Modification Application Planning Report

Section 4.55(2) Modification to SSD 9601 – Proposed Plant 2 Upgrade Works – MOD 1

780 Wallgrove Road, Horsley Park
(Lot 7 DP 1059698)

Prepared by Willowtree Planning Pty Ltd on behalf of The Austral Bricks Co Pty Ltd

November 2021

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PART A PRELIMINARY

1.1 INTRODUCTION

Willowtree Planning Pty Ltd (Willowtree Planning) has prepared this Planning Report on behalf of The Austral Bricks Co Pty Ltd (Austral) to support a Modification Application to SSD 9601 pertaining to the proposed Plant 2 Upgrade Works. The Modification Application is submitted to the NSW Department of Planning, Industry and Environment (DPIE), to determine under the provisions of Section 4.55(2) of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

Development Consent in relation to SSD 9601 was granted by the Minster for Planning and Public Spaces on 18 May 2020 for "Upgrade works to the Horsley Park Brickworks Plant 2 Facility", which comprised of the following development particulars:

- Partial demolition of existing Plant 2 facility and existing kilns;
- Installation of a new kiln;
- Extension of existing production building;
- Stormwater detention basin; and
- Internal fire access road.

Austral wish to undertake future expansion works on the Site in order to improve the operational efficiencies across the business. This Modification Application represents the **first** Modification Application which seeks to modify the existing SSD 9601 Development Consent for the following:

- Amendment to the approved site layout – Appendix 1 under SSD 9601, for the purposes of alterations and additions on-site (refer to **Appendix 1**). The scope of works includes:
    - Upgrade scrubber to Twin Tower Scrubber.
    - Expansion of the hardstand area.
    - Proposed new entry.
    - Provisions for 15 new car parking spaces.
    - Extension of existing OSD Basin.
    - Installation of new gatehouse.
- Increase of capacity from 80 million to 130 million bricks.

Accordingly, the findings of this Planning Report identify that the proposed modifications can be accommodated without generating impacts that are considered unacceptable, in line with the relevant legislation applicable to the Subject Site; and that the proposed modifications would result in development that is materially and substantially the same as the development approved under SSD 9601. Furthermore, the proposed modifications to the Proposed Development (subject to approval) would remain consistent with the objectives outlined within *State Environmental Planning Policy (Western Sydney Parklands) 2009* (SEPP (WSP) 2009); *A Metropolis of Three Cities – Greater Sydney Region Plan*; the *Western City District Plan*; and remains consistent with the principles of Ecologically Sustainable Development (ESD), as part of the overall vision for the Site.

Based on the finds of this Planning Report, the modifications sought continue to support the future development of a Brick Manufacturing Facility, providing further employment-generating opportunities in the immediate locality, as well as the wider locale of the Sydney Metropolitan Area, particularly the Western Sydney Region.

It is noted, that the modifications sought have been assessed against the SSD 9601 consent throughout this Modification Application to demonstrate that the Proposal remains substantially the same development as originally approved. As such, it is recommended, that the proposed modifications sought be approved by the NSW DPIE.

PART B SITE ANALYSIS

2.1 SITE LOCATION & EXISTING SITE CHARACTERISTICS

The identified land portion that is the subject of this Modification Application is legally defined as 780 Wallgrove Road, Horsley Park. The Subject Site comprises two (2) allotments, as described in **Table 1** below.

Table 1: Site Identification	
Street Address	**Legal Description**
780 Wallgrove Road, Horsley Park	Lot 4 DP 235478
	Lot 7 DP 1059698

The Subject Site comprises a total site area of approximately 82 hectares (ha) and is subject to the applicable provisions outlined within SEPP (WSP) 2009. Access to the Site is currently obtained via both Wallgrove Road and Ferrers Road, which contains multiple entry / exit points along the internal access roads servicing the Site, which includes turning loops and hardstand areas within the identified land portion to enable efficient movement and control of traffic within the Subject Site.

The Site is situated approximately 31.78 km west of the Sydney CBD, 13.35 km west of Parramatta and 11.77 km north of Liverpool. It is within close proximity to infrastructure routes including the wider regional road network, including Wallgrove Road, The Great Western Highway and both the M4 & M7 Motorways. All of which provide connectivity to the Subject Site and immediate vicinity, as well as the wider region. Additionally, the Subject Site is located within close proximity to active transport links, such as bicycle routes, providing an additional mode of accessible transport.

In its existing state, the Subject Site comprises a developing logistics park and terminal and is surrounded by similar industrial-related developments. Land surrounding the Site comprises the following zoning categories, including:

- Unzoned Land – Western Sydney Parklands;
- IN1 General Industrial;
- SP2 Infrastructure; and
- RU4 Primary Production Small Lots.

The nearest sensitive land uses are located within the Western Sydney Parklands and can be identified as Prospect Reservoir (east) and the Eastern Creek tributary, which traverses the Site north-south. Accordingly, mitigation and protection measures would be required as part of any future development proposed, in order to preserve the amenity of the Subject Site.

The Site operates under Environmental Protection Licence (EPL) 546 to undertake the following activities listed in Schedule 1 of the *Protection of the Environment Operations Act 1997* (POEO Act):

- Ceramic waste generation > 5-100 tonnes generated or stored annually;
- Ceramics production > 200,000 tonnes produced annually;
- Crushing, grinding or separating, capacity to process > 500,000-2,000,000 tonnes annually;
- Land-based extractive activity, capacity to extract, process or store > 500,000-2,000,000 tonnes annually; and
- Mining for minerals, capacity to produce > 500,000-2,000,000 tonnes annually.

The Site is subject to the provisions outlined within SEPP (WSP) 2009, which is the primary Environmental Planning Instrument (EPI) and categorises the Site as Unzoned Land, for which all land within the Western Sydney Parklands is unzoned. The Site and surrounding context are illustrated in **Figures 1** & **2** below.

Figure 1 Existing Site Context and Surrounding Area (Source: NearMaps, 2021)

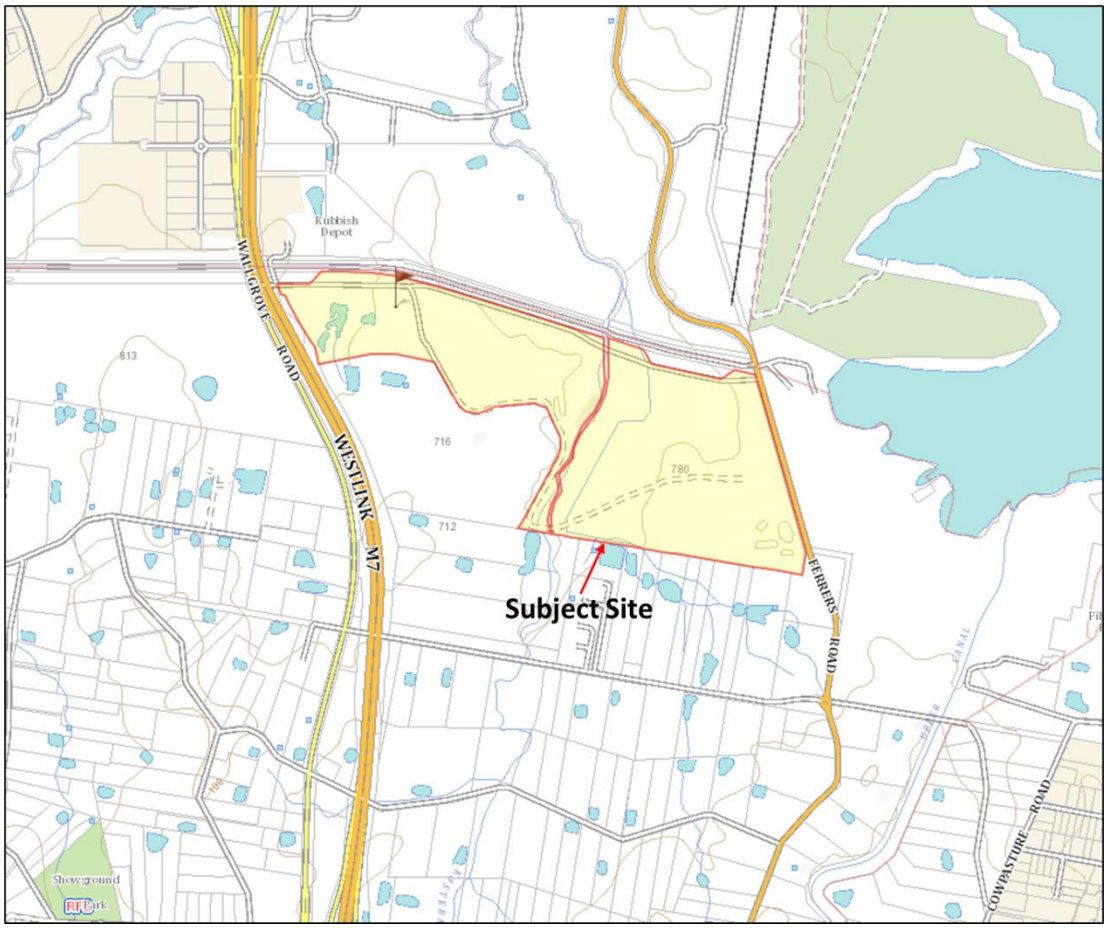

Figure 2 Cadastral Image of Subject Site and Surrounding Context (Source: SIX Maps, 2021)

2.2 SITE CONTEXT

Key contextual attributes of the Subject Site are noted as follows:

Heritage (refer to **Figure 3** below):

- Prospect Reservoir and Surrounding Area which is a State listed heritage item and is also locally listed under the Fairfield Local Environmental Plan 2013 (FLEP 2013). It is located around 250m west of Lot 7;
- Upper Canal System (Pheasants Nest Weir to Prospect Reservoir) Upper Canal System which is a State listed heritage item, located around 720m south-east of Lot 7;
- Group of Hoop Pines, which is listed as a local heritage item under the WSP SEPP, located and 730m south-east of Lot 7;
- Spotted Gum Forest, which is listed as a local heritage item under the WSP SEPP, located around 250m west of Lot 7; and
- Horsley Complex (Homestead Buildings, Garden Farm) which is listed as a local heritage item under the FLEP 2013, located around 2.4km south-west of Lot 7.

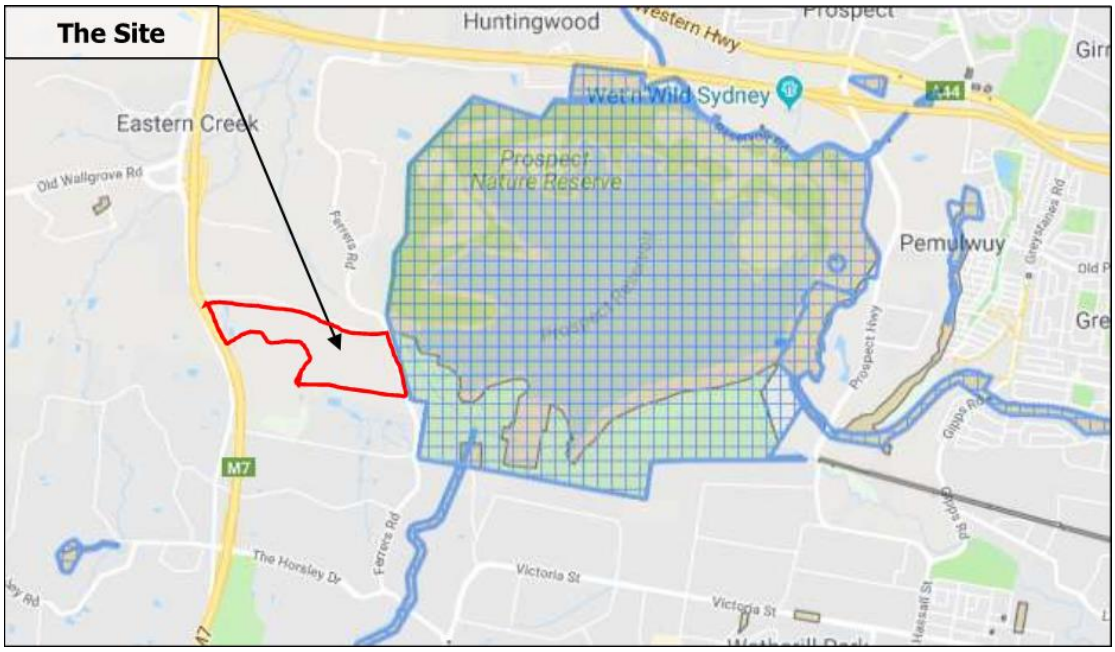

Figure 3 Mapped Heritage Items (Source: NSW Planning Portal, 2021)

Bushfire:

- As demonstrated in **Figure 4** below, the Subject Site contains land that is mapped as containing Categories 1-3 (and Vegetation Buffer) bushfire prone land. Blackash Consulting have prepared an addendum Bushfire Impact Assessment (refer to **Appendix 9**), which considers the potential impacts of bushfire as a result of the proposed modifications.

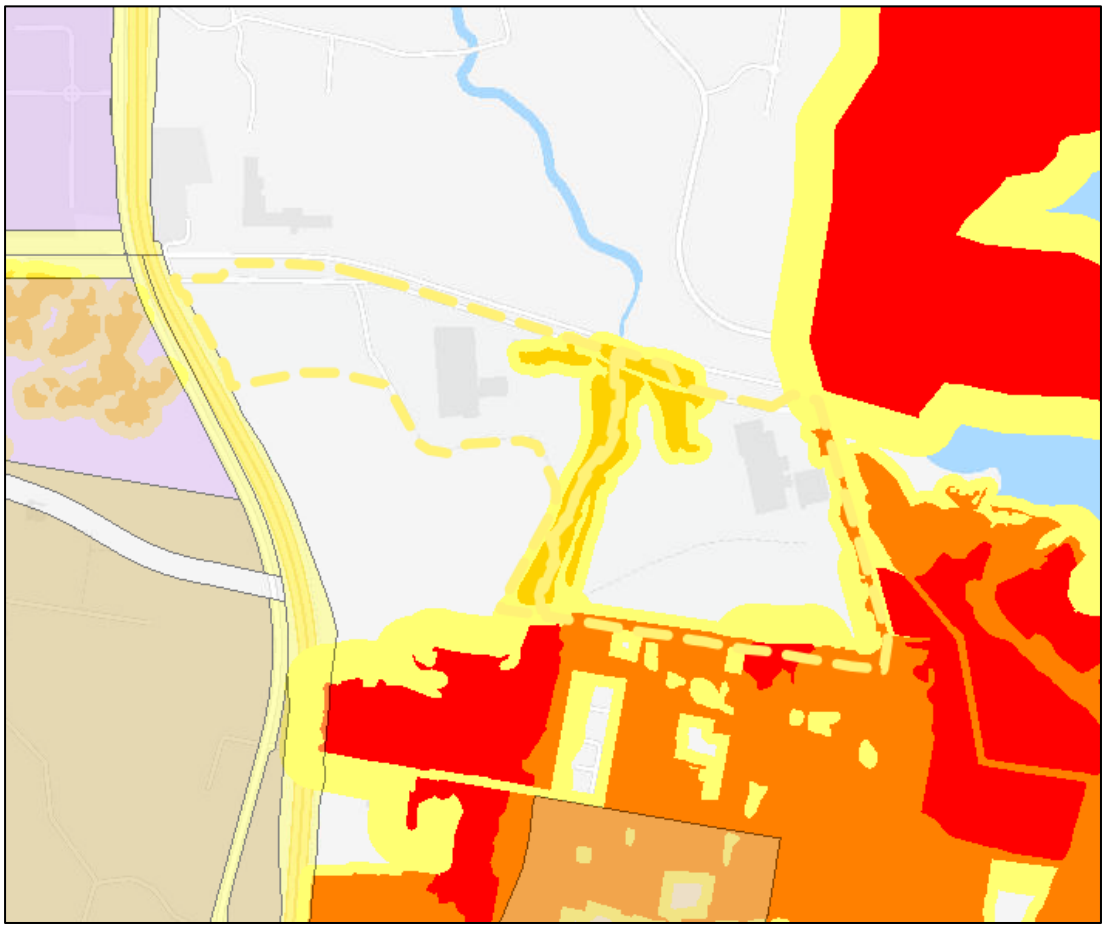

Figure 4 Mapped Bushfire Prone Land (Source: NSW Planning Portal, 2021)

Environmental Conservation Area:

- As demonstrated in **Figure 5** below, the Subject Site adjoins Prospect Reservoir which is a mapped Environmental Conservation Area. **SSD 9601** included planned management and mitigation measures to protect the environmental amenity of the Prospect Reservoir, for which the proposed modifications would be completely consistent with.

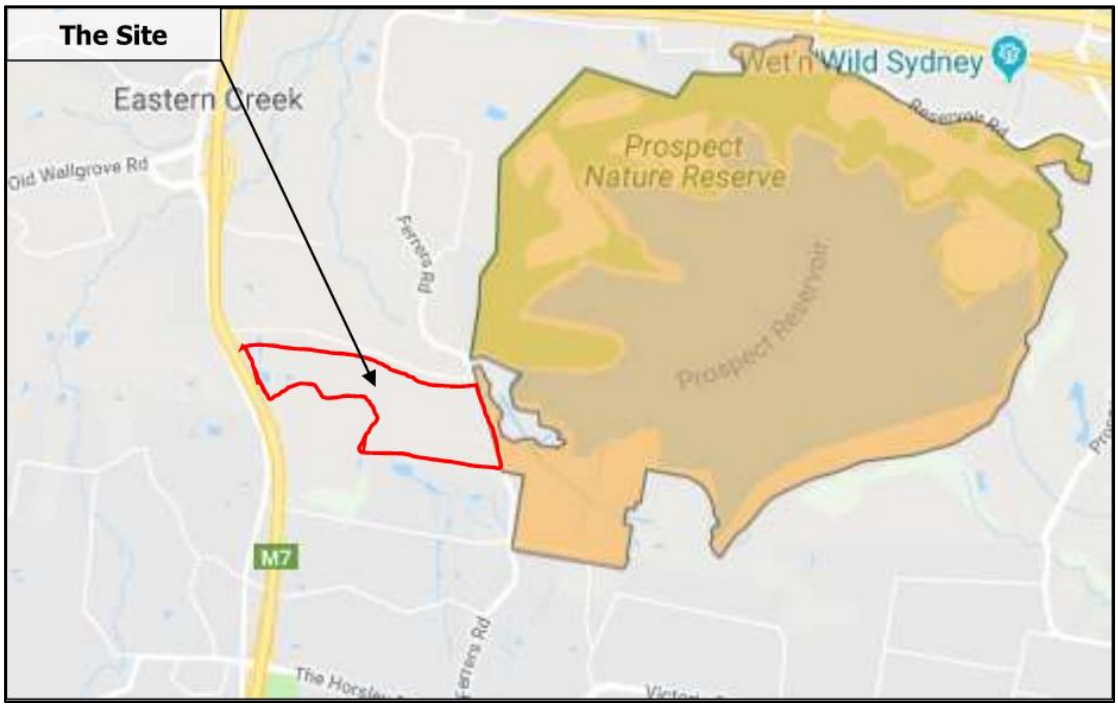

Figure 5 Mapped Environmental Conservation Area (Source: NSW Planning Portal, 2021)

Bulk Water Infrastructure Supply:

- As demonstrated in **Figure 6** below, the bulk water infrastructure map identifies the WaterNSW Pipeline traversing the Subject Site's northern boundary from east to west into the Prospect Reservoir.

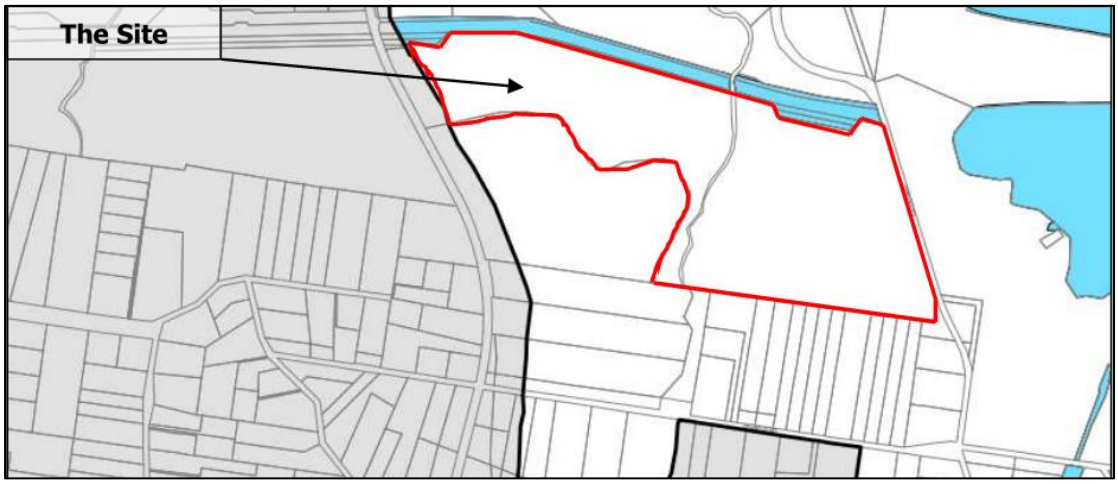

Figure 6 Bulk Water Infrastructure Supply Map – WSP SEPP (Source: NSW Legislation, 2021)

2.3 STRATEGIC CONTEXT

As mentioned above, the Site is included within the Land Application Area for the Fairfield Local Government Area (LGA) (refer to **Figure 7** below) and is identified as unzoned land pursuant to SEPP (WSP) 2009. Despite being wholly located within the Fairfield LGA, the relevant Consent Authority for the subject Modification Application will be the NSW DPIE; however, during the notification period, Fairfield City Council will have the opportunity to comment on the proposed modifications.

SSD 9601 MOD 1 responds accordingly to the strategic context and direction and direction intended for the Subject Site and surrounding area, as it seeks to provide a State-of-the-Art Brick Manufacturing Facility to support the growth and development of employment-generating land uses within the Western Sydney Parklands. Progressive development on the Subject Site would continue to provide employment-generating opportunities that would ultimately contribute to the overall growth and development of the wider Sydney Metropolitan Area, particularly the Western Sydney Region.

In addition to the above, the Site is identified within the Western Parkland City under the *Western City District Plan* (issued by the Greater Sydney Commission (GSC), 2018), which are considered to apply to the Subject Site as follows:

- *Planning Priority W1 – Planning for a city supported by infrastructure;*
- *Planning Priority W7 – Establishing the land use and transport structure to deliver a liveable, productive and sustainable Western Parkland City;*
- *Planning Priority W8 – Leveraging industry opportunities from the Western Sydney Airport and Badgerys Creek Aerotropolis;*
- *Planning Priority W9 – Growing and strengthening the metropolitan cluster;*
- *Planning Priority W10 – Maximising freight and logistics opportunities and planning and managing industrial and urban services land; and,*
- *Planning Priority W11 – Growing investment, business opportunities and jobs in strategic centres.*

The Site forms part of the WSP, which comprises a 27 km urban park corridor running north from Quakers Hill, south to Leppington accounting for approximately 5,280 ha of land. Along its trajectory it crosses various LGAs including, Liverpool, Blacktown and Fairfield. The location of the Site within the extent of the WSP is shown in **Figure 8** below.

The *Western Sydney Parklands Plan of Management 2030* (WSP POM) was formally adopted by the Minister for Environment, Minister for Heritage in December 2018. The WSP POM outlines the main principles, strategic directions, and desired objectives and outcomes with regard to the WSP. The WSP POM considers the wider regions exponential urban growth potential (expected to reach 3 million people by 2036). It sets out the WSP's overall capacity to contribute to the anticipated economic value of the region in terms of development and employment generation. Additionally, it envisages the maintenance of social/recreational and environmental values.

Figure 8 shows the location of the Site within the broader Precinct 6: Wallgrove of the WSP. The Wallgrove Precinct is described in the WSP POM as being 309 ha of diverse urban services infrastructure such as recycling, brickmaking, quarrying and former Eastern Creek Waste Management Centre (which is now being decommissioned). The Wallgrove Precinct also includes agistment land adjacent to the Light Horse Interchange and the M7 Motorway. As shown on **Figure 8**, the site is clearly delineated as 'Austral Bricks,' thus reinforcing that the land is a clear exception to any other freehold parcels due to its long-term working character and employment contribution.

The continued operation of the brickmaking plant would not undermine the objectives of the WSP POM, or surrounding land uses within the locality.

Accordingly, the proposed modifications sought, are considered consistent and responsive to the above priorities, making a valuable contribution to the Western Parkland City under the

Western City District Plan, specifically to the Western Sydney Parklands, which is earmarked for development and higher and better uses with regard to the orderly and economic development of the Subject Site.

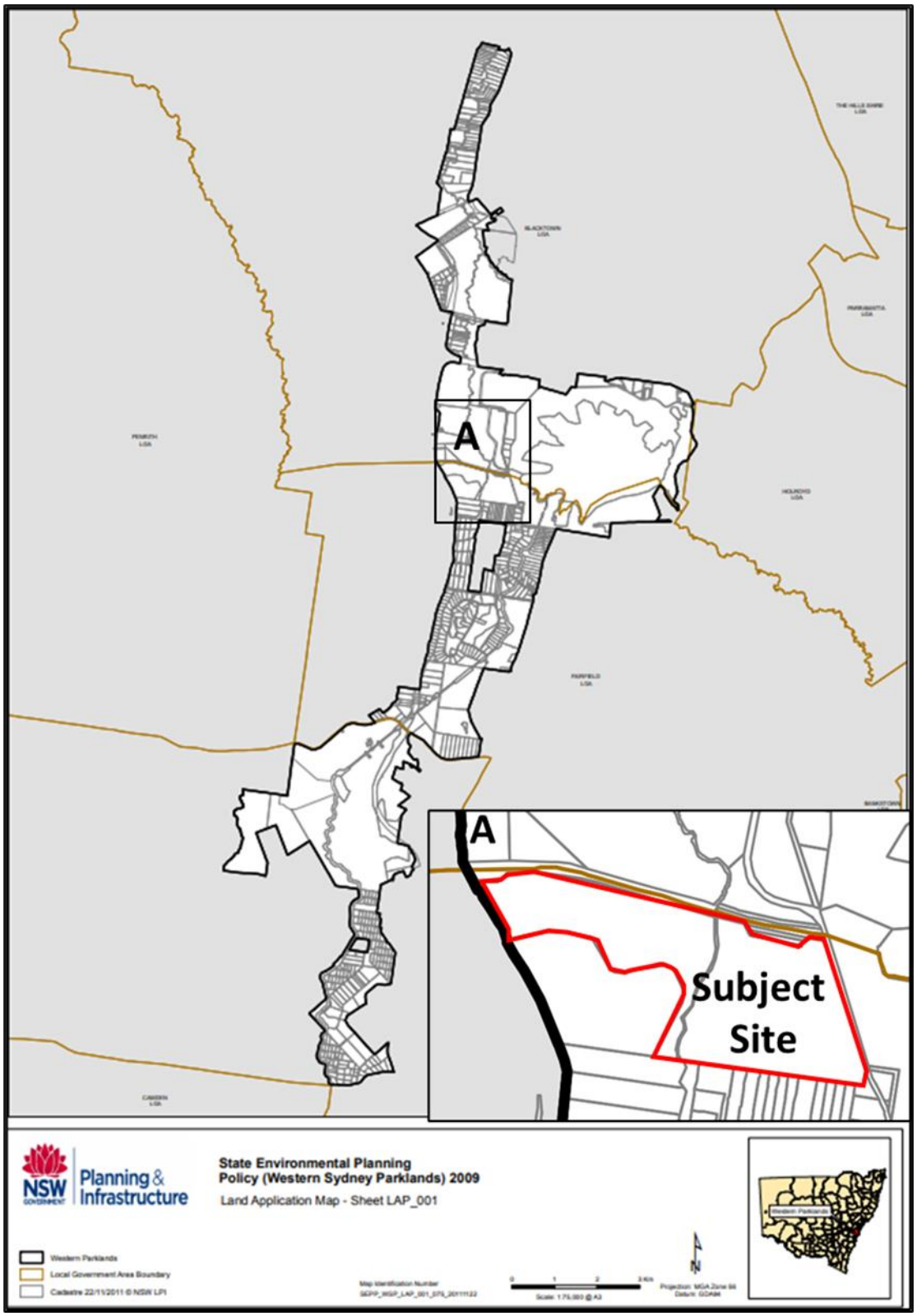

Figure 7 Land Application Under *State Environmental Planning Policy (Western Sydney Parklands) 2009* (Source: NSW Legislation, 2021)

Figure 8 Western Sydney Parklands Plan of Management 2030 – Precinct 6: Wallgrove (Source: Western Sydney Parklands Trust, 2021)

2.4 DEVELOPMENT AND PLANNING HISTORY

As mentioned in **Section 1.1** above, consent was granted by the Minster for Planning and Public Spaces on 18 May 2020 for "Upgrade works to the Horsley Park Brickworks Plant 2 Facility" (SSD 9601), which comprised of the following development particulars:

- Partial demolition of existing Plant 2 facility and existing kilns;
- Installation of a new kiln;
- Extension of existing production building;
- Stormwater detention basin; and
- Internal fire access road.

Additionally, previous approvals issued for the Site include the following:

- On 17 November 1960, Blacktown Shire Council issued approval for the manufacture of bricks and the extraction of clay and shale at the subject site;
- On 23 June 1961, Blacktown Municipal Council issued approval for the erection of buildings in conjunction with the approved brick works;
- On 17 January 1979, Blacktown Municipal Council issued approval to office additions (to a Constructive Industry) at the subject premises. No specific conditions were imposed. A number of structures already existed at the site;
- On 16 June 1982, Fairfield City Council resolved to approve the erection of a factory building to be used for maintenance and storage of engineering equipment. This follows a fire at the premises on 19 March 1982. On 12 July 1982, Council issued approval for the use of the site for the purpose of maintenance and storage of engineering equipment in conjunction with the brick manufacturing plant;
- On 8 August 1983, Council issued Development Consent No. 104/83 for factory extensions. The development involved a 7% or 1360m² increase in the size of the kiln and drying building for the brick manufacturing plant;
- On 8 December 1998, Council resolved to grant Development Consent No. 577/97 for the use of the subject site for the purpose of a solid waste landfill for the remediation of extractive industry;
- On 22 July 1999, Council issued approval for office additions;
- On 18 December 2003, Council issued Modification No. 211/2003 modifying Development Consent No. 577/97 to enable an increase in the acceptance of waste to 430,000 tonnes per annum;
- On 12 July 2005, Council issued Development Consent No. 708/2005 for extensions to the existing sales office of Austral Bricks;
- On 24 March 2006, Council issued Development Consent No. 1431/2005 for the construction of a single storey administration building for the Austral Brick Company;
- On 13 December 2006, Council issued Development Consent No. 880/2006 for additions to Austral Bricks' Sales Office consisting of an office, boardroom and reception;
- On 20 October 2009, Council issued Development Consent No. 1510.1/2008 for the demolition of a portable building and covered pergola and alterations and additions to an existing office building for Austral Bricks;
- On 16 April 2010, Council issued Development Consent No. 1373.1/2009 for the erection of a brick display panel with a steel frame and with dimensions 10m x 10m, for the purpose of using the panel to expand the concept of brick art; and
- On 12 November 2013, Council issued Development Consent 286.1/2012 for Installation of a gas pipeline for the delivery and use of captures landfill gas in the brick manufacturing process.

This Modification Application represents the **first** Modification Application which seeks to modify the existing SSD 9601 Development Consent for the following:

- Amendment to the approved site layout – Appendix 1 under SSD 9601, for the purposes of alterations and additions on-site (refer to **Appendix 1**). The scope of works includes:
    - Upgrade scrubber to Twin Tower Scrubber.
    - Expansion of the hardstand area.
    - Proposed new entry.
    - Provisions for 15 new car parking spaces.
    - Extension of existing OSD Basin.
    - Installation of new gatehouse.
- Increase of capacity from 80 million to 130 million bricks.

PART C PROJECT SUMMARY

3.1 PROPOSED MODIFICATION OBJECTIVES

The aim of the Proposed Development (SSD 9601) is to provide a Brick Manufacturing Facility. The development approved under SSD 9601 included provision for *upgrade works to the Horsley Park Brickworks Plant 2 Facility including:*

- *Partial demolition of existing Plant 2 facility and existing kilns*
- *Installation of a new kiln*
- *Extension of existing production building*
- *Stormwater detention basin*
- *Internal fire access road*

Pursuant to Section 4.19 of the EP&A Act, the provision operates in legality and function to authorise the use of the manufacturing plant and associated facilities and provides that *"a development consent that authorises the erection of a building (but not the use of the building once erected) is sufficient to authorise the use of the building when erected for the purpose for which it was erected if that purpose was specified in the application for development consent."*

Accordingly, the proposed modification seeks to modify the use of the manufacturing facility (approved by SSD 9601) to increase its capacity and does not seek to vary or amend any provision of DA 145/20/33 (which does not contain any cap on capacity in any event). It is important to note, that the proposed modification does not impact the terms of the original development consent which expressly authorises the manufacture of bricks, the extraction of clay and shale material and the processes required to implement those approved uses, but does not impose any limits on the extraction or production capacity authorised at the Site.

The only extraction and production limitations are contained within Environmental Protection Licence (EPL) 546, which applies to the Site and allows for the production of up to 200,000 tonnes of 'ceramics' and the 'crushing, grinding or separating' of up to two (2) million tonnes of material annually.

Therefore, the proposed modification seeks to achieve and maintain the following objectives applicable to SSD 9601, including:

- Appropriate access;
- Compatibility with surrounding developments and the local context;
- Promotes an employment-generating development;
- Enhances the operational efficiencies able to be achieved across Plant 2 by Brickworks;
- Results in minimal impact on the environment;
- Remains consistent with the capacity thresholds pertaining to EPL 546;
- Results in minimal impacts on the visual amenity of adjoining receivers; and
- Allows for the implementation of suitable mitigation measures where required.

The proposed modifications are considered to be the best means of achieving these objectives.

3.2 DESCRIPTION OF THE PROPOSED MODIFICATION

The proposed modifications are made in relation to SSD 9601, which was granted by the Minster for Planning and Public Spaces on 18 May 2020 for "Upgrade works to the Horsley Park Brickworks Plant 2 Facility". SSD 9601 MOD 1 encapsulates further expansion and upgrade works to Plant 2, consistent with the scope of works under SSD 9601. It is important to note, that Plant 2 operates on the eastern side of the facility, largely independent to Plant 1. The site map prepared below (refer to **Figure 9**), illustrates the location of Plant 2 & Quarry and Plant

1 & Quarry. From an operational standpoint, Plant 2 utilises material from the quarry within the factory, and vehicles access the Plant 2 yard for product loading and delivery.

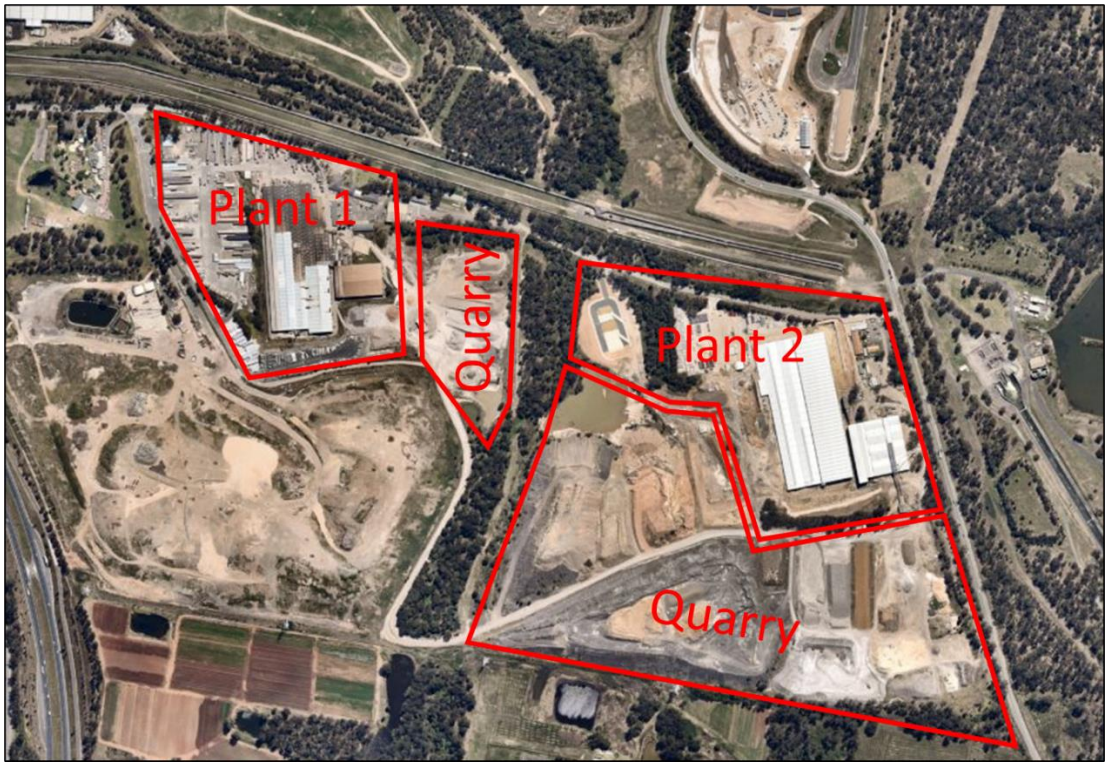

Figure 9 Plant 1 and Plant 2 Context Map (Source: Nearmap, 2021)

The proposed modifications form an extension to these existing works undertaken wholly within Plant 2 and would continue to operate wholly within the Plant 2 site.

Accordingly, the Proposed Development would facilitate the proposed modifications of the Site Layout pertaining to the below mentioned scope of works, which would seek to amend the Architectural Plans approved under Appendix 1 of the Instrument of Approval (refer to **Appendix 2**):

- Amendment to the approved site layout – Appendix 1 under SSD 9601, for the purposes of alterations and additions on-site (refer to **Appendix 1**). The scope of works includes:
  - Upgrade scrubber to Twin Tower Scrubber.
  - Expansion of the hardstand area.
  - Proposed new entry.
  - Provisions for 15 new car parking spaces.
  - Extension of existing OSD Basin.
  - Installation of new gatehouse.
- Increase of capacity from 80 million to 130 million bricks.
- Increase in employment-generating opportunities across the Site pertaining to 35 staff in the daytime shift and 10-12 staff in the night time shift.

<u>Amendment to Appendix 1 Development Layout Plans</u>

As noted above, the proposed modifications seek to amend the Architectural Plans approved under Appendix 1 of the Instrument of Approval pertaining to SSD 9601 (refer to **Appendix 2**).

Note: there are no specific Conditions of Consent to be modified other than the Plans pertaining to Appendix 1 under **SSD 9601**.

Figure 10 below demonstrates the Site Layout approved under SSD 9601, whilst **Figure 11** considers the modifications proposed to SSD 9601 as a result of this Modification Application. A complete set of Architectural Plans are provided in **Appendix 2**.

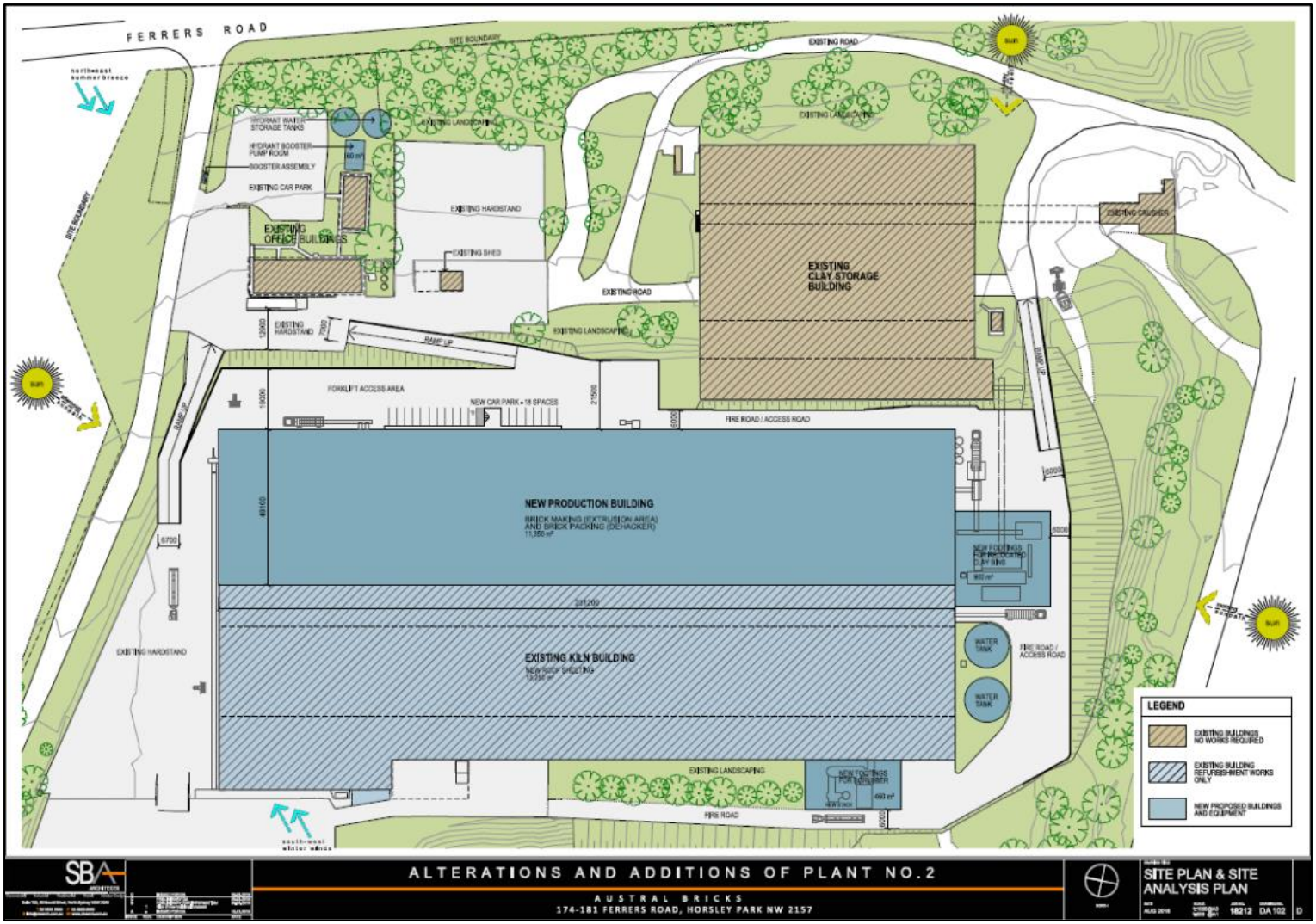

Figure 10 Existing Site Layout Plan Approved under SSD 9601 (Source: NSW DPIE, 2021)

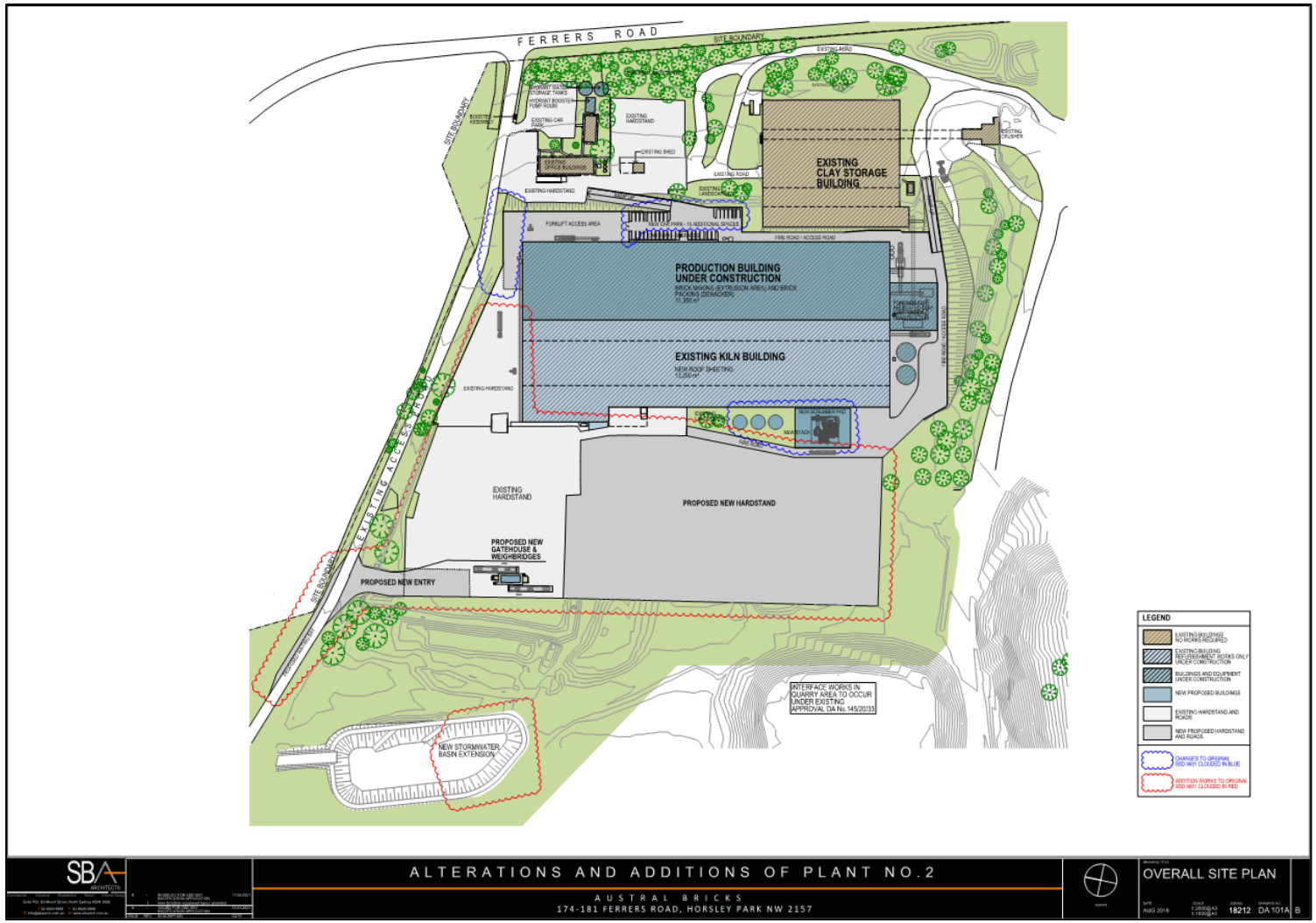

Figure 11 Proposed Site Plan (Source: SBA, 2021)

PART D JUSTIFICATION

4.1 MODIFICATION NEED

The proposed modifications achieve operational efficiencies in terms of brick manufacturing to provide bricks to the marketplace for use in the building and construction industry. The need for the modifications sought are justified as follows:

- Improvement to the Site's production efficiency performance.
- Improve the Site's sustainability performance.
- Need to improve the site's environmental performance, most specifically with regards to air quality impacts, heat loss and gas usage.
- Need to reduce specific work health and safety risks at the site.
- Increased need for employment opportunities in the Sydney Metropolitan Area, particularly the Western Sydney Region (i.e. Western Sydney Parklands).
- Need to improve the production capacity on-site, including improved efficiencies with production to reduction emissions.
- It is considered to be consistent with State, Regional and Local Government objectives intended for the region and the immediate locality.

The proposed modifications would assist in providing new employment opportunities and promoting industry diversification within the industrial sector, through provisionof an enhanced and State-of-the-Art Brick Manufacturing Facility. Additionally, the proposed modifications would not alter the quantity or configuration of land required to facilitate the proposal, rather would take place entirely within the existing Subject Site.

The proposed modifications represent improvements in the optimal use of the equipment and operational footprint approved under SSD 9601 to enable best practice manufacturing. These changes include:

- Increasing the number of full-time employee equivalents by introducing a night shift with limited additional outdoor activities and compliant noise levels;
- Removal of process bottlenecks by processing fired cars during the night shift with limited additional outdoor activities and compliant noise levels;
- Enable equipment approved under SSD 9601 to be used at design capacity rather than restricted levels due to limited employee labour hours;
- No material increase in night-time transport, and a modest increase of 20 road trucks to deliver increased production; and
- Upgrade scrubber to a Twin Tower Scrubber to ensure air emissions are reduced to meet emission concentration levels approved under SSD 9601. The upgraded scrubber will ensure ground level emissions are a minor fraction of the Ground Level Assessment Criteria limits (refer to **Figure 13** below).

These changes will allow an increase in production from 80 million standard brick equivalents to 130 million per annum, while improving expected energy efficiency by over 10% per unit produced. In addition to the abovementioned changes, the following is noted pertaining to the overall operations and modification requirements:

Removal of process bottlenecks by processing fired cars during the night shift with limited additional outdoor activities and compliant noise levels

An opportunity exists for the proponent to maximise the utilisation of kiln capacity, offering a 10% improvement in energy efficiency. Without a night shift, a day and afternoon shift form a "batch shift" operating model, creating some inefficient parts of the production cycle. By adding a night shift, labour is available 24/7 to unload fired cars, set unfired bricks onto cars and fire bricks in a "continuous shift" operating model. A continuous shift operating model removes

inefficient down time periods, where setting is delayed while cars are waiting to be unloaded and firing is delayed waiting for cars to be loaded. This continuous shift operating model allows the optimal capacity of the kiln to be utiilised throughout the whole production cycle, rather than only reaching this level mid cycle (refer to **Figure 12** below).

"Batch Shift" Operating Model - Day and afternoon shifts only

Production Cycle	Start of Cycle	Mid Cycle	Mid Cycle	Mid Cycle	End of Cycle
Efficiency	Less than efficient production	Less than efficient production	Efficient production	Efficient production	Less than efficient production
Setting	Waiting for cars to be unloaded to be able to start setting	Setting at optimal capacity			
Firing	Waiting for cars to be loaded to start firing		Firing at optimal capacity		
Unloading	Unloading - at capacity	Unloading at optimal capacity			Waiting for cars to unload

"Continuous Shift" Operating Model - day, afternoon and night shifts

Production Cycle	Continuous Cycle	Continuous Cycle	Continuous Cycle	Continuous Cycle	Continuous Cycle
Efficiency	Efficient production				
Setting	Setting at optimal capacity				
Firing	Firing at optimal capacity				
Unloading	Unloading at optimal capacity				

Figure 12 Operational Model Improving Efficiencies (Source: Brickworks, 2021)

Plant capacity can be fully utilised

The extruder and setter and firing process were sized for the efficient parts of the production cycle and operation process. To support the Site operating at the optimal efficient production rate continuously, it is proposed for the scrubber capacity to be expanded to match the increased daily production load. The operational process of the scrubber is illustrated in **Figure 13** below.

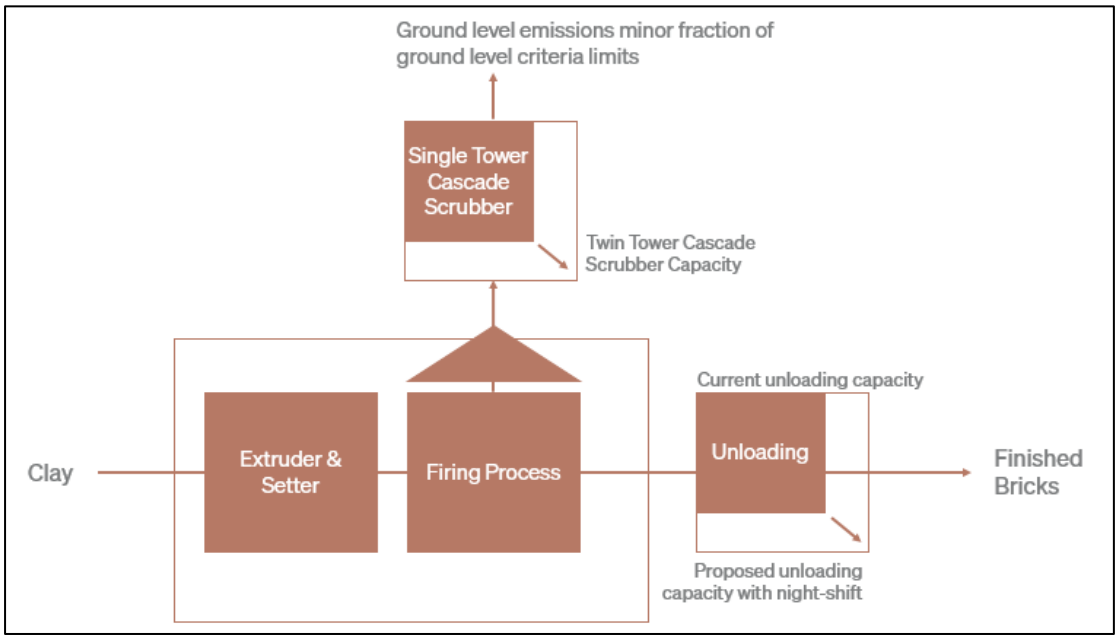

Figure 13 Proposed Twin Tower Scrubber Emissions and Operational Process (Source: Brickworks, 2021)

Expanded capacity can support optimal production efficiency throughout the year

Increased storage area will provide room to build up stock during slower sales periods of the year, avoiding the need to slow down production to less than efficient production rates. This allows production to continue at the most efficient production rate, supporting best practice energy efficiency levels throughout the year (refer to **Figure 14** below). Additional stock stored during slower sales periods makes stock available for sale in peak sales periods, matching sales demand and avoiding missed sales due to stock unavailability.

Limited Storage Capacity

Sales Cycle	Slow Sales Periods	Average Sales Periods	Peak Sales Periods	Average Sales Periods	Slow Sales Periods
Efficiency	Less than efficient production	Efficient production	Less than efficient production	Efficient production	Less than efficient production
Production	Slow down production	Optimal Capacity	Production at capacity	Optimal Capacity	Slow down production
Storage	Fill up storage with stock until full and then slow down production	Limited spare production to build up stock	Limited stock storage may result in missed sales	Limited spare production to build up stock	Fill up storage with stock until full and then slow down production

Expanded Storage Capacity

Sales Cycle	Slow Sales Periods	Average Sales Periods	Peak Sales Periods	Average Sales Periods	Slow Sales Periods
Efficiency	Efficient production				
Production	Production at Optimal Capacity				
Storage	Build up stock to match sales in peak sales periods	Limited spare production to build up stock	Utilise spare stock to match peak sales	Limited spare production to build up stock	Build up stock to match sales in peak sales periods

Figure 14 Storage Capacity Improvements (Source: Brickworks, 2021)

The proposed modifications will not result in any adverse environmental impacts, which will be influenced by improved operations across the Site. This is achieved as follows::

- Night shift with limited additional outdoor activities and compliant noise levels;
- The upgraded scrubber will ensure ground level emissions are a minor fraction of the Ground Level Assessment Criteria limits;
- Upgraded Twin Tower Scrubber with limited visual impact;
- A modest increase of 20 road trucks today to deliver increased production during day time hours; and
- Biodiversity assessment completed and offsets will be procured for required vegetation clearing related to the expansion of hardstand.

Accordingly, the Proposed Development, for the purposes of a Brick Manufacturing Facility (as approved under SSD 9601) is considered consistent with the strategic direction of *A Metropolis of Three Cities*; the *Western City District Plan*; SEPP (WSP) 2009; and the WSP POM. It is noted, that the proposed modifications will further contribute to the growth of knowledge and professional service jobs within the Western Parkland City; hence, contributing to the Western City District's economic growth.

Further, the proposed modifications sought could support the existing operations on-site, by maintaining industrial land stocks (despite being unzoned) and employment objectives, whilst promoting industry diversification (and generate new employment sources); and can generate more employment throughout the planning, construction and maintenance stages.

Additionally, the proposed modifications to SSD 9601, for the purposes of alterations and additions to the existing Brick Manufacturing Facility would generate a range of community need drivers, including the following considerations:

- Reduced travel distances, leading to savings in time and fuel for local working residents, due to a much better access to the Site. It is noted, that a reduction in travel times and distances generates related benefits, including reduced vehicle wear and tear, reduced fuel costs, reduced pollution, reduced traffic congestion, reduced risks of car accidents, and more time which can be spent either working, socialising or undertaking activities;
- New employment opportunities; and
- Providing jobs near people's homes and available alternate transport modes, which would entail positive economic multiplier impacts, which will enhance the local economy within the Fairfield LGA and the wider WSP.

4.2 CONSIDERATION OF ALTERNATIVES

The intention of the proposed modifications is to provide internal and external alterations to the Subject Site, which would serve in continuing to provide the end user (Austral Bricks) with a modernised and State-of-the-Art Brick Manufacturing Facility. After several scenarios of development were investigated, the proposed modifications were deemed to be the most suitable for the Subject Site for the following reasons:

- SEPP (WSP) 2009 permits the proposed modifications, for the purposes of a Brick Manufacturing Facility with Development Consent in accordance with Section 4.55(2) of the EP&A Act.
- Access to the regional road network is provided, namely the M7 Motorway and Wallgrove Road.
- Compatibility with surrounding development and local context is achieved.
- The Site represents orderly and sequential development having regard to the Brick Manufacturing Facility approved under SSD 9601, with respect to the modifications proposed.

- Minimal impact on the environment would result.
- Implementation of suitable mitigation measures where required can be achieved.

The Subject Site is commensurate with the objectives of the proposed modifications as it allows industry-based activities, whilst minimising any potential impacts on the surrounding environment. The revised Site Layout demonstrates a strong connection to maintain consistency with the objectives of the WSP and WSP POM and enhances the underlying employment character intended for the immediate and wider localities. Accordingly, the resultant built form reinforces the nature of the employment-generating land use within the Fairfield LGA and the wider WSP, whilst remaining cognisant and sensitive to the broader surrounding environment.

In determining the most appropriate outcomes for the Site, several options were considered, and subsequently dismissed, in arriving at the current proposal. These included:

(a) The 'Do Nothing' Option

This option did not meet the commercial timing or employment objectives for the Site and was therefore dismissed. If the proposal was not to proceed, the Subject Site would remain underutilised in its current form and not be able to fulfil its employment-generating and manufacturing potential.

(b) Development on an Alternative Site

Due consideration was also given to developing alternative sites. The analysis undertaken showed that the Subject Site offered clearly superior outcomes for the intended development. It was also superior to other sites in terms of community and public benefit to the State, the Region and Local community groups, as it continues to allow for employment-generating opportunities in close proximity to residential communities. Some of the positive attributes of the Site were:

- It is located within the Fairfield LGA and wider WSP and is surrounded by existing and future industry-based and employment-generating development, including the Subject Site which is used as a Brick Manufacturing Facility (SSD 9601);
- Proximity to the wider regional road network, services and located appropriately away from surrounding sensitive land uses, including residential development;
- Relatively free of constraints and therefore able to deliver employment and commercial outcomes;
- Immediate access to the regional road network giving the Site increased economic benefits;
- Low exposure to possible heritage affectations or impact on possible archaeological sites. Any impacts were assessed to be manageable through suitable mitigation measures pursuant to SSD 9601; and
- Excellent siting and context, thereby allowing a high quality, environmentally sensitive finished product, with appropriate visual amenity, given its surrounding context.

(c) Different Site Configuration

Many site configurations were also tested before arriving at the final design. The current configuration was chosen for the following reasons:

- Maximised the use of the land within the Site boundaries off Wallgrove Road, Ferrers Road and the internal access roads;
- It takes advantage of the configuration of the Brick Manufacturing Facility approved under SSD 9601;

- It makes a positive contribution towards improving associated environmental parameters, including future air quality, as well as minimising noise and vibration impacts. The implementation of a Water Sensitive Urban Design (WSUD) Strategy and energy efficiency measures for the Site will also greatly improve the overall emissions and potential environmental impacts imposed by the proposal, all of which would further reinforce Ecologically Sustainable Development.

The proposed modifications are thus able to be justified on the basis that, it is compatible with the locality in which it is proposed, whilst having an obvious positive economic, environmental and social impact on its surrounding region. The proposal has obvious strategic and planning merit and demand; supports the economic and strategic vision for Western Sydney, the WSP and the Western Parkland City and is complementary to industry-based services traversing the Site.

The proposal is also totally aligned with the State, Regional and District Plan objectives.

PART E LEGISLATIVE AND POLICY FRAMEWORK

This Part of the Planning Report assesses and responds to the legislative and policy requirements for the proposed development in accordance with the EP&A Act.

The following current and draft Commonwealth, State, Regional and Local planning controls and policies have been considered in the preparation of this Application:

Commonwealth Planning Context

- *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*

State Planning Context

- *Environmental Planning and Assessment Act 1979*
- *Environmental Planning and Assessment Regulation 2000*
- *Protection of the Environment Operations Act 1979 – EPL 546*
- *Biodiversity Conservation Act 2016*
- *Water Management Act 2000*
- *Rural Fires Act 1997*
- *Western Sydney Parklands Act 2006*
- *State Environmental Planning Policy (State and Regional Development) 2011*
- *State Environmental Planning Policy (Infrastructure) 2007*
- *State Environmental Planning Policy No 33 – Hazardous and Offensive Development*
- *State Environmental Planning Policy No 55 – Remediation of Land*
- *State Environmental Planning Policy (Western Sydney Parklands) 2009*

Regional Planning Context

- *A Metropolis of Three Cities – Greater Sydney Region Plan*
- *Western City District Plan*
- *Western Sydney Parklands Plan of Management 2030*

Local Planning Context

- *Fairfield Local Environmental Plan 2013*
- *Fairfield Citywide Development Control Plan 2013*

This planning framework is considered in detail within the following sections:

5.1 ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION ACT 1999

Under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act), any action (which includes a development, project or activity) that is considered likely to have a significant impact on Matters of National Environmental Significance (MNES) (including nationally threatened ecological communities and species and listed migratory species) must be referred to the Commonwealth Minister for the Environment. The purpose of the referral is to allow a decision to be made about whether an action requires approval on a Commonwealth level. If an action is considered likely to have significant impact on MNES, or an action by the Commonwealth – or an action likely to have an impact on the environment on Commonwealth Land, it is declared a "controlled action" and formal Commonwealth approval is required.

Based on previous preliminary investigations carried out under SSD 9601, the proposed modifications do not warrant referral to the Commonwealth Minister for Environment.

5.2 ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

Section 4.55(2) of the EP&A Act makes provisions to modify a Development Consent that has been granted pursuant to Part 4 of the EP&A Act. The proposal (proposed modifications to SSD 9601) as submitted to the NSW DPIE are considered to satisfy the provisions of Section 4.55(2) of the EP&A Act, as changes proposed would result in minimal environmental impact and would be considered substantially and materially the same development.

The relevant provisions are addressed as follows:

> *"A consent authority may, on application being made by the applicant or any other person entitled to act on a consent granted by the consent authority and subject to and in accordance with the regulations, modify the consent if—*
>
> *(a) it is satisfied that the development to which the consent as modified relates is substantially the same development as the development for which consent was originally granted and before that consent as originally granted was modified (if at all), and*

Comment: In accordance with the application of the *'substantially the same'* test, the focus of the test is on 'the development' as a whole. Accordingly, a comparison must be made between the development as modified and the development that was originally approved (*Scrap Realty v Botany Bay City Council* [2008] NSWLEC 333 at [16]).

Further precedence confirms, that to pass the test, the result of the comparison must include a finding that the modified development is 'essentially' or 'materially' the same as the approved development (*Moto Developments (No 2) v North Sydney Council* [1999] NSWLEC 280 at [55]; *Vacik v Penrith City Council* [1992] NSWLEC 8).

Both a qualitative and quantitative assessment of the Modification Application is required. Case Law confirms, that differences in qualitative and quantitative effects do not necessarily mean that the character of a development is changed in a material respect (*Davi Development v Leichardt Council* (2007) NSWLEC 106). Accordingly, even if each of the changes / modifications proposed to be made are significant in their own right, the proposed modifications may still be considered substantially the same as a whole (*Tyagrah Holdings v Byron Bay Shire Council* [2008] NSWLEC 1420 at [12]).

Quantitative Assessment

With respect to the abovementioned legal interpretation and pursuant to listed Case Law, a quantitative assessment confirms that:

- Amendment to the approved site layout – Appendix 1 under SSD 9601, for the purposes of alterations and additions on-site (refer to **Appendix 1**). The scope of works includes:
  - Upgrade scrubber to Twin Tower Scrubber.
  - Expansion of the hardstand area.
  - Proposed new entry.
  - Provisions for 15 new car parking spaces.
  - Extension of existing OSD Basin.
  - Installation of new gatehouse.
- Increase of capacity from 80 million to 130 million bricks.

Notwithstanding, if comparable review of the 'before' (SSD 9601) and 'after' (subject Modification Application – SSD 9601 MOD 1) Site Layout Plans (refer to **Appendix 1**) were undertaken, the proposed modifications do not materially alter the purposes and functions of

the approved development (SSD 9601), despite modifications to the Site Layout (*Gordon & Valich Pty Ltd v City of Sydney Council* [2007] NSWLEC 780).

Accordingly, it is not considered that the proposed modifications results in a 'radical transformation' of the original Development Consent (SSD 9601). Rather, the proposed modifications improve the overall operational efficiencies able to be achieved across the Site.

Qualitative Assessment

With respect to the abovementioned interpretation and pursuant to listed Case Law, a qualitative assessment with regard to SSD 9601 confirms that:

- The character and purpose of the original development (SSD 9601) is Brick Manufacturing Facility, with ancillary components, associated infrastructure and services, including car parking, hardstand and landscaping.
- The essential feature of the original development (SSD 9601) is to provide a Brick Manufacturing Facility, that provides locally derived sources and products to support the construction industry in the immediate vicinity and wider localities throughout the Sydney Metropolitan Region.

Mills Oakley have provided formal advice as to whether the original Planning Approval and subsequent Building Approval (145/20/33) (noted as the Original Development Consent), would need to be modified in order to facilitate an increase in production capacity. The advice also considered whether a modification to the Instrument of Approval under SSD 9601 may lawfully be made and approved pursuant to Section 4.55(2) of the EP&A Act.

Mills Oakley outline the following:

- *The Original Development Consent does not require modification in order for an increase in production capacity from 80 million bricks per annum to 130 million bricks per annum to be approved.*

- *The Original Development Consent expressly authorises the manufacture of bricks, the extraction of clay and shale material and the processes required to implement those approved uses but does not impose any limits on the extraction or production capacity authorised at the site.*

- *The proposed increase in production capacity will require the amendment or modification of the terms of SSD 9601.*

- *Approval of the proposed increase in production capacity at Plant 2 would be 'substantially the same' as the development for which SS 9601 was originally granted, and may lawfully be approved.*

Accordingly, the proposed modifications would not materially change either of the abovementioned items, for which it is confirmed, that the modifications sought are 'substantially the same' development as the development originally approved under SSD 9601.

In summary, it is confirmed that the proposed modifications are capable of being approved pursuant to Section 4.55(2) of the EP&A Act. With respect to the proposed increase in brick manufacturing per annum across the Site when considered in isolation, the character and purpose of the original development (SSD 9601) as a whole will remain unchanged (i.e. Brick Manufacturing Facility), as will the essential feature of the original development (i.e. brick manufacturing).

(b) it has consulted with the relevant Minister, public authority or approval body (within the meaning of Division 4.8) in respect of a condition imposed as a requirement of

> *a concurrence to the consent or in accordance with the general terms of an approval proposed to be granted by the approval body and that Minister, authority or body has not, within 21 days after being consulted, objected to the modification of that consent, and*

Comment: The NSW DPIE confirmed the potential to undertake a Modification Application with regards to the proposal following correspondence received on 22 June 2021.

Further concurrence has been managed accordingly with both the NSW DPIE and Fairfield City Council with respect to the proposed Modification Application. It is considered that additional consultation will be undertaken by the NSW DPIE to inform the relevant State Agencies of the proposed modifications, for which any Submissions would be considered by the Proponent following the Modification Application being exhibited to the relevant State Agencies whom require to be consulted with.

> *(c) it has notified the application in accordance with—*
> *i. the regulations, if the regulations so require, or*
> *ii. a development control plan, if the consent authority is a council that has made a development control plan that requires the notification or advertising of applications for modification of a development consent, and*
> *(d) it has considered any submissions made concerning the proposed modification within the period prescribed by the regulations or provided by the development control plan, as the case may be.*

Comment: For the purpose of this Modification Application and the provisions set out in the *Environmental Planning & Assessment Regulation 2000* (EP&A Regulation), any Submissions received will be formally responded to following the Modification Application being exhibited (including any submissions received from adjoining properties).

5.3 BIODIVERSITY CONSERVATION ACT 2016

The *Biodiversity Conservation Act 2016* (BC Act, 2016) is the key legislation in NSW relating to the protection and management of biodiversity and threatened species. The purpose of the BC Act 2016 is to "maintain a healthy, productive and resilient environment, for the greatest well-being of the community, now and into the future, consistent with the principles of ecologically sustainable development". The BC Act 2016 is supported by a number of regulations, including the *Biodiversity Conservation Regulation 2017* (BC Regulation 2017).

The *Biodiversity Development Assessment Report* prepared by Ecologique (2021) considers the potential impacts on biodiversity values as a result of the proposed modifications (refer to **Appendix 7**). SSD 9601 was supported by a Biodiversity Development Assessment Report (BDAR) prepared by Cumberland Ecology (2019) in accordance with Section 7.9 of the BC Act.

It is noted, that offsetting obligations conditioned under SSD 9601 required three (3) ecosystem credits be retired to offset the clearing of 0.14 ha of native vegetation. Offset obligations have been fulfilled under the parent consent. Accordingly, as a result of the proposed modifications, additional native vegetation clearing is required.

Ecologique note, that identification of Plant Community Types (PCTs) within the Subject Site was confirmed during site surveys with reference to the BioNet Vegetation Classification database and data collected from floristic and site integrity plot / transects in accordance with Section 2 of the Biodiversity Assessment Methodology (BAM) (2020). Three (3) PCTs have been allocated to the native vegetation present within the Subject Site (refer to **Figure 15**):

1. Forest Red Gum – Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin Bioregion (PCT 835)

2. Grey Box – Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion (PCT 849)
3. Cumberland Swamp Oak riparian forest (PCT 1800)

Figure 15 PCTs and TECs within the Subject Site (Source: Ecologique, 2021)

With respect to fauna species, *Meridolum corneovirens* (Cumberland Plain Land Snail) is the only species considered to have the potential to occur on the Subject Site; however, following investigate studies under SSD 9601 and further surveys by Ecologique on 30 September 2020, no snail species were found.

In accordance with Clause 6.1 of the BC Regulation, prescribed biodiversity impact must be assessed as part of the Biodiversity Offsets Scheme (BOS). **Table 2** outlined below lists the prescribed impacts, which are identified in Clause 6.1 of the BC Regulation; and the relevance of each prescribed impact in relation to the proposed modifications.

Table 2: Prescribed and Uncertain Impacts		
Will there be impact on any of the following?	**Yes/No?**	**If Yes, address the assessment questions from Section 9.2.1 of the BAM**
(a) Development on the habitat of threatened species or ecological communities associated with: i. karst, caves, crevices, cliffs, rock outcrops and other geological features of significance; ii. human-made structures; iii. non-native vegetation;	No	i. No karst, caves, crevices, cliffs and other features of geological significance occur on or near the Subject Site. ii. No human-made structures would be disturbed as a result of the proposed modifications. iii. Non-native vegetation within the Subject Site is unlikely to provide habitat for threatened species or ecological communities.
(b) on areas connecting threatened species habitat, such as movement corridors	No	The Subject Site is mapped within the Cumberland Subregion BIO Map Biodiversity Corridors of Regional Significance in the Biodiversity Investment Opportunities Map (OEH 2018). The proposed modifications will not remove vegetation from these areas.
(c) that affect water quality, water bodies and hydrological processes that sustain threatened entities (including from subsidence or upsidence from underground mining)	No	Stormwater runoff from the Subject Site has been managed historically via drainage swales and is capture in reservoirs before discharge to Eastern Creek. The design of the approved SSD and proposed MOD 1 is anticipated to improve on stormwater management. Therefore, it is considered unlikely that water quality and hydrological processes as a result of the proposed MOD 1 would cause further impacts providing appropriate construction and operational management mitigation measures are implemented.
(d) on threatened and protected animals from turbine strikes from a wind farm	No	No wind turbines are proposed.
(e) on threatened species or fauna that are part of a TEC from vehicle strikes	No	The proposed modifications are anticipated to maintain similar vehicular routes as approved under SSD 9601.

Accordingly, the proposed modifications seek to avoid and minimise direct impacts on native vegetation and habitat through the following:

- Locating the majority of the proposed yard / hardstand extension in areas already cleared or comprising exotic vegetation;
- Avoiding areas of remnant native vegetation, in particular those areas of native vegetation located within the Cumberland Subregion BIO Map Biodiversity Corridors of Regional Significance (OEH, 2018); and
- Minimising clearing of native vegetation to under 0.5 ha comprising several scattered locations of native vegetation in poor condition (i.e. isolated and / or highly degraded vegetation growing in existing modified areas of the plant, yard and quarry and which do not contain habitat for threatened species).

The proposed modifications seek to prevent indirect impacts on retained native vegetation and habitat, including the riparian and downstream aquatic environment of Eastern Creek, through the following:

- A new (extension of the existing) stormwater detention / sediment basin, which has been designed to prevent sediment impacts on water quality and moderate impacts from altered hydrology to Eastern Creek;
- The implementation of a range of avoidance and minimisation measures, which include:
    - Staging of construction to minimise material stockpiling, cleaning (water suppression) of haul roads and speed restrictions for management of potential dust impacts;
    - An Erosion and Sediment Control Plan (ESCP), which applies best management practices to prevent indirect impacts on retained native vegetation, less mobile terrestrial fauna (such as invertebrates) and the downstream aquatic environment of Eastern Creek;
    - Pre-clearance and clearance processes, which aim to achieve the following, but not limited to:
        - protection of retained native vegetation and habitat
        - prevention of injury / mortality to all fauna
        - prevention of the spread and/or introduction of weeds and pathogens

The proposed modifications will directly impact on approximately 0.462 ha of native vegetaion (commensurate with three (3) PCTs) and approximately 0.955 ha of exotic vegetation, as illustrated in **Figure 16** below.

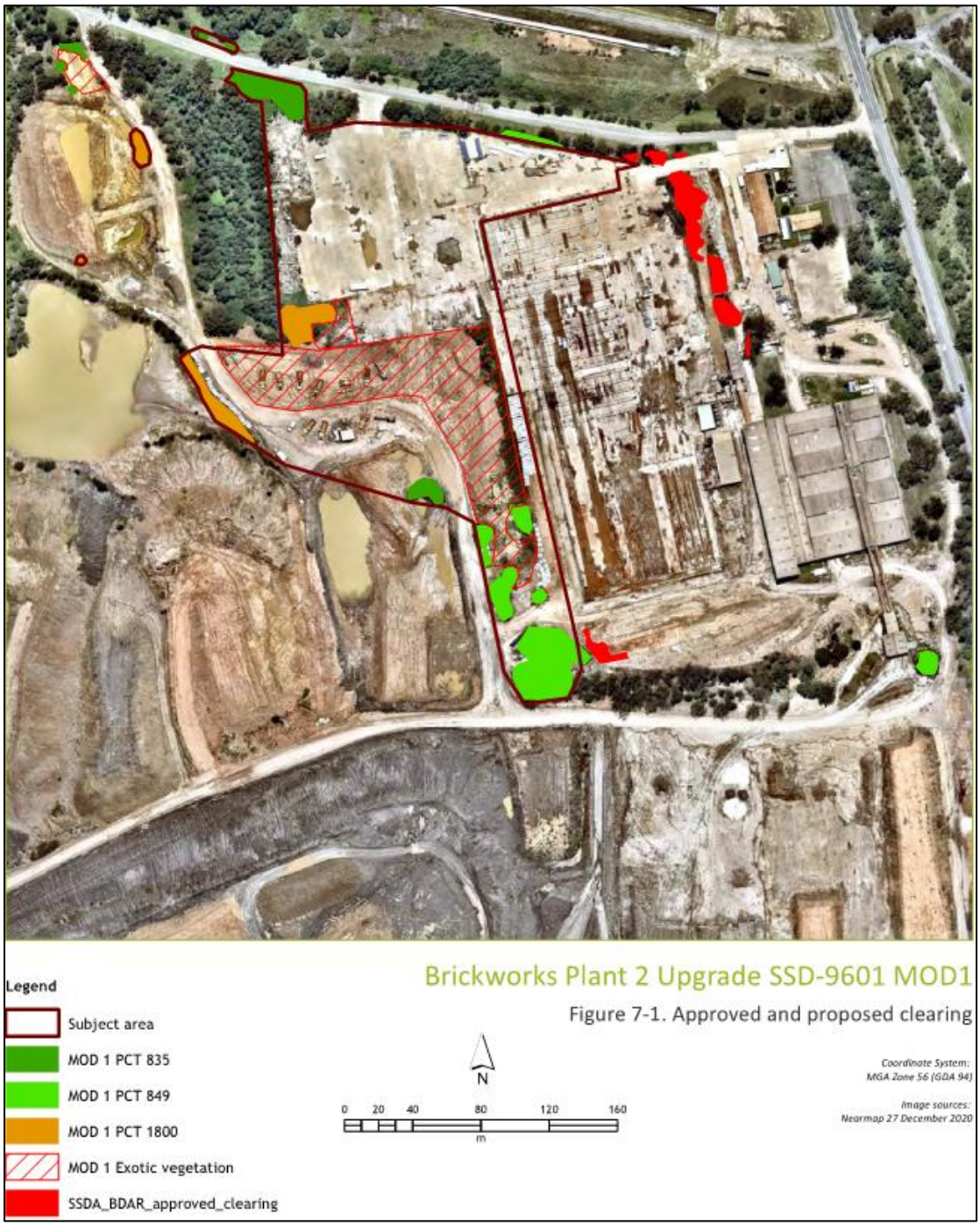

Figure 16 Approved and Proposed Clearing (Source: Ecologique, 2021)

It is important to note, that the proposed modifications would result in a direct and permanent impact on 0.462 ha of native vegetation. The following range of mitigation and management measures shall be implemented to avoid and minimise any unintentional direct impacts on the Subject Site's retained biodiversity values, including:

- Vegetation and habitat clearing:
  - Pre-clearance;
  - Clearing; and
  - Post-clearing.
- Adaptive management for uncertain impacts – not applicable to the proposed modifications.

Furthermore, PCT 849 is identified in the Threatened Biodiversity Data Collection (TBDC) as a Serious and Irreversible Impact (SAII) entity and has been assessed in accordance with the criteria set out in subsection 9.1.1 of the BAM. Accordingly, the assessment undertaken by Ecologique found that the cumulative impacts (as a result of the impacts approved under SSD 9601 and as modified under the subject proposal) will not contribute to further irreversible impacts on PCT 849, on basis that:

- Within the Subject Site, PCT 849 is either of planted or derived origins, e.g. PCT 849 constituent species either planted or that have colonised constructed bund walls. The latter environment is not commensurate with habitat for PCT 849 and comprises hostile subsoils and heavily weed infested ground layer;
- PCT 849 within the Subject Site does not contribute to the existing mapped and known extent of the SAII; and
- PCT 849 within the Subject Site (and that which will be impacted as a result of the SSD 9601 and the proposed modifications) is highly degraded, and is located within an active operational plant and quarry, and isolated from larger and better condition areas of PCT 849.

Ecologique confirm, that the BDAR has determined that eight (8) ecosystem credits must be retired to offset the direct impacts on the three (3) allocated PCTs within the Subject Site. Further, there are no species credit species which have been identified as requiring an offset and no prescribed or uncertain impacts have been identified.

Accordingly, the proposed modifications would not result in additional biodiversity impacts at the Site, with respect to SSD 9601, which would require further consideration under the BC Act and corresponding BC Regulation.

5.4 PROTECTION OF THE ENVIRONMENT OPERATIONS ACT 1997

Another important item of legislation against which this Modification Application has been assessed, is the *Protection of the Environment Operations Act 1997* (POEO Act). Schedule 1 of the POEO Act contains a core list of activities that require a licence before they may be undertaken or carried out. The definition of an 'activity' for the purposes of the POEO Act is:

> *"an industrial, agricultural or commercial activity or an activity of any other nature whatever (including the keeping of a substance or an animal)."*

The Site currently operates under EPL 546 to undertake the following activities listed in Schedule 1 of the POEO Act:

- Ceramic waste generation >5-100 tonnes generated or stored annually;
- Ceramics production >200,000 tonnes produced annually;
- Crushing, grinding or separating, capacity to process >500,000-2,000,000 tonnes annually;
- Land-based extractive activity, capacity to extract, process or store >500,000-2,000,000 tonnes annually; and
- Mining for minerals, capacity to produce > 500,000-2,000,000 tonnes annually.

The proposed modifications (subject to approval) would increase the Site's existing production capacity. The proposed modifications would therefore require a production variation to EPL 546.

The Site has existing water quality monitoring points and parameters under EPL 546 which would assist the Site in continuing to comply with Section 120 of the POEO Act (with regards to water pollution).

Any events occurring at the site which threaten material environmental harm would be managed according to the site's Incident Response Management Plan as per Part 5.7A of the POEO Act.

5.5 WATER MANAGEMENT ACT 2000

SSD 9601 has previously considered development constituting a Controlled Activity under Section 91(2) of the *Water Management Act 2000*. Further consideration is not considered to be required in this respect.

5.6 WESTERN SYDNEY PARKLANDS ACT 2006

The *Western Sydney Parklands Act 2006* (WSP Act 2006) establishes the Western Sydney Parklands Trust (WSPT) under Clause 4 of the WSP Act 2006; defines the boundaries applicable to the WSP; and guides their overall management. It is noted, that Clause 12 of the WSP Act 2006 identifies, that the principal function of the WSPT is to develop the WSP "into a multi-use urban parkland for the region of Western Sydney and to maintain and improve the Parklands on an ongoing basis."

Schedule 12 also provides functions towards undertaking, providing or facilitating the provision of commercial, retail, transport and industrial (innominate development pursuant to Clause 11(2) of SEPP (WSP) 2009) activities and facilities, with the object of supporting the viability of the management of the WSP. Additionally, the principles of Ecologically Sustainable Development (ESD) should be considered for any future development within the WSP.

With regard to SSD 9601, it is noted, that the development of the Site within an area designed for innominate use (including employment-generating / industrial development), is considered consistent with the requirements of the WSP Act 2006.

It is noted, that the WSPT must provide land owners consent for any development proposed on the Site.

5.7 STATE ENVIRONMENTAL PLANNING POLICY (STATE AND REGIONAL DEVELOPMENT) 2011

Proposed developments involving activities that are listed in Schedule 2 of *State Environmental Planning Policy (State and Regional Development) 2011* (SRD SEPP) are identified as being State Significant Development. Clause 5 of Schedule 2 states:

> ***"5 Development in the Western Parkland***
>
> *Development that has a capital investment value of more than $10 million on land identified as being within the Western Parklands on the Western Sydney Parklands Map within the meaning of State Environmental Planning Policy (Western Sydney Parklands) 2009."*

SSD 9601 was approved pursuant to the provisions of Schedule 2, Clause 5, as it comprised a Proposal constituting a Capital Investment Value (CIV) of more than $10 Million, and is for the purposes of a Brick Manufacturing Facility.

Accordingly, the proposed modifications are consistent with SSD 9601.

5.8 STATE ENVIRONMENTAL PLANNING POLICY (INFRASTRUCTURE) 2007

State Environmental Planning Policy (Infrastructure) 2007 (ISEPP) provides permissibility for the development of certain activities for a range of infrastructure types. The ISEPP indicates

whether an activity is permissible with or without consent and on what land use zone the activity is permissible.

The ISEPP repeals the former State Environmental Planning Policy No 11 – Traffic Generating Development and, pursuant to Clause 104, provides for certain proposals, known as Traffic Generating Development, to be referred to NSW Roads and Maritime Services (RMS) for concurrence.

Schedule 3 lists the types of development that are defined as Traffic Generating Development. The referral thresholds for 'Industry' development are:

- *20,000 m^2 in site area or (if the site area is less than the gross floor area) gross floor area; or*
- *5,000 m^2 or more in area where the site has access to a classified road or to a road that connects to a classified road (if access is within 90 metres of connection, measured along the alignment of the connecting road).*

As the proposal (approved under SSD 9601) seeks consent for greater than 20,000 m^2 of GFA, referral to Transport for NSW is therefore required.

5.9 STATE ENVIRONMENTAL PLANNING POLICY NO 33 – HAZARDOUS AND OFFENSIVE DEVELOPMENT

As the proposed modifications involve upgrade works only and no changes to the processes used in the actual brickmaking process, it is considered that the proposed modifications would not result in any additional types or quantities of dangerous goods being stored at the Site as previously assessed and approved under SSD 9601.

5.10 STATE ENVIRONMENTAL PLANNING POLICY NO 55 – REMEDIATION OF LAND

Under SSD 9601, the Site was considered suitable for the proposed land use purposes, comprising industrial / commercial uses, for which the proposed modifications would be completely consistent with. Further consideration with respect to SEPP 55 is not considered to be required in this instance.

5.11 STATE ENVIRONMENTAL PLANNING POLICY (WESTERN SYDNEY PARKLANDS) 2009

The aims of the SEPP WSP are outlined as follows:

(a) allowing for a diverse range of recreational, entertainment and tourist facilities in the Western Parklands, and
(b) allowing for a range of commercial, retail, infrastructure and other uses consistent with the Metropolitan Strategy, which will deliver beneficial social and economic outcomes to western Sydney, and
(c) continuing to allow for and facilitate the location of government infrastructure and service facilities in the Western Parklands, and
(d) protecting and enhancing the natural systems of the Western Parklands, including flora and fauna species and communities and riparian corridors, and
(e) protecting and enhancing the cultural and historical heritage of the Western Parklands, and
(f) maintaining the rural character of parts of the Western Parklands by allowing sustainable extensive agriculture, horticulture, forestry and the like, and
(g) facilitating public access to, and use and enjoyment of, the Western Parklands, and

(h) facilitating use of the Western Parklands to meet a range of community needs and interests, including those that promote health and well-being in the community, and
(i) encouraging the use of the Western Parklands for education and research purposes, including accommodation and other facilities to support those purposes, and
(j) allowing for interim uses on private land in the Western Parklands if such uses do not adversely affect the establishment of the Western Parklands or the ability of the Trust to carry out its functions as set out in section 12 of the Western Sydney Parklands Act 2006, and
(k) ensuring that development of the Western Parklands is undertaken in an ecologically sustainable way.

The Site is subject to the provisions of SEPP (WSP) 2009. Pursuant to Clause 9(2) of SEPP (WSP) 2009, all land within the WSP is unzoned. Pursuant to Clause 11(2), the future development of the Subject Site, would represent an innominate development due to the unzoned nature of the land.

Under Clause 12 of SEPP (WSP) 2009, the following matters require consideration by a consent authority when applying for development consent on land within the WSP (refer to **Table 3** below):

Table 3: Clause 12 of SEPP (WSP) 2009 – Matters for Consideration	
Matters	**Comments**
(a) the aim of this Policy, as set out in clause 2,	The ongoing development of the Subject Site, for the purposes of a Brick Manufacturing Facility is deemed to be consistent with the aims of SEPP (WSP) 2009, as the intentions and development outcomes for the Site would promote economic benefits towards the WSP. Furthermore, under SSD 9601, the Site was not deemed as containing any ecological and Aboriginal Cultural & Historic Heritage values of significance, requiring further consideration. Notwithstanding, the proposed modifications have considered any potential environmental impacts, as a result of the future development of the Subject Site (refer to **Part G** of this Planning Report).
(b) the impact on drinking water catchments and associated infrastructure,	The Stormwater Management Plan (SMP) and Erosion and Sediment Control Plan (ESCP) was implemented under SSD 9601 to negate any impacts from occurring, with particular attention given to Eastern Creek traversing the Subject Site.
(c) the impact on utility services and easements,	The Subject Site is appropriately serviced by infrastructure services, for which further consideration is not considered to be required in relation to the proposed modifications.
(d) the impact of carrying out the development on environmental conservation areas and the natural environment, including endangered ecological communities,	Given, that the Site preparation works under SSD 9601 were approved, removal of vegetation has been undertaken. Notwithstanding, an addendum to the Biodiversity Development Assessment Report (BDAR) has been provided as part of the proposed modifications with respect to any further clearing on the Subject Site to facilitate the proposed modifications (refer to **Appendix 7**).
(e) the impact on the continuity of the Western Parklands as a corridor linking core habitat	As above.

such as the endangered Cumberland Plain Woodland,	
(f) the impact on the Western Parkland's linked north-south circulation and access network and whether the development will enable access to all parts of the Western Parklands that are available for recreational use,	A Traffic Impact Assessment has been prepared to assess the proposed modifications in relation to potential traffic impacts stemming from the increase in production capacity across the Site (refer to **Appendix 4**).
(g) the impact on the physical and visual continuity of the Western Parklands as a scenic break in the urban fabric of western Sydney,	Future development on the Subject Site, would represent an orderly and logical development, that is considered commensurate with regard to surrounding industrial development adjoining the Subject Site with respect to the WSEA to the west of the M7 Motorway.
(h) the impact on public access to the Western Parklands,	The nature of the Subject Site in its existing form does not restrict access to the wider WSP.
(i) consistency with: *i. any plan of management for the parklands, that includes the Western Parklands, prepared and adopted under Part 4 of the Western Sydney Parklands Act 2006, or* *ii. any precinct plan for a precinct of the parklands, that includes the Western Parklands, prepared and adopted under that Part,*	Future development of the Subject Site would continue to align with the WSP POM and the development approved under SSD 9601. It is noted, that the Subject Site is located within Precinct 6 (Wallgrove), which is nominated for land uses including industrial, warehouse, storage and distribution premises and transport related services.
(j) the impact on surrounding residential amenity,	The proposed modifications will be designed to protect the amenity of nearby rural-residential receivers.
(k) the impact on significant views,	The proposed modifications will be designed to consider any sensitive views and vistas that have the potential to be impacted as a result of future development on the Site. Given the scope of works are relatively minor in nature, there are no views and vistas that would be impacted as a result of the proposed modifications that require further consideration with respect to visual amenity impacts (refer to **Appendix 10**).
(l) the effect on drainage patterns, ground water, flood patterns and wetland viability,	Although SSD 9601 considered flooding and stormwater, the proposed modifications will reaffirm the previous flood studies and stormwater management outcomes are accurate and apply to the Site with respect to the proposed modifications.

(m) the impact on heritage items,	It is noted, that the Subject Site does not contain any items of heritage value (including Aboriginal Cultural Heritage) or significance; however, adequate mitigation and protection measures will be implemented to reduce any impacts from occurring on potential undiscovered items of heritage significance, as required under the Conditions of Consent pertaining to SSD 9601.
(n) the impact on traffic and parking.	A Traffic Impact Assessment has been prepared to assess the proposed modifications in relation to potential traffic impacts stemming from the increase in production capacity across the Site (refer to **Appendix 4**).

5.12 A METROPOLIS OF THREE CITIES – GREATER SYDNEY REGION PLAN

A Metropolis of Three Cities – Greater Sydney Region Plan (Greater Sydney Commission, 2018) divides the Sydney Region into three (3) Cities, with a vision of growth until 2056 (refer to **Figure 17** below). The Plan aims to anticipate the housing and employment needs of a growing and vastly changing population. The overall vision pursues an objective of transforming 'Greater Sydney' into a Metropolis of Three Cities, including:

- The Western Parkland City;
- The Central River City; and,
- The Eastern Harbour City

The division into three (3) cities puts workers and the wider community closer to an array of characteristics such as, intensive jobs, 'city-scale' infrastructure & services, entertainment and cultural facilities. By managing and retaining employment lands close to city centres and transport, this will ensure critical and essential services are readily available to support local businesses and community members and residents. The Proposed Development would not only achieve economic growth and prosperity but would encourage employment-generating opportunities that are considered relatively close in conjunction with residential communities, for ease of commute.

The proposed development also contributes to the four (4) standardised elements communicated across for all three (3) cities, including:

- Infrastructure and collaboration – subject to approval of the proposed modifications, future built form would be able to provide a locally derived source, readily available for distribution for local use, as well as operating on a national and global scale;
- Liveability – future built form of the Subject Site would encourage employment-generating opportunities and economic prosperity, which would have positive influences on the wider locality;
- Productivity – the Subject Site is situated within the *Western City District Plan* (**Section 5.13**); and,
- Sustainability – the modifications proposed would not cause any detrimental impacts to its wider ecological surroundings as identified in **Part G** of this Report.

In summary, the proposed modifications would contribute to the objectives set out in the *A Metropolis of Three Cities – Greater Sydney Region Plan* by promoting minor environmental impacts and the further promotion of employment-generating opportunities to the wider locality and community, positioned within the Fairfield LGA.

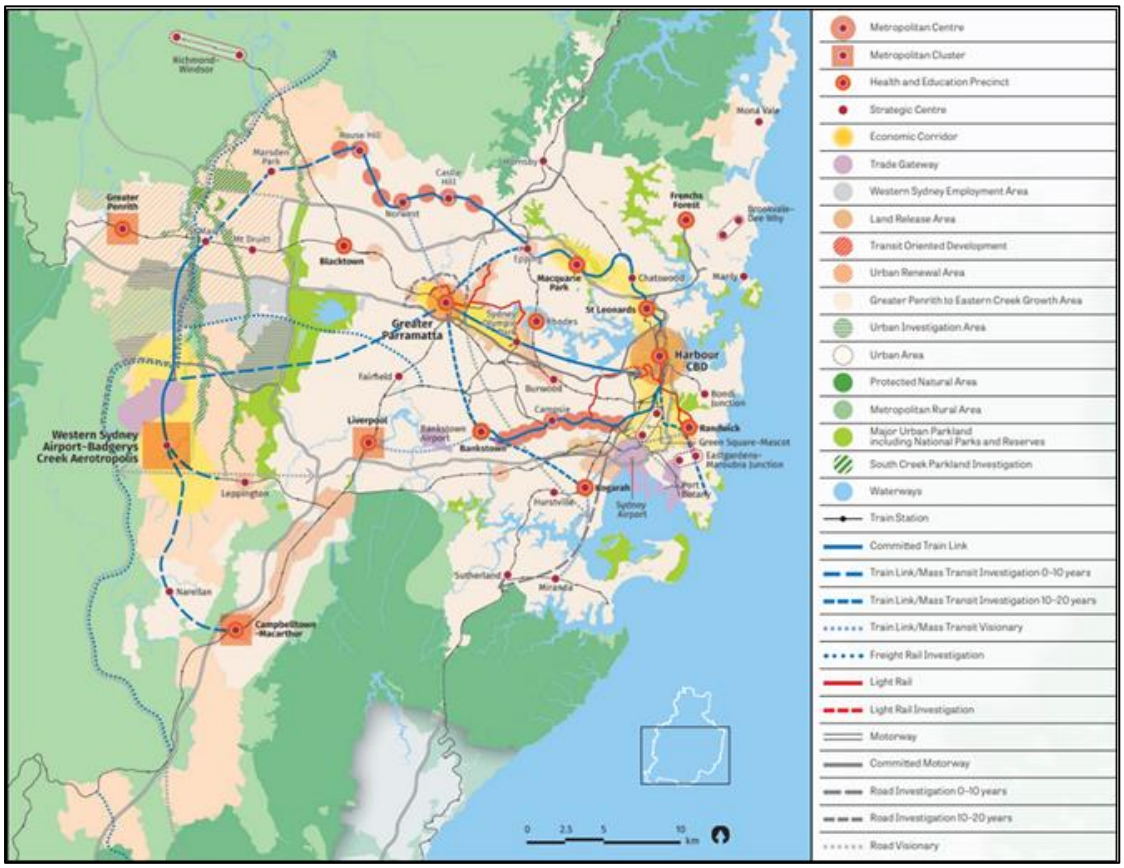

Figure 17 Metropolis of 3 Cities A Vision to 2056 (Greater Sydney Commission: Greater Sydney Region Plan, 2018)

5.13 WESTERN CITY DISTRICT PLAN

The *Western City District Plan* covers the Fairfield LGA. The Plan encourages a twenty-year plan to help encourage and establish goals set out in *A Metropolis of Three Cities – Greater Sydney Region Plan* mentioned above in **Section 5.12**. The Plan is considered the 'bridge' between Regional and Local planning.

The Subject Site – 780 Wallgrove Road, Horsley Park is situated within the *Western City District Plan*, which falls within the Western Parkland City.

The *Western City District Plan* reinforces the four (4) planning priorities of the GSC. The Plan establishes a number of priorities and actions to guide growth, development and change, relating to infrastructure & collaboration, liveability, productivity and sustainability.

The Greater Sydney Commission's mission statement further reinforces the Plan's concentrated aims by outlining its main strategies, namely:

- *Creating a once-in-a-generation economic boom with the Western Sydney Airport and Badgerys Creek Aerotropolis bringing together infrastructure, businesses and knowledge intensive jobs;*
- *Building on the Western Sydney City Deal to transform the Western City District over the next 20 to 40 years by building on natural and community assets and developing a more contained Western City District with a greater choice of jobs, transport and services aligned with growth;*
- *Delivering the first stage of the North South Rail Link;*

- *Collaborating and building strong relationships between Liverpool, Greater Penrith and Campbelltown-Macarthur reinforced by the emerging Badgerys Creek Aerotropolis forming a unique metropolitan cluster;*
- *Providing major transport links for people and freight by unprecedented transport investments;*
- *Developing a range of housing, providing access to public transport and infrastructure including schools, hospitals and community facilities;*
- *Linking walking and cycling paths, bushland and a green urban landscape framed by the Greater Blue Mountains World Heritage Area, the Scenic Hills and Western Sydney Parklands;*
- *Enhancing and protecting South Creek, Georges River and Hawkesbury-Nepean river systems;*
- *Mitigating the heat island effect and providing cooler places by extending urban tree canopy and retaining water in the landscape;*
- *Protecting the District's natural landscapes, heritage and tourism assets, unique rural areas and villages; and,*
- *Protecting the environmental, social and economic values of the Metropolitan Rural Area.*

The proposed modifications would contribute to a variety of the objectives set out in the *Western City District Plan* by promoting a greater range of land uses of benefit to the community including the proposed development approved under SSD 9601 within a land portion envisaged for industrial purposes and other supporting commensurate land uses; and promoting additional employment-generating opportunities to the wider locality and community closer to home, whilst supporting an economically and environmentally sustainable proposed development.

5.14 LIVERPOOL LOCAL ENVIRONMENTAL PLAN 2008

Given the provision of SEPP (WSP) 2009 apply to development in the WSP for development accruing a CIV over $10 Million, it is considered that future development would not require further consideration with respect to the FLEP2013.

5.15 DRAFT ENVIRONMENTAL PLANNING INSTRUMENTS

No draft EPIs apply to the Subject Site.

5.16 FAIRFIELD CITY WIDE DEVELOPMENT CONTROL PLAN 2013

The *Fairfield City Wide Development Control Plan 2013* (FDCP2013) provides a non-statutory instrument to guide development in the Fairfield LGA, including land within the WSP that is subject to the provisions of SEPP (WSP) 2009. SSD 9601 has previously been assessed and approved against the FDCP2013. Notwithstanding, DCPs do not apply to SSDs.

PART F CONSULTATION

6.1 STAKEHOLDER ENGAGEMENT AND CONSULTATION

A key matter identified in the SEARs for SSD 9601 was to implement a Community and Stakeholder Engagement Strategy to keep the key stakeholders informed of the works occurring across the Subject Site. This includes the requirement for further consultation to be undertaken as a result of the any modifications sought.

Ongoing consultation has occurred to date with mainly the NSW DPIE to confirm the approach to undertake a Modification Application. Notwithstanding, ongoing consultation would be undertaken with any external key State Agencies for which the Application would be referred to upon the Modification Application being notified. Any Submissions received will be appropriately responded to.

PART G ENVIRONMENTAL ASSESSMENT

The key planning matters for consideration, as they relate to the modified proposal are addressed in the ensuing subsections.

7.1 CONTEXT AND SETTING

The proposed modifications in relation to SSD 9601, concerning the existing Brick Manufacturing Facility would remain consistent with the intended development of designated employment lands within the WSP, including the Wallgrove Precinct. The proposed modifications in relation to amendments to the Site layout and increase in operational capacity across the Site would continue to enable the efficient and sustainable use of existing operational employment land.. Accordingly, the proposed modifications to SSD 9601 would beneficially contribute to the regional and local economies and population groups positioned in the wider locality.

The proposed modifications would continue to remain consistent and compatible with respect to surrounding employment-generating development within the Wallgrove Precinct and the wider WSP, as well as the closely linked WSEA. Accordingly, the Subject Site would not adversely impact the identified rural-residential typologies in close proximity to the Site. Therefore, the Site (including the proposed modifications) would not exhibit any adverse environmental or amenity impacts. Any recommendations previously stipulated under SSD 9601 (and any additional recommendations) will be implemented accordingly with respect to the proposed modifications.

With respect to the proposed modifications, the Site layout and building design (informed by the revised Architectural Plans) would continue to ensure the functional operation of a Brick Manufacturing Facility can continue to be achieved, whilst improving the operational efficiencies of the Site and can continue to maintain market demand, whilst not impacting on any other surrounding operations. Similarly, the Site and built form have been designed in respect of the planned / existing road infrastructure, noting the Site's direct linkages to the wider regional road network, including both the M4 & M7 Motorways.

The proposed modifications would not exhibit any significant environmental impacts and would not adversely impact on the amenity or operations of any adjoining sites within close proximity to the Subject Site. Therefore, the proposed modifications in relation to SSD 9601, would be considered compatible with the Site context.

7.2 URBAN DESIGN AND VISUAL

The proposed modifications in relation to SSD 9601, concerning the Plant 2 Brickworks Brick Manufacturing Facility would be complemented by a high quality design consistent with the built form approved under SSD 9601, in order to positively reflect and contribute to the aesthetically pleasing characteristics set out in the aims and objectives of SEPP (WSP) 2009 with regard to the Wallgrove Precinct and the wider WSP.

The proposed modifications would continue to display the appropriate scale and visual appearance, that is considered consistent with what was approved under SSD 9601 for the purposes of a Brick Manufacturing Facility, as well as the built form of surrounding employment-generating land uses in the WSP and wider WSEA, which reinforces the character of the area furthermore.

The proposed modifications sought would by no means compromise the positive visual outcome articulated and approved under SSD 9601, as the Site would contribute to pleasant views toward the Site from the public domain / private access road, as well as wider views from the M7 Motorway, Ferrers Road and Wallgrove Road, which would be enhanced by improved

landscaping provisions which were previously approved under SSD 9601, creating a welcoming and aesthetically pleasing landscape character for the Site and surrounding land uses.

In a letter of supported prepared by Group GSA, they note, that there will be no adverse visual impacts as a result of the proposed modifications (refer to **Appendix 10**).

7.3 TRAFFIC AND TRANSPORT

The *Transport Statement* was prepared by Ason Group (2021) in support of the proposed modifications pertaining to access, traffic and parking implications (refer to **Appendix 4**).

7.3.1 Car Parking

As a result of the proposed modifications, Ason Group note that the car parking demands will be consistent with the car parking approved under SSD 9601, for which the car parking analysis was based on a first principles assessment. It is noted, that the proposed modifications would account for a total increase of ten (10) staff for the night shift. Notwithstanding, the maximum number of staff on-site at any given time will remain as 35 staff. This indicates a car parking demand of 35 spaces, which is considered to be consistent with the previous assessment undertaken for SSD 9601.

As such, the additional parking to be provided in accordance with the proposed modifications, results in a net increase of approximately 15 car parking spaces for Plant 2. Ason Group note, that the unmarked car parking will generally be unused unless required for overflow parking (such as visitors when all staff are on-site) and will support the wider site.

7.3.2 Traffic Generation

The proposed modifications will result in a production capacity increase across Plant 2, which would result in the following additional traffic generation:

- 10-12 light vehicles relating to staff working the night shift (between 10pm and 6am)
- 10 additional heavy vehicles travelling to / from the Site across the course of the day (20 vehicle movements)

The additional staff trips would be outside of the key road network peak hours, which was determined to be from 8:30am to 9:30am and 1:00pm to 2:00pm on Wallgrove Road, as per traffic surveys undertaken in 2018 to inform the Traffic Impact Assessment for SSD 9601.

Ason Group note that the existing approval (SSD 9601) comprised the refurbishment and extension of existing on-site infrastructure but did not increase staff numbers, production or general vehicle movements.

Furthermore, as part of SSD 9601, traffic volume surveys were undertaken at the intersection of Access Road / Wallgrove Road and Access Road / Ferrers Road. The results of the survey informed the SIDRA intersection modelling.

Noting that Plant 2 was operational during the time of traffic surveys, Ason Group have deduced that the existing generation of Plant 2 has been captured in the traffic surveys and corresponding SIDRA intersection modelling.

The proposed modifications will result in production increase which would result in an additional 20 truck movements throughout the day (approximately 2-3 trucks per hour). As such, the Proposed Development would result in an increase of 2-3 vehicle trips in the peak hours.
Ason Group note, that the impact of the cumulative traffic generation of SSD 9601 and the proposed modifications are acceptable for the following reasons:

- The existing Ferrers Road / Access Road intersection has been tested in SIDRA and the results indicate that the right turn from Access Road to Ferrers Road is operating poorly. As such, any increase in traffic to this movement would result in significant (though unrealistic) increases to the average delay; this is a known limitation of SIDRA intersection modelling.
- The results for all vehicles turning right from Access Road to Ferrers Road (Scenario 1) indicate unrealistic increases to average delay (26.3 sec in the AM peak hour and 760.4 sec in the PM peak hour). This is consistent with the SIDRA limitations, as discussed in the point above.
- Notwithstanding, an increase of 3 trucks in the peak is minor and it would be expected that it this increase would not significantly impact the operation of any intersection.
- Furthermore, with consideration to dynamic redistribution, it would be apparent that those familiar with the area (or have been warned / instructed) would either turn left from Access Road onto Ferrers Road (Scenario 2) OR avoid the Ferrers Road / Access Road intersection entirely (Scenario 3).
- SIDRA modelling demonstrates that Scenario 2 would result in minor increases to delay (0.6 sec in the AM peak hour and 1.4 sec in the PM peak hour) whilst Scenario 3 would not impact the intersection at all.
- It is also noted that as part of the Gazcorp Industrial Estate SSD (application no.: SSD 5248), upgrades to the Access Road / Wallgrove Road intersection have been stipulated in the Development Consent. The upgrades are yet to be constructed and would further improve the operation of the intersection when completed.

As such, the cumulative traffic impacts of SSD 9601 and the proposed modifications are considered minor and would not materially impact the existing intersection operation.

Therefore, the proposed modifications are supportable on traffic generation grounds.

7.4 SOILS AND WATER

The *Soil and Water Management Plan & Civil Engineering Design Report* has been prepared by At&l (2021) which considers the engineering requirements as a result of the proposed modifications (refer to **Appendix 3**).

7.4.1 Geotechnical Conditions

Douglas Partners have previously undertaken geotechnical investigations on the Subject Site in 2015. In accordance with the areas subject to the proposed modifications, the investigations found that the Site contains a layer of fill from the surface up to 4 m in depth (containing ripped shale, clay and crushed bricks) over residual stiff, high plasticity silty clays. This is underlain by Bringelly shale typically of low to medium strength.

7.4.2 Earthworks

Bulk earthworks will be required in order to create suitable ground levels for the construction of the new hardstand areas. The required total cut volume is estimated to be approximately 64,000 m^3 across the Site. This volume is primarily generated from excavation into the existing ground under the proposed storage yard footprints to allow for new pavement construction. There is no filling required as part of the proposed modifications.

7.4.3 Groundwater

Investigations were previously undertaken across the Site pertaining to groundwater monitoring. Measured groundwater levels in the closest borehole to the proposed modification area (Borehole No. 4) was RL57.9 (approximately 4 m deep) as observed during drilling and

considered likely to be a perched water table in the fill. Whilst finished surface levels of the proposed modifications are generally well above this groundwater level, groundwater is expected to be encountered in some areas during excavation for service trenches. The contractor (subject to approval) will need to employ a dewatering methodology during construction works where required.

It is noted, that due to the impervious coverage of the proposed modifications (i.e. mostly building and pavements) there is expected to be minimal infiltration and therefore minimal interaction between the surface water and groundwater on the Site as a result of the proposed modifications.

7.4.4 Contamination

No known contamination exists in the subsoils within the proposed extent of earthworks. Given the Site's history of industrial use, it is possible that contaminated materials may be uncovered in localised areas during the excavation works. Should any contamination be uncovered during the course of the works, the NSW EPA will be notified and the contamination investigated and managed as prescribed by the *Contaminated Land Management Act 1997*.

7.4.5 Stormwater Management

There are four (4) primary discharge points to Eastern Creek from the eastern part of the Subject Site including:

- Via the existing drainage channel at the northern edge o the Site (Catchment A)
- Via the recently constructed Plant 2 stormwater basin (Catchments B and D)
- Via the existing quarry dam (Catchment C)

The corresponding catchments are outlined in **Table 4** below.

Table 4: Existing Catchment Composition

Catchment	Type	Area (ha)	Discharge Point
A	Roof, pavements & landscaping	5.15	Eastern Creek
B	Roof, pavements & landscaping	5.71	Existing Stormwater Basin
C	Quarry / stockpiles	30.6	Existing Quarry Dam (then to Plant 1 Basin)
D	Basin	0.84	Existing Stormwater Basin

In accordance with **Table 4** above, the area containing the proposed modification extents have been divided into logical sub-catchment areas based on the proposed hardstand grading and proposed drainage infrastructure discharge points (refer to **Table 5** and **Figure 18**).

Table 5: Proposed Catchment Composition

Catchment	Type	Area (ha)	Discharge Point
1A	Pavements	1.22	Discharge to enlarged OSD / sediment basin for attenuation of peak flows prior to release to existing dam
1B	Pavements	0.91	
Total		**2.13**	
2A	Pavements	0.86	Piped discharge to existing northern drainage channel (to Eastern Creek)
2B	Roof	0.87	
	Pavements	0.58	
Total		**2.31**	
3	**Total**	**0.10**	Sheet flow into existing northern drainage channel (to Eastern

			Creek)
4	**Total**	**0.84**	Basin low-level (pipe) and high-level (spillway) outlets to Eastern Creek
EX A	**Total**	**2.17**	Reduced area – continues to discharge to creek
EX B	**Total**	**5.71**	Unchanged. Continue to discharge to basin
EX C	**Total**	**29.05**	Reduced area – continues to discharge to existing quarry dam

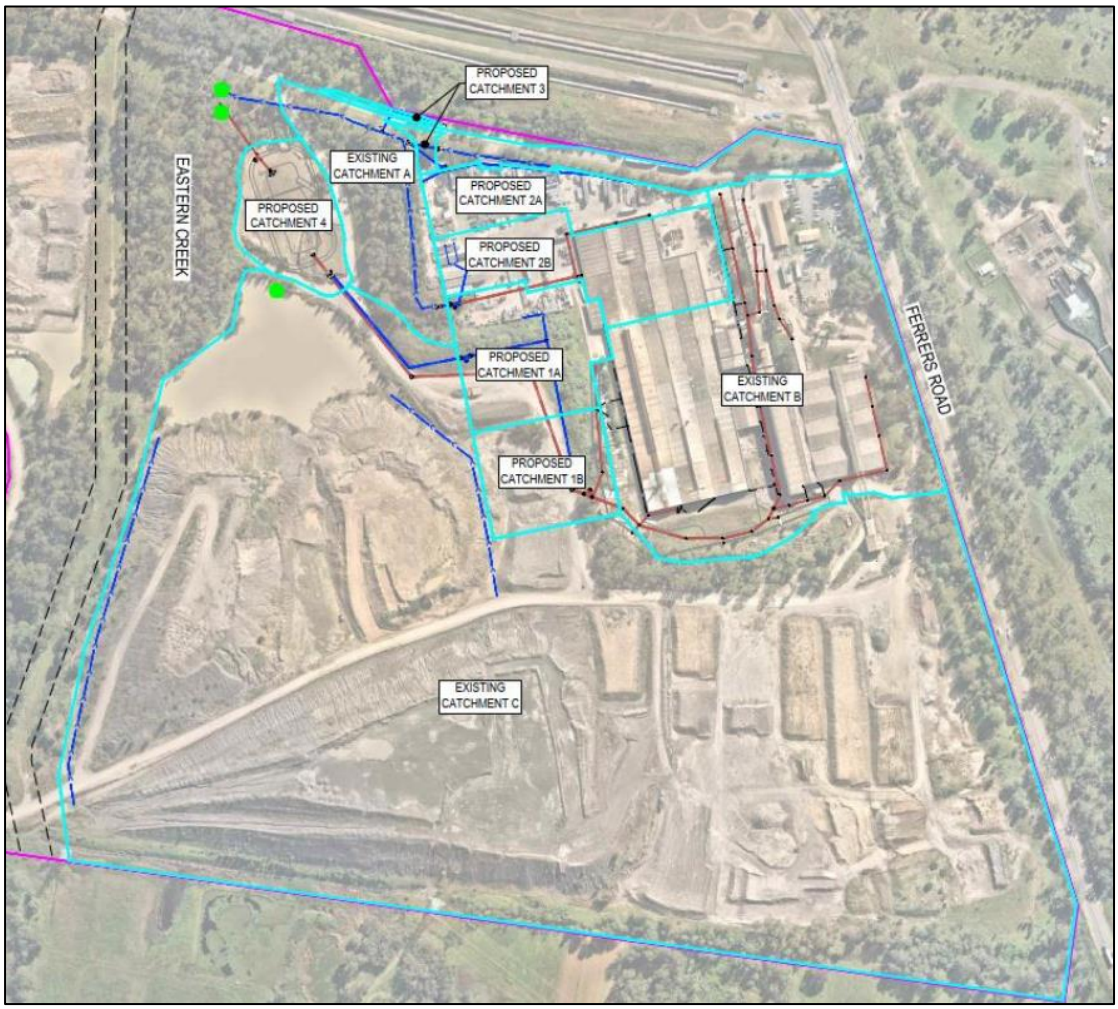

Figure 18 Proposed Stormwater Catchments (Source: at&l, 2021)

At&l note, that a new underground pit and pipe network will be installed through the new hardstand area to collect and convey stormwater efficiently to designated discharge points. The minor stormwater drainage system will generally be sized to convey the 10-year ARI (10% AEP) storm event. The civil design includes suitable gradients applied to the surface of the new pavement areas to direct stormwater away from the buildings and towards grated gully inlet pits located in localised sag points.

The existing stormwater drainage infrastructure is to remain, such as the 1200 mm diameter trunk outlet from the Plant 2 factory area (Existing Catchment B) to the stormwater detention basin, which must also be protected during the construction of the works comprising the proposed modifications.

7.4.6 Stormwater Quantity

Table 6 outlines the pre-development and post-development peak flows into Eastern Creek from the designated discharge points.

Table 6: Pre-Development vs Post-Development Peak Flow Comparison						
Storm Event (AEP)	**Storm Event (ARI)**	**Pre-Development Flow (L/s)**	**Post-Development Flow (L/s)**	**Difference (L/s)**	**% Change**	**Peak Flow Reduction**
63%	1	634	496	-138	-21.8%	Yes
39%	2	902	708	-194	-21.5%	Yes
20%	4.48	1,191	1,060	-131	-11.0%	Yes
10%	10	1,497	1,353	-144	-9.6%	Yes
5%	20	1,807	1,509	-298	-16.5%	Yes
2%	50	2,193	1,749	-444	-20.2%	Yes
1%	100	2,493	2,016	-477	-19.1%	Yes

At&l have also undertaken a Permissible Site Discharge (PSD) calculation for the areas subject to new impervious development (i.e. Catchments 1, 3 and 4) in accordance with Council's engineering requirements (refer to **Table 7** below).

Table 7: Peak Stormwater Flows for the 5 Year and 100 Year ARI Events			
Storm Duration	**Allowable PSD (78L/sec/ha)***	**5 Year ARI Flow (L/s)**	**100 Year ARI Flow (L/s)**
5 minutes	685 L/s	18	21
10 minutes		20	24
20 minutes		22	26
30 minutes		23	29
60 minutes		25	491
180 minutes		27	566
360 minutes		251	617
540 minutes		322	509

***Note:** PSD calculated based on 8.78 ha, which includes Existing Catchment B since it is also routed through the existing stormwater basin.

7.4.7 Stormwater Quality

As part of the proposed modifications, the new hardstand areas will need to be provided with stormwater quality treatment measures to capture and remove the pollutants they are expected to generate. Accordingly, in order to achieve the required pollutant load reductions, a treatment train approach will be implemented including the following:

- Primary treatment: Gross pollutant trap to remove litter and larger particles etc.
- Secondary treatment: Sediment basin focused on removing sediment, fine particles and attached pollutants.
- Tertiary treatment: Filtration device focused on removal of dissolved nutrients such as nitrogen, phosphorus and suspended solids.

In accordance with the modelling undertaken by at&l (2021), the modelling results show substantial reductions in each pollutant category for the post-development mitigated scenario (based on implementation of the proposed treatment train) compared with the hypothetical unmitigated scenario (refer to **Table 8** below).

Table 8: MUSIC Model Treatment Train Effectiveness Results				
Pollutant	**Annual Pollutant Loads (kg/yr)**		**Reduction (%)**	**Council Target (%)**
	Sources	**Residual**		
Total Suspended Solids	17,600	2,910	83.4	80.0
Total Phosphorus	32.2	11.9	63.0	55.0
Total Nitrogen	178	97.3	45.5	40.0
Gross Pollutants	2,000	81.1	95.9	90.0

Notes:

1. **Table 8** above is for the complete treatment train which includes flows from the upstream Plant 2 factory catchment (Existing Catchment B) which also drains to the same basin and filter unit.
2. Council's Stormwater Management Policy does not require the designated targets to be achieved for sites in the Rural Zone.

7.4.8 Flooding

Since the original Rural Flood Study hydraulic model (approved under **SSD 9601**) was based on the assumption that quarry areas were filled in, it was not suitable for use as a base case model for the impact assessment. Therefore, BMT were required to "patch in" accurate 3D survey data for the Subject Site to the wider model in order to create the refined pre-development/ existing conditions model. The quarry dam was also assumed to be full prior to the design storm event.

The results of the TUFLOW flood modelling exercise undertaken by BMT for the post-development scenario, using AT&L's supplied design surface, show that at the critical Reporting Point P08 (immediately downstream of the Site and upstream of the WaterNSW bulk water pipelines) the afflux in the 5% AEP, 1% AEP and PMF storm events are nil or negative, indicating that there is no increase in flood levels at these locations. **Figure 19** below illustrate this graphically for the 1% AEP. Similarly, upstream of the parent site at Reporting Point P02 there is also nil increase in any of the design storm events.

The proposed modifications pertaining to the storage yard development area is not directly affected by flooding from Eastern Creek as shown in **Figure 20** below.

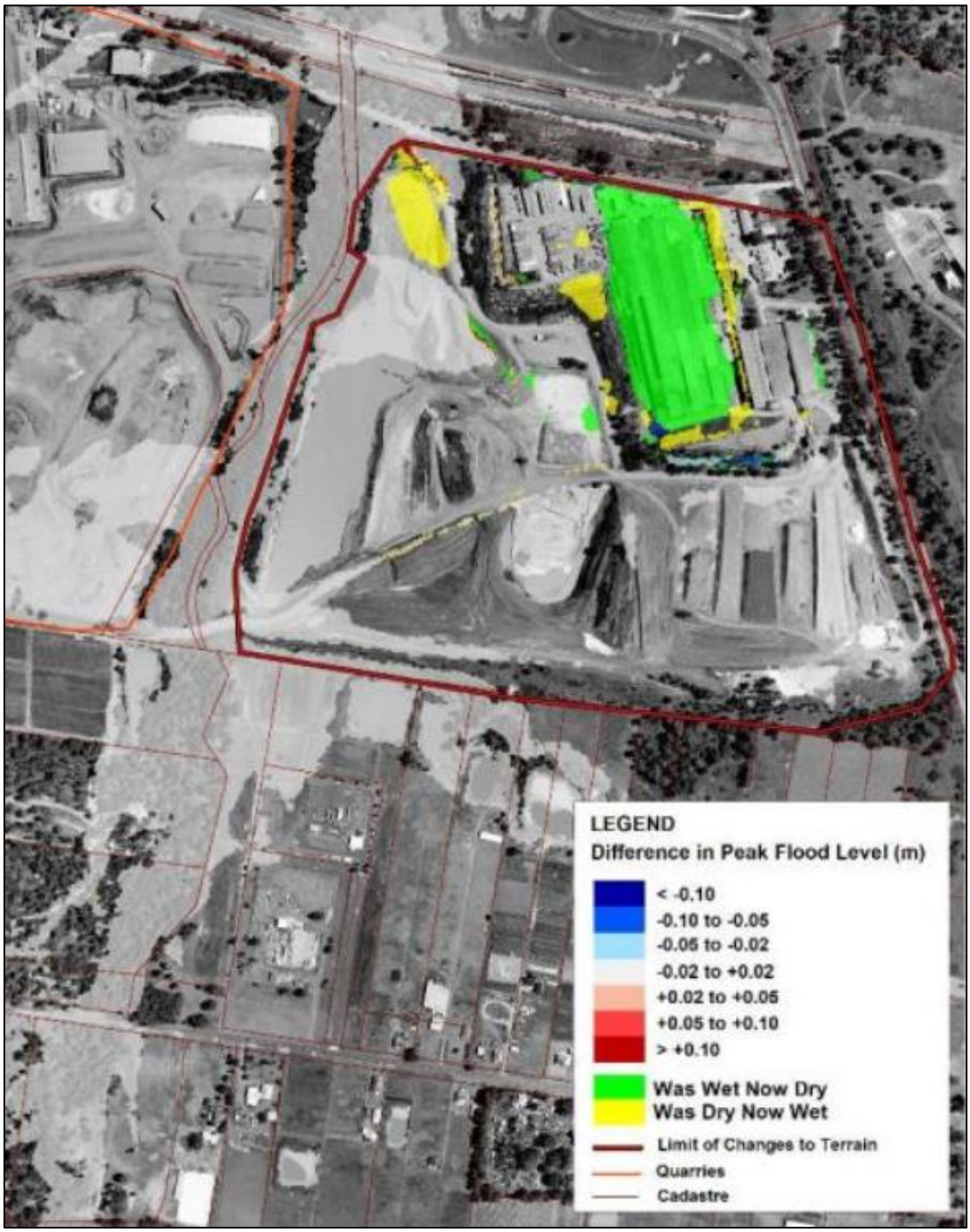

Figure 19 1% AEP Peak Flood Level Comparison for Pre-Development vs. Post-Development Cases (Source: At&l, 2021)

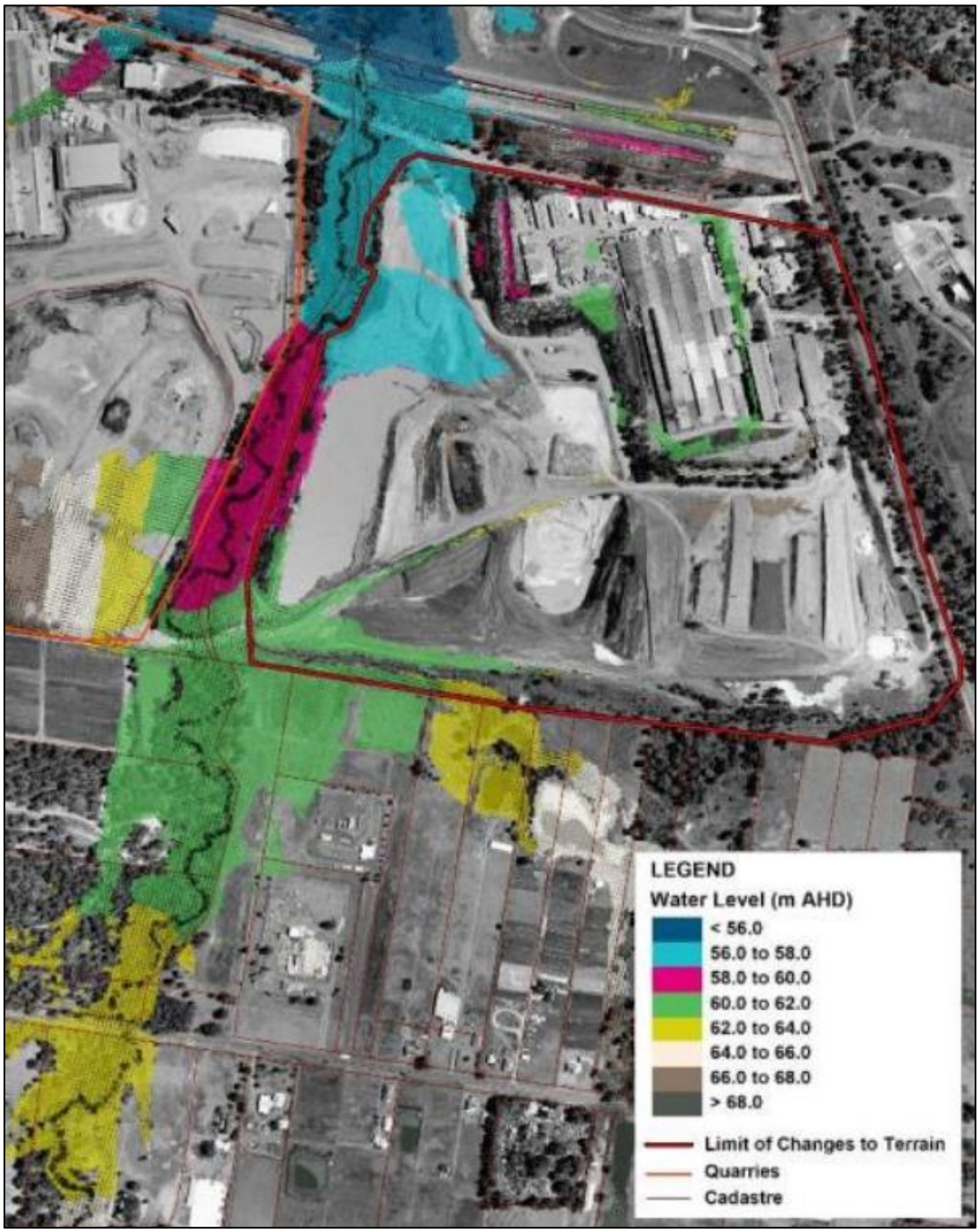

Figure 20 1% AEP Peak Flood Levels for Post-Development Case (Source: At&l, 2021)

7.5 NOISE

The *Noise Impact Assessment* prepared by Benbow Environmental (2021) considers the potential noise emission criteria (including any potential noise impacts) as a result of the proposed modifications (refer to **Appendix 5**).

Table 9 outlined below identified the nearest sensitive receptors that could be potentially affected by the noise impacts from the Site's existing and proposed activities. The nearest residential receptor is located approximately 730 m away from the Site (refer to **Figure 21**).

Figure 21 Nearest Sensitive Receptors (Source: Benbow Environmental, 2021)

Table 9: Nearest Identified Sensitive Receptors							
Receptor ID	**Address**	**Direction from Site**	**Approximate Distance to Proposed Development (m)**	**Easting 302846**	**Northing 6255133**	**Lot and DP**	**Type of Receiver**
R1	785-811 Wallgrove Road, Horsley Park	W	1,370	301476	6254973	Lot 4 DP 24094	Residential
R2	763-783 Wallgrove Road, Horsley Park	WSW	1,370	301539	6254786	Lot 31 DP 1062703	Residential
R3	259-273 Chandos Road, Horsley Park	SW	1,200	301851	6254325	Lot 120 DP 13905	Residential
R4	203-209 Chandos Road, Horsley Park	SSW	920	302342	6254232	Lot 58A DP 17288	Residential
R5	168-174 Chandos Road, Horsley Park	SSW	730	302575	6254276	Lot 93 DP 752041	Residential
R6	150-154 Chandos Road, Horsley Park	S	730	302693	6254257	Lot 3 DP 30290	Residential
R7	126-130 Chandos Road, Horsley Park	S	740	302883	6254223	Lot 7 DP 30290	Residential
R8	127-131 Ferrers Road, Horsley Park	SSE	1,030	303190	6254049	Lot 50C DP 348693	Residential
R9	Prospect Water Filtration Plant, Chandos Road, Wetherill Park	ENE	230	303064	6255208	Lot 304 DP 1122291	Industrial
R10	Ferrers Road, Eastern Creek	N	570	302838	6255576	Lot 1 DP 1077822	Industrial
R11	Wallgrove Road, Eastern Creek	NW	1,380	301724	6255706	Lot 10 DP 1048435	Industrial
R12	Prospect Nature Reserve, Reservoir Road, Prospect	ENE	490	303193	6255414	Lot 2 DP 1062094	Passive Recreation

7.5.1 Existing Acoustic Environment

Unattended long-term noise monitoring was undertaken by Benbow on 8 March 2017 until 9 March 2017 and 6-19 March 2018 at two (2) rural-residential locations surrounding the Subject Site. **Table 10** outlined below includes the logger location addresses.

Table 10: Long Term Monitoring Locations	
Location ID	**Address**
Logger A	2C Burley Road, Horsley Park
Logger B	105-119 Chandos Road, Horsley Park

The results of the long term unattended noise monitoring undertaken by Benbow is displayed in **Figures 22** & **23** below.

Date	Average L_1			Average L_{10}			ABL (L_{90})			L_{eq}		
	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night
8/03/2017	65	58	50	56	52	49	48	47	46	54	52	47
9/03/2017	64	60	54	56	53	50	49	46	44	55	53	52
10/03/2017	64	57	54	56	52	50	47	48	43	55	51	50
11/03/2017	63	58	53	54	52	49	43	48	43	53	52	48
12/03/2017	61	62	53	54	57	49	45	48	44	52	62	49
13/03/2017	-	60	55	-	56	53	-	50	46	-	55	52
14/03/2017	-	59	-	-	53	-	-	47	-	-	52	-
15/03/2017	-	61	-	-	57	-	-	51	-	-	55	-
16/03/2017	-	60	-	-	52	-	-	48	-	-	52	-
17/03/2017	66	-	-	59	-	-	52	-	-	58	-	-
18/03/2017	-	54	-	-	51	-	-	34	-	-	51	-
19/03/2017	-	49	-	-	42	-	-	32	-	-	42	-
Average	64	58	53	56	53	50	*	*	*	*	*	*
Median (RBL)	*	*	*	*	*	*	**47**	**48**	**44**	*	*	*
Logarithmic Average	*	*	*	*	*	*	*	*	*	**55**	**55**	**50**

Note: - indicates value that has not been considered due to adverse weather conditions
* Indicates value that is not relevant to that noise descriptor
Value in bold indicates most relevant noise descriptor

Figure 22 Unattended Noise Monitoring Results, dB(A) – Logger A – 2C Burley Road, Horsley Park (Source: Benbow Environmental, 2021)

Date	Average L_1			Average L_{10}			ABL (L_{90})			L_{eq}		
	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night
6/09/2018	62	55	53	53	49	48	43	41	42	52	47	46
7/09/2018	-	-	-	-	-	-	-	-	-	-	-	-
8/09/2018	58	52	52	51	48	48	39	40	38	53	46	46
9/09/2018	62	57	52	53	50	48	41	43	40	63	49	46
10/09/2018	63	53	53	53	48	49	40	41	39	56	45	50
11/09/2018	60	54	53	53	49	49	43	43	38	51	47	48
12/09/2018	59	55	-	53	51	-	43	44	-	51	48	-
13/09/2018	-	53	53	-	47	49	-	38	37	-	45	49
14/09/2018	58	67	53	52	55	48	42	45	38	50	56	48
15/09/2018	-	-	54	-	-	49	-	-	40	-	-	47
16/09/2018	-	53	-	-	47	-	-	39	-	-	45	-
17/09/2018	60	55	55	53	49	51	42	41	40	51	47	50
18/09/2018	60	55	54	53	49	50	41	43	40	51	47	50
19/09/2018	-	-	55	-	-	50	-	-	40	-	-	51
Average	60	55	53	53	49	49	*	*	*	*	*	*
Median (RBL)	*	*	*	*	*	*	**42**	**41**	**40**	*	*	*
Logarithmic Average	*	*	*	*	*	*	*	*	*	**55**	**49**	**49**

Note: - indicates value that has not been considered due to adverse weather conditions
* Indicates value that is not relevant to that noise descriptor
Value in bold indicates most relevant noise descriptor

Figure 23 Unattended Noise Monitoring Results, dB(A) – Logger B – 105-119 Chandos Road, Horsley Park

Despite unattended noise monitoring undertaken, short-term operator attended noise monitoring was undertaken at the logger locations during the day period. The results of the short-term attended noise monitoring are outlined in **Table 11** below.

Table 11: Attended Noise Monitorin Results, dB(A) - Daytime

Location / Time Period	Noise Descriptor				Comments
	L_1	L_{10}	L_{90}	L_{eq}	
Location A Monday 13/03/2017 17:09 Daytime Period	66	62	57	60	▪ M7 traffic <64 dB(A) ▪ M7 trucks <69 dB(A) ▪ Ambient birds chirping consistently <63 dB(A) ▪ Insects <48 dB(A) ▪ Aeroplane <56 dB(A) ▪ Wind rustling through trees <45 dB(A) ▪ Car leaving property <72 dB(A) ▪ Austral Plant inaudible ▪ Industrial air release <62 dB(A) ▪ Forklift reverse alarm (0:10 total) <60 dB(A) ▪ Hand Tools (0:05 total) <56 dB(A)
Location B Monday 06/09/2018 17:12 Daytime Period	65	61	53	59	▪ Aeroplane <55 dB(A) ▪ Birds <60 dB(A) ▪ Wind rustling through trees <35 dB(A) ▪ Car on Chandos Road <66 dB(A) ▪ Truck on Chandos Road <81 dB(A) ▪ Austral Plant inaudible

Benbow note that the Project Noise Trigger Levels (PNTLs) for the Site have been established in accordance with the principles and methodologies of the *Noise Policy for Industry* (NPI) document (NSW EPA, 2017). **Figure 24** provided below presents the Rating Background Level (RBL), project intrusiveness noise levels, recommended amenity noise level and project amenity noise level.

Receiver	Type of Receptor	Time of day	Rating background noise level	Project intrusiveness noise level $L_{eq\ 15\ minute}$	Recommended amenity noise level $L_{Aeq\ period}$	Project amenity noise level $L_{Aeq\ 15\ minute}$ [2]	PNTL $L_{Aeq\ 15\ minute}$	Sleep Disturbance L_{Amax}
R1-R3	Residential – Urban	Day	47	**52**	60	58	**52**	-
		Evening	47[1]	52	50	**48**	**48**	-
		Night	44	49	45	**43**	**43**	**59**
R4-R8	Residential – Urban	Day	42	**47**	60	58	**47**	-
		Evening	41	**46**	50	48	**46**	-
		Night	40	45	45	**43**	**43**	**55**
R9-R11	Industrial Premises	When in use	-	-	70	68	**68**	-
R12	Passive Recreation	When in use	-	-	50	48	**48**	-

Notes:
1) It is recommended that the project intrusiveness noise level for the evening be set no greater than the project intrusiveness noise level for the day (NSW Noise Policy for Industry Section 2.3).
2) These levels have been converted to $L_{Aeq\ 15\ minute}$ using the following: $L_{Aeq\ 15\ minute} = L_{Aeq\ period}$ **+ 3 dB** (NSW Noise Policy for Industry Section 2.2).

Figure 24 Project Noise Trigger Levels (PNTL) for Operational Activities, dB(A) (Source: Benbow Environmental, 2021)

7.5.2 Construction Noise Impacts

As a result of the proposed modifications, all construction works are proposed to be undertaken during standard construction hours, including:

- Monday to Friday: 7am to 6pm
- Saturday: 8am to 1pm
- No work on Sundays and Public Holidays

Results of the predictive noise modelling of the proposed modification activities are outlined in **Figure 25** below. It is noted, that the predicted noise levels comply with the construction noise criteria at all receivers during standard construction hours for all scenarios.

Receiver	PSNL ($L_{eq,15\ minute}$ dB(A)) Standard Hours	Scenario (Standard Hours) (L_{eq}, dB(A))			
		1[1]	2	3	4
R1	57	41 ✓	32 ✓	29 ✓	29 ✓
R2	57	40 ✓	31 ✓	29 ✓	28 ✓
R3	57	41 ✓	22 ✓	15 ✓	16 ✓
R4	52	26 ✓	18 ✓	16 ✓	16 ✓
R5	52	32 ✓	20 ✓	14 ✓	13 ✓
R6	52	46 ✓	19 ✓	14 ✓	12 ✓
R7	52	34 ✓	32 ✓	27 ✓	18 ✓
R8	52	34 ✓	32 ✓	28 ✓	27 ✓
R9	75	67 ✓	43 ✓	44 ✓	40 ✓
R10	75	57 ✓	42 ✓	39 ✓	36 ✓
R11	75	43 ✓	33 ✓	32 ✓	31 ✓
R12	65	58 ✓	38 ✓	40 ✓	37 ✓

Note 1: As per section 4.5 of the Interim Construction Noise Guideline (DECC, 2009), a number of activities have proven to be particularly annoying to residents and have therefore had 5 dB added to their predicted levels.
✓Complies ✗ Non-compliance

Figure 25 Noise Modelling Results Associated with Construction Activities for L_{eq}, dB(A) (Source: Benbow Environmental, 2021)

7.5.3 Operational Noise Impacts

The sound power levels for the identified noise sources associated with the operational activities have been taken from onsite measurements of Plant 2, other Austral Bricks Plants, as well as from Benbow Environmental's database. Accordingly, A-weighted third octave band centre frequency sound power levels have been used and are presented in **Figures 26** & **27** below.

Noise Source	Height	Max	Overall	Third Octave Band Centre Frequency (Hz)									
				25	31	40	50	63	80	100	125	160	200
				250	315	400	500	630	800	1000	1250	1600	2000
				2500	3150	4000	5000	6300	8000	10000	12500	16000	20000
Jaw Crusher	2 m	-	108	50	63	68	75	82	86	91	94	97	97
				91	90	94	99	101	98	96	97	96	94
				92	89	86	84	81	78	75	71	67	62
Kiln	2 m	-	100	39	44	50	58	64	70	71	73	78	84
				83	85	86	92	96	89	87	89	86	86
				85	85	84	80	77	73	68	64	60	54
Extruder	2 m	-	98	34	40	41	48	66	59	63	68	72	79
				76	76	77	77	79	81	95	86	82	81
				82	84	88	91	85	84	81	78	74	68
Concrete Mixer	1 m	-	105	35	36	38	42	49	53	65	71	69	74
				73	76	84	82	87	89	90	95	95	96
				97	97	95	92	90	88	85	85	80	70
Dehacker	2 m	-	94	35	39	41	48	49	54	59	62	66	70
				68	73	74	75	77	78	81	82	82	83
				83	84	85	85	85	83	79	78	74	69
Vibrating Screen	2 m	-	100	46	42	48	59	59	64	69	67	72	80
				82	86	86	87	91	92	93	88	88	88
				88	89	86	85	83	81	77	73	67	60
Conveyor	8 m	82	78	27	33	47	47	45	50	53	53	57	60
				60	60	62	64	65	66	68	70	70	68
				68	65	66	65	63	62	56	52	47	39
Truck Filling	1.5 m	105	102	61	64	66	72	74	78	78	79	88	92
				91	87	88	91	93	92	92	92	92	90
				85	83	82	79	77	72	66	61	57	54
Forklift	1.5 m	104	99	40	45	51	58	66	62	65	71	72	81
				83	87	85	87	89	88	88	89	88	88
				88	86	88	84	80	78	72	69	64	59
Tanker Delivery	1.5 m	105	102	41	49	49	53	63	60	65	69	75	74
				76	81	83	86	89	93	97	93	93	92
				90	88	85	80	76	71	66	61	55	46
Feed Conveyor	2 m	82	88	37	43	57	57	55	60	63	63	67	70
				70	70	72	74	75	76	78	80	80	78
				78	75	76	75	73	72	66	62	57	49
Front End Loader	2 m	109	104	46	50	53	64	74	89	83	79	86	84
				88	84	91	97	93	95	95	93	92	89
				88	85	81	80	76	78	69	62	58	50
Scrubber	2 m	98	96	51	52	61	65	66	71	72	78	85	78
				79	82	84	85	89	83	89	84	84	82
				79	78	77	74	69	68	66	62	58	57
Scrubber Stack	35m	97	96	-	-	-	-	64	-	-	79	-	-
				84	-	-	91	-	-	92	-	-	85
				-	-	80	-	-	78	-	-	-	-

Figure 26 A-weighted Sound Power Levels Associated with Operational Activities, dB(A) (Source: Benbow Environmental, 2021)

Noise Source	Height	Max	Overall	Third Octave Band Centre Frequency (Hz)									
				25	31	40	50	63	80	100	125	160	200
				250	315	400	500	630	800	1000	1250	1600	2000
				2500	3150	4000	5000	6300	8000	10000	12500	16000	20000
Truck Engine	1 m	106	103	44	48	57	65	70	73	78	78	80	82
				83	85	94	98	94	96	89	88	82	87
				85	84	82	83	83	82	78	-	-	-
Truck Exhaust	3.6 m	104	101	42	46	55	63	68	71	76	76	78	80
				81	83	92	96	92	94	87	86	80	85
				83	82	80	81	81	80	76	-	-	-

Figure 27 A-weighted Sound Power Levels Associated with Operational Activities, dB(A) (Source: Benbow Environmental, 2021)

Benbow note, that as the proposed noise generating scenario is very similar to the existing noise generating scenario on-site, noise impacts are therefore predicted to be similar to the existing activities on-site. The details from the modelled scenario are outlined below for the day evening and night period:

Indoor Equipment:

- Kiln;
- Extruder;
- Concrete Mixer;
- Dehacker;
- Vibrating Screen;
- Crusher; and
- Feed Conveyor.

Outdoor Equipment:

- Conveyor;
- Front End Loader;
- Truck Filling;
- Tanker Delivery;
- Scrubber;
- Forklift x 6; and
- Truck Engine and Exhaust Manouvering x 2.

In accordance with the proposed modifications, noise levels at the nearest receptors have been calculated and results of the predictive noise modelling considering operational activities are shown in **Figures 28** & **29** below. The noise predictions are presented against both the noise emission limits in the existing EPL pertaining to the Site, and a contemporary noise criterion as derived from the NPI.

Receptor	Noise Policy for Industry Project Criteria				Scenario 1 Neutral Weather		Scenario 1 Source-To-Receiver Winds, Evening and Night	
	$L_{eq(15\ minute)}$			L_{AMax}				
	Day	Evening	Night	Max	$L_{eq(15\ minute)}$	Max	$L_{eq(15\ minute)}$	Max
R1	52	48	43	59	30 ✓	33 ✓	36 ✓	40 ✓
R2	52	48	43	59	30 ✓	33 ✓	36 ✓	40 ✓
R3	52	48	43	59	24 ✓	31 ✓	N/A	N/A
R4	47	46	43	55	27 ✓	20 ✓	N/A	N/A
R5	47	46	43	55	32 ✓	32 ✓	N/A	N/A
R6	47	46	43	55	33 ✓	35 ✓	N/A	N/A
R7	47	46	43	55	33 ✓	37 ✓	N/A	N/A
R8	47	46	43	55	32 ✓	34 ✓	N/A	N/A
R9	68			N/A	55 ✓	N/A	55 ✓	N/A
R10	68			N/A	45 ✓	N/A	N/A	N/A
R11	68			N/A	32 ✓	N/A	31 ✓	N/A
R12	48			N/A	47 ✓	N/A	47 ✓	N/A

✓Complies × Non-compliance

Figure 28 Predicted $L_{eq,\ 15\ minutes}$ Noise Levels – Operational Activities dB(A) (Source: Benbow Environmental, 2021)

Receptor	EPL Project Criteria $L_{A10(15\ minute)}$		Scenario 1 Neutral Weather	Scenario 1 Source-To-Receiver Winds, Evening and Night
	Day & Evening	Night	$L_{A10(15\ minute)}$	$L_{A10(15\ minute)}$
R1	50	40	33 ✓	39 ✓
R2	50	40	33 ✓	39 ✓
R3	50	40	27 ✓	N/A
R4	50	40	30 ✓	N/A
R5	50	40	35 ✓	N/A
R6	50	40	36 ✓	N/A
R7	50	40	36 ✓	N/A
R8	50	40	35 ✓	N/A
R9	N/A	N/A	N/A	N/A
R10	N/A	N/A	N/A	N/A
R11	N/A	N/A	N/A	N/A
R12	N/A	N/A	N/A	N/A

✓Complies × Non-compliance

Figure 29 Predicted L_{A10} Noise Levels – Operational Activities, dB(A) (Source: Benbow Environmental, 2021)

As depicted in **Figures 28** & **29** above, the operational activities are predicted to comply with the criteria under the NPI and current EPL respectively. Accordingly, noise compliance is predicted at all receivers during all activities and considered weather conditions as outlined in the NIA prepared by Benbow Environmental (refer to **Appendix 5**). Furthermore, the predicted noise levels outlined in **Figures 28** & **29** broadly correspond with the existing noise levels generated by the Site.

Truck noise has also been considered as a result of the proposed modifications, whereby it is noted that there is an average of 60 truck movements per a 24 hour period has been considered to be the existing truck numbers. It is noted, that the proposed modifications will result in 20

additional road trucks (40 movements) per day, during the day. The result distribution is 12 movements during the night period (10pm to 7am) and 88 movements during the day period (7am to 10pm). The predicted noise levels are displayed in **Figure 30** below.

Receptor	Period	PSNL $L_{eq,15\ or\ 9\ hour}$	Existing Site Specific Road Traffic Noise	Proposed Site Specific Road Traffic Noise
763-783 Wallgrove Road (R2)	Day	60	39 ✓	41 ✓
	Night	55	35 ✓	35 ✓

Figure 30 Predicted Noise Levels Associated with Road Traffic, dB(A) (Source: Benbow Environmental, 2021)

Accordingly, Benbow conclude that noise generating scenarios are predicted to comply with the project specific noise levels at all receivers during all time periods and considered weather conditions. Furthermore, the operational noise levels comply with the existing EPL noise limits.

7.6 AIR QUALITY AND ODOUR

The *Revised Air Quality Impact Assessment* prepared by Airlabs Environmental (Airlabs, 2021) considers the increased annual production rate from 80 million to 130 million bricks, including the potential associated air quality impacts as a result of the overall increase in capacity across the Site (refer to **Appendix 6**).

Airlabs confirm that the Air Quality Impact Assessment (AQIA) for SSD 9601 was based on the mid-cycle maximum throughput at 25.4 Nm^3/sec of the "Batch Shift" operating model (day and afternoon shifts only), which was considered to be a conservative maximum throughput estimate from the mid-cycle, and throughput would have been lower during slower times of the production cycle (e.g. start and end of cycle and night time), resulting in an 80 million bricks per annum production. Therefore, based on the above, the pollutant emission rates estimated in SSD 9601 are conservative.

The subject Modification Application refers to an expanded annual production of 130 million SBE per annum, from a continuous throughput of 36.2 Nm^3/sec. The extruder, setter, firing process has capacity for the higher throughput of 130 million SBE per annum (36.2 Nm^3/sec), and an expanded scrubber capacity is proposed to match the increased daily production load. A "Continuous Shift" Operating Model also allows for constant efficient production throughout the cycle (day, afternoon and night shift) at the higher throughput of 36.2 Nm^3/sec, avoiding lower during slower times of the production cycle (e.g. start and end of cycle and night time). This continuous shift operating model at the expanded capacity production results in the proposed 130 million SBE per annum.

The continuous shift at the Site also allows constant operation at the most efficient rate, offering a 10% energy efficiency opportunity to be achieved. This would further improve the already very energy efficient kiln, greatly outperforming internal energy efficiency benchmarks. This is considered to be a crucial carbon reduction opportunity for brick production in Australia.

Furthermore, Airlabs note, that one of the key changes relating to the proposed modifications includes the upgrade of the cascade scrubber to a twin cascade scrubber so that the hydrogen fluoride (HF) discharge concentrations reported under SSD 9601 are still achieved as a result of the increase in production capacity. Essential, a twin cascade scrubber consists of two (2) scrubber columns to provide the required ratio of limestone surface area to gas flowrate. Cascade limestone dry gas scrubbers achieve best practice by reducing fluoride discharge concentrations to below 20 mg/m^3.

Dispersion model parameters (including kiln stack emissions and fugitive particulate emissions)

reflecting the proposed modifications are depicted in **Figures 31** to **34** below. Natural gas and electricity usage estimates reflecting the increased annual production rate, for which Scope 1 and Scope 2 Greenhouse Gas (GHG) emissions have been estimated and are outlined in **Figure 34** below.

Pollutant	Design Concentration (as provided to Airlabs)	Units	Corresponding Group 6 Standard of Concentration – POEO Clean Air Regulation 2010, Schedule 4	Compliance with Clean Air Regulation Standard of Concentration	Estimated Mass Emission Rate (g/sec) [b] from Plant 2 Kiln Stack for SSD 9601 Mod 1
TSP	34	mg/Nm^3 corrected to 273K, dry and 101.325 kPa	50 mg/m^3	Yes	1.23
PM_{10}	28	mg/Nm^3 corrected to 273K, dry and 101.325 kPa	n.d.	n.d.	1.01
$PM_{2.5}$	17 [a]	mg/Nm^3 corrected to 273K, dry and 101.325 kPa	n.d.	n.d.	0.61
HF	20	mg/Nm^3 corrected to 273K, dry and 101.325 kPa	50 mg/m^3	Yes	0.72
SO_2	150	mg/Nm^3 corrected to 273K, dry and 101.325 kPa	400 mg/m^3 [c]	Yes	5.42
NOx as NO_2	100	mg/Nm^3 corrected to 273K, dry and 101.325 kPa	350 mg/m^3	Yes	3.62
Sulfuric acid mist	10	mg/Nm^3 corrected to 273K, dry and 101.325 kPa	100 mg/m^3	Yes	0.36

(a) Design concentrations for $PM_{2.5}$ were not provided. As-such, $PM_{2.5}$ concentrations have been estimated assuming that they are approximately 50% of the design TSP concentrations.
(b) Mass emission rate calculated based on provided design concentration and volumetric flow rate of 36.2 Nm^3/sec (expressed at reference condition of 273K, dry, 101.325 kPa) for the proposed production rate of 130 million bricks pa.
n.d. – no data
(c) – SO_2 concentrations compared against the licence limit specified in EPL 546

Figure 31 Pollutant Discharge Concentrations and Stack Emission Rates Corresponding to the Increased Production Rate of 130 Million Bricks Per Annum (Source: Airlabs, 2021)

Parameter	Value	Units
Location – Easting (X)	302801	m
Location – Northing (Y)	6255028	m
Height above ground level	35	m
Stack diameter at exit	2.5	m
Design exit velocity	15	m/sec
Stack temperature at exit	453	Kelvin
Operational hours	Continuous (24 hours, 365 days)	

Figure 32 Plant 2 Kiln Stack Parameters for SSD 9601 MOD 1 (Source: Airlabs, 2021)

Activity	Quantity	Units	Modelled Annual Emission Rates (kg/year)		
			TSP	PM_{10}	$PM_{2.5}$
Front end loader on raw material stockpiles	455,000 (a)	tpa	39.2	18.5	2.8
Haul truck unloading raw materials	455,000 (a)	tpa	39.2	18.5	2.8
Loading raw materials into the crusher unit	455,000 (a)	tpa	39.2	18.5	2.8
Crushing operations	455,000 (a)	tpa	273.0	122.9	22.8
Conveying to the mill building	455,000 (a)	tpa	11.8	5.6	0.8
Mill building operations (incl. grinding)	455,000 (a)	tpa	75.1	25.3	12.6
Conveying to the new brick kiln	455,000 (a)	tpa	11.8	5.6	0.8
Wind erosion – inactive and active stockpiles	21.1 (b)	ha	5,280.7	2,640.3	396.0
Heavy vehicle haulage on gravel surfaces	455,000 (a)	tpa	3,512.4	751.4	75.1
Total			**9,282**	**3,607**	**517**

(a) As per information provided by Austral Bricks, 115 million standard brick equivalents (SBE) roughly translates to 400,000 tpa of material. Based on this information, the estimated material quantity required to produce 130 million bricks per annum would be approximately 455,000 tonnes per annum (tpa).

(b) No change expected in the extent of active and inactive stockpiles for the increased production rate. Footprint referenced from SSD 9601 AQIA.

Figure 33 Estimated Annual Fugitive Dust Emission Rates from the Plant 2 Site Corresponding to the Increased Production Rate of 130 Million Bricks Per Annum (Source: Airlabs, 2021)

Parameter	Value	Units
Natural Gas	683,728.19	GJ/annum
Electricity usage	18,646.06	MWh/annum

Figure 34 Project Estimates of Natural Gas and Electricity Consumption Corresponding to the Increased Capacity of 130 Million SBE Per Annum (Source: Airlabs, 2021)

7.6.1 Air Quality Impacts

Airlabs note, that predicted ground level concentrations of all modelled pollutants from the proposed modifications are discussed below, for which incremental concentrations are a consequence of the following:

- Point source emissions from the Plant 2 kiln exhaust stack reflecting an increased production rate of 130 million bricks per annum.
- Fugitive dust emissions generated from the operational activities at the Plant 2 site corresponding to the increased production rate of 130 million bricks per annum.

Model predicted hydrogen fluoride (HF) ground-level incremental concentrations are a result of the revised maximum discharge concentration of 20 mg/m^3; increasing the stack height to 35 m from the existing 16 m; and increasing the exhaust gas volumetric flow rate corresponding to the increase in the annual production rate to 130 million bricks per annum. As HF is the key pollutant amongst the assessed pollutants, model predicted maximum incremental ground level concentrations at the identified sensitive receptors have been exclusively presented in **Figures 35** & **36** below. Maximum model predicted incremental ground level concentrations for all the other pollutants are summarised in **Figure 37** below.

Model Predicted Maximum (100th Percentile) HF Incremental Concentrations (µg/m³) at Agricultural / Fluoride Sensitive Receptors				
Averaging Period	90-days	30-days	7-days	24-hours
Impact Assessment Criteria (µg/m³) – Specialised Land-Use	0.25	0.4	0.8	1.5
R1	0.08	0.10	0.18	0.41
R2	0.04	0.06	0.13	0.28
R3	0.03	0.04	0.09	0.18
R4	0.05	0.06	0.11	0.25
R5	0.06	0.08	0.11	0.35
R6	0.06	0.08	0.12	0.45
R7	0.05	0.06	0.10	0.30
R8	0.04	0.05	0.10	0.23
Max of R1-R8	*0.08*	*0.10*	*0.18*	*0.45*
Max of R1-R8 – Percentage of Impact Assessment Criteria	*31%*	*26%*	*22%*	*30%*
Model Predicted Maximum (100th Percentile) HF Incremental Concentrations (µg/m³) at Non-Agricultural / General Land-Use Sensitive Receptors				
Averaging Period	90-days	30-days	7-days	24-hours
Impact Assessment Criteria (µg/m³) – General Land-Use	0.5	0.84	1.7	2.9
R9	0.08	0.10	0.14	0.50
R10	0.09	0.11	0.17	0.61
R11	0.10	0.13	0.19	0.44
R12	0.06	0.08	0.10	0.31
R13	0.06	0.09	0.17	0.34
R14	0.06	0.08	0.14	0.37
R15	0.07	0.09	0.14	0.35
R16	0.06	0.09	0.13	0.31
R17	0.07	0.10	0.16	0.32
R18	0.07	0.08	0.12	0.37
R19	0.05	0.06	0.08	0.26
R20	0.06	0.06	0.11	0.36
Max of R9-R20	*0.10*	*0.13*	*0.19*	*0.61*
Max of R9-R20 – Percentage of Impact Assessment Criteria	20%	16%	11%	21%

Figure 35 Revised Model Predicted Incremental HF Impacts at Identified Sensitive Receptors – Specialised Land Use and General Land Use (Source: Airlabs, 2021)

Model Predicted Maximum (100th Percentile) Incremental Concentrations (µg/m³) at Identified Sensitive Receptors													
Pollutant	TSP	PM_{10}		$PM_{2.5}$		SO_2				NO_2 (a)		SO_3	Deposited Dust
Averaging Period	Annual	24-hours	Annual	24-hours	Annual	10-minutes	1-hour	24-hours	Annual	1-hour	Annual	1-hour	Annual
Impact Assessment Criteria (µg/m³)	90	50	25	25	8	712	570	228	60	246	62	18	2 (Max increase)
R1	0.52	1.69	0.38	0.49	0.09	47.71	25.38	3.08	0.32	16.92	0.22	0.77	0.07
R2	0.23	1.18	0.21	0.33	0.06	42.33	22.52	2.07	0.20	15.01	0.13	0.66	0.03
R3	0.13	0.82	0.15	0.23	0.04	41.19	21.91	1.33	0.15	14.60	0.10	0.57	0.02
R4	0.74	2.20	0.49	0.40	0.10	34.72	18.47	1.90	0.26	12.31	0.17	0.74	0.08
R5	0.86	3.16	0.68	0.65	0.15	51.02	27.14	2.62	0.34	18.09	0.22	0.85	0.08
R6	0.72	2.77	0.60	0.65	0.14	41.53	22.09	3.38	0.35	14.73	0.23	0.82	0.07
R7	0.71	2.74	0.57	0.57	0.13	50.60	26.92	2.22	0.29	17.94	0.19	0.70	0.07
R8	0.34	1.51	0.30	0.34	0.07	36.59	19.47	1.70	0.23	12.98	0.15	0.59	0.03
R9	1.08	2.89	0.83	0.76	0.18	65.92	35.06	3.75	0.38	23.37	0.26	1.53	0.16
R10	1.74	4.35	1.24	1.09	0.25	100.35	53.38	4.61	0.46	35.58	0.30	1.51	0.26
R11	1.38	5.22	1.23	1.06	0.25	104.10	55.37	3.33	0.44	36.92	0.29	2.25	0.16
R12	0.16	1.25	0.22	0.35	0.07	53.63	28.53	2.29	0.25	19.02	0.16	1.05	0.02
R13	0.22	1.35	0.21	0.40	0.06	29.06	15.46	2.55	0.25	10.30	0.17	0.70	0.03

Figure 36 Summary of Revised Model Predicted Incremental Impacts – All Pollutants Excluding HF (Source: Airlabs, 2021)

Model Predicted Maximum (100th Percentile) Incremental Concentrations (µg/m³) at Identified Sensitive Receptors													
Pollutant	TSP	PM_{10}		$PM_{2.5}$		SO_2				NO_2 (a)		SO_3	Deposited Dust
Averaging Period	Annual	24-hours	Annual	24-hours	Annual	10-minutes	1-hour	24-hours	Annual	1-hour	Annual	1-hour	Annual
Impact Assessment Criteria (µg/m³)	90	50	25	25	8	712	570	228	60	246	62	18	2 (Max increase)
R14	0.20	1.14	0.19	0.39	0.06	27.01	14.37	2.74	0.26	9.58	0.17	0.68	0.03
R15	0.52	1.69	0.38	0.49	0.09	47.71	25.38	3.08	0.32	16.92	0.22	0.77	0.03
R16	0.23	1.18	0.21	0.33	0.06	42.33	22.52	2.07	0.20	15.01	0.13	0.66	0.02
R17	0.13	0.82	0.15	0.23	0.04	41.19	21.91	1.33	0.15	14.60	0.10	0.57	0.02
R18	0.74	2.20	0.49	0.40	0.10	34.72	18.47	1.90	0.26	12.31	0.17	0.74	0.01
R19	0.86	3.16	0.68	0.65	0.15	51.02	27.14	2.62	0.34	18.09	0.22	0.85	0.01
R20	0.72	2.77	0.60	0.65	0.14	41.53	22.09	3.38	0.35	14.73	0.23	0.82	0.01
Max of R1-R20	*1.74*	*5.22*	*1.24*	*1.09*	*0.25*	*104.10*	*55.37*	*4.61*	*0.46*	*36.92*	*0.30*	*2.92 (b)*	*0.26*
Max of R1-R20 – Percentage of Impact Assessment Criteria	*1.9%*	*10.4%*	*5.0%*	*4.4%*	*3.2%*	*14.6%*	*9.7%*	*2.0%*	*0.8%*	*15.0%*	*0.5%*	*16%*	*13.2%*

(a) To predict ground level NO_2 concentrations, it has been conservatively assumed that all the NOx released is converted to NO_2 (100% NOx to NO_2 conversion). This approach is listed in Section 8.1.1 of the Approved Methods
(b) The value presented is the maximum (reported as 99.9th percentile) 1-hour average sulfuric acid concentration predicted at or beyond the Plant 2 site boundary as per the Approved Methods

Figure 37 Summary of Revised Model Predicted Incremental Impacts – All Pollutants Excluding HF (Source: Airlabs, 2021)

The modelling shows that the incremental HF concentrations predicted at all sensitive receptors comply with the relevant impact assessment criteria for all averaging periods, for the proposed modifications. It is noted that the impact assessment criteria are relevant for cumulative concentrations; however, for the purposes of comparison and to demonstrate the contribution of the Plant 2 emissions in isolation, the incremental concentrations have been compared against the assessment criteria.

Additionally, based on comments issued by the NSW EPA for SSD 9601, agricultural receptors which are assumed to be susceptible to fluoride emissions have been identified and incremental impacts have been predicted at these receptors. HF ground-level concentrations at agricultural

receptors have been compared against the specialised land-use assessment criteria, which is more stringent than the general land-use assessment criteria.

From the results presented in **Figure 37** above, it is noted that incremental HF concentrations predicted at the agricultural receptors are also well below the specialised land-use assessment criteria, which is more stringent than the general land-use criteria. Maximum model predicted HF incremental concentration at all agricultural sensitive receptors for all averaging periods is less than 35% of the corresponding assessment criteria for the proposed modifications. For the non-agricultural / general land use sensitive receptors, the maximum incremental concentrations across all the averaging periods are less than 25% of the assessment criteria for the proposed modifications.

In accordance with the revised model predictions for the proposed modifications, it is observed that the incremental HF concentrations are well below their respective assessment criteria, at all the identified receptors, including those that are considered to be sensitive to fluoride impacts.

Modelling shows that incremental concentrations predicted at the identified sensitive receptors for all the other pollutants are well below their respective assessment criteria, which demonstrates the low-level impacts expected from the Plant 2 site operating at an increased production rate of 130 million bricks per annum.

Incremental particulate modelling results presented in **Figure 37** are a result of the point and fugitive dust sources inventoried from the Plant 2 site. With respect to SO_3 (sulfuric acid mist and sulfur trioxide expressed as SO_3) concentrations, the Approved Methods specifies that ground level concentrations are to be reported as the 99.9^{th} percentile 1-hour average incremental concentration predicted at or beyond the Plant 2 site boundary, and subsequently, this value has been extracted, which is around 16% of the corresponding impact assessment criteria.

7.6.2 Cumulative Impacts

Cumulative model predictions for HF are presented in **Figure 38** below, and all the other remaining pollutants are presented in **Figure 39**. The presented cumulative concentrations are noted as a sum total of the following sources:

- Incremental impacts from Plant 2 predicted as a consequence of the proposed improvements and increasing the production rate to 130 million bricks per annum.
- Impacts from the existing Plant 1 operations – point and fugitive (refer to the SSD 9601 AQIA for additional details).
- Impacts from the existing Horsley Park WMF – fugitive (refer to the SSD 9601 AQIA for additional details).
- Impacts from the existing Plant 3 operations – point sources (Point 6 – Swindell and Point 7 – Ceric) (refer to the SSD 9601 AQIA for additional details).
- Background concentrations from the ambient air quality monitoring station at Prospect (refer to the SSD 9601 AQIA for additional details).

With respect to cumulative HF concentrations, no exceedances of the impact assessment criteria are reported at any of the identified sensitive receptors – including agricultural receptors for the subject Modification Application.

Model Predicted Maximum (100th Percentile) HF Cumulative Concentrations (µg/m³) at Agricultural / Fluoride Sensitive Receptors				
Averaging Period	90-days	30-days	7-days	24-hours
Impact Assessment Criteria (µg/m³) – Specialised Land-Use	0.25	0.4	0.8	1.5
R1	0.16	0.18	0.26	0.53
R2	0.10	0.12	0.18	0.41
R3	0.08	0.10	0.12	0.34
R4	0.11	0.13	0.18	0.49
R5	0.10	0.13	0.20	0.50
R6	0.10	0.12	0.20	0.53
R7	0.10	0.12	0.17	0.41
R8	0.09	0.11	0.14	0.36
Max of R1-R8	*0.16*	*0.18*	*0.26*	*0.53*
Max of R1-R8 – Percentage of Impact Assessment Criteria	*66%*	*45%*	*32%*	*35%*
Model Predicted Maximum (100th Percentile) HF Cumulative Concentrations (µg/m³) at Non-Agricultural / General Land-Use Sensitive Receptors				
Averaging Period	90-days	30-days	7-days	24-hours
Impact Assessment Criteria (µg/m³) – General Land-Use	0.5	0.84	1.7	2.9
R9	0.12	0.14	0.20	0.63
R10	0.15	0.18	0.25	0.67
R11	0.17	0.21	0.34	0.73
R12	0.11	0.13	0.19	0.45
R13	0.12	0.15	0.26	0.46
R14	0.13	0.16	0.24	0.44
R15	0.14	0.17	0.24	0.50
R16	0.14	0.17	0.25	0.52
R17	0.17	0.22	0.35	0.60
R18	0.15	0.17	0.29	0.54
R19	0.11	0.12	0.17	0.44
R20	0.10	0.11	0.22	0.42
Max of R9-R20	*0.17*	*0.22*	*0.35*	*0.73*
Max of R9-R20 – Percentage of Impact Assessment Criteria	*35%*	*26%*	*21%*	*25%*

Figure 38 Predicted Cumulative HF Impacts at Identified Sensitive Receptors – Specialised Land Use and General Land Use (Source: Airlabs, 2021)

Model Predicted Maximum (100th Percentile) Cumulative Concentrations (µg/m³) at Identified Sensitive Receptors												
Pollutant	TSP	PM_{10}		$PM_{2.5}$		SO_2				NO_2 (a)		Deposited Dust
Averaging Period	Annual	24-hours	Annual	24-hours	Annual	10-minutes	1-hour	24-hours	Annual	1-hour	Annual	Annual
Impact Assessment Criteria (µg/m³)	90	50	25	25	8	712	570	228	60	246	62	4 (Max total)
R1	49.14	42.65	20.32	24.97	7.94	232.53	123.69	19.02	3.38	140.79	20.65	2.16
R2	47.90	40.88	19.40	24.44	7.74	175.09	93.14	15.75	2.73	139.58	20.40	2.04
R3	47.65	40.55	19.19	24.32	7.69	171.77	91.37	15.03	2.54	138.81	20.33	2.02
R4	48.55	41.89	19.75	24.68	7.81	227.58	121.05	16.71	2.93	140.71	20.48	2.14
R5	48.45	41.96	19.79	24.66	7.81	216.74	115.29	16.82	2.82	141.45	20.47	2.11
R6	48.25	41.67	19.67	24.59	7.79	215.26	114.50	16.82	2.78	139.88	20.46	2.09
R7	48.28	41.69	19.67	24.58	7.79	200.68	106.74	15.60	2.78	140.99	20.44	2.09
R8	47.87	41.02	19.37	24.43	7.73	195.76	104.13	15.99	2.70	136.44	20.39	2.04
R9	48.62	41.83	19.93	24.73	7.83	223.63	118.95	17.02	2.76	151.95	20.46	2.17
R10	49.29	42.54	20.35	24.90	7.91	244.27	129.93	17.57	2.88	162.32	20.53	2.28
R11	48.86	42.98	20.24	24.94	7.89	291.30	154.95	18.56	2.79	171.31	20.50	2.17
R12	47.58	40.57	19.17	24.34	7.68	206.93	110.07	15.35	2.45	147.97	20.32	2.02
R13	48.16	41.43	19.60	24.56	7.78	166.58	88.61	15.48	2.76	136.55	20.44	2.07
R14	48.20	41.50	19.63	24.58	7.79	169.65	90.24	15.73	2.78	136.55	20.45	2.07

Figure 39 Summary of Model Predicted Cumulative Concentrations – All Pollutants (Source: Airlabs, 2021)

Model Predicted Maximum (100th Percentile) Cumulative Concentrations (µg/m³) at Identified Sensitive Receptors												
Pollutant	TSP	PM_{10}		$PM_{2.5}$		SO_2				NO_2 (a)		Deposited Dust
Averaging Period	Annual	24-hours	Annual	24-hours	Annual	10-minutes	1-hour	24-hours	Annual	1-hour	Annual	Annual
Impact Assessment Criteria (µg/m³)	90	50	25	25	8	712	570	228	60	246	62	4 (Max total)
R15	48.50	42.01	19.86	24.73	7.84	174.88	93.02	17.02	2.90	133.30	20.49	2.10
R16	48.29	41.63	19.70	24.63	7.81	170.83	90.87	17.05	2.86	134.12	20.48	2.08
R17	48.87	42.53	20.18	24.86	7.91	180.88	96.21	19.07	3.09	135.19	20.56	2.14
R18	48.97	42.37	20.10	24.76	7.88	184.45	98.11	20.02	3.06	136.84	20.52	2.16
R19	47.80	40.87	19.28	24.38	7.71	171.00	90.96	17.69	2.72	133.78	20.39	2.04
R20	47.89	40.78	19.37	24.41	7.73	170.68	90.79	17.22	2.72	137.11	20.40	2.05
Max of R1-R20	*49.29*	*42.98*	*20.35*	*24.97*	*7.94*	*291.30*	*154.95*	*20.02*	*3.38*	*171.31*	*20.65*	2.28
Max of R1-R20 – Percentage of Impact Assessment Criteria	*54.8%*	*86.0%*	*81.4%*	*99.9%*	*99.3%*	*40.9%*	*27.2%*	*8.8%*	*5.6%*	*69.6%*	*33.3%*	*56.9%*

(a) To predict ground level NO_2 concentrations, it has been conservatively assumed that all the NOx released is converted to NO_2 (100% NOx to NO_2 conversion). This approach is listed in Section 8.1.1 of the Approved Methods

Figure 40 Summary of Model Predicted Cumulative Concentrations – All Pollutants (Source: Airlabs, 2021)

The following observations can be made from the cumulative concentrations presented for the other pollutants in **Figure 40** above, including:

- Cumulative concentrations of all the modelled pollutants comply with the relevant assessment criteria at all the receptors.
- With respect to gases, the 1-hour average NO_2 cumulative concentration has the highest impact when compared to the assessment criteria. The maximum 1-hour average cumulative NO_2 ground level concentration is approximately 69.6% of the assessment criteria, whereas the maximum annual average concentration predicted at receptor R1 is approximately 33% of the assessment criteria.
- Cumulative SO_2 concentrations for all averaging periods are well below their respective assessment criteria and therefore do not warrant a detailed discussion.
- SO_3 (sulfuric acid mist and sulfur trioxide expressed as SO_3) concentrations are to be

reported as incremental and therefore, have been excluded from the cumulative impact assessment.

- Cumulative model predictions of particulate matter (TSP, PM_{10} and $PM_{2.5}$) concentrations for all averaging periods are in compliance with the impact assessment criteria at all the identified sensitive receptors.
- It is noted that the maximum 24-hour average cumulative PM_{10} concentration is predicted at receptor R11, which is approximately 86% of the assessment criteria, whereas the highest annual average of all the sensitive receptors predicted at receptor R10, is approximately 81% of the assessment criteria.
- With respect to $PM_{2.5}$ impacts, it is evident from the model predictions that the highest cumulative 24-hour average $PM_{2.5}$ concentrations of all the modelled receptors is 24.97 $\mu g/m^3$ (at receptor R1) and is approaching the assessment criteria of 25 $\mu g/m^3$. A similar observation has been made with the annual average $PM_{2.5}$ cumulative concentrations, whereby the highest annual average of all the receptors is 99.3% (at receptor R1) of the assessment criteria.
- It is noted that a Level 2 contemporaneous assessment was undertaken to predict the 24-hour average PM_{10} and $PM_{2.5}$ cumulative concentrations, where the daily varying model predicted concentrations at each receptor were paired with the corresponding daily varying background concentrations, which included contribution from the following – Plant 1 (point and fugitive), Horsley Park WMF (fugitive), Plant 3 kiln stacks (point) and the ambient concentrations measured at the Prospect monitoring station.
- As the 24-hour and annual average cumulative $PM_{2.5}$ concentrations are approaching their respective assessment criteria at receptor R1, a source contribution exercise was conducted to understand the effect of Plant 2 emissions on the overall cumulative concentrations.
- For the source contribution exercise, 24-hour average $PM_{2.5}$ concentrations from each of the modelled facilities (Plant 2, Plant 1, Horsley Park WMF, Plant 3) were extracted on the day when the maximum 24-hour cumulative concentration was predicted at the worst impacted receptor, which is R1. Contributions from each facility were extracted from the model output on that day. The corresponding ambient concentration on that day was also noted. Through this exercise, contribution from the Plant 2 facility was determined and is illustrated in Figure 5 of **Appendix 6**.
- With regards to the cumulative annual average $PM_{2.5}$ concentrations, predicted concentrations from each of the modelled facilities at receptor R1 was noted along with the annual average ambient background concentrations and compared against the corresponding cumulative concentration at receptor R1 to ascertain the contribution of Plant 2.
- The findings of the source contribution exercise for receptor R1 are illustrated in Figure 5 (for the PM2.5 24-hour average) and Figure 6 (PM2.5 annual average) of **Appendix 6**. From the pie-charts provided by Airlabs, it is noted that the major contributor is the ambient background concentrations measured at the Prospect monitoring station (represented by the light blue coloured pie), followed by contribution from localised sources – which include point and fugitive emissions from Plant 1, fugitive emissions from the Horsley Park WMF and point source emissions from the two (2) kiln stacks at Plant 3 – Point 6 (Swindell) and Point 7 (Ceric). Contribution from Plant 2 operations corresponding to the modification application (point and fugitive) at the worst impacted receptor R1 is very low.

7.6.3 Greenhouse Gas Emissions

Airlabs note, that Greenhouse Gas (GHG) emissions corresponding to the proposed modifications have been quantified for the following:

- On-site combustion of diesel fuel and natural gas – scope 1 emissions; and
- On-site consumption of electricity – scope 2 emissions.

Quantities of natural gas and electricity projected to used for the increased production rate of 130 million bricks per annum at the Plant 2 site are summarised in **Table 12** below.

Table 12: Projected Estimates of Natural Gas and Electricity Consumption Corresponding to the Increased Capacity of 130 Million SBE Per Annum

Parameter	Value	Units
Natural Gas	683,728.19	GJ/annum
Electricity Usage	18,646.06	MWh/annum

Accordingly, estimated annual scope 1 and scope 2 GHG emissions, expressed in tonnes of CO_2-e (t CO_2-e / annum) for the Plant 2 site with an increased production capacity of 130 million SBE per annum are outlined in **Table 13** below.

Table 13: Annual Scope 1 and 2 GHG Emissions from the Upgraded Plant 2 Site – 130 Million SBE Per Annum

Scope	Annual Emissions (t CO_2-e / annum)	Source of Emissions
Scope 1 GHG Emissions	35,143.6	Natural gas consumption and other emissions (including calcination, scrum oil, die oil, waste oil and diesel oil)
Scope 2 GHG Emissions	15,662.7	Electricity consumption
Total	50,806.3	All sources

Airlabs note, that the contribution of GHG emissions from the Plant 2 site to the state and national emissions is considered to be relatively minimal as observed from comparing the estimated emissions with the state and national inventories. This low footprint is a result of Austral Bricks' Energy Management Policy which aims to continually improve energy efficiency and invest in plant upgrades to achieve step change efficiency improvements.

Changes that are being incorporated as part of the proposed modification to enable best practice lean manufacturing include:

- Removal of process bottlenecks by processing fired cars during the night shift with limited additional outdoor activities.
- Enabling equipment approved in SSD 9601 to be used at design capacity rather than operating at restricted levels due to employee labour hours.

By incorporating the above measures, this will improve the energy efficiency by more than 10% per unit produced with respect to gas consumption when compared to the current production and gas consumption rates.

As per information provided to Airlabs, approximately 475,637 GJ per annum of energy in the form of natural gas is expended to produce 80,000,000 SBE per annum, which approximately translates to 458.4 kcal of energy expended per kg of product manufactured. On the other hand, with the measures proposed by Austral Bricks to enable lean manufacturing, it is expected that approximately 683,728 GJ of energy in the form of natural gas would be expended to produce 130 million SBE per annum, which equates to approximately 405.52 kcal of energy consumed per kg of product manufactured, thereby representing a 12% improvement in gas consumption when compared to the current production of 80 million SBE per annum. Similarly, the measures proposed provides a 15% improvement in electricity consumption when compared to current practices.

Therefore, based on the above estimates, it is clearly observed that the measures proposed by Austral Bricks for the subject Modification Application will improve the energy efficiency by at

least 10% or more when compared to current production levels.

7.7 BUSHFIRE

The *Bushfire Risk Assessment* prepared by Blackash Bushfire Consulting (Blackash, 2021) considers the proposed modifications against the relevant provisions of the *Planning for Bushfire Protection 2019* (PBP) document (refer to **Appendix 9**).

It is noted, that Bushfire Prone Land is land that has been identified by Council, which can support a bushfire, or is subject to bushfire attack. Accordingly, the Subject Site has been mapped as containing bushfire prone land (vegetation buffer), with the surrounding land containing both Category 1 & 2 (refer to **Figure 41**).

Figure 41 Bushfire Prone Land (Source: Blackash Bushfire Consulting, 2021)

The vegetation formations (bushfire fuels) and the topography (effective slope) combine to create the bushfire threat may affect bushfire behaviour at the Site and which determine the planning and building response in relation to the PBP. Blackash note, that the land around the Site is identified as bushfire prone land and is made up of woodland vegetation communities. Small patches of remnant woodland exist within and surrounding the Site with the remainder of the area being managed / non-hazard areas. Accordingly, the vegetation within the Site and its surrounds are fragmented and highly modified.

The 'effective slope' influencing fire behaviour approaching the Site has been assessed in accordance with the methodology specified within the PBP. This is conducted by measuring the worst-case scenario slope where the vegetation occurs over a 100 m transect measured outwards from the development boundary or the existing/ proposed buildings. The slope within the Site ranges from upslope in the south and south east to 0–5 degrees downslope in the west and north (refer to **Figure 42** below).

The Bushfire Attack Level (BAL) is a means of measuring the severity of a building's or sites potential exposure to ember attack, radiant heat and direct flame contact. In the Building Code of Australia (BCA), the BAL is used as the basis for establishing the requirements for residential construction to improve protection of building elements. The BAL's to the Site from the woodland vegetation are outlined in **Figure 43** below. Furthermore, Asset Protection Zones (APZs) will be provided around the development that will include perimeter roads and hardstand areas. The buildings will be non-combustible and have APZs provided to meet Objective 3 of the PBP.

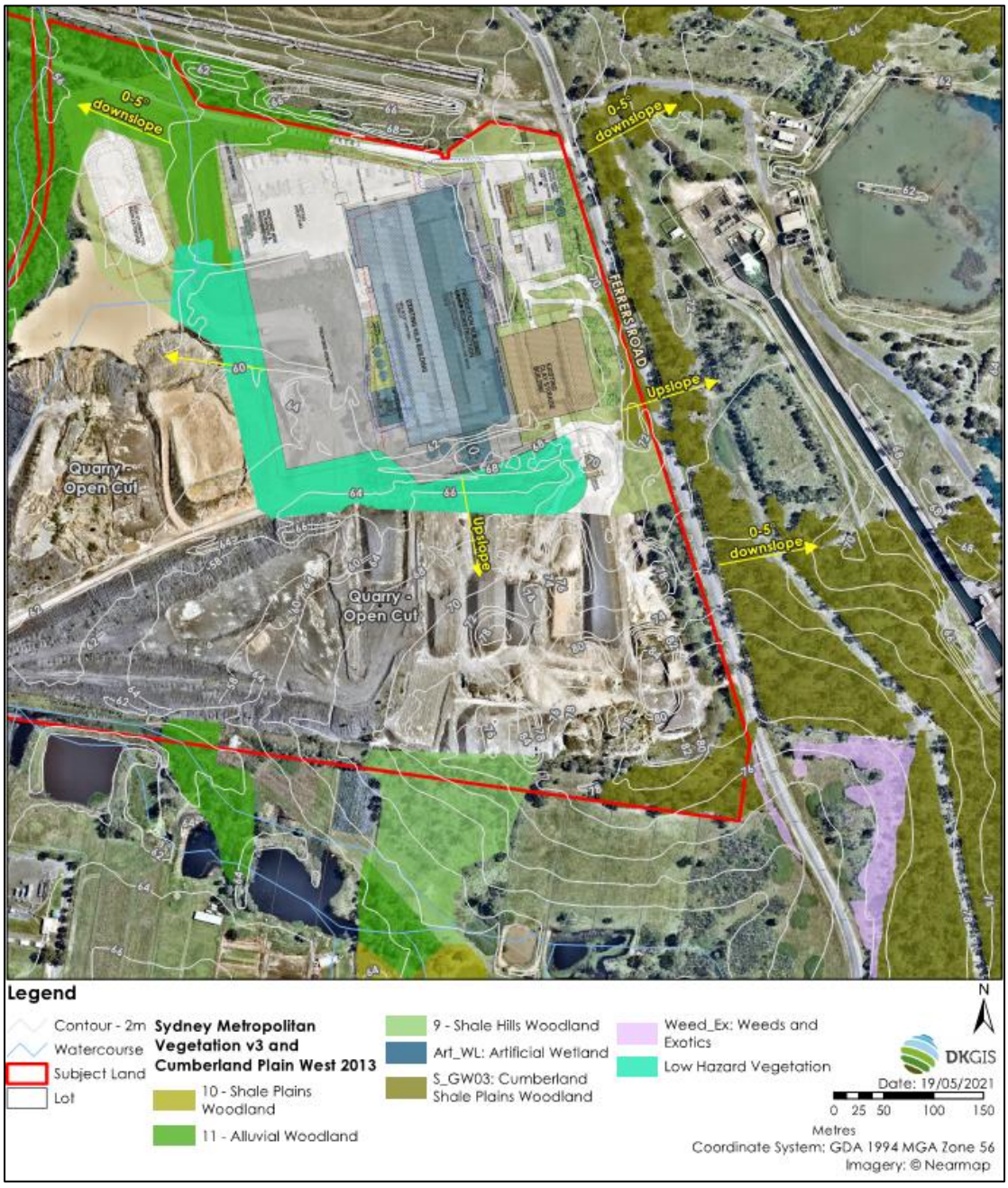

Figure 42 Vegetation and Slope (Source: Blackash Bushfire Consulting, 2021)

	KEITH VEGETATION FORMATION	BUSH FIRE ATTACK LEVEL (BAL)				
		BAL-FZ	BAL-40	BAL-29	BAL-19	BAL-12.5
		Distance (m) asset to predominant vegetation class				
ALL UPSLOPE AND FLAT LAND	Rainforest	< 8	8 -< 11	11 -< 16	16 -< 23	23 -< 100
	Forest (Shrubby and Grassy) including Coastal Swamp Forest, Pine Plantations and Sub-Alpine Woodland	< 18	18 -< 24	24 -< 33	33 -< 45	45 -< 100
	Woodland (grassy and woody)	< 9	9 -< 12	12 -< 18	18 -< 26	26 -< 100
	Forested Wetland	< 7	7 -< 10	10 -< 14	14 -< 21	21 -< 100
	Tall Heath	< 11	11 -< 15	15 -< 21	21 -< 30	30 -< 100
	Short Heath	< 7	7 -< 10	10 -< 15	15 -< 21	21 -< 100
	Arid-Shrublands (acacia and chenopod)	< 5	5 -< 7	7 -< 10	10 -< 15	15 -< 100
	Freshwater Wetlands	< 5	5 -< 6	6 -< 9	9 -< 13	13 -< 100
	Alpine Complex	< 5	5 -< 7	7 -< 10	10 -< 14	14 -< 100
	Grassland	< 8		NOT APPLICABLE		8 -< 50
0 > 5 DEGREES - DOWNSLOPE	Rainforest	< 11	11 -< 14	14 -< 21	21 -< 29	29 -< 100
	Forest (Shrubby and Grassy) including Coastal Swamp Forest, Pine Plantations and Sub-Alpine Woodland	< 22	22 -< 29	29 -< 40	40 -< 54	54 -< 100
	Woodland (grassy and woody)	< 12	12 -< 16	16 -< 23	23 -< 32	32 -< 100
	Forested Wetland	< 9	9 -< 12	12 -< 18	18 -< 26	26 -< 100
	Tall Heath	< 12	12 -< 16	16 -< 24	24 -< 33	33 -< 100
	Short Heath	< 8	8 -< 11	11 -< 16	16 -< 24	24 -< 100
	Arid-Shrublands (acacia and chenopod)	< 6	6 -< 8	8 -< 11	11 -< 17	17 -< 100
	Freshwater Wetlands	< 5	5 -< 7	7 -< 10	10 -< 15	15 -< 100
	Alpine Complex	< 6	6 -< 8	8 -< 11	11 -< 16	16 -< 100
	Grassland	< 9		NOT APPLICABLE		9 -< 50

Figure 43 Bushfire Attack Levels (Source: Blackash Bushfire Consulting, 2021)

An APZ is a buffer zone between a bush fire hazard and buildings. The APZ provides a fuel-reduced, physical separation between buildings and bush fire hazards are a key element in the suite of bush fire measures and dictate the type of construction necessary to mitigate bushfire attack. APZs relevant to the proposed modifications are shown in **Figure 44** and meet the requirements of PBP to provide a defendable space and minimises material ignition.

APZs will be managed and maintained to prevent the spread of a fire towards the building and to prevent the spread of fire onto or from the Site in accordance with Section 63 of the *Rural Fires Act 1997*. The area around the buildings is cleared and maintained to mineral earth and is not considered to be a fire hazard.

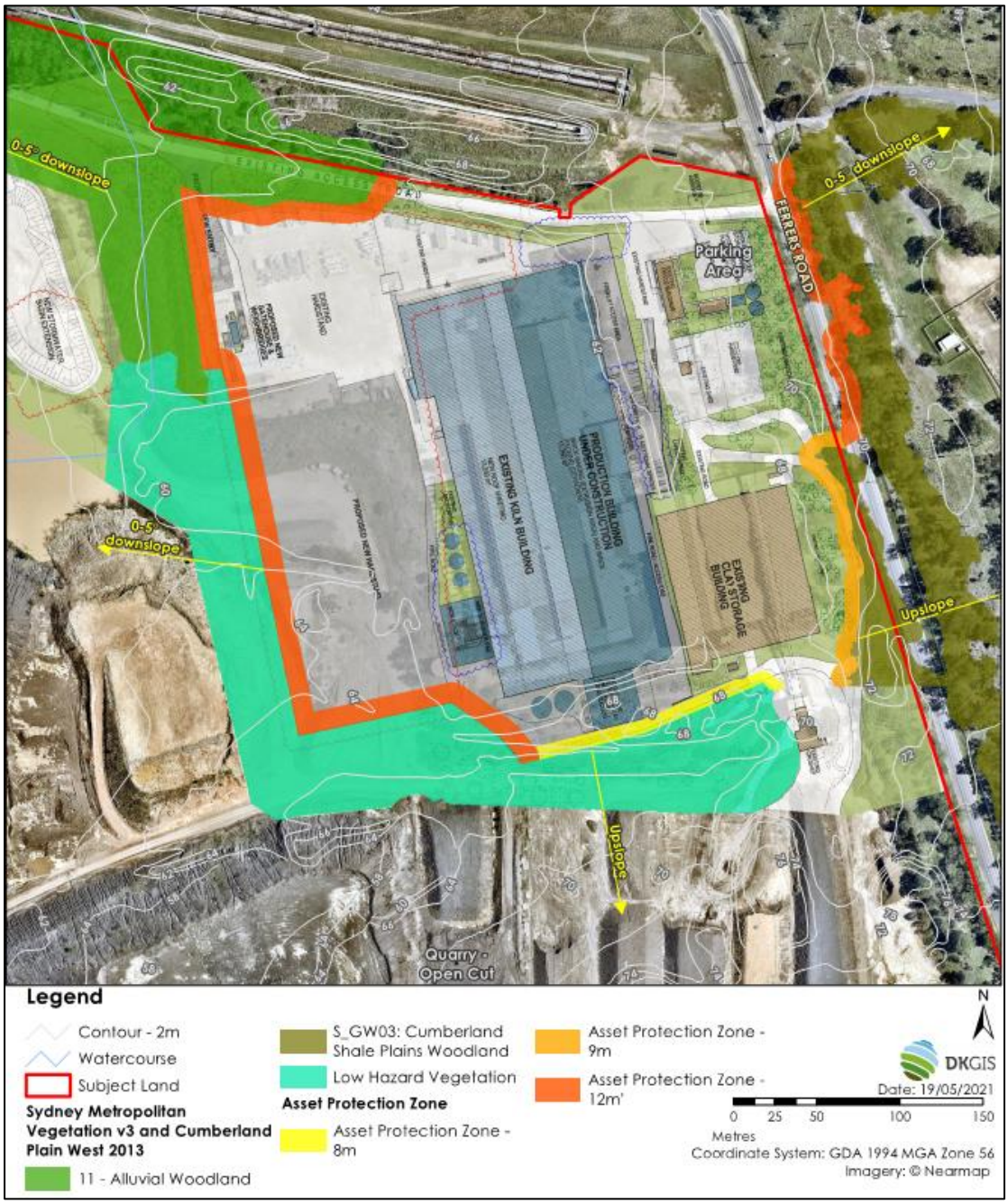

Figure 44 Asset Protection Zones (Source: Blackash Bushfire Consulting, 2021)

Blackash note that all development in bushfire prone areas need to demonstrate compliance with the aims and objectives of the PBP. **Table 14** outlined below considers these objectives in further detail.

Table 14: Compliance with Aim & Objectives of PBP		
Aim	**Meets Criteria**	**Comment**
The aim of the PBP document is to use the NSW development assessment system to provide for the protection of human life (including fire fighters) and to minimise impacts on property from	**YES**	Landscaping, defendable space, access and egress, emergency risk management and construction standards are in accordance with the requirements of the PBP, for which the aims of PBP have been achieved.

the threat of bushfire, while having due regard to development potential, onsite amenity and the protection of the environment.		
Objectives	**Meets Criteria**	**Comment**
Afford occupants of any building adequate protection from exposure to a bushfire.	**YES**	The development provides opportunity for all occupants to be shielded from any external bushfire. Heavy plant and machinery will be present at the Site that can be used in firefighting operations within the Site (spot fires and grass fire) that provides on-site response to limit the development and spread of spot fires. Construction material will be non-combustible to ensure durability that will exceed AS3959 requirements.
Provide for defendable space to be located around buildings.	**YES**	Defendable space is provided on all sides of the proposed modifications.
Provide appropriate separation between a hazard and buildings, which, in combination with other measures, prevent direct flame contact and material ignition.	**YES**	The structures are separated from the narrow remnant areas of vegetation and provide APZs to BAL 40. The structures are non-combustible.
Ensure that safe operational access and egress for emergency service personnel and occupants is available.	**YES**	The Site has direct access to public roads, and access and egress for emergency vehicles and evacuation is adequate. A perimeter road is provided around the buildings. The development provides for the movement of heavy articulated trucks about the site with passing areas provided for fire trucks if needed.
Provide for ongoing management and maintenance of bushfire protection measures, including fuel loads, in the asset protection zone.	**YES**	The site will be managed as an APZ and will be extensively cleared to mineral earth.
Ensure that utility services are adequate to meet the needs of firefighters (and others assisting in bushfire fighting).	**YES**	Utility services are adequate to meet the needs of firefighters (and others assisting in bushfire fighting).

Blackash have made the following recommendation in relation to bushfire planning for the proposed modifications:

- Asset Protection Zones: At the commencement of building works and in perpetuity, an Asset Protection Zone shall be established and maintained as per Figure 7 of the Blackash Bushfire Hazard Assessment Report. The APZ shall be established and maintained as an inner protection area as outlined within Planning for Bushfire Protection 2019 and the NSW RFS document 'Standards for Asset Protection Zones'.

Accordingly, Blackash conclude that the proposed modifications are capable of complying with the PBP.

7.8 BIODIVERSITY

As mentioned in **Section 5.3** above, the proposed modifications will directly impact on approximately 0.462 ha of native vegetaion (commensurate with three (3) PCTs) and approximately 0.955 ha of exotic vegetation, as illustrated in **Figure 18** above.

It is important to note, that the proposed modifications would result in a direct and permanent impact on 0.462 ha of native vegetation. The following range of mitigation and management measures shall be implemented to avoid and minimise any unintentional direct impacts on the Subject Site's retained biodiversity values, including:

- Vegetation and habitat clearing:
  - Pre-clearance;
  - Clearing; and
  - Post-clearing.
- Adaptive management for uncertain impacts – not applicable to the proposed modifications.

Furthermore, PCT 849 is identified in the Threatened Biodiversity Data Collection (TBDC) as a Serious and Irreversible Impact (SAII) entity and has been assessed in accordance with the criteria set out in subsection 9.1.1 of the BAM. Accordingly, the assessment undertaken by Ecologique found that the cumulative impacts (as a result of the impacts approved under SSD 9601 and as modified under the subject proposal) will not contribute to further irreversible impacts on PCT 849, on basis that:

- Within the Subject Site, PCT 849 is either of planted or derived origins, e.g. PCT 849 constituent species either planted or that have colonised constructed bund walls. The latter environment is not commensurate with habitat for PCT 849 and comprises hostile subsoils and heavily weed infested ground layer;
- PCT 849 within the Subject Site does not contribute to the existing mapped and known extent of the SAII; and
- PCT 849 within the Subject Site (and that which will be impacted as a result of the SSD 9601 and the proposed modifications) is highly degraded, and is located within an active operational plant and quarry, and isolated from larger and better condition areas of PCT 849.

Ecologique confirm, that the BDAR has determined that eight (8) ecosystem credits must be retired to offset the direct impacts on the three (3) allocated PCTs within the Subject Site. Further, there are no species credit species which have been identified as requiring an offset and no prescribed or uncertain impacts have been identified.

Accordingly, the proposed modifications would not result in additional biodiversity impacts at the Site, with respect to SSD 9601, which would require further consideration under the BC Act and corresponding BC Regulation.

7.9 HERITAGE

All Aboriginal Cultural Heritage and Non-Aboriginal (Historic) Heritage has been previously considered across the Site under SSD 9601. Any prior recommendations would continue to be implemented across the Site as a result of the proposed modifications, including the implementation of an unexpected finds protocol.

7.10 WASTE

The *Waste Management Plan* prepared by LG Consultv considers the anticipated waste streams and estimated volumes associated with the proposed modifications (refer to **Appendix 8**).

The estimated demolition waste quantities are summarised in **Table 15** below.

Table 15: Estimated Demolition Waste

Type of Waste Generated	Reuse	Recycling	Disposal	Method of on-site reuse, contractor and recycling outlet and / or waste depot to be used
	Estimate Volume (m^3) or Weight (t)	Estimate Volume (m^3) or Weight (t)	Estimate Volume (m^3) or Weight (t)	
Bricks / Pavers	139 m^3 (kilns: bricks)			
Metal		55 m^3 (steel)		Recycling Management Centre
Concrete		1,000 m^3 (steel)		Recycling Management Centre
Hazardous / Special Waste			94 m^3 (asbestos)	Waste Management Centre
Total	**139 m^3**	**1,055 m^3**	**94 m^3**	

The estimated construction waste quantities are summarised in **Table 16** below.

Table 16: Estimated Construction Waste

Type of Waste Generated	Reuse	Recycling	Disposal	Method of on-site reuse, contractor and recycling outlet and / or waste depot to be used
	Estimate Volume (m^3) or Weight (t)	Estimate Volume (m^3) or Weight (t)	Estimate Volume (m^3) or Weight (t)	
Excavation Material	93,000 m^3 (mainly clay)			
Timber		2 m^3 (offcuts)		Recycling Management Centre
Concrete		100 m^3		Recycling Management Centre
Bricks / Pavers	2 m^3			
Tiles			2 m^3	Waste Management Centre
Metal		4 m^3 (offcuts)		Recycling Management Centre
Fixtures and Fittings			2 m^3	Waste Management Centre
Packaging (used pallets,		2 m^3		Recycling Management

pallet wrap)				Centre
Containers (cans, plastic, glass)			2 m^3	Waste Management Centre
Paper / Cardboard		4 m^3		Recycling Management Centre
Total	**93,002 m^3**	**114 m^3**	**6 m^3**	

The estimated weekly operational waste quantities are summarised in **Table 17** below.

Table 17: Estimated Weekly Operational Waste			
Area Description	**Waste (tonnes)**	**Conversion Factor**	**Total Waste (m^3)**
Garbage Waste	2	0.15	15
Cardboard	1	0.13	8
Paper	1	0.10	5
Plastic	2	0.156	13
Pallets	15	0.156	96
Total	21	-	137

The complete WMP is located in **Appendix 8** of this Modification Application submission.

7.11 HAZARDS AND RISKS

As the proposed modifications involve upgrade works only and no changes to the processes used in the actual brickmaking process, it is considered that the proposed modifications would not result in any additional types or quantities of dangerous goods being stored at the Site as previously assessed and approved under SSD 9601.

7.12 UTILITIES

The proposed modifications would not create the need for additional utility services to be provided at the Site.

7.13 BUILDING CODE OF AUSTRALIA AND FIRE ENGINEERING

There are no built form components proposed under the subject Modification Application requiring assessment against the BCA.

7.14 CUMULATIVE IMPACTS

No foreseeable cumulative impacts would be anticipated as a result of the proposed modifications sought. Rather, the proposed modifications would remain substantially the same development with respect to what was previously approved under SSD 9601 within an area which is commensurate with the intended development of the Site and its surrounds within the WSP.

7.15 SUITABILITY OF THE SITE FOR DEVELOPMENT

The proposed modifications are considered minor in nature and thus remain generally consistent with the relevant standards and controls listed under SEPP (WSP) 2009. Furthermore, the outcomes of the proposed modifications would remain generally consistent with the original approval.

7.16 PUBLIC INTEREST

The proposed modifications are consistent with the Site being used for its intended manufacturing land use purposes, whilst enhancing the potential yield for employment-generating opportunities across the Site and improving the overall operational efficiencies; thereby, enabling the Site to meet the strategic land use objectives in the immediate locality within the WSP, as well as aligning with the relevant Strategic Plans including *A Metropolis of Three Cities,* the *Western City District Plan*, SEPP (WSP) 2009 and the WSP POM.

Additionally, the Site is suitably located geographically with respect to its close proximity to the wider regional road network and residential areas, which maximise the overall strategic land use factors.

PART H CONCLUSION

The subject Modification Application has been prepared taking into consideration the following key matters:

- The development history of the Site;
- Previously approved development in relation to SSD 9601;
- The context of the Site and locality;
- The relevant heads of consideration under Section 4.55(2) of the EP&A Act;
- The aims, objectives and provisions of the relevant statutory and non-statutory planning instruments; and
- The Pre-Scoping planning advice received from the NSW DPIE regarding the proposed modifications sought.

The proposed modifications to Development Consent SSD 9601 are considered to be of minor environmental impact, given the extent of changes proposed to the approved development. The development as proposed to be modified would remain substantially the same as the original development, and it is therefore considered that the proposed modifications be supported on the basis that:

- There are negligible visual amenity impacts associated with the proposed amendments.
- The construction and operation of a Brick Manufacturing Facility is generally in accordance with the built form outcomes envisaged for the Site, approved under SSD 9601.
- The modifications proposed to Appendix 1 of SSD 9601 are considered minor in nature.
- The potential traffic impacts are considered negligible as confirmed by Ason Group in relation to the proposed modifications (refer to **Appendix 4**).
- The Site will continue to achieve the relevant stormwater pollutant reduction targets across the Site, including a supportable pre- and post-development scenario with due consideration afforded towards flooding across the Site (refer to **Appendix 3**).
- The potential noise impacts will continue to achieve compliance with the relevant noise emission criteria applicable to the Site in accordance with the *Noise Policy for Industry* document (refer to **Appendix 5**).
- The potential air quality and greenhouse gas emissions as a result of the proposed modifications would be considered to be compliant, consistent with SSD 9601, noting the air quality emissions criteria would not be exceeded as a result of the proposal (refer to **Appendix 6**).

Furthermore, the proposed modifications would have no undue impact on the public interest, as it would allow the Site to continue to meet the strategic land use objectives of *A Metropolis of Three Cities*, the *Western City District Plan*; SEPP (WSP) 2009; and the WSP POM, whilst fulfilling the Site's employment-generating potential, pursuant to the Site's strategic land use objectives under the WSP.

It is therefore recommended, that the NSW DPIE's favourable determination be given in support of the proposed modifications sought pursuant to SSD 9601.

Appendices