

Appendix G

Cumulative impacts assessment methodology

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This appendix describes the methodology for the cumulative impact assessment included in the impact assessment for this proposal.

1.1 Introduction

Cumulative impacts have the potential to occur when impacts from a project interact or overlap with impacts from other projects and can potentially result in a larger overall effect (positive or negative) on the environment, businesses or local communities. Cumulative impacts may occur during construction stages when projects are constructed concurrently or consecutively. Projects constructed consecutively (or sequentially) can result in construction activities occurring over an extended period of time with little or no break in construction activities, potentially causing increased impacts and construction fatigue for local communities.

The extent to which another development or activity could interact with the construction of the proposal would depend on its scale, location and/or timing of construction. Generally, cumulative impacts would be expected to occur where multiple long-duration construction activities are undertaken close to, and over a similar timescale to, construction activities for the proposal, or where consecutive construction occurs in the same area.

Construction fatigue can also potentially cause complaint fatigue, which is where impacted residents do not complain as they believe corrective action is unlikely to occur and hence there is no point in lodging a complaint. Construction fatigue is considered in Chapter 13 (Social impacts) and is also detailed in Technical Paper 6 (Social impact assessment).

The overall effect of cumulative benefits or impacts could be positive or negative, depending on the nature of the projects and the nearby communities and environment.

1.2 Legislative and policy context

The Department of Planning, Industry and Environment published the *Cumulative Impact Assessment Guidelines for State Significant Projects* (2021) in July 2021. The transitional provisions for the new guidelines means the *Cumulative Impact Assessment Guidelines for State Significant Projects* (Department of Planning, Industry and Environment, 2021) are not applicable to this proposal. This is because the new requirements do not apply to assessment reports where the Secretary's Environmental Assessment Requirements were issued before 1 October 2021, and for Environmental Impact Statements received on or before 31 March 2022. The Secretary's Environmental Assessment Requirements for this proposal were issued on 7 July 2021, and the Environmental Impact Statement is anticipated to be exhibited in late 2021.

The Secretary's Environmental Assessment Requirements for this proposal refer to the need to undertake an assessment of the relevant cumulative impacts that take into account:

- Other State significant projects that have been approved but where construction has not commenced
- Projects that have commenced construction
- Projects that have recently been completed (such as WestConnex, Western Harbour Tunnel and the major civil construction for Sydney Metro West between Westmead and The Bays)
- Approved construction in the relevant precincts.

The Secretary's Environmental Assessment Requirements also require that for each key issue associated with this proposal, the impacts of concurrent activities within the proposal and cumulative impacts (parallel and sequential) with other projects be assessed. The cumulative impact assessment of this proposal has been prepared to address the Secretary's Environmental Assessment Requirements.

1.3 Assessment methodology

The assessment methodology for the cumulative impact assessment for this proposal involved:

- Identification of projects (which have publicly available information) that could be considered for cumulative impacts, using the following initial criteria:
 - Projects located in the same local government areas as the proposal
 - Major transport infrastructure projects, including public transport projects and road projects
 - Large-scale urban development projects and other infrastructure projects
- Application of detailed screening criteria to determine which projects should be taken forward to the cumulative impact assessment
- Identification of projects that would be carried through to the cumulative impact assessment.

The assessment methodology is shown in Figure 1 and detailed in the sections that follow.

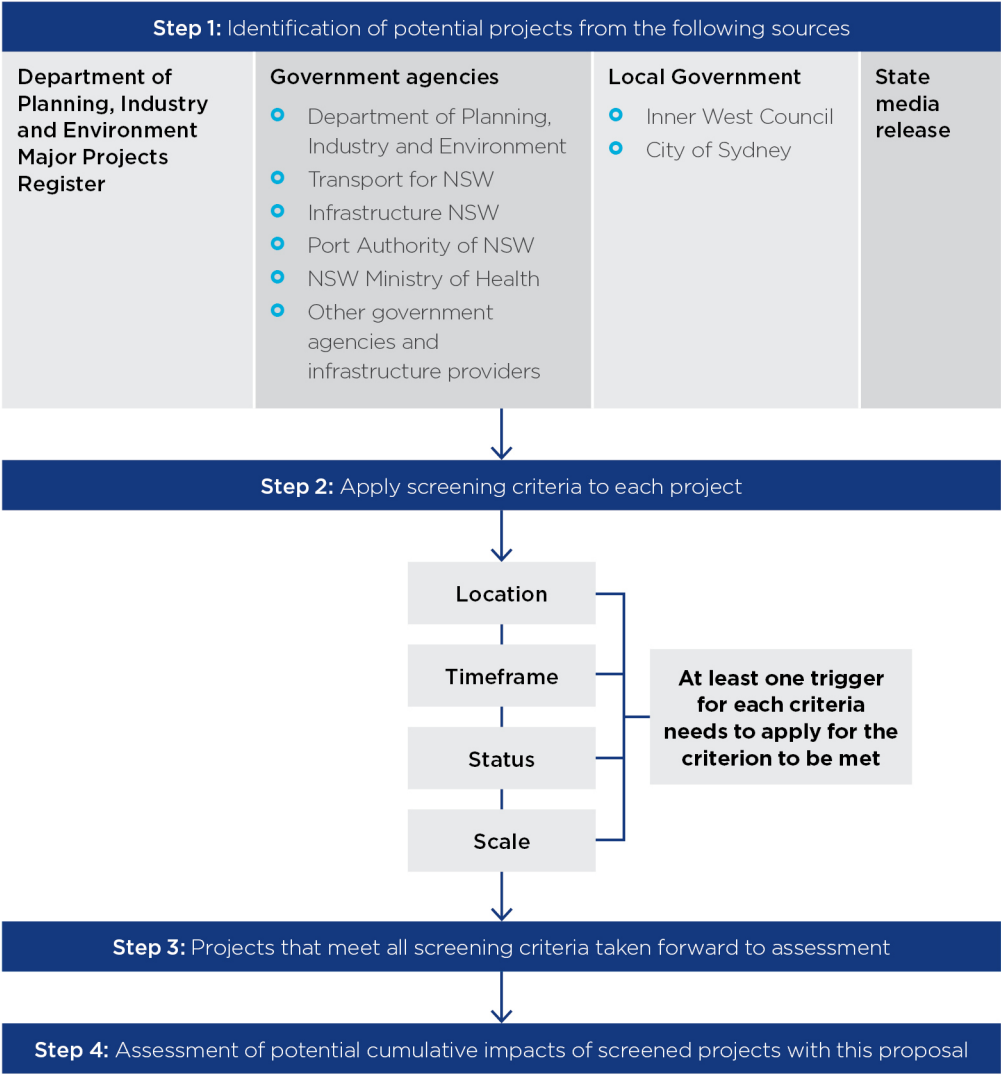


Figure 1 Overview of the cumulative impact assessment methodology

1.3.1 Screening criteria

Once the initial list of projects was developed using publicly available information, four criteria were applied to identify whether a project should be assessed for cumulative impacts as shown in Table 1.

Several triggers were developed for each screening criteria to objectively determine whether a project could potentially cause a cumulative impact with this proposal and should be considered in the cumulative impact assessment.

Projects that satisfied at least one of the triggers in each of the four criteria were included in the cumulative impact assessment and are described in Section 1.4.

Table 1 Screening criteria for cumulative impact assessment

Criteria	Triggers
Location	<ul style="list-style-type: none"> • Direct overlap – Construction footprints of a project intersect with this proposal • In the area – Construction footprints are adjacent or in close proximity to this proposal
Timeframe	<ul style="list-style-type: none"> • Concurrent construction program with the proposal • Consecutive construction program with the program
Status	<ul style="list-style-type: none"> • Based on publicly available information • Approved projects (statutory approvals received), including approved projects that have not started construction, projects currently under construction, and recently completed projects • Proposed projects (currently under statutory environmental impact assessment which includes where an application has been lodged), where there is enough publicly available information at the time of preparing this Environmental Impact Statement to allow for analysis of potential cumulative impact issues
Scale	A project was considered relevant where it is a large-scale major development or infrastructure project that could cause cumulative impacts with the proposal

1.3.2 Identification of projects

Projects identified on the initial list that satisfied at least one of the triggers for each of the screening criteria in Table 1 were included in the cumulative impact assessment.

The list of projects identified can be broadly categorised as:

- Major transport infrastructure projects, including public transport projects and road projects
- Large-scale urban development projects and other infrastructure projects.

The separate construction sites at both the Pyrmont Station and Hunter Street Station (Sydney CBD) sites are relatively close to each other geographically, and the impacts of each of the construction sites at Pyrmont and Hunter Street (Sydney CBD) have been assessed and discussed in the main chapters of the Environmental Impact Statement.

1.3.3 Approach to potential cumulative impact assessment

Projects that met the screening criteria have been considered for the cumulative impact assessment.

Potential cumulative impacts may occur on the same receiving environment or community from where activities from the proposal:

- Would occur in an area recently affected by activities from previous projects
- Are combined with activities from other project that could cause a cumulative impact on a single environmental or social value or asset
- Are combined with activities from other projects that could cause a cumulative impact on multiple environmental or social values of assets.

The potential cumulative impacts during construction of this proposal are described in Chapter 6 to 22 of this Environmental Impact Statement. In locations where cumulative impacts relating to a key issue has been assessed as negligible, the issue is not considered further.

1.4 Projects taken forward for cumulative assessment

The projects that met the screening criteria for consideration in the cumulative impact assessment area included in Table 2.

Table 2 Projects considered in the cumulative impact assessment

Project name, status, and expected construction period	Brief project description	Relevant locations where cumulative impacts may occur
Sydney Metro West Major civil construction work between Westmead and The Bays <i>Approved</i> Construction program 2021 - 2026	Sydney Metro West (the Concept) would involve the construction and operating of a metro rail line around 24 kilometres long between Westmead and Sydney CBD. Approval has been granted for Stage 1 of the planning approvals process, involving major civil construction work between Westmead and The Bays. Components of the project relevant to this cumulative impact assessment include: <ul style="list-style-type: none"> Station excavation for a new metro station at The Bays Tunnel excavation between Sydney Olympic Park and The Bays, including tunnel support activities at The Bays. 	<ul style="list-style-type: none"> The Bays tunnel launch and support site
WestConnex M4-M5 Link <i>Approved</i> Construction program 2018 - 2023	The M4-M5 Link component of WestConnex involves the construction and operation of twin tunnels between the New M4 at Haberfield and the New M5 at St Peters, with an interchange at Rozelle and tunnel connection to Victoria Road at Iron Cove.	<ul style="list-style-type: none"> The Bays tunnel launch and support site
Western Harbour Tunnel and Warringah Freeway Upgrade <i>Approved</i> Construction program 2020 - 2026	The Western Harbour Tunnel and Warringah Freeway Upgrade project form part of the Western Harbour Tunnel and Beaches Link Program and comprise a new motorway tunnel connection across Sydney Harbour, and an upgrade of the Warringah Freeway to integrate the new motorway infrastructure with the existing road network, with a connection to the Beaches Link and Gore Hill Freeway Connection project. A construction site at White Bay is proposed to support the construction of the Western Harbour Tunnel.	<ul style="list-style-type: none"> The Bays tunnel launch and support site
Glebe Island concrete batching plant and aggregate handling <i>Approved</i> Construction program 2021 - 2022	This project involves the construction and operation of a new aggregate handling and concrete batching facility, with the capacity to produce up to one million cubic metres of concrete per annum.	<ul style="list-style-type: none"> The Bays tunnel launch and support site
Glebe Island Multi-User Facility <i>Approved</i> Construction program 2020 - 2021	This proposal includes the construction and operation of a ship off-loading, storage and dispatch facility for bulk construction materials such as sand, aggregates and other dry bulk construction materials. The proposal site is located within land owned by the Port Authority on the eastern side of Glebe Island.	<ul style="list-style-type: none"> The Bays tunnel launch and support site
The new Sydney Fish Market <i>Approved</i> Construction program 2020 - 2024	The project involves building a new Sydney Fish Market which will be set within an improved public domain including the creation of a waterfront promenade. The site is located at the head of Blackwattle Bay between Pyrmont Peninsula and Glebe Peninsula.	<ul style="list-style-type: none"> The Bays tunnel launch and support site Pyrmont Station construction sites

Project name, status, and expected construction period	Brief project description	Relevant locations where cumulative impacts may occur
Sydney Metro West Rail infrastructure, stations, precincts and operations <i>Proposed</i> Construction program 2024 - 2029	Stage 3 of the planning approval process for Sydney Metro West includes tunnel fit-out, construction of stations, ancillary facilities and station precincts, and operation and maintenance of the Sydney Metro West line. The construction sites used for this proposal would be handed over to contractors of this project.	<ul style="list-style-type: none"> • The Bays tunnel launch and support site • Pyrmont Station construction sites • Hunter Street Station (Sydney CBD) construction sites
Sydney Metro City & Southwest (Chatswood to Sydenham) <i>Approved</i> Construction program 2017 - 2024	The Chatswood to Sydenham component of Sydney Metro City & Southwest Project involves the construction and operation of a 15.5 km metro line from Chatswood, under Sydney Harbour and through Sydney's CBD out to Sydenham. The Bligh Street construction site, currently used for excavation associated with Martin Place metro station would be handed over from the City and Southwest contractor to the Sydney Metro West contractor. The nearest City & Southwest stations to the proposal are Barangaroo Station, Martin Place metro station, and Pitt Street Station.	<ul style="list-style-type: none"> • Hunter Street Station (Sydney CBD) construction sites
Cockle Bay Wharf mixed use development <i>Proposed</i> No construction program	A State Significant Development application was approved by the NSW Independent Planning Commission in 2019 for the Concept Proposal and Stage 1 works which included a commercial building envelope and demolition works. The Application for Stage 2 of the development seeks consent for the detailed development, comprising: <ul style="list-style-type: none"> • Construction of a landbridge across part of the Western Distributor • The design, construction and use of a 43 storey mixed-use development • At least 6,500 square meters of publicly accessible open space • Site interface works • Subdivision. 	<ul style="list-style-type: none"> • Pyrmont Station construction sites • Hunter Street Station (Sydney CBD) construction sites
50-52 Phillip Street New Hotel <i>Proposed</i> Construction program 2023 - 2026	The proposal involves the delivery of a new landmark hotel building in Sydney CBD. The proposal will deliver about 331 new rooms throughout the 47 storey hotel development. Lower level café/bar uses would also be included.	<ul style="list-style-type: none"> • Hunter Street Station (Sydney CBD) construction sites
One Sydney Harbour <i>Approved</i> Construction program 2019 - 2025	One Sydney Harbour is a skyscraper complex under construction which includes 808 apartments in three towers. The project is part of the major urban renewal precinct of Barangaroo.	<ul style="list-style-type: none"> • Hunter Street Station (Sydney CBD) construction sites
Sydney Metro – Martin Place Over Station Development <i>Approved</i> Construction program 2017 - 2024	This project includes two over station development commercial towers above the northern and southern entrances of the yet to be constructed Martin Place metro station. The Concept Proposal is intended to be delivered as a single, integrated project along with the delivery of rail, station, concourse infrastructure and public domain works associated with the Martin Place metro station. The construction of the different elements is likely to be staged so as not to interrupt the overall construction program for this Sydney Metro line.	<ul style="list-style-type: none"> • Hunter Street Station (Sydney CBD) construction sites

Project name, status, and expected construction period	Brief project description	Relevant locations where cumulative impacts may occur
65-77 Market Street <i>Approved</i> Construction program 2020 - 2023	This project involves the retention and alteration of the existing retail/commercial building on the site and the construction of a 22 storey residential tower above. The development accommodates retail and commercial uses within the existing building, 101 residential apartments within the tower and 108 car parking spaces within the basement.	<ul style="list-style-type: none"> Hunter Street Station (Sydney CBD) construction sites
317 and 319-321 George Street <i>Proposed</i> No construction program	This proposal is for the redevelopment of the site at 317 and 319-321 George Street, including the retention and restoration of the existing listed heritage façade and the construction and use of a new building for commercial offices and retail premises. The new 14 storey commercial office building would include two lower levels of retail and 12 levels of commercial offices.	<ul style="list-style-type: none"> Hunter Street Station (Sydney CBD) construction sites
194-204 Pitt Street <i>Concept development application approved</i> No construction program	The Concept development application sought approval for a Concept building envelope for the redevelopment of the City Tattersall's Club, comprising a podium and tower containing indicative residential, retail, hotel and club land uses.	<ul style="list-style-type: none"> Hunter Street Station (Sydney CBD) construction sites
301 and 305 Kent Street Concept Hotel Development <i>Approved</i> No construction program	The Concept proposal sought consent for the establishment of a building envelope, use of the site at 301 and 305 Kent Street as a hotel with ancillary uses, pedestrian and vehicular access arrangements, and the provision of on-site bicycle and car parking.	<ul style="list-style-type: none"> Hunter Street Station (Sydney CBD) construction sites
180 George Street <i>Approved</i> No construction program	180 George Street will encompass the Salesforce Tower with a collection of new urban laneways hosting retail, dining and a major public square on George Street.	<ul style="list-style-type: none"> Hunter Street Station (Sydney CBD) construction sites

1.5 Location of projects assessed relative to construction sites

1.5.1 The Bays tunnel launch and support site

Projects near The Bays tunnel launch and support site considered in the cumulative impact assessment are shown in Figure 2.



Figure 2 Projects near The Bays tunnel launch and support site considered in the cumulative impact assessment

1.5.2 Pyrmont Station construction sites

Projects near the Pyrmont Station construction sites considered in the cumulative impact assessment are shown in Figure 3.

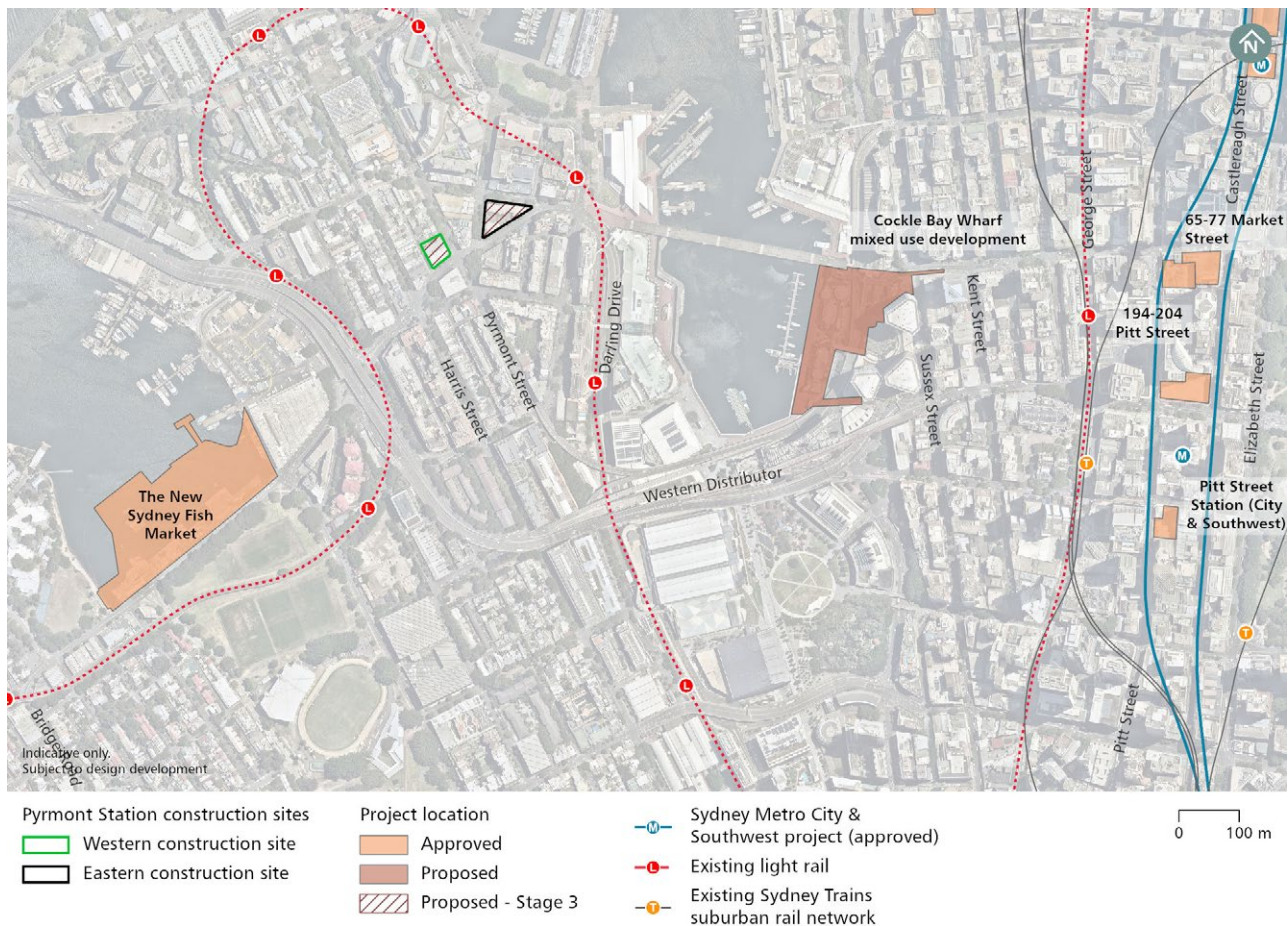


Figure 3 Projects near Pymont Station construction sites considered in the cumulative impact assessment

1.5.3 Hunter Street Station (Sydney CBD) construction sites

Projects near the Hunter Street Station (Sydney CBD) construction sites considered in the cumulative impact assessment are shown in Figure 4.

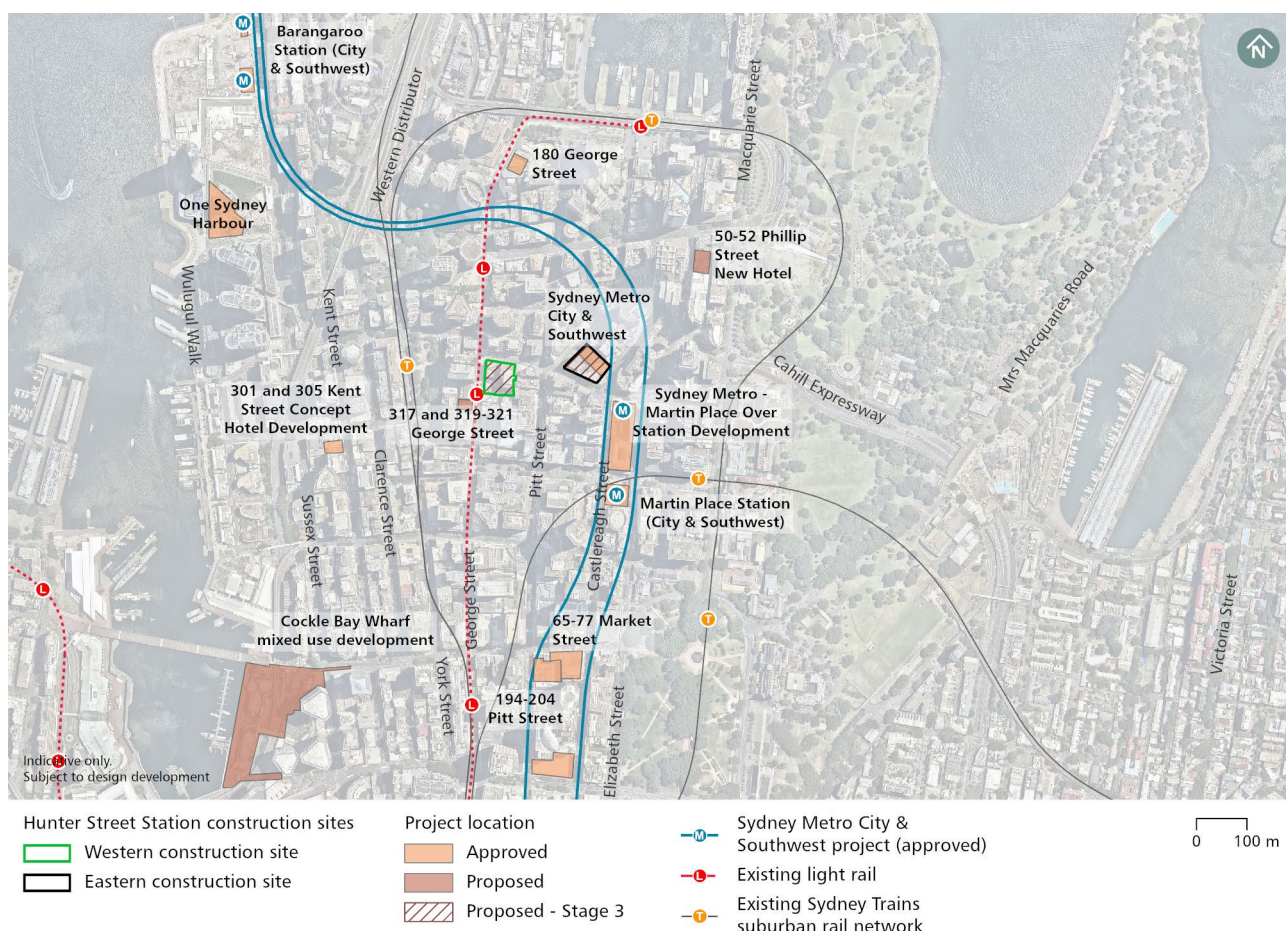


Figure 4 Projects near Hunter Street Station construction sites considered in the cumulative impact assessment

1.6 Assessment of cumulative impacts in technical papers

Specialists used their judgement to identify those projects from the list which are most relevant to their assessment scope, depending on the potential impacts associated with each project. This is different for each specialist. Specialists were advised to review the list of projects identified in Table 2 for cumulative assessment and further assess those which are directly relevant to their discipline. Cumulative impact assessments (where undertaken) are included within each environmental impact assessment chapter, as relevant, to enable a holistic assessment of the issue to be presented within the relevant chapter.

1.7 Mitigation measures

Where the cumulative impact assessment in Chapter 6 to 22 of the Environmental Impact Statement predicts impacts that would require the implementation of mitigation measures to address cumulative impacts, these measures are included in each respective chapter where the cumulative impact has been assessed.

Sydney Metro will coordinate and consult with the following stakeholders where required to manage the interface of projects under construction at the same time:

- Other parts of Transport for NSW
- Department of Planning, Industry and Environment
- Port Authority of NSW
- Local government
- Sydney Motorways Corporation
- Emergency service providers
- Utility providers
- Construction contractors.

Co-ordination and consultation with these stakeholders would include:

- Provision of regular updates to the detailed construction program, construction sites and haul routes
- Identification of key potential conflict points with other construction projects
- Developing mitigation strategies in order to manage conflicts. Depending on the nature of the conflict, this could involve:
 - Adjustments to the Sydney Metro construction program, work activities or haul routes; or adjustments to the program, activities or haul routes of other construction projects
 - Co-ordination of traffic management arrangements between projects.

