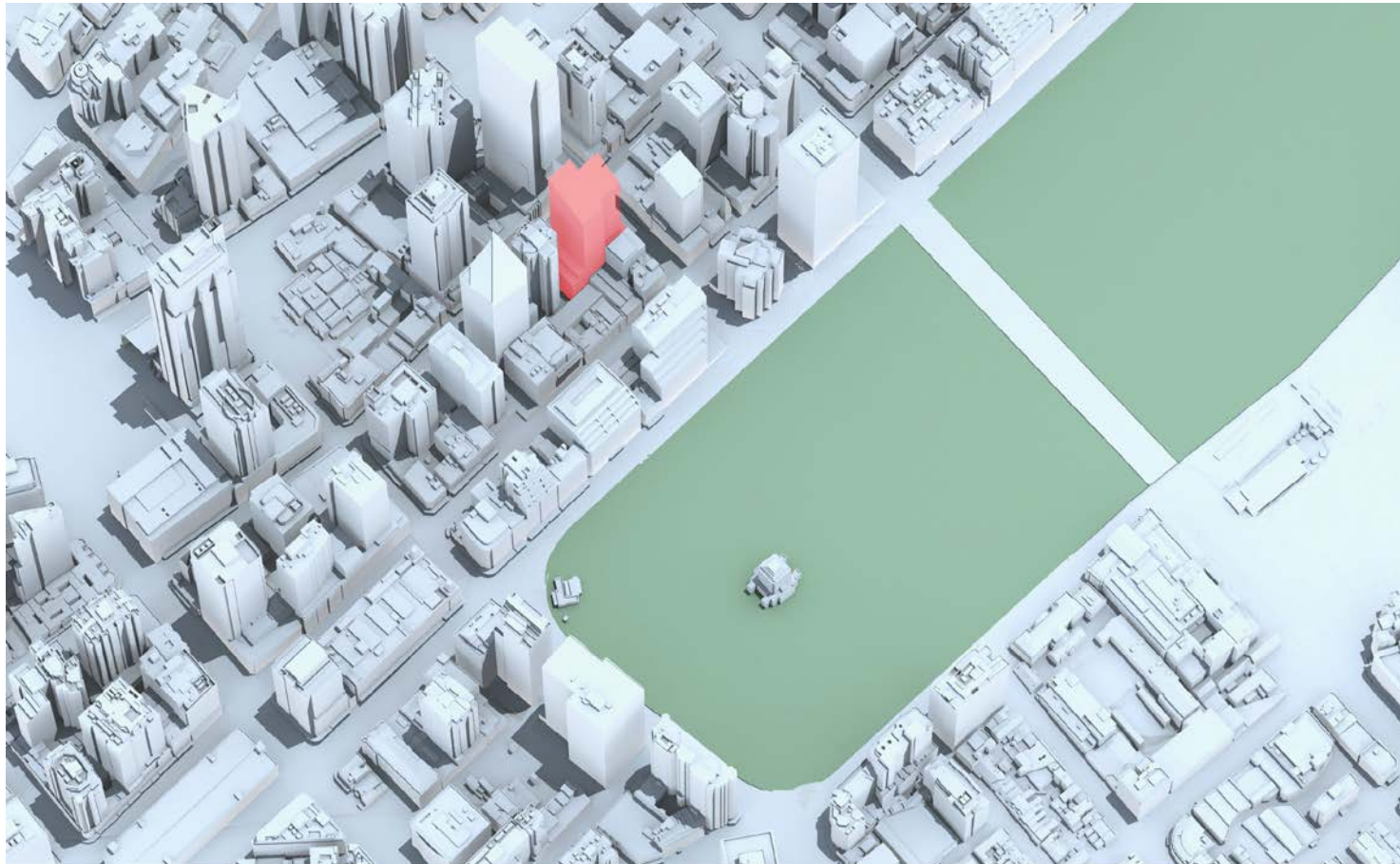
 Pitt Street South OSD Envelope	 Additional Shadow cast by Pitt Street South OSD Envelope	 Hyde Park	 Shadow cast by existing City of Sydney buildings
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**Pitt Street South OSD Shadow Study      December 21 12:00PM      AEDT**

 Pitt Street South OSD Envelope	 Additional Shadow cast by Pitt Street South OSD Envelope	 Hyde Park	 Shadow cast by existing City of Sydney buildings
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**Pitt Street South OSD Shadow Study      December 21 12:30PM      AEDT**

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**Pitt Street South OSD Shadow Study      December 21 13:00PM      AEDT**

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**Pitt Street South OSD Shadow Study**      **December 21 13:30PM AEDT**

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**Pitt Street South OSD Shadow Study      December 21 14:00PM      AEDT**

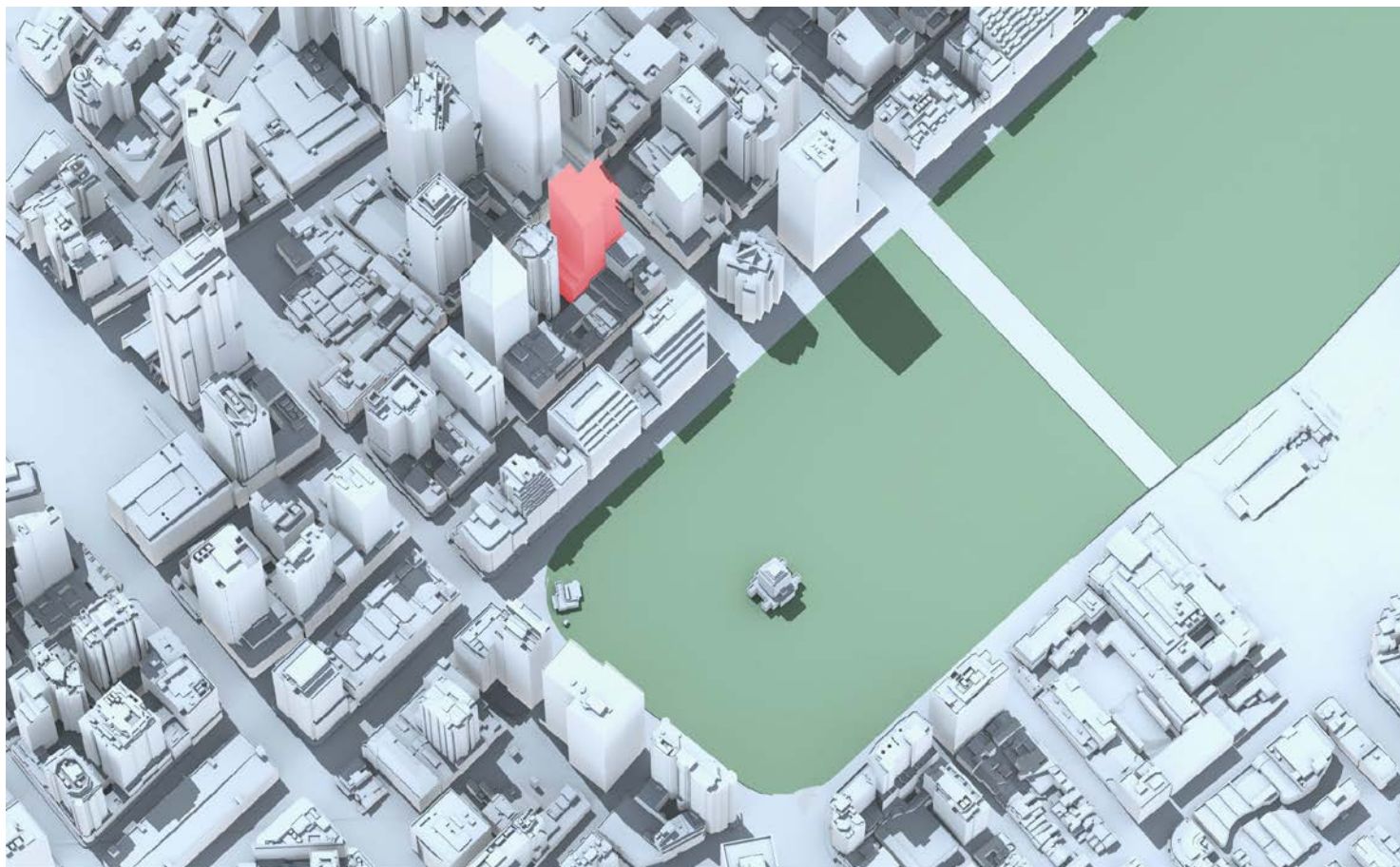
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