

## 22. Cumulative impacts

### 22.1 Existing environment and background

This chapter draws on information provided in Appendix F (Aboriginal heritage assessment), Appendix G1 (Non-Aboriginal heritage assessment), Appendix G2 (Historical archaeological impact assessment and research design), Appendix H (Traffic, transport and access assessment), Appendix I (Place and urban design assessment), Appendix K (Noise and vibration assessment), Appendix L (Socio-economic impact assessment), Appendix P (Air quality assessment) and Chapter 18 (Land use and property). This cumulative impact assessment has been prepared in accordance with the Cumulative Impact Assessment Guidelines for State Significant Projects (Department of Planning and Environment (DPE), 2022b).

#### 22.1.1 Overview

Cumulative benefits or impacts have the potential to occur when benefits or impacts from a project interact or overlap with benefits or impacts from other projects and can potentially result in a larger overall effect (positive or negative) on the environment or local communities. Cumulative impacts may occur during construction stages when projects are constructed or operated concurrently or consecutively. Once the project is operational, other projects which interrelate may enhance the project and create positive cumulative benefits.

Projects identified for consideration as part of the cumulative impact assessment were those that were:

- Located within one kilometre of the project
- Listed on the NSW Government Major Projects website as State significant development or State significant infrastructure.

The following criteria were used to screen the projects initially identified:

- Spatial relevance: a project was considered to be spatially relevant if it overlapped with or was adjacent or in close proximity to the project footprint
- Timing: a project was considered to be relevant if the expected timing of its construction would overlap or occur consecutively and/or sequentially (that is, within three months) to the project's timing of construction or operation
- Scale: large-scale major development or infrastructure projects that could cause cumulative impacts with the project were considered, as listed on the NSW Government Major Projects website
- Publicly available information: projects under consideration must have publicly available information (at the time of preparing this Environmental Impact Statement), with a sufficient level of detail to allow for analysis of potential cumulative impact issues.

The projects identified for inclusion in the cumulative impact assessment are included in Table 22-1. Publicly available information and environmental planning documents were reviewed to identify any potential residual impacts and the main receivers and values that would be impacted.

Table 22-1: Projects considered for cumulative impacts

Development	Details	Indicative timing	Residual impacts	Receivers and values
Central Precinct Renewal Program (CPRP)	<b>Central State Significant Precinct (SSP)</b> rezoning proposal. The rezoning proposal aims to deliver a technology and innovation precinct by enabling development over and adjacent to the railway lines at Central Station, providing new jobs, homes and open space. While development approval for the over station development has not yet been approved, the anticipated residual impacts, receivers and values have been included to inform the assessment.	Unknown	<ul style="list-style-type: none"> <li>Construction related amenity impacts (for example, visual, noise and air quality)</li> <li>Construction traffic impacts</li> <li>Non-Aboriginal heritage impacts</li> <li>Construction socioeconomic impacts and operational benefits</li> <li>Construction and operation land use and property impacts.</li> </ul>	<ul style="list-style-type: none"> <li>Residential and commercial receivers surrounding Central Station</li> <li>Sydney Terminal and Central Railway Stations Group heritage item.</li> </ul>
	<b>Western Gateway</b> involves the development of the associated sub-precinct to support the delivery of Tech Central. It will include a mix of company headquarters, apartments, and retail including. The Western Gateway sub-precinct, comprises three development blocks of land known as Block A (Atlassian Central), Block B (Central Place) and Block C (TOGA Central).	Atlassian Central – Q3 2022 – Q1 2026 Central Place – Q2 2023 – Q1 2028 TOGA Central – Q2 2023 – Q3 2027	<ul style="list-style-type: none"> <li>Construction related amenity impacts (for example, visual, noise and vibration and air quality)</li> <li>Construction traffic impacts</li> <li>Non-Aboriginal heritage impacts</li> <li>Construction socioeconomic impacts and operational benefits</li> <li>Construction and operation land use and property impacts.</li> </ul>	<ul style="list-style-type: none"> <li>Residential and commercial receivers surrounding Central Station</li> <li>Sydney Terminal and Central Railway Stations Group heritage item.</li> </ul>
	<b>Former Prince Alfred Substation Adaptive Reuse Project</b> involves creating a new space for tech and creative industries or start-ups.	Q1 2023 – Q4 2023	<ul style="list-style-type: none"> <li>Construction related amenity impacts (for example, visual, noise and vibration and air quality)</li> <li>Construction traffic impacts</li> <li>Construction socioeconomic impacts and operational benefits.</li> </ul>	<ul style="list-style-type: none"> <li>Residential and commercial receivers surrounding Central Station.</li> </ul>
	<b>Early Activation Work   EDDY</b> is a project that will allow 12-to-18-month leases to be taken on Eddy	Commenced in November 2022	<ul style="list-style-type: none"> <li>Positive impacts during operation with the addition of</li> </ul>	<ul style="list-style-type: none"> <li>Visitors and commuters at Central Station.</li> </ul>

Development	Details	Indicative timing	Residual impacts	Receivers and values
	Avenue, Eddy Avenue Plaza, and the Grand Concourse for retail and dining spaces.		food and beverage outlets and events in Eddy Avenue Plaza.	
Sydney Metro City and Southwest	The <b>Sydney Metro City and Southwest</b> platforms are below the intercity rail Platforms 13, 14, and 15. This project is currently under construction and is expected to be open in 2024.	Project currently under construction. Completion in 2024	<ul style="list-style-type: none"> <li>• Construction related amenity impacts (for example, visual, noise and vibration and air quality)</li> <li>• Construction traffic impacts</li> <li>• Non-Aboriginal heritage impacts</li> <li>• Construction socioeconomic impacts and operational benefits.</li> </ul>	<ul style="list-style-type: none"> <li>• Residential and commercial receivers surrounding Central Station</li> <li>• Visitors and commuters at Central Station</li> <li>• Sydney Terminal and Central Railway Stations Group heritage item.</li> </ul>
More Trains More Services program	The <b>More Trains More Services</b> program will support new suburban and intercity services. It involves reconfiguring Platforms 9 to 14 and other adjustments to allow more trains per hour. The first phase on Platforms 5 to 8 has recently been finished.	Unknown	<ul style="list-style-type: none"> <li>• Construction related amenity impacts (for example, visual, noise and vibration and air quality)</li> <li>• Construction traffic impacts</li> <li>• Non-Aboriginal heritage impacts</li> <li>• Construction socioeconomic impacts and operational benefits.</li> </ul>	<ul style="list-style-type: none"> <li>• Residential and commercial receivers surrounding Central Station</li> <li>• Visitors and commuters at Central Station</li> <li>• Sydney Terminal and Central Railway Stations Group heritage item.</li> </ul>
Tech Central	<b>Tech Central</b> is the biggest innovation district of its kind in Australia. It covers seven suburbs: Haymarket, Ultimo, Surry Hills, Camperdown, Darlington, North Eveleigh, and South Eveleigh. The district will provide technology company space and affordable space for start-ups and scaleups over the coming years. While not associated with a specific development approval, the anticipated residual impacts, receivers and values have been included to inform the assessment.	Unknown	<ul style="list-style-type: none"> <li>• Construction related amenity impacts (for example, visual, noise and vibration and air quality)</li> <li>• Construction traffic impacts</li> <li>• Non-Aboriginal heritage impacts</li> <li>• Construction socioeconomic impacts and operational benefits.</li> </ul>	<ul style="list-style-type: none"> <li>• Residential and commercial receivers surrounding Central Station</li> <li>• Sydney Terminal and Central Railway Stations Group heritage item.</li> </ul>

## 22.2 Potential cumulative impacts – construction

Potential cumulative impacts during construction of the project are summarised in Sections 22.2.1 to 22.2.5 below. Further details on the potential cumulative impacts during construction are presented in the relevant technical reports.

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. Based on the environmental impact assessments for the project and for those projects listed in Table 22-1, potential impacts considered most likely to result in construction fatigue include construction traffic, construction noise and vibration, visual and amenity impacts.

### 22.2.1 Traffic, transport and access

With the location of the project within the City, core traffic volumes and heavy vehicle usage is already very high. As the works are focused on the Sydney Terminal Building and surrounds and not the train or road network itself, impacts are expected to be minor. Overall, the contribution of the project to the cumulative impact on traffic and transport in the area is minor, considering construction impacts would be managed through the implementation of a range of environmental management measures.

### 22.2.2 Noise and vibration

The Western Gateway describes three zones between the existing rail corridor and Lee Street, south of the project. Each of the three zones have submitted development applications including proposed demolition and redevelopment work which may result in cumulative impacts for receiver west of the project (see Chapter 12 (Noise and vibration)).

Where concurrent construction work is being completed near to a particular area, the worst-case construction noise levels could theoretically increase by around three decibels. While the likelihood of worst-case noise levels being generated by concurrent construction work is considered low, the potential impact on those affected by the noise should still be considered. Instead of increasing overall noise levels, the impact of concurrent construction activities may primarily be an increase in the duration and annoyance of noise impacts for those nearby.

Additionally, successive work in a particular area may result in consecutive impacts (that is, ‘construction fatigue’) at the surrounding receivers due to construction work being in the area for an extended period. Mitigation measures aimed at short-term construction work may be less effective where receivers are affected by impacts over a longer duration from several projects.

The potential for cumulative noise and vibration impacts would be reviewed as the project progresses and detailed work schedules are available. Specific management and mitigation measures designed to address potential impacts would be developed and used to minimise the impacts as far as practicable, in consultation with the affected community.

### 22.2.3 Socio-economic

The project would likely contribute to cumulative socio-economic impacts to the surrounding community through a temporary reduction in amenity during construction (for example, impacts to air quality, noise and vibration levels, and visual amenity), as well as potential minor cumulative impacts to the transport network.

### 22.2.4 Visual amenity

It is expected that the impact during construction of the project will span over a three-year period. The impact of the adjoining projects will occur at different time periods and will be an extension of the construction activities in the vicinity of the Sydney Terminal Building. This means there would be ongoing disruption and amenity loss across the precinct for several years. This adds to the disruption that has occurred to date from building Sydney Light Rail and Metro.

### 22.2.5 Air quality

The highest potential for cumulative air quality impacts is where construction of other projects would occur concurrently with the project. Given the potential to generate air quality impacts during construction is minor-moderate, would not involve significant dust generating activities and would largely occur in confined indoor and small areas outdoors the potential for cumulative impacts would be low.

## 22.3 Potential cumulative impacts – operation

Potential cumulative impacts during operation are summarised in Sections 22.3.1 to 22.3.4 below. Further details on the potential cumulative impacts during operation are presented in the relevant technical reports, noting that there is no technical report for land use and property which is presented in Chapter 18 (Land use and property).

### 22.3.1 Non-Aboriginal heritage

The proposed Central SSP rezoning (which includes areas of over-station development), Western Gateway and Sydney Metro City and Southwest would have major, irreversible heritage impacts. The Heritage Impact Statements prepared to support the Environmental Impact Statements for these projects assess them as having moderate to major physical impacts and major visual impacts on the Central Precinct.

The project would result in an overall minor heritage impact on the place. It positively impacts the place by enhancing and upgrading the Sydney Terminal Building to allow its continued operation as a transport interchange. The project would also increase the efficiency and amenity of the station by improving paths of movement through the building and providing a variety of new retail and food and beverage offerings, further facilitating the continued use, visitation and appreciation of the place. Cumulatively, the project would have a negligible cumulative heritage impact, within the wider context of major development and major, irreversible heritage impacts to the place.

The cumulative archaeological impact on archaeological resources of State significance associated with the Church of England section of the Devonshire Street Cemetery, the Belmore Police Barracks, Carter's Barracks and the Police Superintendent's Residence is identified as low to moderate. The works would result in cumulative impacts to the heritage value of the archaeological resource, despite the positive impacts of the knowledge gained from the excavation of such remains.

### 22.3.2 Traffic, transport and access

The project forms part of the wider set of works that would be delivered under the CPRP. It would enable and support the planned redevelopment of the Western Gateway, Former Prince Alfred Substation Adaptive Reuse Project, Tech Central, and future over-station development. These projects in conjunction with transport infrastructure upgrades proposed as part of Sydney Metro City and Southwest and More Trains, More Services aim to deliver a combined cumulative transport benefit across the Precinct for customers and visitors. The scale of this benefit is defined in Section 9.7 of the [State Significant Precinct Study – Central State Significant Precinct](#) (Transport for NSW, 2022u). Because the project has no material operational impact on its own, it means it would have no cumulative traffic impact in combination with the above projects.

### 22.3.3 Land use and property

Tech Central and the EDDY retail activation project would likely support the evolution and success of the Sydney Terminal Building going forward. Once operational, Tech Central would attract growth in tech-based industries and innovation which is going to introduce a mix of jobs and income brackets to Central Precinct. This would drive demand for a range of local services and retail experiences and is therefore likely to attract a broader mix of retail and office floor space in response to those working and visiting Tech Central and Eddy Avenue. This may alter the type of population serving industries including retail, food and beverage, and potentially introduce some more premium options.

These cumulative impacts would generate long-term positive impacts to property and land uses within the project area by further aligning it with the overall vision for Central Precinct as outlined in Chapter 3 (Strategic context and project need). The revitalisation of the Sydney Terminal Building would also help to improve the interconnections between the new land uses expected with Tech Central and the existing land uses in surrounding neighbourhoods. In particular, the new multipurpose space on the ground floor of the Sydney Terminal Building as well as the improvements to existing public spaces such as Eddy Avenue Plaza would help to foster this connection to the surrounding neighbourhoods by providing an improved meeting space with increased activation.

### 22.3.4 Landscape character and visual impacts

The overall cumulative landscape character and visual impact is assessed as moderate due to the scale and proximity of the developments adjoining Central Station. The landscape character zones (LCZ) directly impacted by the developments listed in Table 22-1 are LCZ1 – Chinatown and CBD South Village, LCZ3 – Redfern Street Village, and LCZ4 – Harris Street Village.

The additional public open space and enhanced streetscape from the proposed developments will contribute to improve the cumulative character and visual benefit of the areas adjoining the Sydney Terminal Building.

## 22.4 Environmental management measures

Both positive and negative cumulative impacts will be addressed in the form of management measures. Measures to minimise impacts relating to the individual environmental aspects are addressed in the other impact chapters and have not been included here. Table 22-2 lists the measures to manage cumulative impacts specifically.

Table 22-2: Environmental management measures – cumulative impacts

Ref	Impact / Uncertainty	Environmental management measure	Timing
CL01	Impact   Cumulative construction impacts	<p>Transport will coordinate the Central Precinct Working Group to manage potential impacts with other projects within and adjoining Central Precinct under construction at the same time as the project.</p> <p>Co-ordination and consultation with other relevant stakeholders will also occur when necessary (for example, DPE, Sydney Trains, NSW TrainLink, Sydney Light Rail, State Transit Authority, City of Sydney Council, utility providers and emergency services).</p> <p>Coordination and consultation with these stakeholders will include:</p> <ul style="list-style-type: none"> <li>• Provision of regular updates to the detailed construction program, construction sites and haul routes</li> <li>• Identification of key potential conflict points with other construction projects</li> <li>• Developing mitigation strategies to manage conflicts. Depending on the nature of the conflict, this could involve: <ul style="list-style-type: none"> <li>– Adjustments to the construction program, work activities or haul routes; or adjustments to the program, activities or haul routes of other construction projects</li> <li>– Coordination of traffic management arrangements between projects</li> <li>– Coordination of consultation activities to minimise the potential for consultation fatigue</li> <li>– Agree delivery and storage areas.</li> </ul> </li> </ul>	Construction
CL02	Impact   Cumulative construction noise	<p>Potential cumulative noise and vibration impacts will be reviewed as the project progresses and detailed work schedules are available. Specific management and mitigation measures designed to address potential impacts will be developed and used to minimise the impacts as far as practicable, in consultation with the affected community.</p>	Pre-construction / Construction