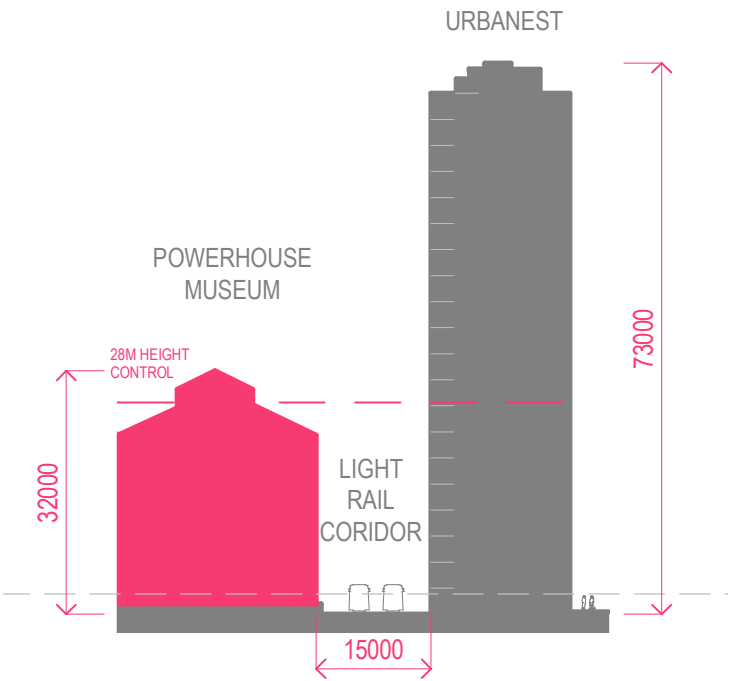
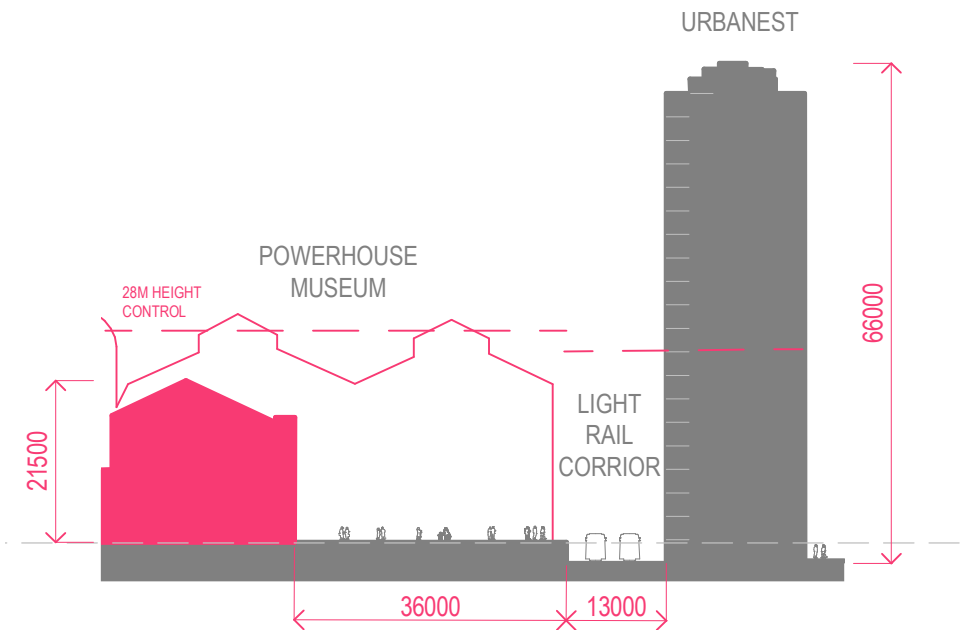
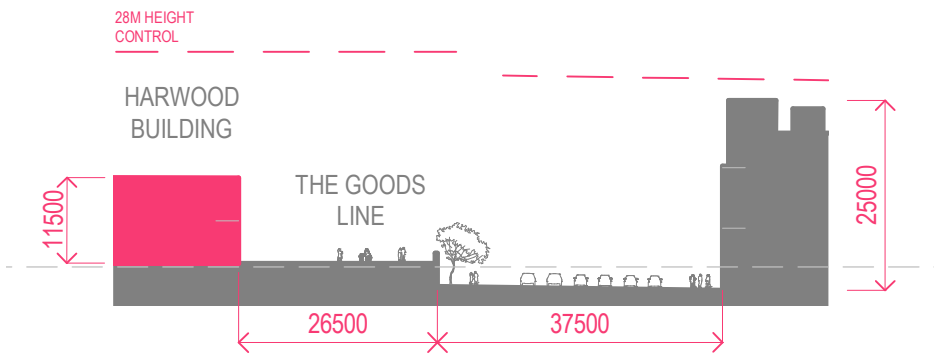


3.9 Spatial Character - The Goods Line



GL 03: The Goods Line



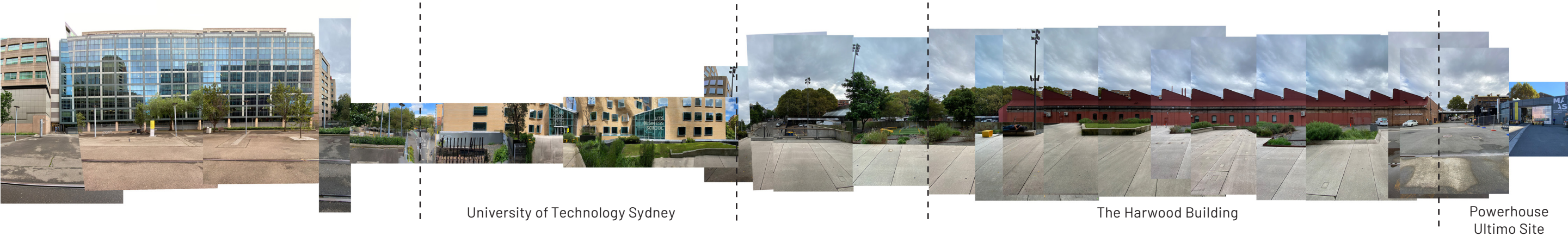
GL 04: Powerhouse Ultimo Forecourt



GL 05: Light Rail Corridor

3.10 Spatial Character - Street Elevations

The Goods Line



Harris Street



3.10 Spatial Character - Street Elevations

William Henry Street



Macarthur Street



3.11 View Analysis - Existing

The view analysis captures the visual impact of the existing Powerhouse Ultimo buildings, which includes the heritage buildings: the Switch House, Boiler House, Turbine Hall, Engine House, North Annex and the Former Post Office. The existing view analysis also captures the visual impact of the Wran building.

Powerhouse Ultimo buildings are visible from both south and north ends of Harris Street, William Henry Street looking east, Darling Drive looking south, The Goods line looking north, and to the east from the Plaza looking north and Hay Street looking north west.

There is minimal visual impact from the far south end of The Goods Line and from Broadway looking north. There is no visual impact further beyond the site from Darling Quarter looking south west.

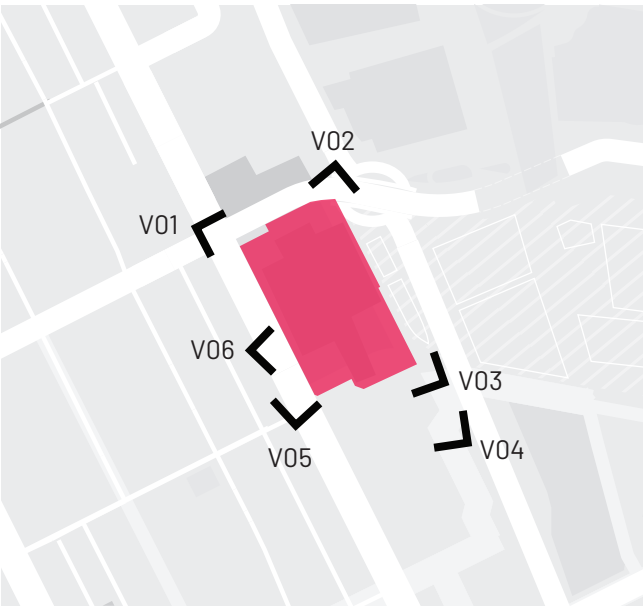
Existing views have been taken from a detailed Visual and View Impact Assessment (VIA), which accompanies the Environmental Impact Statement (EIS) undertaken by Ethos Urban as part of the Stage 1 SSDA. A complete and detailed assessment of views is available in the VIA.



V01: NW corner of Harris St and William Henry St looking SE



V02: Pier St Northern Footpath looking SW



View Analysis Key

3.11 View Analysis - Existing



V03: Goods Line and end of Macarthur St looking NW



V04: Goods Line between Macarthur St and Mary Ann St looking NW



V05: SW corner of Harris St and Macarthur St looking NE



V06: Harris St looking east

3.12 Overshadowing - Existing

Existing buildings on the site create a negligible amount of overshadowing to the surrounding context at present. The Turbine Hall, Boiler House and Switch House heritage buildings create partial overshadowing to the south-east courtyard from midday through to the afternoon at most times of the year.

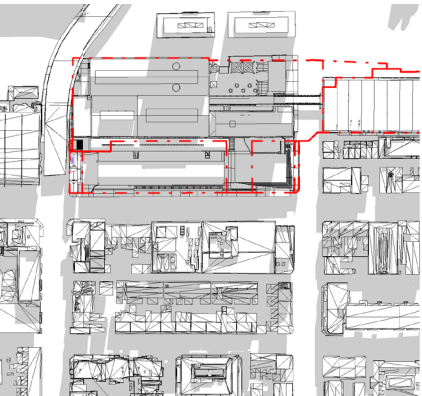
Overshadowing is cast to the existing external courtyard to the south-east of the site by the student accommodation towers east of the site across the year. The towers fully overshadow the south-east external courtyard from morning to late afternoon during the winter solstice, and from morning to midday most other times of the year. The existing two storey town houses to the south of Macarthur Street are overshadowed by the towers in winter from early morning to 10am.

The Harris Street forecourt is most impacted by overshadowing in the early morning during the winter, being almost fully overshadowed by the Urbanest towers, Switch House and Wran building at 9am during the winter solstice. The forecourt is minimally overshadowed by the Switch House from early morning to midday and by the Wran building from midday to early afternoon, being least impacted throughout the day in spring and summer and most impacted during winter.

Legend

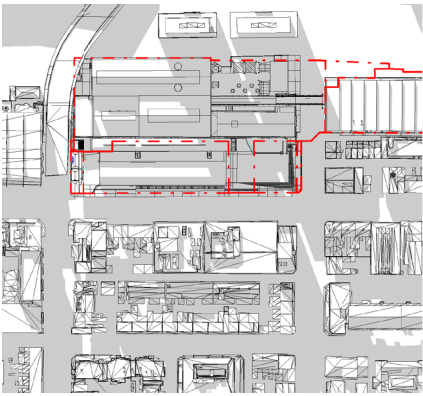
- Lot boundaries
- Existing overshadowing

Shadow Diagrams - Autumn Equinox



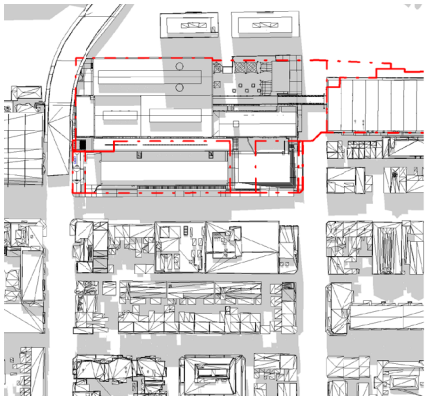
21 March 2022 - 9am

Shadow Diagrams - Winter Solstice



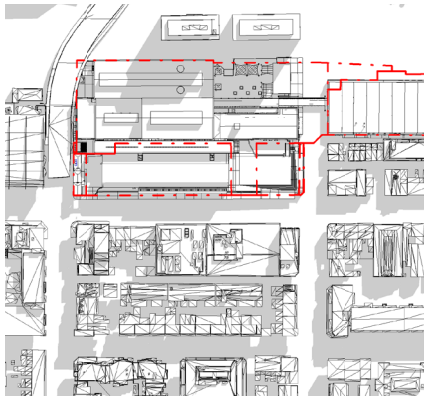
21 June 2022 - 9am

Shadow Diagrams - Spring Equinox

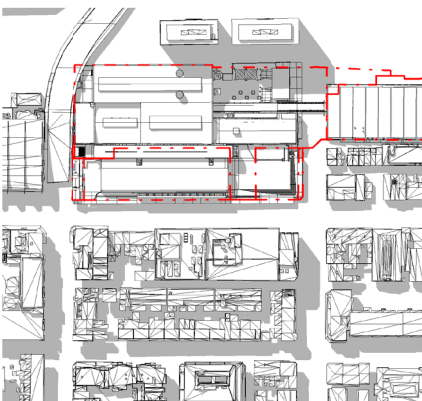


23 September 2022 - 9am

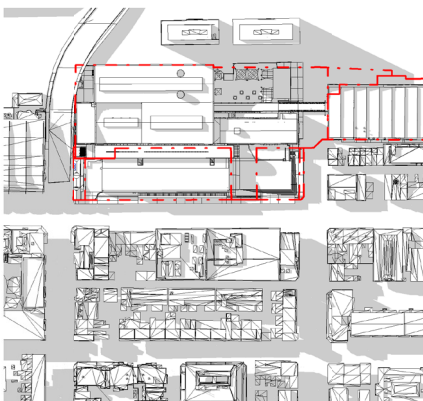
Shadow Diagrams - Summer Solstice



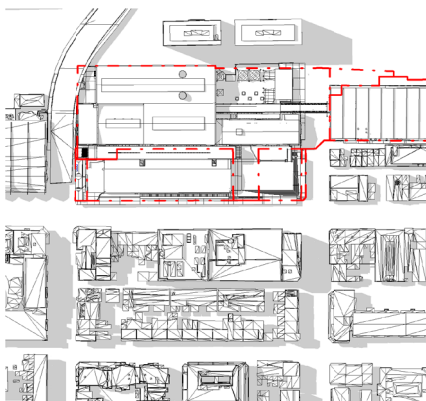
21 December 2022 - 9am



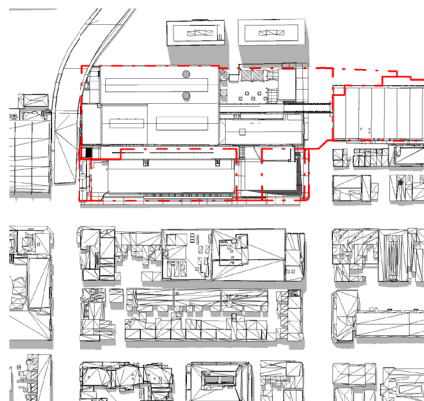
21 March 2022 - 12pm



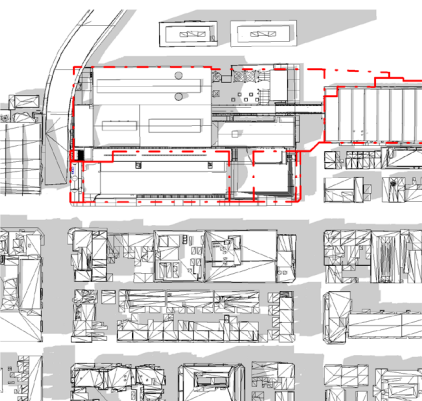
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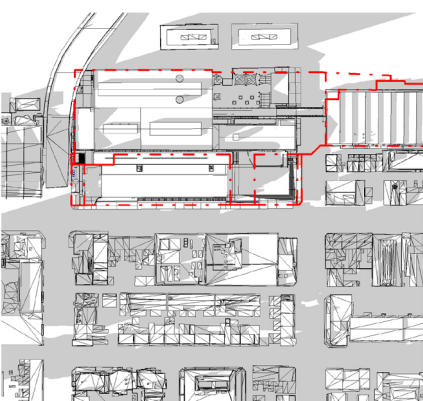
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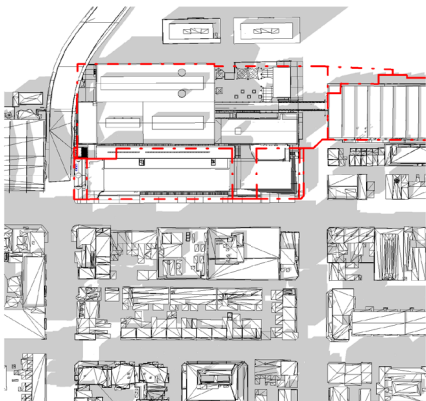
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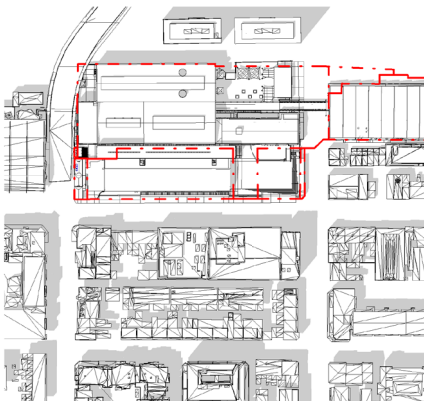
21 March 2022 - 3pm



21 June 2022 - 3pm



21 March 2022 - 3pm



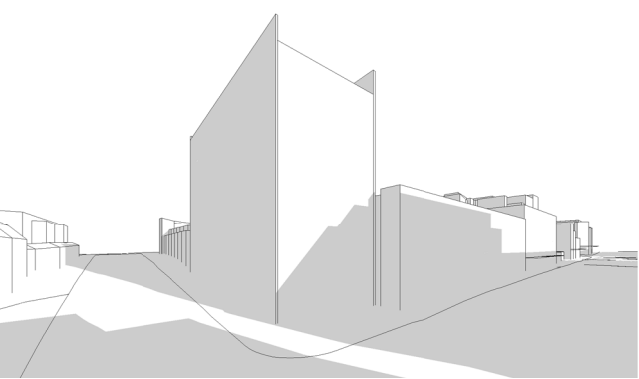
21 December 2022 - 3pm

3.12 Overshadowing - Existing

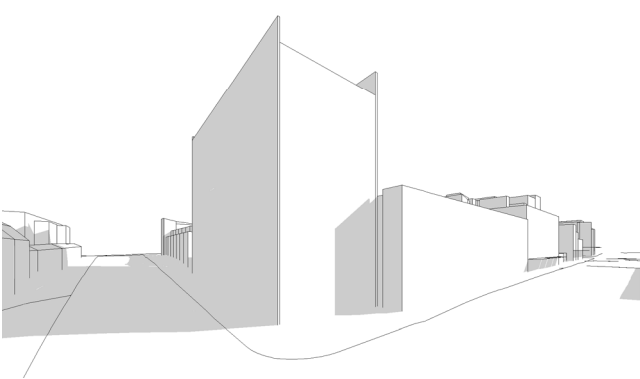
Photo 1 - Harris St south end facing west



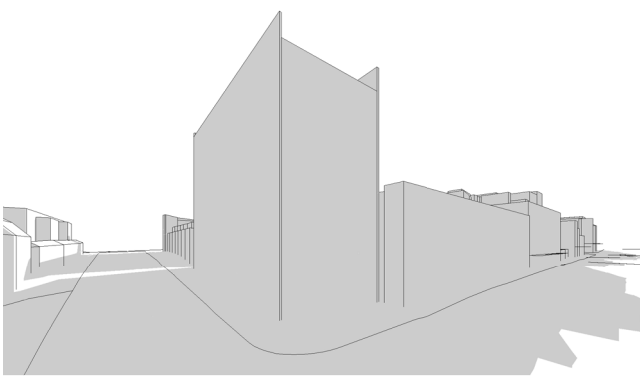
Street View 1 - Harris St south end facing west



21 June 2022 - 9am



21 June 2022 - 12pm

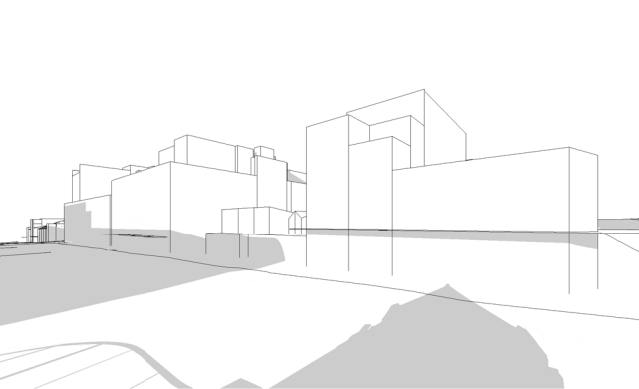


21 June 2022 - 3pm

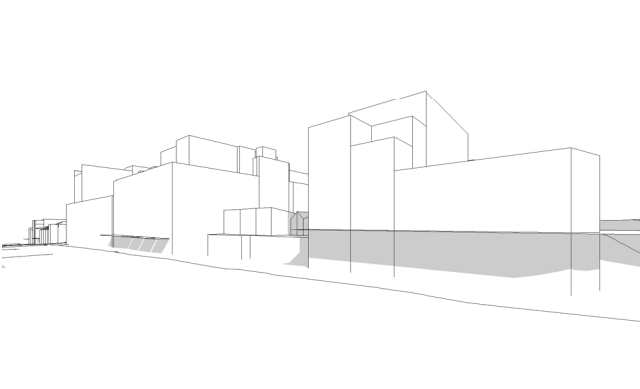
Photo 2 - Harris St north end facing west



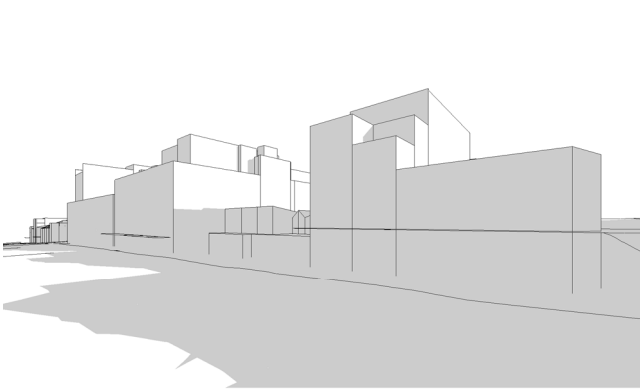
Street View 2 - Harris St north end facing west



21 June 2022 - 9am



21 June 2022 - 12pm

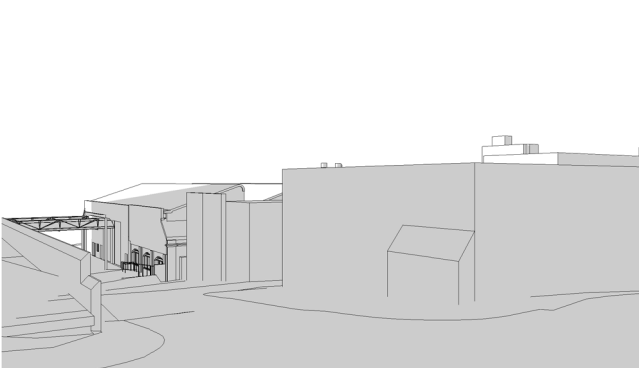


21 June 2022 - 3pm

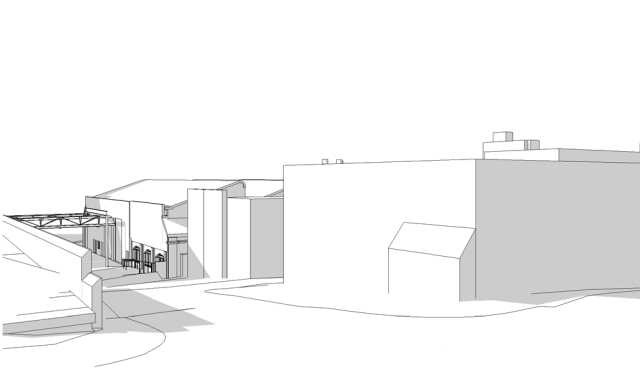
Photo 3 - Macarthur St west end facing south



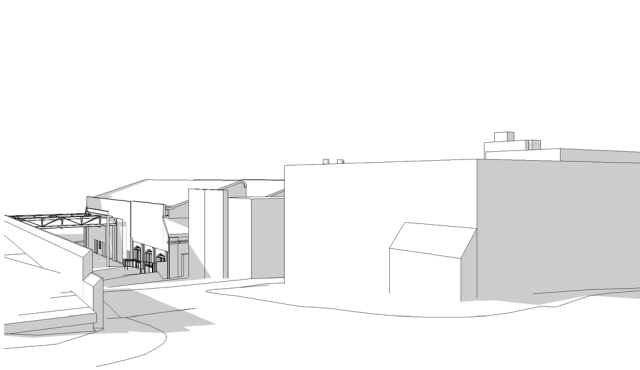
Street View 3 - Macarthur St west end facing south



21 June 2022 - 9am



21 June 2022 - 12pm

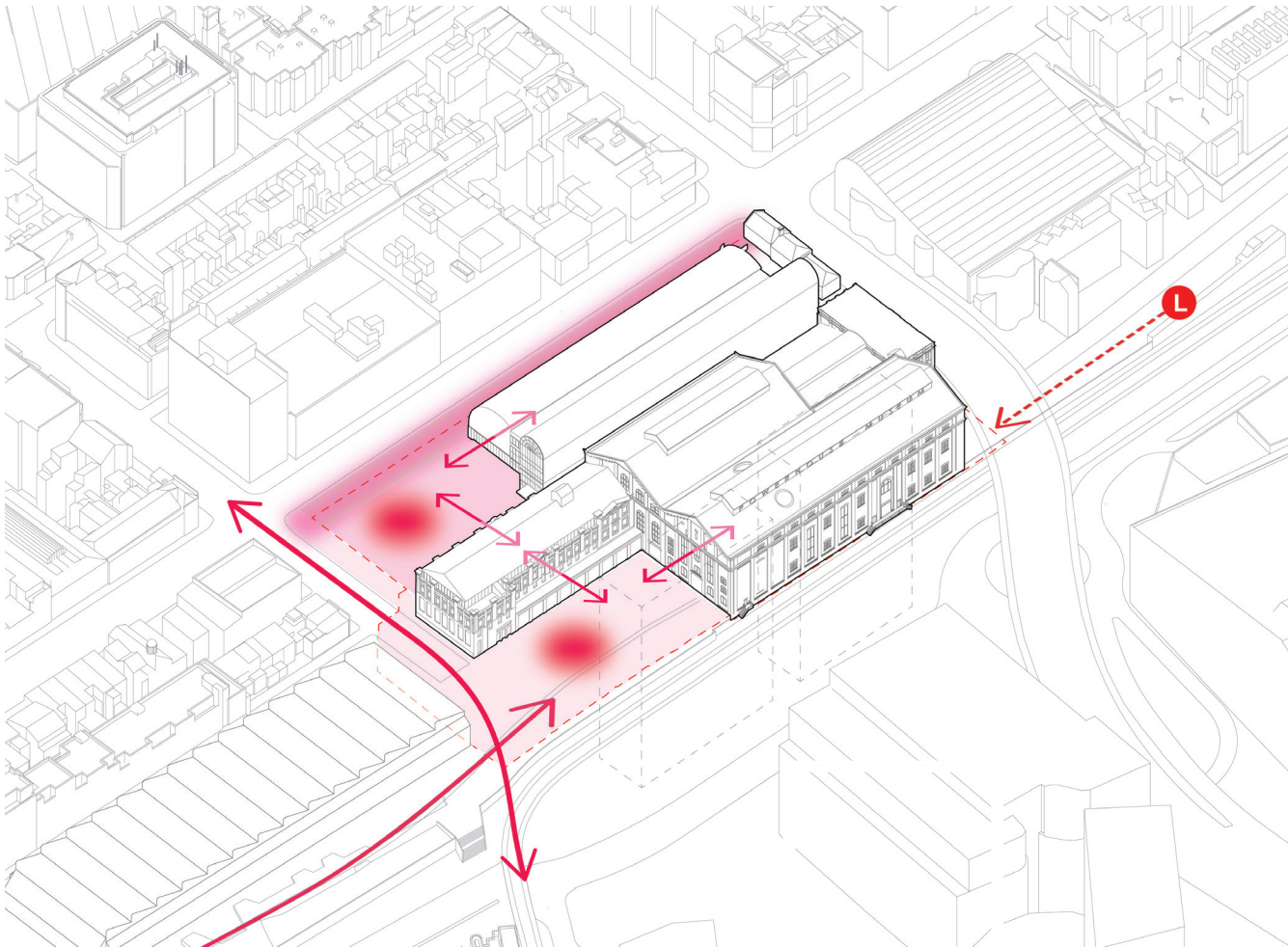


21 June 2022 - 3pm

3.13 Opportunities

The Powerhouse Ultimo Renewal is an opportunity to:

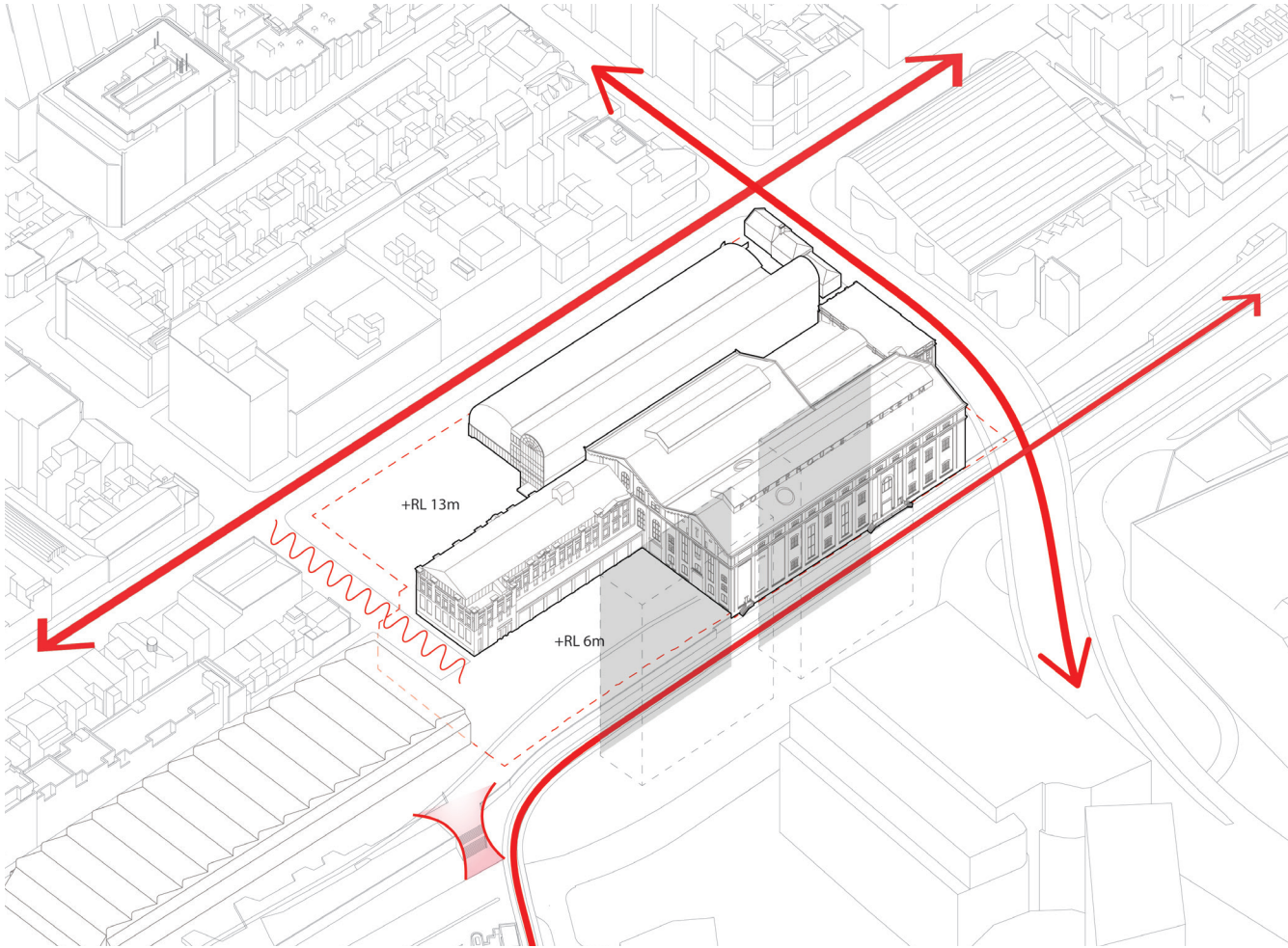
- Deliver an international standard museum that is complementary to Powerhouse Parramatta, Powerhouse Castle Hill and Sydney Observatory.
- Provide new and refurbished international standard spaces for museum operations, exhibitions, programs and associated industry and creative uses that will activate and engage audiences.
- Continue the adaptative reuse of the site, highlighting and conserving its heritage fabric.
- Review the museum's address to Harris Street, Macarthur Street and the Goods Line and explore reorientating the entrance towards the City to expand its connectivity to the Goods Line creating space for community events and Powerhouse programming.
- Use the indicative design response to facilitate a national design excellence process that encourages a wide range of creative and innovative architectural responses to the site and functional brief.
- Integrate a vibrant creative industries precinct, that connects with its surrounds, responds to the changed and changing urban environment and provides concurrent original and distinctive contemporary cultural experiences.
- Enable and support the development of the NSW creative industries and improve productivity through sustainable, flexible and affordable infrastructure that supports co-location and collaboration.
- Deliver a highly operational precinct that contributes to the NSW visitor and night-time economies.
- Provide a connected and integrated interface with surrounding precinct developments, including The Goods Line, Harwood Building, Darling Square, UTS and Tech Central.



- Key**
- Harris Street Engagement
 - Possible Pedestrian Connection
 - Key Pedestrian Movement
 - Opportunity Museum Expansion
 - Key Public Transport (Light Rail)
 - Key Opportunity for Built Form and/or Public Space

3.14 Constraints

- Existing transport infrastructure:
Harris Street and Pier Street remain busy, arterial vehicular thoroughfares; light rail corridor serves as barrier along eastern edge of the site.
- Topography:
Significant grade change from West (Harris Street) to East (Goods Line and Hay Street) presents challenges for accessibility, site legibility and wayfinding.
- Overshadowing:
New open space opportunities are impacted by overshadowing from existing Powerhouse buildings and nearby residential developments, to the east.
- Connectivity:
Pedestrian linkages to and from the CBD via Hay Street are impacted by a significant change in ground level and the proximity of the light rail corridor, creating a narrow bottleneck.
- Heritage Form:
Can limit degree of architectural / spatial intervention and constrain potential for museum and through-site connectivity.



Key	
	Pedestrian Bottleneck
	Heavy Traffic Barrier
	Significant Change in Level
	Substantial Overshadow
RL...m	Ground Level

4.0 Principles

4.1 Overview

This section presents a series of strategies and guidelines, to guide the development of the urban design and public realm. These strategies were developed through an analysis of the policy context applicable to the site, along with an observational site analysis and resultant opportunities and constraints implicit in the site and its physical fabric. These urban strategies are intended to help shape the renewal design and have been applied to the development of the indicative design.



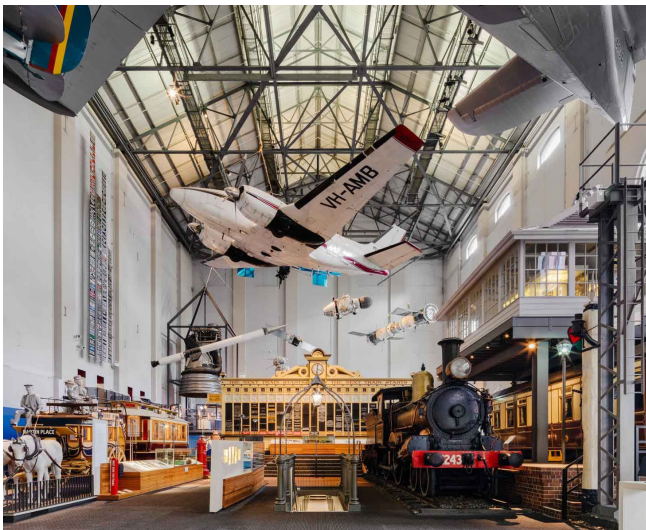
Powerhouse Ultimo. Image credit: Katherine Lu



Powerhouse Ultimo heritage facade to Henry William Street. Image credit: Katherine Lu

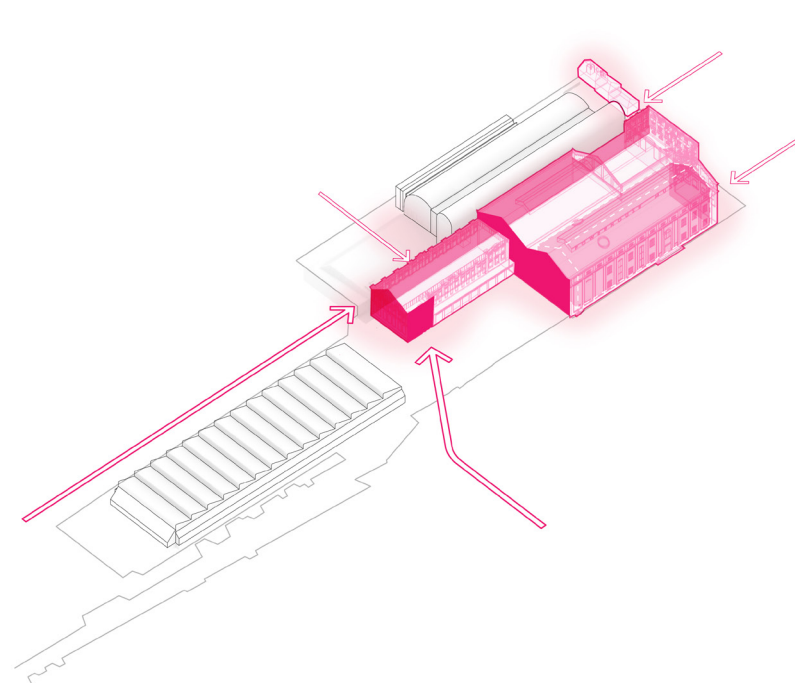


Powerhouse Ultimo. Image credit: Dan Boud



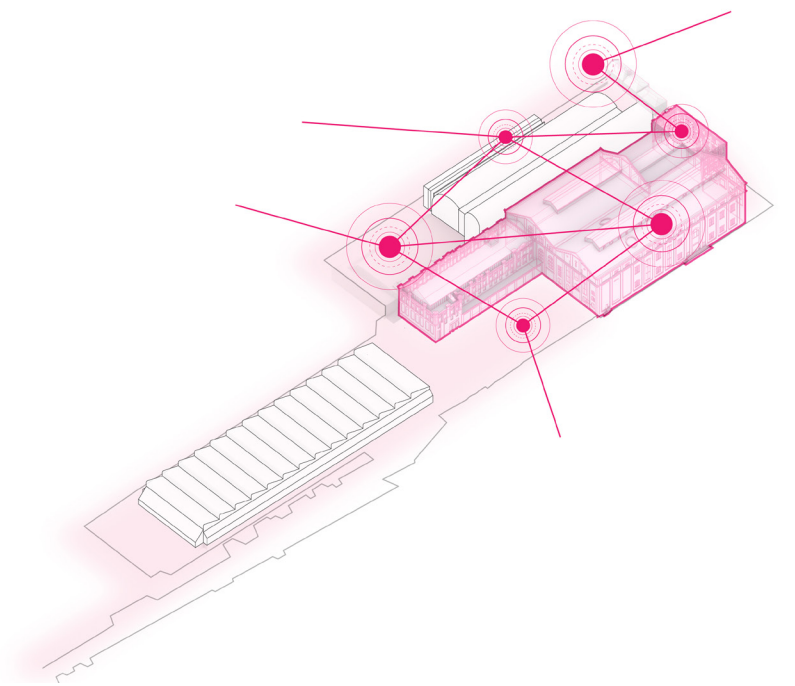
Powerhouse Ultimo. Image credit: Katherine Lu

4.2 Principles



Reveal and celebrate heritage fabric and spaces

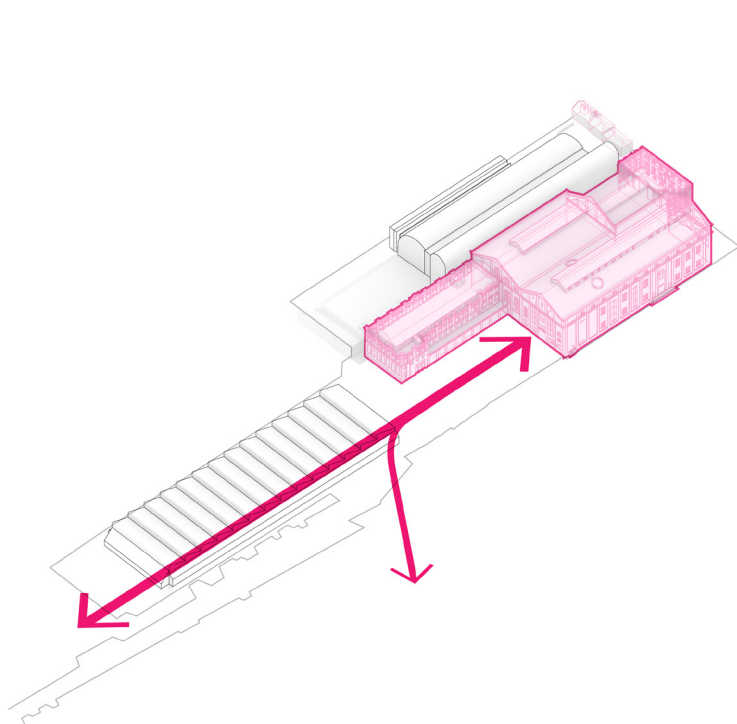
Reveal the important heritage fabric and spaces to the wider public domain network allowing improved access to, and appreciation for, these buildings and spaces.



Adaptive reuse for contemporary museum practice

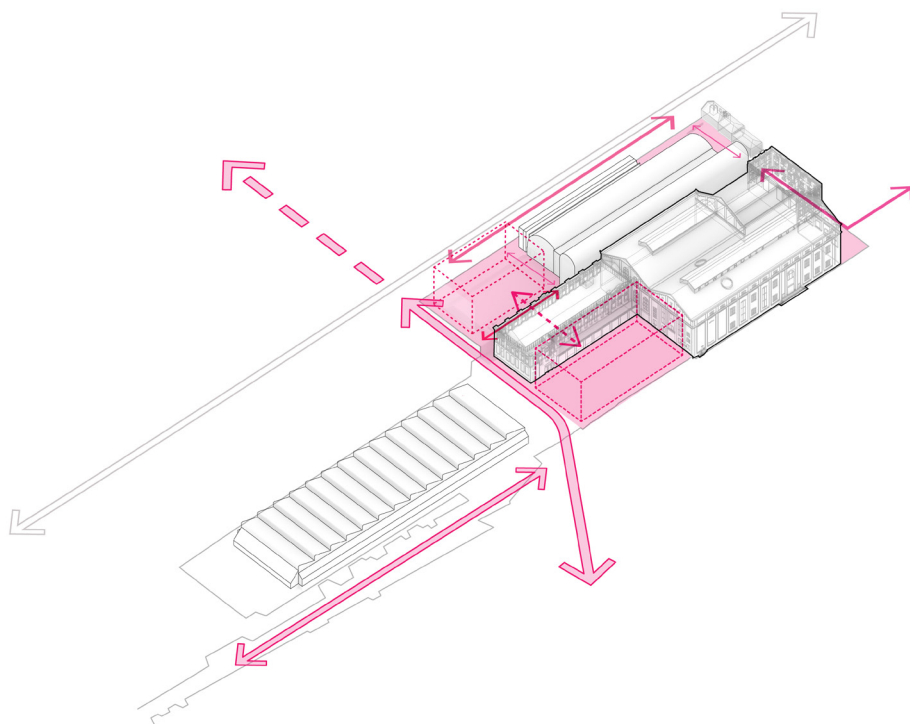
As Australia’s leading museum of design and innovation Powerhouse Ultimo will reflect the changing needs of the community it serves; it must be contemporary and relevant in its outlook and in the way it presents its stories and its collections. The continued adaptive reuse of the heritage fabric of the museum will reflect these contemporary methods and requires ongoing flexibility and agility of the built form.

4.2 Principles



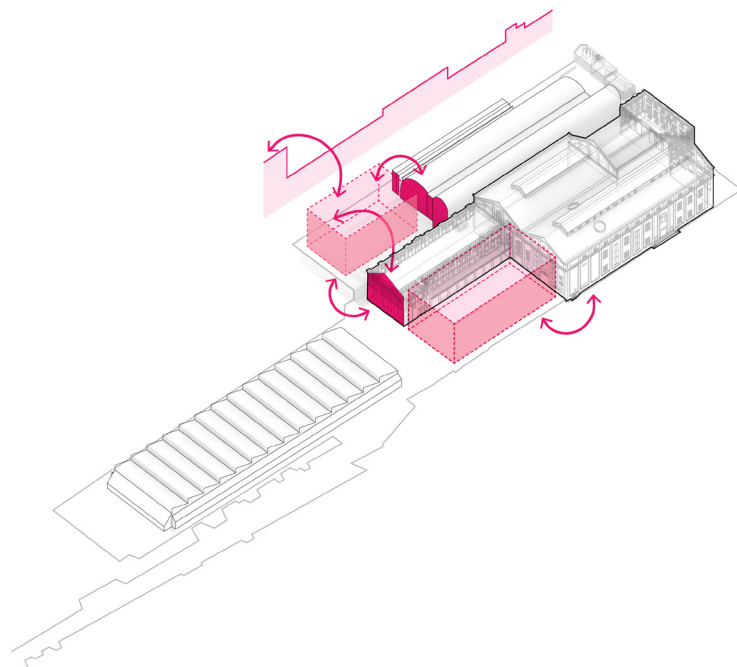
Continue the cultural spine

The continuation of the Goods Line increases connectivity to expansive public domain space, increases the visibility of the Harwood building and provides an opportunity to reorientate the Museum’s public address and entrance to the CBD.



Create a connected and engaging public domain

An opportunity exists to introduce a network of lanes and public spaces within the site, to seamlessly connect with the wider public domain network, particularly along the Goods Line and Hay Street.



Arrange new built form to be responsive to the site and its context

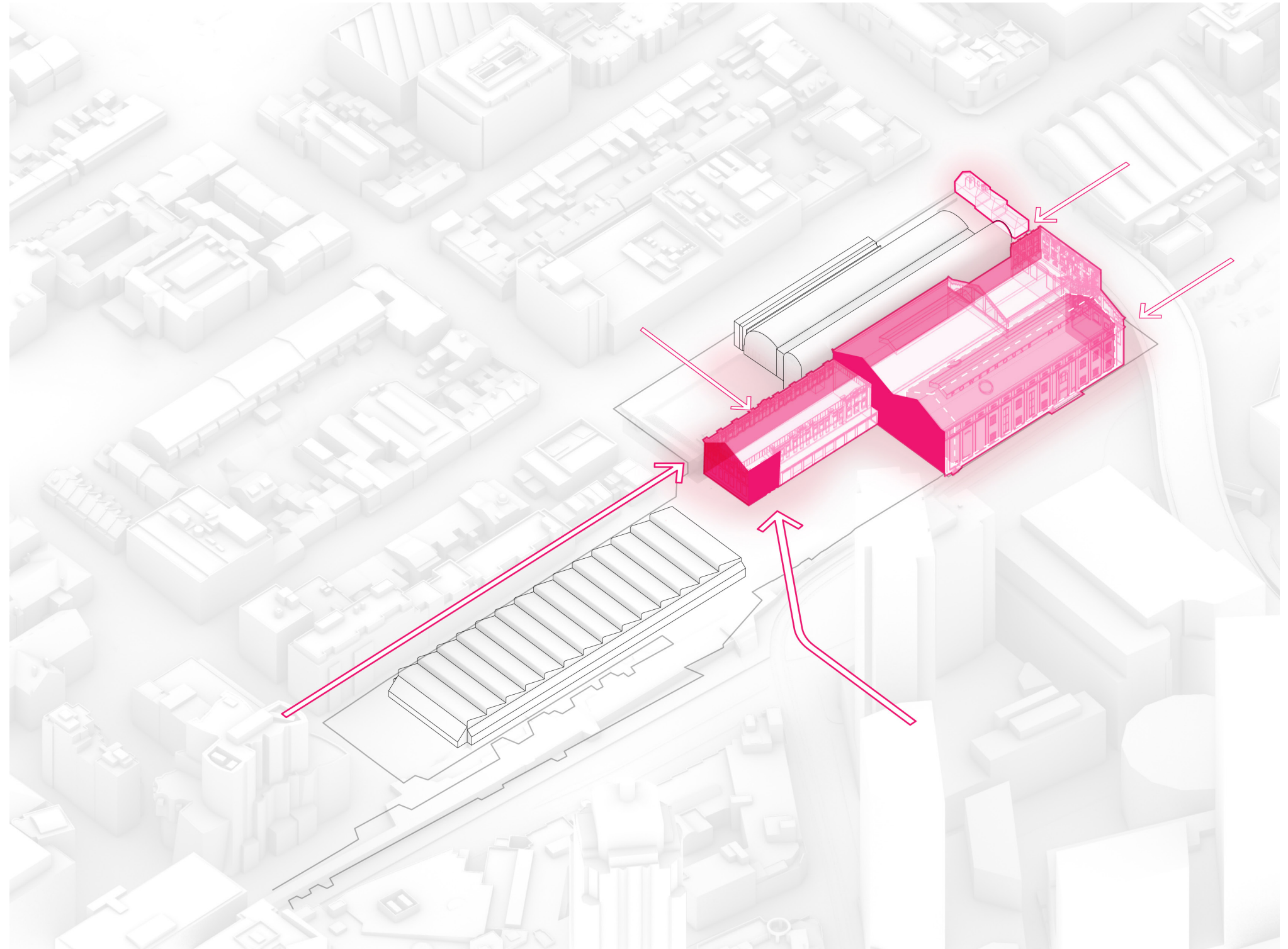
The new floor space and built form will improve the relationships between heritage fabric, the public domain network and surrounding streetscapes.

4.3 Reveal and celebrate heritage fabric and spaces

The site and its existing heritage fabric is characterised by largely intact, industrial-scaled masonry buildings of high quality and a series of more intimate spaces around and between these buildings. To a considerable extent, these buildings are removed or obscured from key public vantage points.

An opportunity exists to configure the reference design in a manner which better presents important heritage fabric and spaces to the wider public domain network allowing improved access to, and appreciation for, these buildings and spaces.

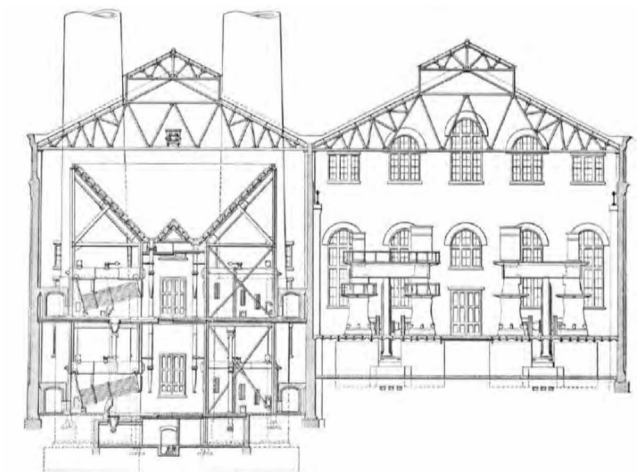
This opportunity supports a programmatic reinterpretation of the significant industrial history of the site in a meaningful way and most importantly, should celebrate the remaining fabric of the Powerhouse Ultimo heritage buildings: the Switch House, Boiler House, Turbine Hall, Engine House, North Annex and the Former Post Office reminding us of Sydney's rich industrial past.



4.3 Reveal and celebrate heritage fabric and spaces

Revealing Heritage

During its 40-year utilisation (Stage 1 1981, Stage 2, 1988) of the site, there have been several additions and modifications to the Powerhouse site. Externally the finely detailed heritage facades should be given an appropriate curtilage where possible. Direct and indirect views of these facades assist an understanding of the scale of these buildings in their context. The approach to restoration and intervention should interpret and celebrate the heritage elements within the site.



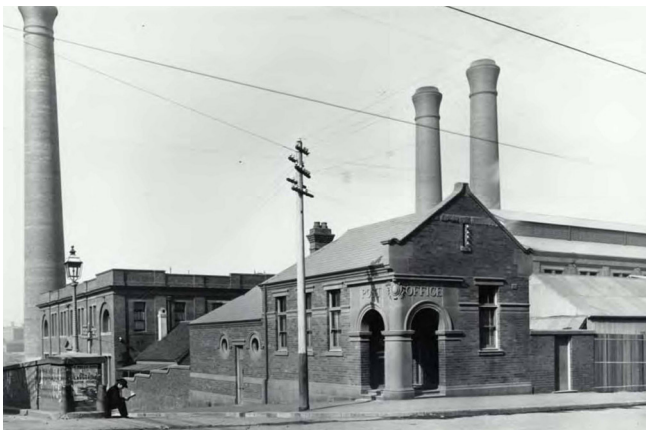
A section drawing of the Boiler House and Turbine Hall soon after completion of the extensions between 1902 and 1905.



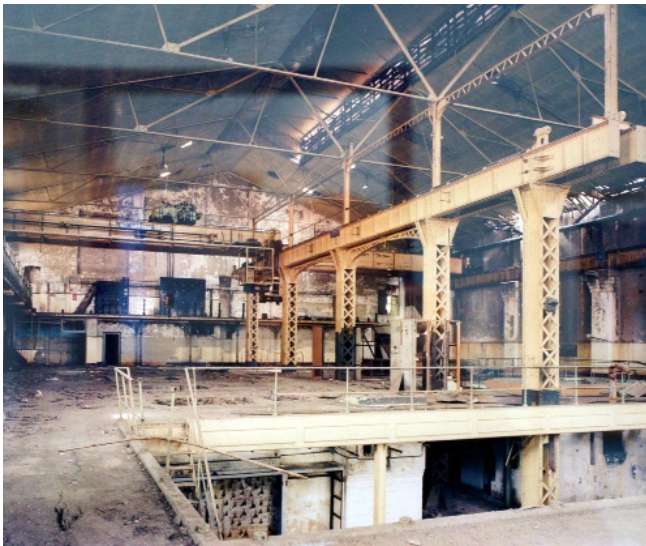
The interior of the Turbine Hall during the 1980s adaptation.

Celebrating Heritage

The Heritage Core celebrates the industrial history of the site. Opportunities to further reveal the robust character should be explored. Internally, the volumes of the Turbine Hall and Boiler Hall are to be celebrated and the scale of the buildings appreciated. Retention of the gantries and equipment within the Turbine Hall are important reminders of its industrial past.



The Ultimo Post Office c1905. Source: NSW State Archives.



The Engine House before its conversion into the Powerhouse Ultimo Museum in 1988. Source: Curio Projects



Stage 2 redevelopment of The Powerhouse Ultimo in the 1980s. Source: Curio Projects, Powerhouse Ultimo

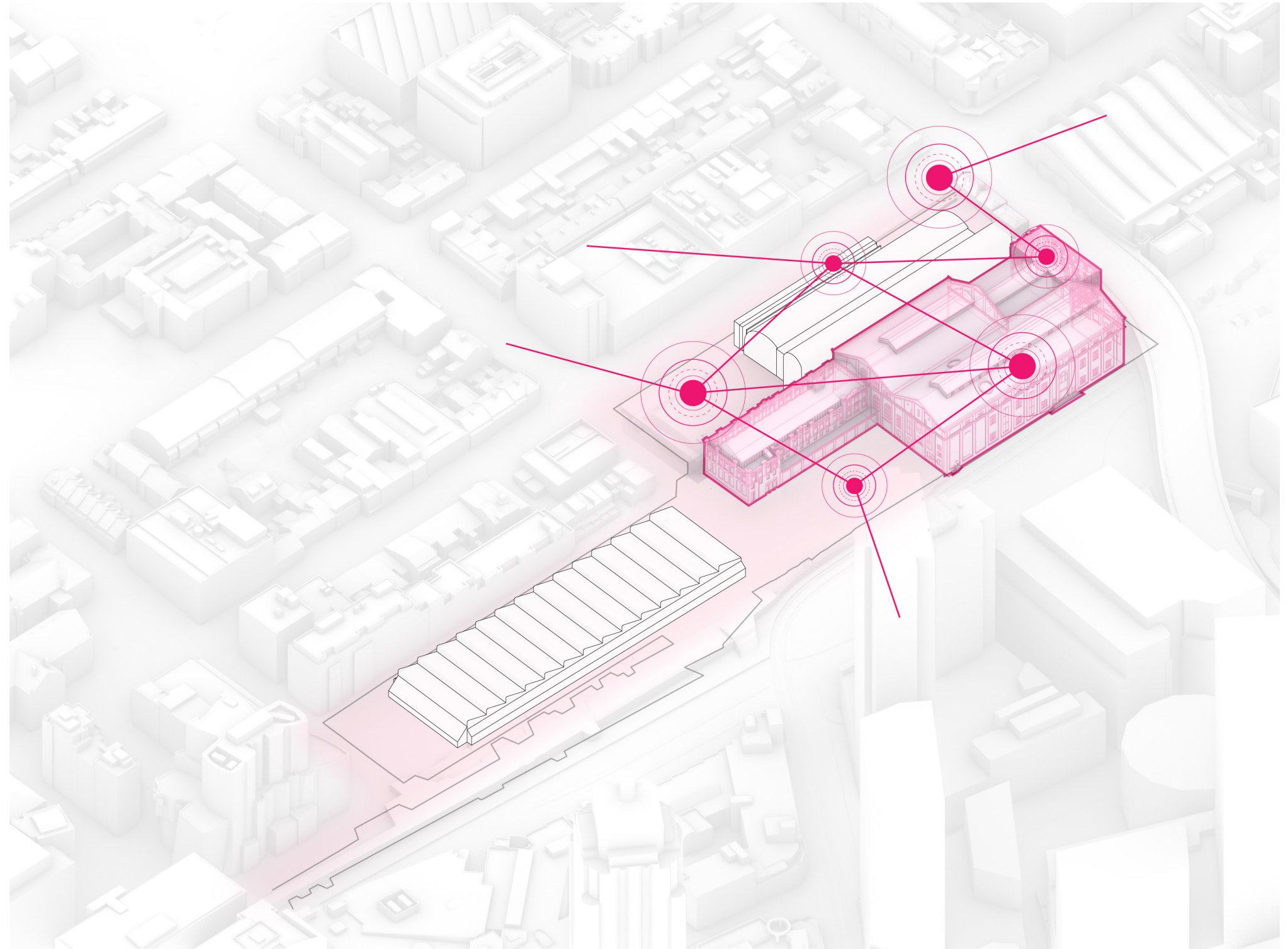
4.4 Adaptive reuse for contemporary museum practice

As Australia's leading museum of design and innovation, the Powerhouse should reflect the changing needs of the communities it serves. Contemporary museum programming is diverse and multi-modal, where once traditional exhibition spaces are now also used to present content in various modes and forms.

A revitalised Powerhouse Ultimo requires great flexibility with an improved ability to:

- Renew exhibitions
- Increase visitation and access to the Powerhouse Collection
- Support a changing program
- Create column free exhibition spaces
- Give primacy to the museum exhibition experience

Adaptive reuse and renewal of the heritage buildings is encouraged and should be developed in response to the 2022 Draft Conservation Management Plan. Design should respond carefully and thoughtfully to the remaining industrial character, patina and spatial volumes.



4.4 Adaptive reuse for contemporary museum practice



Powerhouse Ultimo taking shape in 1986. Image credit: Robert Pearce



Stage 2 redevelopment of Ultimo Power Station in the 1980's. Image credit: Powerhouse Ultimo



Stage 2 redevelopment of Ultimo Power Station 1980s, Source: Powerhouse Ultimo

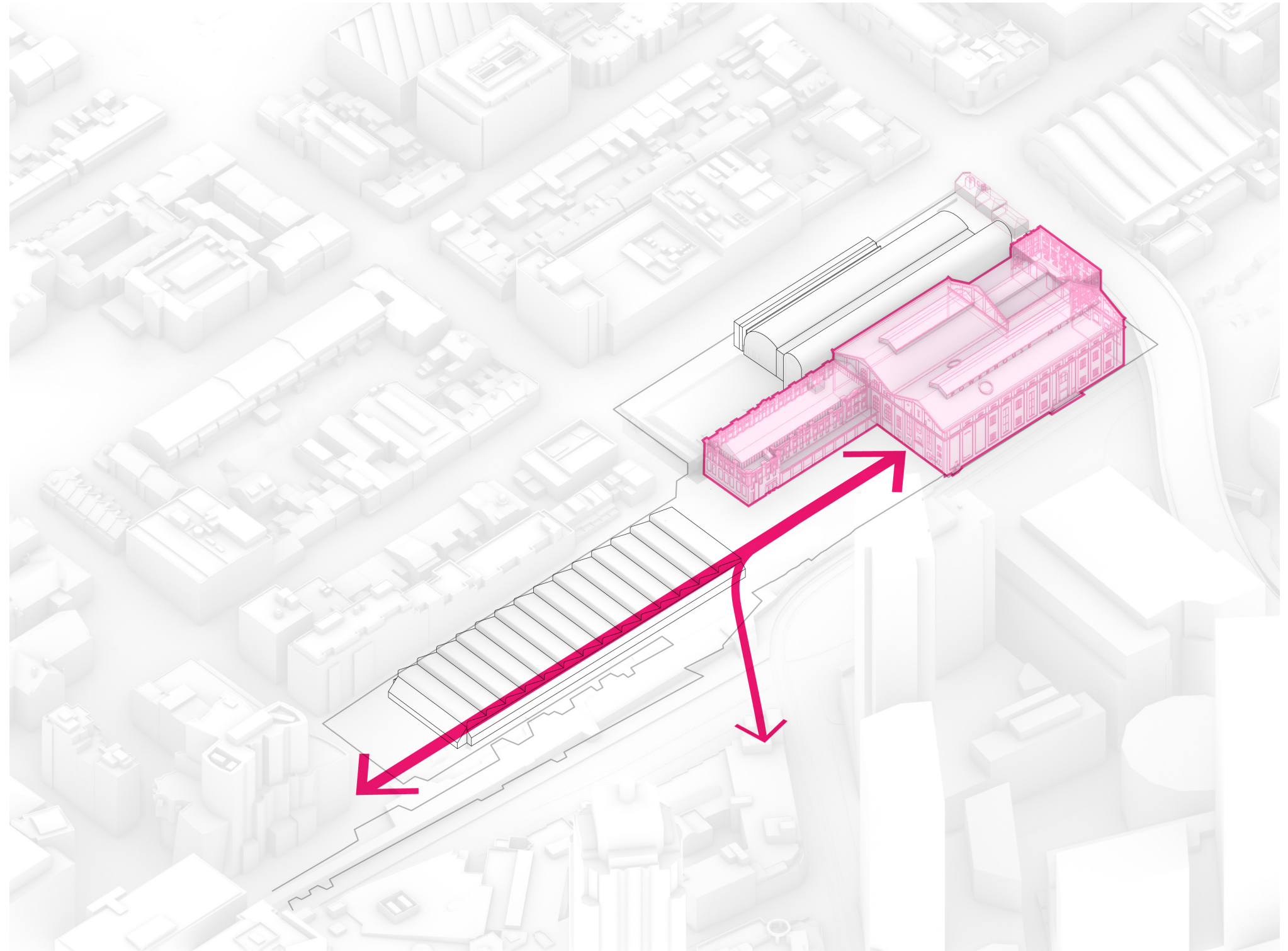


Artist's impression, Turbine Hall, Image credit: MOGAMMA

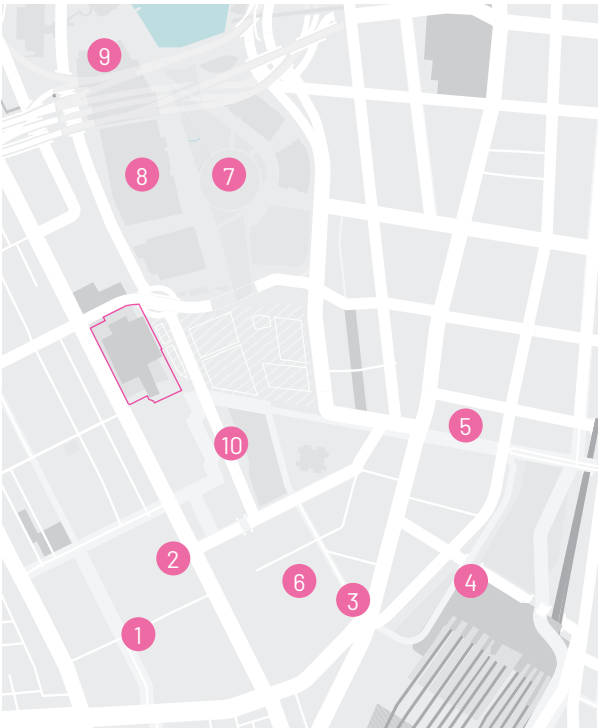
4.5 Continue the cultural spine

The Goods Line is a successful urban renewal project that establishes a high quality public domain and is pedestrian focused. UTS, ABC, Central Station and the existing Powerhouse Museum each have good access and address to the Goods Line. The emergence of the new Tech Central precinct will only serve to reinforce the value of the Goods Line as a key civic connector.

Through this relationship with the Goods Line and with an active and engaging public domain, Powerhouse Ultimo can also serve to unlock connections to its north and east. The International Convention Centre, Tumbalong Park and Darling Quarter together with The Capitol Theatre and Darling Square reinforce what could be a thriving cultural spine at the southern end of the Sydney CBD



4.5 Continue the cultural spine



Cultural Institutions surrounding Powerhouse Ultimo



1 UTS & Alumni Green
Source: Aspect Studios



2 TAFE NSW
Source: TAFE NSW



5 Capitol Theatre
Source: www.timeout.com



7 Tumbalong Park
Source: Aspect Studios



6 ABC HQ
Source: www.abc.net.au



3 TAFE NSW
Source: TAFE NSW



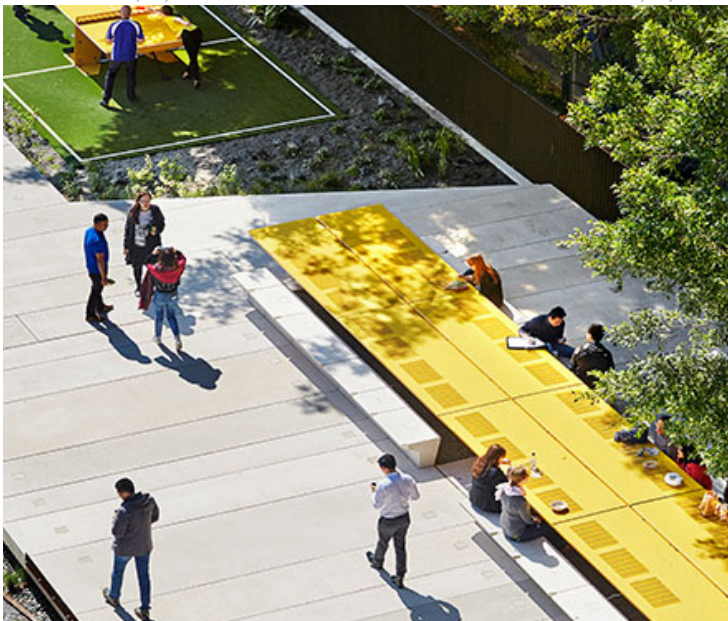
4 Central Station
Source: Sydney-City Blogspot



8 ICC Sydney
Source: ICC Sydney



9 ICC Sydney
Source: ICC Sydney



10 The Goods Line
Source: Aspect Studios

4.6 Create a connected and engaging public domain

The world's most successful cultural precincts are embedded within the surrounding urban fabric and are an authentic extension of the city - where workers, local residents and the public each have access to high amenity public space.

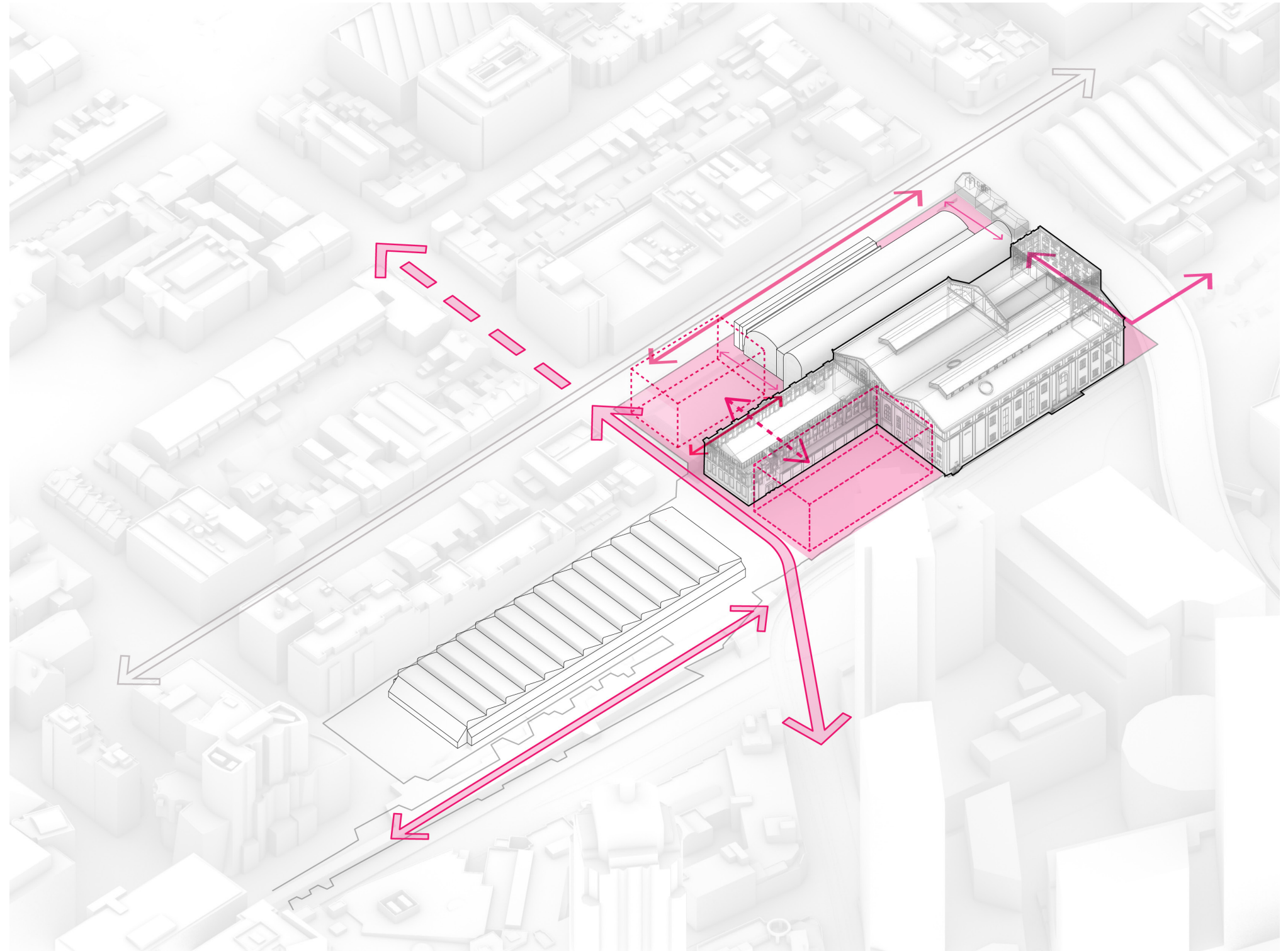
An opportunity exists to introduce a network of lanes and public spaces within the site, to seamlessly connect with the wider public domain network, particularly along The Goods Line and Hay Street.

Key opportunities exist to improve east-west links, connecting Darling Square and Chinatown, to the established neighbourhoods into Ultimo/Pymont and beyond.

A key opportunity exists for a new iconic public space within the site - in the location of the existing Harris Street forecourt and/or at the termination of The Goods Line, edged by revitalised heritage buildings and along the key east-west link.

Additional pedestrian focused lanes will allow for more permeability, unraveling heritage and creating a curious network of spaces to discover. This includes an opportunity to provide greater east-west and vertical connectivity through the site/museum.

The creation of a well connected network in this precinct will further inspire and unlock the potential of future connections to other neighbourhoods, especially to Harris Street Village and Pymont.



4.6 Create a connected and engaging public domain



The Goods Line, a key pedestrian link, Aspect Studios. Image Credit: Florian Groehn.



The Goods Line, Sydney Architecture Festival. A space for community interaction. Image credit: Aspect Studios

A well connected network

The precinct will create a network that continues to enhance the established urban permeability whilst bringing the unique experience of the precinct. Unlocking the precinct through providing well defined entries and access points will help draw visitors into the site, creating a seamless and porous precinct.

An engaging public domain

Understanding the hidden potential of the site, the indicative design response explores options to reclaim existing under utilised spaces, and create new engaging high-quality public domain that optimises the interaction between the precinct and the surrounding neighbourhood communities, acting as a shared platform for passive and active recreation and commercial food and beverage.



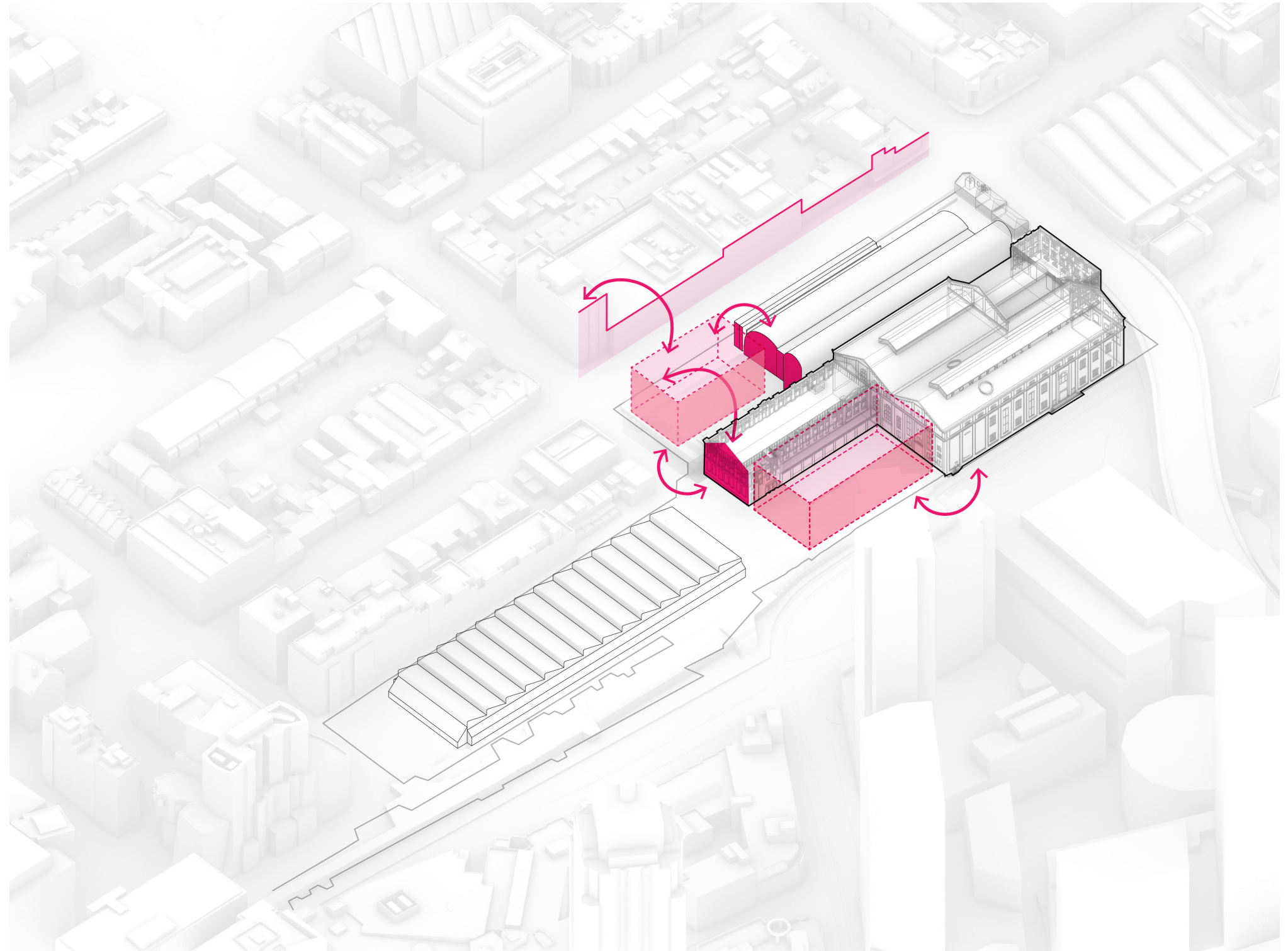
Steam Mill Lane, an active laneway with a unique character, Aspect Studios. Image credit: Simon London

4.7 Arrange new built form to be responsive to the site and its context

The contextual analysis presented in Chapter 4 includes a series of observations key to the existing urban character of this part of Ultimo. This includes the juxtaposition between traditional fine-grained residential terrace houses and large-scaled industrial buildings, the prevailing street wall scale of Harris Street and the evolving nature of the city form along The Goods Line.

The Ultimo site sits on the edge of the city as an intermediary between the global City of Sydney and the local historic residential precinct. The analysis also indicates that certain portions of the existing site are able to accommodate additional built form without creating overshadowing impacts upon key public spaces and neighbouring uses.

Additional floor space within the precinct improve the relationships between heritage fabric, the public domain network and surrounding streetscapes.



4.7 Arrange new built form to be responsive to the site and its context



Looking north towards the Dr Chau Chak Wing Building and Goods Line.
Source: John Wardle Architects

Material Character

New built form on these sites will have regard to the history of the site and the existing heritage on and adjacent to the site. It is the consistency of the precinct's materiality that defines Ultimo's utilitarian and working past.

Ultimo was a working precinct. These buildings are associated with trade. They are not civic buildings and do not exhibit the finery of hand carved sandstone associated with the most civic of Sydney buildings. There is a material honesty to the expression of masonry within the precinct.

While large in scale the facades of the warehouses and Powerhouse Ultimo are elegantly detailed. They exhibit brick, render, pressed terracotta and faience terracotta panels which adorn the playful fenestration patterns of these vast facades.

The UTS Dr Chau Chak Wing Building exhibits a playful interpretation of brickwork in a contemporary form. This is a radical formal interpretation and use of brick – the most pragmatic building material.



Brick details on Powerhouse Ultimo Northern Annex.
Source: John Wardle Architects



The pressed terracotta facade of the nearby Sydney Technical College.
Source: John Wardle Architects



Ultimo is a suburb where small terrace houses comfortably sit adjacent to large warehouses.
Source: John Wardle Architects

Large and Small

There is a history of variant built form. Large buildings sit comfortably with small buildings. A Power House next to a Workers Cottage and a variety of scales in-between. What binds these diverse scales is the constancy of material character in the making and construction of these structures.

Nowhere is this history more apparent than along the length of Harris Street – where the Harris Street Heritage Conservation Area meets the mighty bulk of the Powerhouse Ultimo and Harwood Building. To the north of Harris Street, the remnants of industry remain, warehouses with sawtooth roofs once filled with goods have been converted to apartments. Within these residential enclaves the six to eight storey warehouses sit adjacent to two storey residential terraces.

5.0 Project Guidelines - Urban Design

5.1 Overview

This section of the report provides a suite of Urban Design and Public Realm Guidelines to guide the renewal of Powerhouse Ultimo. The intention of these design guidelines is to establish a clear and legible framework within which the project will be designed and delivered and that they be used as a tool to achieve design excellence and a built form that is appropriate within its context.

It is not intended that these guidelines become a set of prescriptive design controls for any future development. Rather, the intention is to encourage and support design innovation, creativity and new ideas through the design competition and to create alternate design solutions.



View north across the Powerhouse Ultimo Site. Turbine Hall in centre, concealed by the Switch House, and modern constructions (Level 1 courtyard café and covered walkway). Source: Powerhouse Ultimo

5.2 First Nations

Powerhouse Ultimo is situated upon the ancestral homelands of the Gadigal people of the Eora Nation. The word Eora is a word used to describe the coastal Aboriginal people in and around Sydney, translating simply as 'here' or 'from this place'. Aboriginal people in the local area used this word to describe their belonging and custodianship of Country to the British, this word is still used by their descendants today, to express their identity and continuous connection to Sydney.

The Powerhouse recognises Aboriginal connections to this place as a cultural continuum – resilient, resistant and responsive to emerging and receding industries. The Powerhouse site has always been a place of story and gathering and through the renewal it is paramount that Powerhouse Ultimo continues to be a place for broader community and reflects their stories.

Principles

- Recognition of Traditional Custodians as well as diasporic First Nations communities that now call Sydney home.
- Recognise that Aboriginal history on the site is continuous.
- Reflect and respect cultural narratives of the site.
- Reinstate the relationship between the Harbour and Pirrama peninsula.
- Create opportunities for First Nations employment, engagement and participation.

Guidelines

- Through its First Nation's Directorate, the Powerhouse will continuously engage with First Nations communities to produce a design that supports Aboriginal and Torres Strait Islander connections to the site and continuing practices.
- All related project briefs will be authored with leadership and participation of the Powerhouse First Nation's Directorate to ensure self determination of Indigenous representation.
- The Design Excellence Strategy and Competition Briefs will be informed by the NSW Government Architect's Connecting with Country Draft Framework (and Designing with Country Discussion Paper) and Torres Strait Islander connections to the site and continuing practices.
- The project is to be undertaken in accordance with recommendations from the Designing with Country discussion paper (GANSW) and Connecting with Country draft framework (GANSW).



Uncle Brendan Kerin conducts a smoking ceremony at First Nations Fashion & Design Powerhouse Hub
Image credit: Patrick Stevenson