

26 April 2021

2190140

Mr Jim Betts
Secretary
Department of Planning, Industry and Environment
12 Darcy Street
Parramatta NSW 2150

Attention: Amy Watson (Team Leader, Key Sites Assessments)

Dear Ms Watson,

**SECTION 4.55(1A) MODIFICATION APPLICATION
BAYS 1-4A, LOCOMOTIVE WORKSHOPS, SOUTH EVELEIGH (SSD 8517)**

This application has been prepared by Ethos Urban on behalf of Mirvac Projects Pty Ltd (Mircvac), pursuant to section 4.55(1A) of the *Environmental Planning and Assessment Act 1979* (EP&A Act) to modify development consent SSD 8517 relating to Bays 1-4a of the Locomotive Workshops, South Eveleigh (the site).

The proposed modification seeks to modify the approved development consent in order to enable the installation of three extraction hoods, fans and flues for three of the existing heritage coke furnaces (Furnaces 6, 9 and 10) in the Blacksmith workshop (Bays 1 and 2 South) of the Locomotive Workshops. The intention of the proposed modification is to improve the amenity for workers and visitors of the Locomotive Workshops by reducing the smoke plumes generated by the furnaces used by the blacksmith in the Locomotive Workshops.

This application identifies the consent, describes the proposed modifications and provides an assessment of the relevant matters contained in section 4.55(1A) of the EP&A Act. This application is accompanied by:

- Architectural Plans (**Attachment A**);
- Heritage Impact Statement (**Attachment B**); and
- Air Quality Report (**Attachment C**).

1.0 Consultation

Mircvac and Curio Projects have worked closely with the NSW Heritage Division (Heritage Division) and the City of Sydney Council (Council) to ensure that the proposed amendments achieve a respectful, functional and aesthetically pleasing result for the Locomotive Workshops.

On Friday 19 February 2021, Mircvac, Curio Projects and Ethos Urban met with the Heritage Division and the Council to discuss the proposed installation of the three extraction hoods, fans and flues for the existing furnaces.

The NSW Heritage Division and Council acknowledged that the proposed modification's function and appearance are consistent with the industrial heritage character of the site and therefore raised no issues in relation to the proposed modification.

2.0 Consent proposed to be modified

On 22 February 2019, the Independent Planning Commission (IPC) granted approval of SSD 8517 and SSD 8449 which provided development consent for the adaptive reuse of the existing Locomotive Workshop in the Australian Technology Park (now referred to as South Eveleigh).

SSD 8517, which is the subject of this application, relates to the adaptive reuse of Locomotive Workshop (Bays 1-4a), including:

- a maximum of 11,607m² GFA for uses including retail premises, function centre, educational establishment, information and education facility, artisan food and drink industry, general industrial (retention of the Blacksmith) and recreation facility (indoor);
- a loading dock and travelator;
- associated heritage conservation works; and
- public domain works, external illumination and signage.

SSD 8449, relates to the adaptive reuse of the locomotive Workshop (Bays 5-15), including:

- a maximum of 27,458m² for commercial premises including 156m² for retail uses;
- associated heritage conservation works; and
- external illumination and signage.

To date, seven (7) modifications to SSD 8517 have been approved since February 2019, with one (1) additional modification – MOD 7, currently in the ‘response to submissions’ stage. The existing and future modifications are summarised below in **Table 1**.

Table 1 Modifications to SSD 8517

Modification #	Date Approved	Description
Modification 1	10 September 2019	Modification to Condition B29 (Stormwater and Drainage).
Modification 2	29 May 2019	Deletion of Condition D6 (Construction Hours).
Modification 3	6 September 2019	Modification to the ground floor layout of Bays 3-4a North.
Modification 4	20 November 2019	Retention of existing skylights (the removal of which was approved under SSD 8517) and provision of additional skylights above Bays 1-4a.
Modification 5	12 February 2020	Amendments to the Conditions of Consent (Part B & E) to enable the issuing of staged Occupation Certificates and changes to glazing in heritage arched windows.
Modification 6	20 August 2020	Amendments to the layout of Bay 3-4 of the Locomotive Workshop and Condition B37.
Modification 7	Under Assessment	Amendments to enable future ‘food and drinks premises’ in the western portion of Innovation Plaza.
Modification 8	2 September 2020	Amendments to enable the installation of photovoltaic panels on the roof of the Locomotive Workshop, above Bays 1-4a.

3.0 Proposed modifications to the consent

3.1 Modifications to the development

The proposed modifications to Development Consent SSD 8517 involve the installation of extraction hoods, fans and flues to three heritage coke furnaces (Furnaces 6, 9 and 10) within the Blacksmith tenancy in Bays 1 and 2 South of the Locomotive Workshops. As shown in **Figures 1 and 2**, Furnaces 9 and 10 are located in Bay 1 and Furnace 6 is located in Bay 2.

Architectural Plans prepared by Sissons Architects are included at **Attachment A** and existing and proposed elevations are also included at **Figures 3 and 4**, respectively, which highlight the perspective of the flues when viewed from different sides of the development.

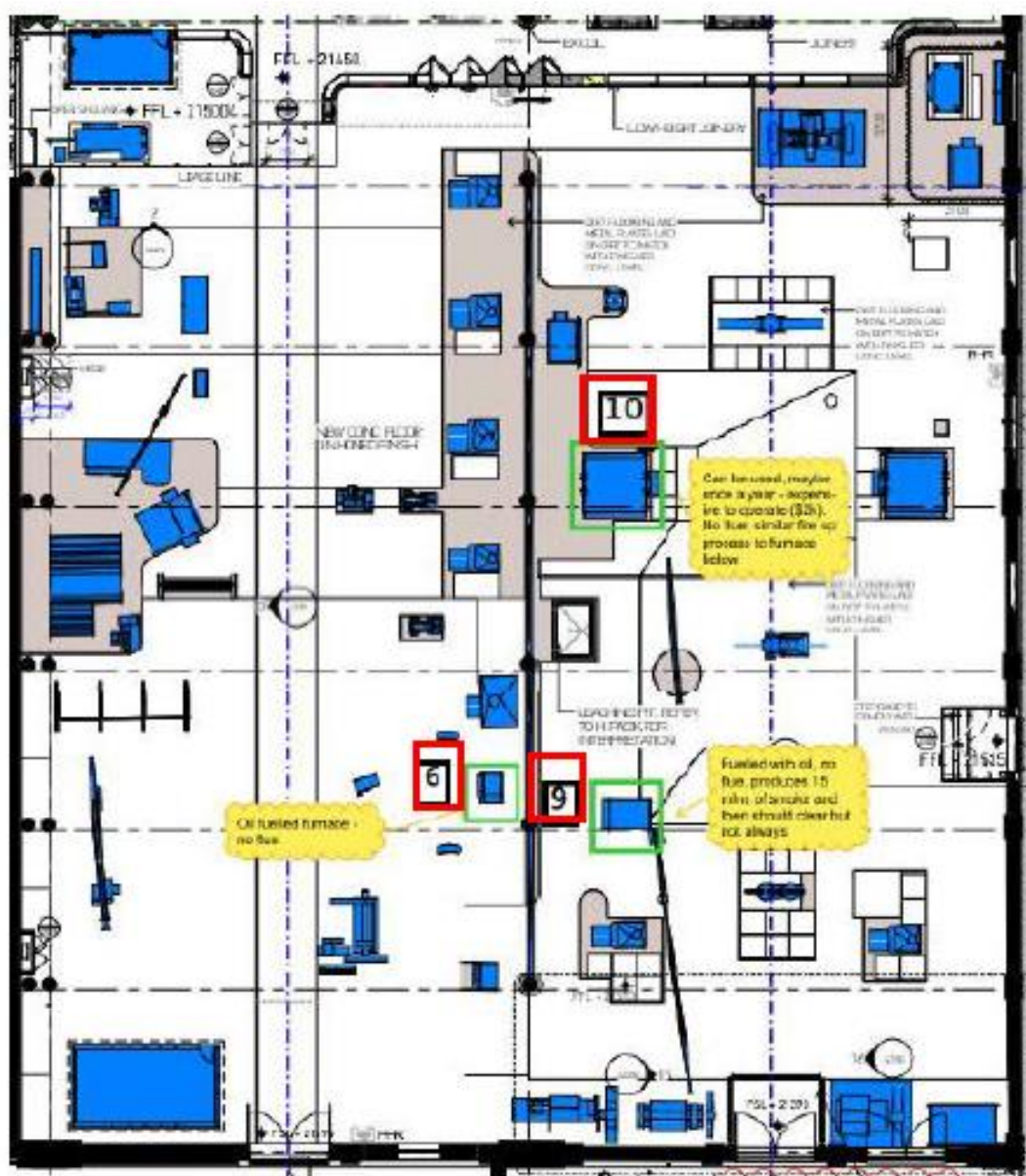


Figure 1 Location of Furnaces 6, 9 and 10 (indicated in green) and their numbers (indicated in red) within Bay 1 and 2 south

Source: Curio and Mirvac



Figure 2 Proposed Roof Plan identifying the location of the flues

Source: *Sissons Architects*



Figure 3 Approved elevations of Bays 1-4a

Source: Sissons Architects



Figure 4 Proposed elevations of Bays 1-4a

Source: Sissons Architects

3.1.1 Proposed works

The proposed works include the installation of galvanised steel exhaust flues above each furnace that penetrate the existing roof structure and rise approximately 3m above the highest point of the roof, as shown in **Figure 5**.

At the ground level, the extraction hood will envelope the footprint of each furnace, in order to maximise the capture of smoke from the blacksmith activities. The flue is then proposed to be suspended above each furnace using a combination of guy wire and structural supports in order to ensure the stability of the flue. The flue will extend continuously from this point immediately above the furnace, through the roof to the aforementioned height above the roof line. The structural design and extent of the flues can be seen below in **Figure 6**.

The Ground Floor and First Floor layout of the approved development will not change as a result of the installation of the extraction hoods and flues, as is highlighted in **Figures 6 to 9**.

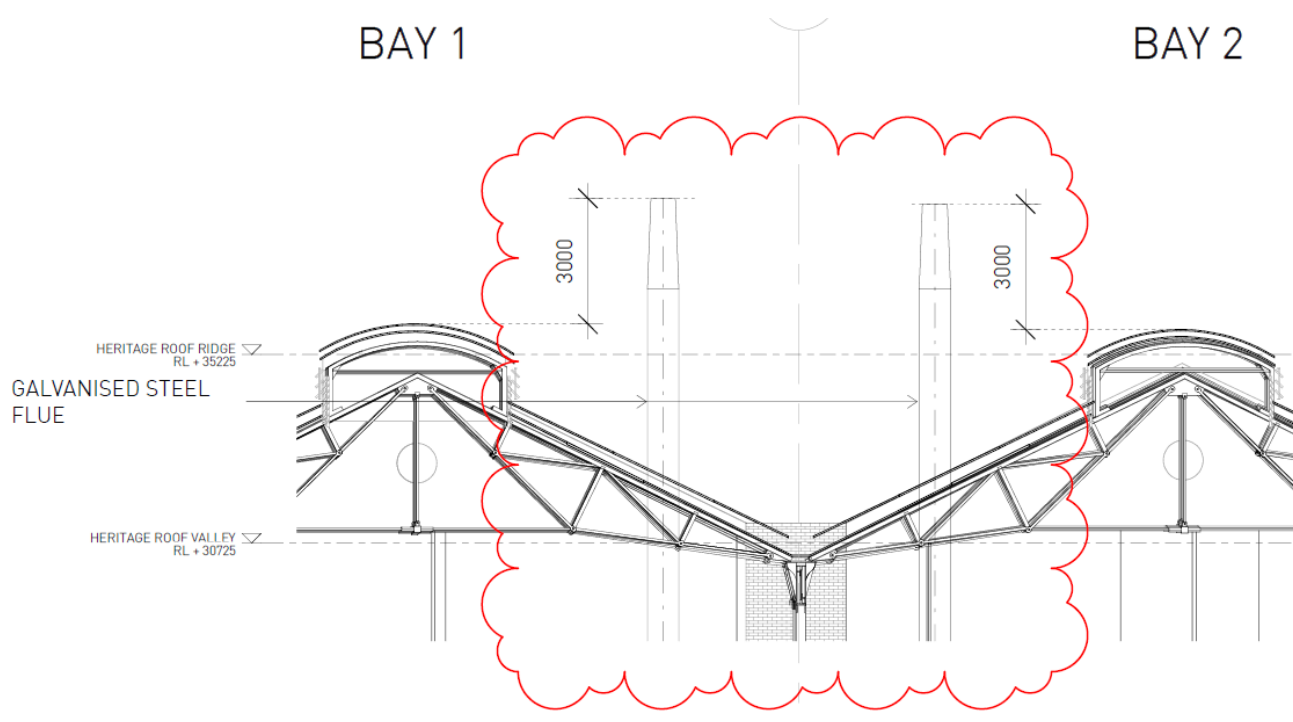
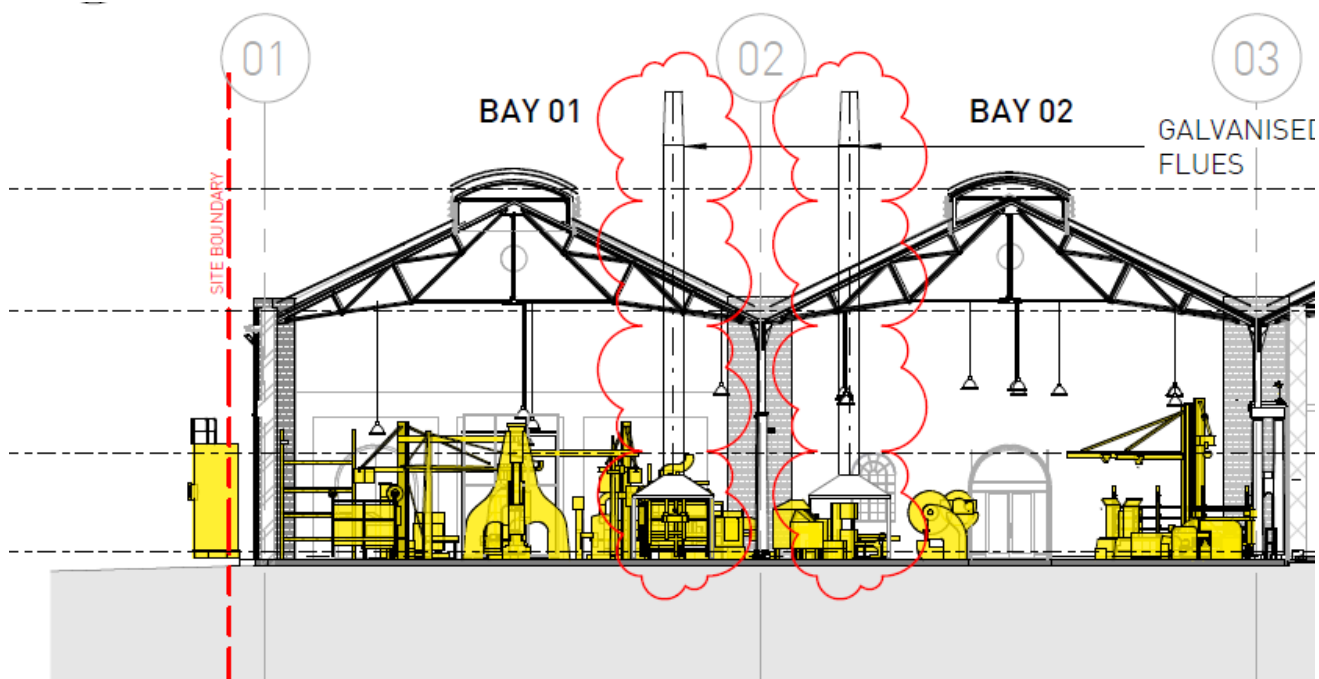


Figure 5 Proposed design of the flues

Source: *Sissons Architects*



4 PROPOSED - LONG SECTION B - RETAIL

1 : 250

Figure 6 Proposed Long Section B - Retail, detailing the structural design of the extraction hoods and flues in Bays 1-2

Source: Sissons Architects

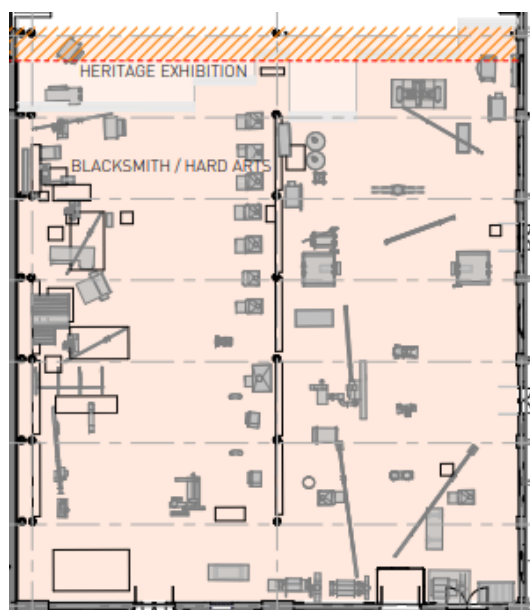


Figure 7 Approved Ground Floor Plan

Source: Sissons Architects

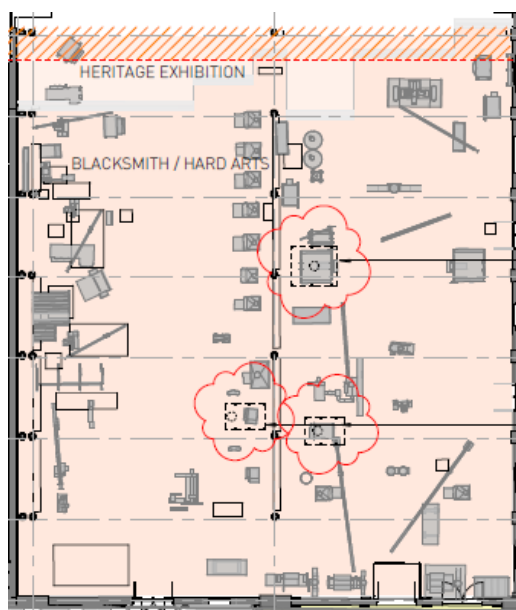


Figure 8 Proposed Ground Floor Plan showing the location and extent of the extraction hood and flues

Source: Sissons Architects

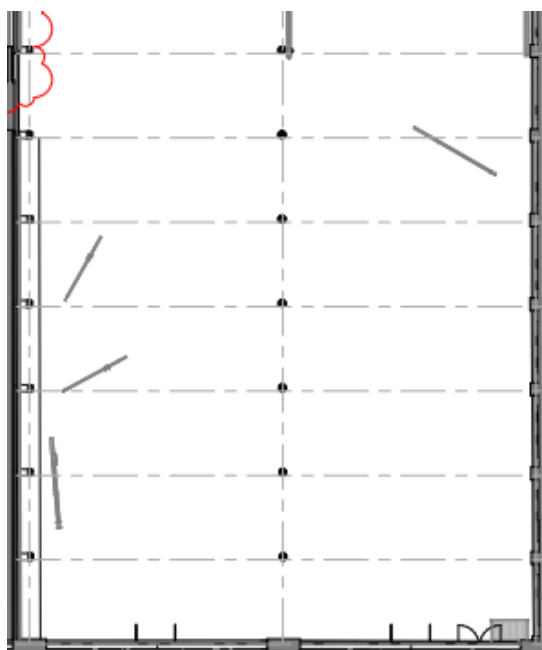


Figure 9 Approved First Floor Plan

Source: Sissons Architects

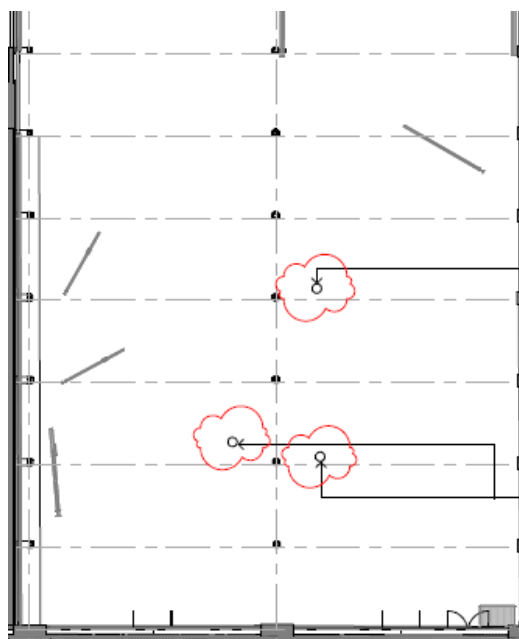


Figure 10 Proposed First Floor Plan identifying the penetration locations of the flues in Bays 1 and 2

Source: Sissons Architects

3.1.2 Justification

An Air Quality Assessment was undertaken by JBS&G Australia (JBS&G), which assessed the impacts of the furnaces servicing the blacksmith and the resultant air quality impacts (refer to **Attachment C**). This superseded an air quality assessment that was undertaken in April 2018, as during the 2018 assessment, the large oil fuelled furnace (Furnace 9) was not operational and the process of quenching fired steel in oil baths was also not captured in the sampling, which is a common practice of blacksmith activity. Accordingly, additional testing was conducted while Furnace 9 was operational, and the quenching bath activities were being undertaken to further evaluate the air quality conditions. The revised Air Quality Assessment therefore addressed these additional activities, the potential associated air quality impacts and provides appropriate mitigation recommendations.

The scope of works completed for the assessment comprised:

- Collection of ambient air samples from seven locations within Bay 1 during the oil furnace and quenching operations.
- Recording of spot CO and NO_x levels in the air at the seven sample locations during the oil furnace and quenching operations.
- Laboratory analysis of collected air samples for contaminants of potential concern including, VOCs, PAHs, elemental carbon, heavy metals and respirable particles; and
- Evaluation of field measurements and laboratory analysis data, and subsequent documentation of the activities, laboratory analysis results and assessment outcomes.

During the oil furnace operation, two conditions were observed:

- During the period noted as 'furnace start-up', the furnace was observed to emit thick black smoke for approximately 20 to 30 minutes following start up, this smoke accumulated below the internal roof apex; and
- During the period noted as 'post start-up', after 20-30 minutes of use, the furnace was observed to emit notably less visible smoke, resultant of the furnace running more efficiently once the internal refractory had heated to a high temperature. The black smoke which had previously accumulated below the roof apex was slowly released to atmosphere via the roof louvres.

Furthermore, JBS&G noted moderate 'fume' odour was evident in Bays 1 and 2 whilst the oil furnace was in operation, with the fume odour particularly evident higher in the roof structure (i.e at truss height).

Based on these findings, JBS&G considered that:

- The quantitative results of the air quality assessment conducted for the oil furnace and oil quenching operations in Bays 1 and 2 south do not indicate a health risk to the construction workforce or future building occupants; and
- From an aesthetic perspective, a moderate smoke haze and 'fume' odour was evident in Bays 1 & 2 when the oil furnace was in operation. Whilst this does not present a health risk, such visual and olfactory conditions could potentially be perceived as unhealthy.

Therefore, JBS&G considered that no further actions were necessary based on the results of the air testing conducted, however it was suggested that in an attempt to improve aesthetic conditions (visible smoke and odour), a ventilation consultant could be engaged to design a system to more efficiently capture, direct and exhaust emissions and smoke generated during furnace and oil quenching operations.

Accordingly, Mirvac engaged with the ventilation consultant and the proposed works are to ensure that Furnaces 6, 9 and 10 which are currently in operation are consistent with contemporary blacksmith workshop operational design, and mitigate any potential adverse impacts resulting from the smoke plumes generated by the furnaces.

3.2 Modifications to conditions

The proposed modifications described above necessitate amendments to the consent conditions which are identified below. Words proposed to be deleted are shown in ~~bold strike through~~ and words to be inserted are shown in **bold italics**.

A2. The development may only be carried out:

- (a) in compliance with the conditions of this consent;
- (b) in accordance with all written directions of the Planning Secretary;
- (c) generally in accordance with the EIS and Response to Submissions;
- (d) in accordance with the approved plans in the table below:

Drawing no.	Rev	Name of Plan	Date
SA-AR-DWG-BB-B4-0330	BB CC	Proposed Plan – Ground Floor	07/07/20 22/03/21
SA-AR-DWG-BB-B4-0331	AA BB	Proposed Plan – First Floor	10/12/19 22/03/21
SA-AR-DWG-BB-B4-0334	V W	Proposed Plan – Roof	06/07/20 22/03/21
SA-AR-DWG-BB-B4-0340	R T	Proposed Elevations	07/07/20 22/03/21
SA-AR-DWG-BB-B4-0345	N P	Proposed Sections	15/05/18 22/03/21

Reason: The Architectural Plans are proposed to be modified in order to allow for the installation of the extraction hoods, fans and flues above the three heritage coke furnaces within the blacksmith tenancy in Bays 1 and 2 South of the Locomotive Workshop.

4.0 Substantially the same development

Section 4.55(1A) of the EP&A Act states that a consent authority may modify a development consent if “it is satisfied that the development to which the consent as modified relates is substantially the same development as the development for which the consent was originally granted and before that consent as originally granted was modified (if at all)”.

The development, as proposed to be modified, is substantially the same development as that originally approved, given that the proposed modifications:

- will not substantially alter the approved use or heritage fabric of Bays 1-4a of the Locomotive Workshops;
- will not alter the approved gross floor area of the development;
- will not alter the key benefits of the adaptive reuse of the Locomotive Workshops, namely the creation of employment opportunities near the CBD and public transport, provision of heritage interpretation experiences, improved public access to a State listed heritage building and an enhanced public domain;
- do not alter the approved development’s compliance with the applicable environmental planning instruments and policies; and
- do not result in any additional environmental impacts beyond those considered and determined to be acceptable by granting development consent to SSD 8517, as discussed further in **Section 5.3** below.

The Department of Planning, Industry and Environment (DPIE) may therefore be satisfied that the development consent as proposed to be modified will remain substantially the same as the original development consent, with the proposed modifications representing only a minor addition to the scope of the already approved development. The proposed modification of Development Consent SSD 8517 may therefore be lawfully approved under Section 4.55(1A) of the EP&A Act.

5.0 Environmental assessment

Section 4.55(1A) of the EP&A Act states that a consent authority may modify a development consent if “*it is satisfied that the proposed modification is of minimal environmental impact*”. Under section 4.55(3) the consent Authority must also take into consideration the relevant matters to the application referred to in section 4.15(1) of the EP&A Act and the reasons given by the consent authority for the grant of the original consent.

The following assessment considers the relevant matters under section 4.15(1) and demonstrates that the development, as proposed to be modified, will be of minimal environmental impact.

5.1 Reasons given for granting consent

The Statement of Reasons for Decision issued by the IPC noted that “the impacts of the development are acceptable and can be appropriately mitigated through the implementation of the recommended conditions of consent”. The Commission also recognised that the approved development was in the public interest, as they will result in a range of public benefits, including:

- employment opportunities near the CBD and public transport;
- improved public access to a state listed heritage building;
- heritage interpretations experiences; and
- an improved public domain which will benefit workers, visitors and the local community.

The proposed modifications will not alter the public benefits identified by the IPC in granting Development Consent to SSD 8517. The proposed modifications will continue to support employment opportunities near the CBD, whilst enhancing the amenity and experience of visitors and workers to the Locomotive Workshops, as the extraction hoods, fans and flues above the heritage coke furnaces will minimise the production of smoke plumes.

5.2 Compliance with Environmental Planning Instruments

5.2.1 State Environmental Planning Policy (State Significant Precincts) 2005

South Eveleigh is located within the Redfern-Waterloo Authority ‘specified site’ and therefore State Environmental Planning Policy (State Significant Precincts) 2005 (SEPP SSP 2005) is the principal planning instrument that applies to South Eveleigh.

The proposed modifications will not result in an increase in the maximum approved gross floor area under SSD 8517, nor will it alter the approved land uses. Therefore, the proposed modifications will not alter the original assessment of SSD 8517, which will remain consistent with the objectives of the Business Zone – Business Park zone.

5.3 Environmental Impacts

The EIS submitted with the original State Significant Development Application (SSDA) addressed the likely impacts of the development, including:

- built form;
- design excellence;
- heritage impacts;
- traffic, parking and access;
- waste management;
- contamination;
- noise, vibration and air quality;
- accessibility;
- Building Code of Australia;
- services and utilities;
- water cycle management;
- railway infrastructure;
- social and economic benefits;
- construction management;
- ecologically sustainable development;
- development contributions;
- site suitability; and
- public interest

The proposed modifications to the approved development do not give rise to any material change to the assessment of impacts that were considered and determined to be acceptable in the granting of development consent SSD 8517.

Notwithstanding this, supplementary technical assessment has been undertaken in relation to heritage issues which are discussed in further detail below.

5.4 Heritage impact

The Locomotive Workshops building falls within the Eveleigh Railway Workshops boundary and contains many of the items within the Eveleigh Railway Workshops Machinery collection. Both the Eveleigh Railway Workshops and the Eveleigh Railway Workshops Machinery are listed on the NSW State Heritage Register as well as the ATP S170 Heritage Conservation Register (ATP S170 Register).

Curio Projects has prepared a Heritage Impact Statement (**Attachment B**) to identify and assess any potential impacts on heritage amenity that may arise from the proposed modifications, with regard to both the Locomotive Workshops as well as the wider South Eveleigh Railway Workshops precinct.

Through a detailed consideration of the proposed modifications, Curio Projects confirms that the installation of the flues is responding to concerns surrounding the amenity for both visitors and blacksmith workers, and that their installation represents a practical and visually/structurally suitable response to minimising internal smoke accumulation associated with the blacksmith workshop. In their assessment, Curio Projects considered the potential physical impacts on heritage amenity that may result from the flue installation process. The report concluded that by virtue of the flues being fitted only through the modern sheeting fabric of the roof, any physical impact to the historic trusses will be avoided. As such, the report ultimately concludes that the flues will have a neutral physical impact.

Regarding visual amenity, Curio Projects gave consideration to three different perspectives during its assessment.

- The flues' height above the existing roof line has been determined to be of a minimal visual impact, pertaining to the fact that the points of penetration are considerably set back from the edge of the roof, and are therefore not within view lines from the public domain. Additionally, the scale and proportion of the flues are deemed to be sympathetic to the architectural integrity of the Locomotive Workshops, and will emulate other vertical elements within the area of the site.
- The operational nature of the flues will mitigate the visual impacts currently caused by the smoke generation arising from the blacksmith workshop activities. Curio Projects determined that the installation of the flues would reduce potential visual impacts for both the blacksmiths in the workshop as well as neighbouring tenancies.
- The material finish of the flues is considered to align with the heritage aesthetic and industrial character of the Locomotive Workshops and will contribute to the overall user experience.

As such, Curio Projects affirms that the proposed modifications are a positive outcome for South Eveleigh, and will not have any adverse heritage impacts, by virtue of the ability for the flues to blend into the industrial aesthetic of the Locomotive Workshop as a whole, as well as the fact that they will not be readily visually apparent from the public domain.

5.5 Suitability of the site

Under SSD 8517, Bays 1-4a of the Locomotive Workshops have already been approved for a combination of heritage, educational and retail premises. The proposed modifications will not alter the suitability of Bays 1-4a, or the broader Locomotive Workshops, for these uses. They will also support the future operation of Bays 1-4a by responding to visual amenity impacts associated with the existing furnaces used within the Blacksmith tenancy of the Locomotive Workshops by installing extraction hoods, fans and flues that will mitigate the impacts of the large smoke plumes generated.

5.6 Public interest

The proposed modifications to the approved development are in the public interest, given that they will:

- safeguard the amenity of building users by installing extraction hoods, fans and flues to the existing furnaces that will mitigate smoke flumes generated within Bays 1 and 2 South by the Blacksmithing activities;
- not result in any adverse heritage impacts to the Locomotive Workshops;
- continue to facilitate the delivery of a revitalised and vibrant commercial development, set within a State significant heritage building that will provide a range of tenancies to support start-up, small scale and large-scale enterprises; and
- demonstrate excellence in design within a State heritage building.

6.0 Conclusion

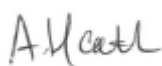
This modification application seeks to modify the approved development consent to facilitate the installation of three extraction hoods, fans and flues to the existing furnaces in the blacksmith component of Bays 1-4a of the Locomotive Workshops at South Eveleigh.

In accordance with section 4.55(1A) of the EP&A Act, Council may modify the consent as:

- the proposed modification is of minimal environmental impact; and
- substantially the same development as development for which the consent was granted.

We trust that this information is sufficient to enable a prompt assessment of the proposed modification request.

Yours sincerely,



Alexander Heath
Junior Urbanist
0448 079 558
aheath@ethosurban.com



Claire Burdett
Associate Director, Planning
0423 066 002
cburdett@ethosurban.com