Construction Environmental Management Plan

Austral Bricks Plant 2 Upgrade, Horsley Park

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This document was prepared for the sole use of the Brickworks Pty Limited, the New South Wales Department of Planning Industry and Environment, the Environmental Protection Authority and the private individuals provided with a copy of the report by the Brickworks. These are the only intended beneficiaries of our work. No other party should rely on the information contained herein without the prior written consent of the Brickworks Pty Limited.

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1. Introduction

Claus Environmental Engineering has been engaged by Brickworks to prepare a Construction Environmental Management Plan (CEMP) for the upgrade of Plant 2 at Horsley Park.

1.1 Project Description

A scope of the project as modified by Austral Brick Project Management is as follows.

1. Demolition of redundant plant, equipment & building areas in preparation for new construction works.
2. Existing building to be redevelop, including the construction of an additional building area to accommodate the new production process equipment, amenities, office area's, including plant maintenance areas.
3. Construction of 1 x new kiln & 3 x dryer assemblies, including new kiln cars & plant movement & handling systems - same capacity as existing kiln One new kiln to replace existing 2 kilns. 80 million bricks per annum capacity remains unchanged
4. Construction of upgraded & expanded site access, electrical upgrades, including new fire roads, stormwater drainage infrastructure & the construction of a storm water detention basin.
5. Construction activities for relocated & new clay infeed handling equipment & storage bins.
6. Installation of new scrubber assembly to be connected to the new kiln assembly.

Figure 1 The Site – Aerial View (SIXMaps, 2018)

Figure 1-1 – Figure 1 from the EIS showing an aerial view of the site from SIXMaps

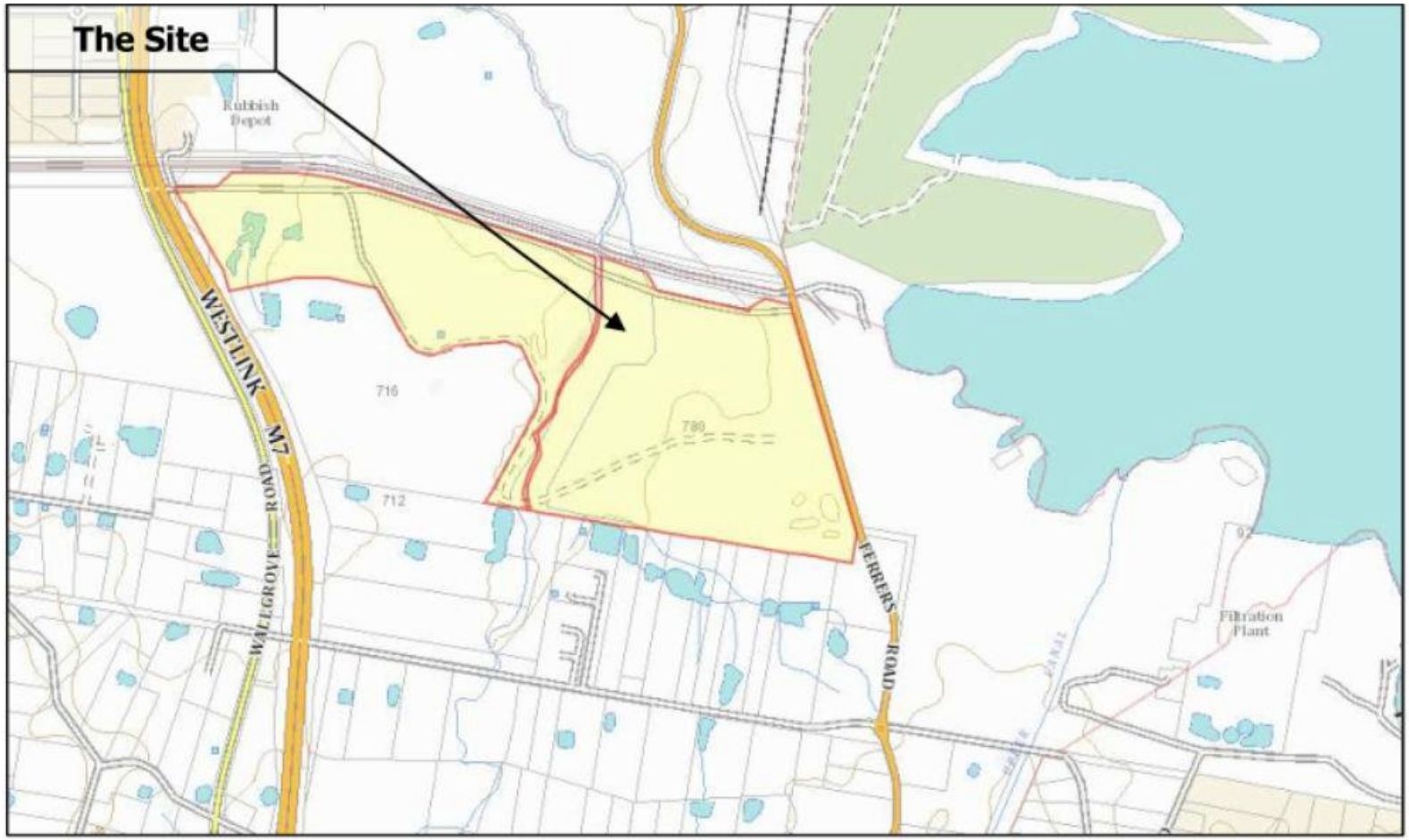

Figure 2 The Site – Cadastral View (SIXMaps, 2018)

Figure 1-2 – Figure 2 from the EIS showing a Cadastral view of the site from SIXMaps

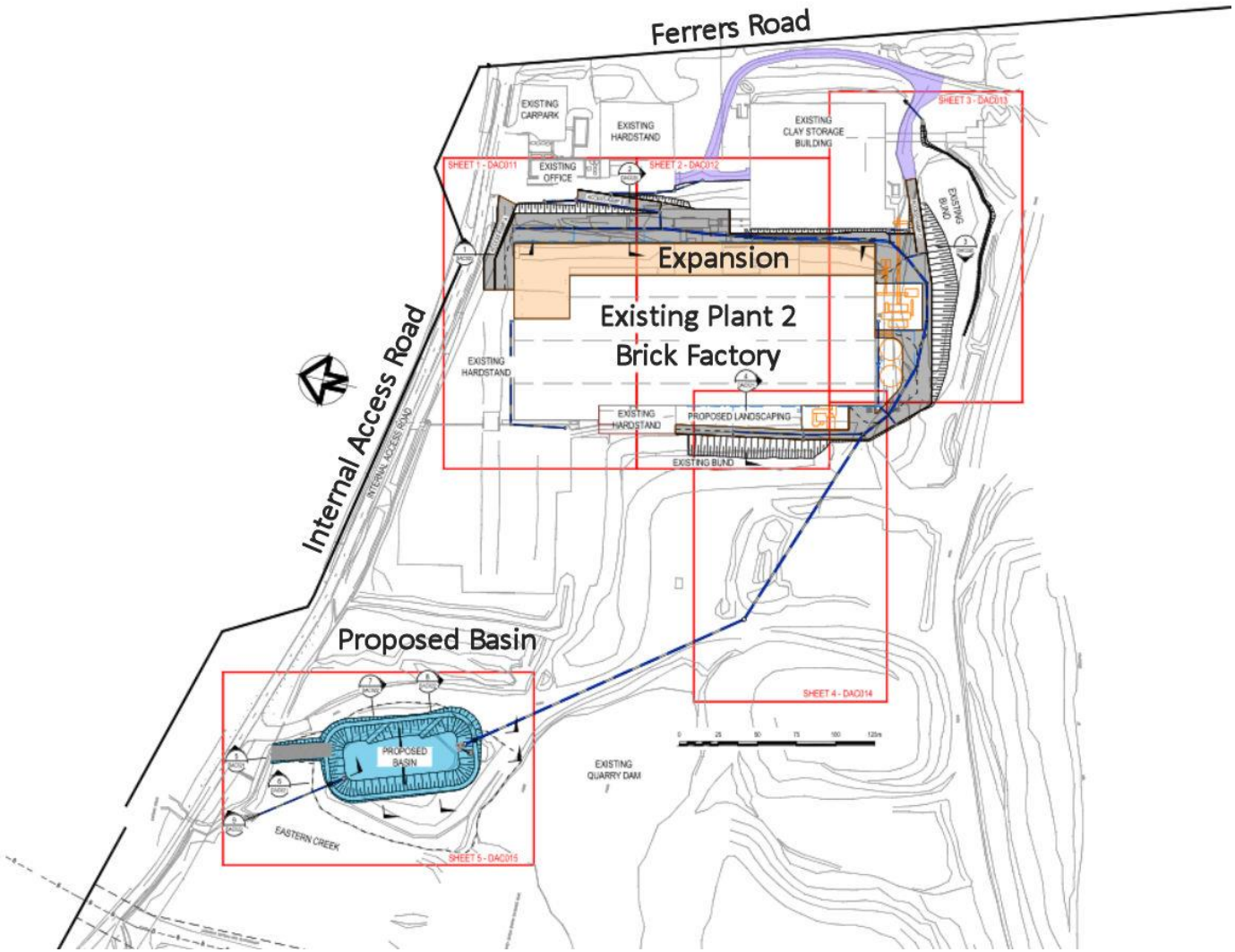

Figure 1-3 – General Arrangement Drawing from AT&L App3 of EIS Drawing Number DAC004-Issue D

1.2 Proposed Staging

Austral Bricks must continue to operate Plants 1 and 3 during the construction of the Plant 2 Upgrades. Austral Bricks parent company, Brickworks, operates several other businesses which also must continue during the Plant 2 construction work. Austral Bricks anticipates scenarios where the demolition and construction may require staged approach to allow the use of some parts of the Plant 2 site.

Austral Brick will be in contact with the A/Senior Environmental Assessment Officer by phone and/or email in the lead up to commencement of construction and the change of stages. The A/Senior Environmental Assessment Officer will also be emailed regular Environmental Status reports as described in section 1.3

The current staging plan is defined in the following sections.

1.2.1 Stage 1A

The preliminary timing for Stage 1A is estimated to be 16 to 20 weeks. Assuming approval of the requirements of the consent conditions the construction and demolition would run from July to December 2020. A summary of some of the key elements of the Stage 1A construction are shown in the dot points below and many of the activities of Stage 1A are shown in **Table 1-4**.

- Detention Basin Construction
- Masonry Utilize Yard – Use rear yard access only
- Install Temporary Fencing 25 metres off Factory Wall for External Access
- Internal Demolition – Kiln and Dryers.
- Demolish East Side of Factory and Outbuildings
- Demolish Clay Storage Bin Area
- "HOLD" – Infrastructure Works and Front Retaining Wall Works

The various reports and plans to be submitted prior to Stage 1A are as follows:

1. Stage 1A CEMP with associated Stage 1A Erosion Sedimentation Control Plan and Traffic Plan info
2. Stage 1A Erosion Sedimentation Control Plan from AT&L
3. Stage 1A Construction Traffic Management Plan from Ason Group
4. Construction and Demolition Waste Management Plan – Complete
5. Community Consultation and Complaints Handling – Complete
6. Air Quality Management Plan – Complete
7. Noise Management Plan – Complete
8. Stormwater Drainage Plan – Complete
9. Water Quality Management Plan – Complete
10. Unexpected Contamination Procedure – Complete
11. Aboriginal Heritage Unexpected Finds Protocol – Complete
12. Incident Notification and Reporting Procedure - Complete

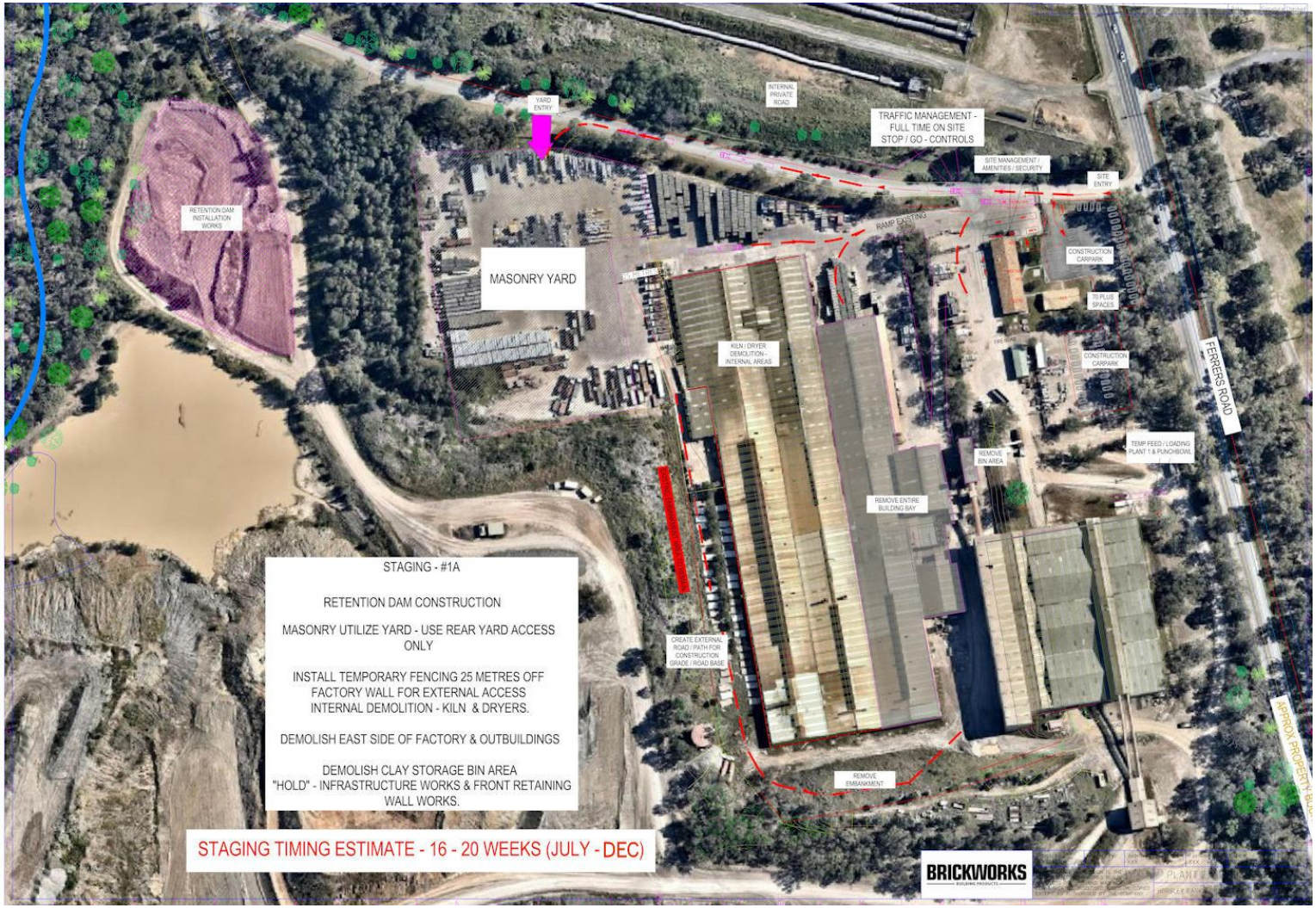

Figure 1-4 – Proposed Stage 1A plan

1.2.2 Preliminary Stage 1B Plan

The preliminary timing for Stage 1B is September 2020 to March 2021. It is likely that there will be some overlap with Stage 1A tasks. A summary of some of the key elements of the Stage 1B construction are shown in the dot points below and many of the activities of Stage 1B are shown in **Figure 1-5**.

- Masonry Utilize Yard – Use Rear Yard Access Only
- Complete Civil Works along East side for New Building Bay Area
- Install New Retaining Walls along Pan Room West Wall Areas
- Complete Civil Works – Storm water run from Basin to Factory and Local Factory External Areas
- Complete New Cladding to West Wall on Pan Room
- Complete Make Good Works Scope on Existing Building Area.
- Erect New Building Extension – Part Construction.

Note – Limit Number of Trades on site. Overlapping of Work Fronts to be kept to a minimum

The various reports and plans to be submitted prior to Stage 1B are as follows:

1. Stage 1B CEMP with associated Stage 1B Erosion Sedimentation Control Plan and Traffic Plan info
2. Stage 1B Erosion Sedimentation Control Plan from AT&L
3. Complete Construction Traffic Management Plan from Ason Group
4. All other completed plans previously approved, so not needed to resubmit

The submission of a staged CEMP will also give the opportunity for Austral Brick to review the elements of the previous submissions and update the CEMP, based on guidance from DPIE and EPA, as well as experience from the first parts of the project.

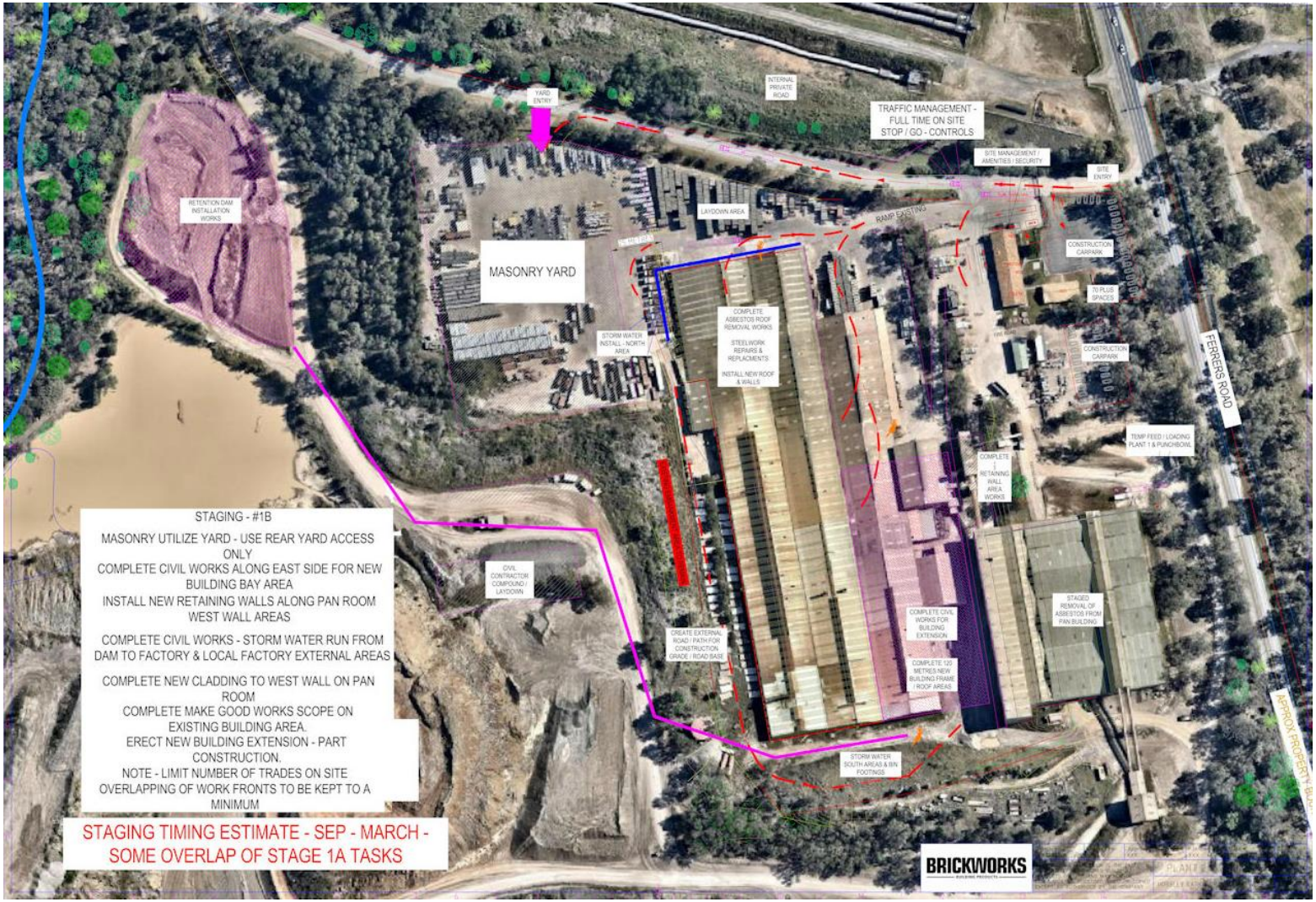

Figure 1-5 – Proposed Stage 1B plan

1.2.3 Preliminary Stage 2 Plan

The preliminary timing for Stage 2 is February 2021 to May 2021. It is likely that there will be some overlap with Stage 1B tasks. A summary of some of the key elements of the Stage 2 construction are shown in the dot points below and many of the activities of Stage 2 are shown in **Figure 1-6**.

- Masonry Utilize Yard – Use Rear Yard Access Only – Relocate to gain Additional Space to Factory Area
- Close off front area for Retaining Wall & Stormwater works – North / West Area.
- Complete New Access Ramp
- Install remaining Building Extension Area Leave North and Front Walls off for Access
- Extruder Footings and Bin area Civil works
- Accelerate Pan Building – Asbestos Removal and New Cladding Works - Staged

The reports and plans to be submitted prior to Stage 2 are as follows:

1. Stage 2 CEMP with associated Stage 2 Erosion Sedimentation Control Plan info
2. Stage 2 Erosion Sedimentation Control Plan from AT&L
3. All other completed plans previously approved so not needed to resubmit

The submission of a staged CEMP will also give the opportunity for Austral Brick to review the elements of the previous submissions and update the CEMP, based on guidance from DPIE and EPA, as well as experience from the first parts of the project.

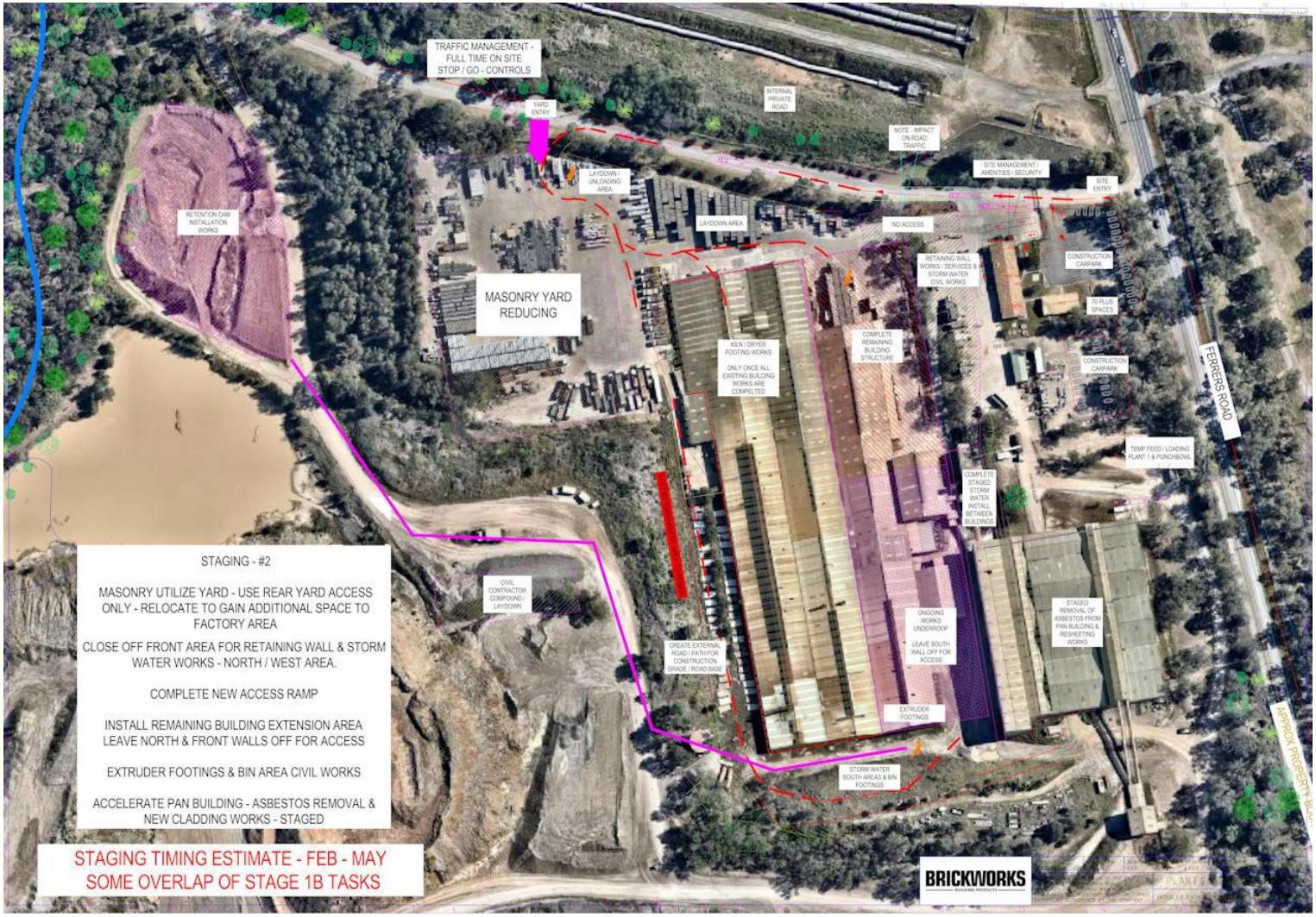

Figure 1-6 – Proposed Stage 2 plan

1.3 Construction Site Monitoring and Reporting

Austral Brick intends to work with DPIE and EPA throughout the project on the best way to provide adequate information on the progress and environmental performance of the project. The cornerstone of the reporting procedure will be the **Horsley Park Plant 2 Upgrade Environmental Status Report** (**Figure 1-4**). It will be completed by the Project Manager or his/her direct appointee. Austral Brick proposes to send the appropriate DPIE representative a Status Report on a minimum monthly basis (and more frequently if special circumstances arise) to keep DPIE informed on the environmental management of the site.

The Project Manager will be assisted by Austral Brick's Environmental Manager and Project Support Engineer. Each have several years' experience on the Horsley Park site and will be assisted by Austral Brick and contractor staff. The Project Manager and his/her team will be available to respond to environmental queries from DPIE and EPA throughout the project.

Figure 1-4 - Horsley Park Plant 2 Upgrade Environmental Status Report

SITE: Horsley Park Plant 2 **Person(s) inspecting:**

Date: Person(s) consulted:

INSPECTION ITEM	REFERENCE (and inspection details)	(Yes-No-N/A)	Issues or comments (Must complete if changes have occurred or non-compliance issues- Hazard must be opened for any issue or incident *see Hazard Reporting and Risk Control ~ SHE-MSP-All-06.001*	Action Taken Eg. Hazard form (No.) OR Toolbox meeting (date)
GENERAL	Current progress of Construction / Demolition work			
	Have any changes occurred to Submitted Plans?			
	If so, should new checks be added or existing checks modified?			
	Any checks for new licence/permit/approval conditions be added to this list?			
	Has there been any Increased risk of hazard / fire?			
	Traffic Management – Is Traffic moving smoothly as designed?			
DISPOSAL	**SHE-MSP-Env-07.004**			
	Have any hazardous substances been correctly disposed of?			
	Have waste transport certificates been completed and retained on file?			
	Have any materials containing Asbestos been disturbed?			
	Has it been handled according to Australian Standards?			
	Has any Asbestos been disposed off?			
	Has it been disposed of to standard and have waste transport certificates been completed and retained on file?			
POLLUTION	**SHE-MSP-Env-07.332**			
	Is all pollution control equipment operating correctly?			
	Is maintenance, emptying or replenishment required?			
	Are any additional pollution controls required?			
	SHE-MSP-Env-07.342			
	Are spill kits appropriately stocked and located?			
	Are hydrocarbons stored correctly in bunds (or on bunded pallets)?			
	Have all lids, caps, and bungs been refitted after use?			
	Are empty hydrocarbon containers stored so as to not fill-up with rain?			
WASTE	**SHE-MSP-Env-07.334**			
	Are initiatives to reduce waste functioning successfully?			
	Is any excess waste being generated?			
	Is waste being separated for re-use or recycling where possible?			
	Is re-usable or recyclable waste being stored appropriately?			
	Are all bins, skips, bunkers and stockpiles clearly labelled?			
	Is waste for disposal stored correctly and removed regularly?			
WATER	**SHE-MSP-Env-07.335**			
	Have there been significant storms or rainfall events?			
	Is stormwater flowing as designed?			
	Are all drains and grates clear of blockages?			
	Is surface water being correctly separated, directed and/or contained?			
	Are all Erosion Sedimentation Controls in place& operating as required?			
	Are additional sediment or other controls required?			
	Does pond, sump or surface water require treatment prior to discharge?			
	Are preventative measures being implemented to avoid poor water quality?			
	Have any controlled or uncontrolled discharges been monitored?			
	Are all waste treatment or sewage (porta-loo) systems operating correctly?			
	SHE-MSP-Env-10.335			
	Have water samples been collected as required?			
	Are enough empty sample bottles on hand for prolonged rainfall?			

INSPECTION ITEM	**REFERENCE** (and inspection details)	(Yes-No-N/A)	Issues or comments (Must complete if changes have occurred or non-compliance issues- Hazard must be opened for any issue or incident *see Hazard Reporting and Risk Control ~ SHE-MSP-All-06.001*	Action Taken **Eg.** Hazard form (No.) **OR** Toolbox meeting (date)
LAND	**SHE-MSP-Env-07.336**			
	Has any Unexpected Contamination been discovered on site?			
	If yes Has the contamination procedure been followed?			
	Has any Aboriginal Heritage been discovered?			
	If yes Has the Aboriginal Heritage finds procedure been followed?			
	Is landscaping, re-vegetation or rehabilitation recommended?			
	Do fences and gates prevent vehicle/person/animal access as appropriate?			
AIR	**SHE-MSP-Env-07.321**			
	Are existing dust suppression controls (sweeping/watercart/etc) effective?			
	Are raw materials stored to avoid becoming spilt and/or windblown?			
	Are material transfer processes successful in minimising dust and spillage?			
	SHE-MSP-All-10.021			
	Are meteorological data & significant dust-creating activities recorded?			
	Is any dust potentially escaping off-site?			
NOISE	**SHE-MSP-Env-07.322**			
	Any work outside proscribed operating hours?			
	SHE-MSP-All-10.022			
	Are there are any potential off-site noise impacts?			
BULK LIQUID STORAGE	**SHE-MSP-Env-07.337**			
	Are all liquid containers stored appropriately in suitable locations?			
	Are all above-ground tanks double-skinned or adequately bunded?			
	Are full IBC's stored in appropriate locations away from drains/waterways?			
	Are damaged, faulty or dis-used IBC's being promptly removed from site?			
COMPLAINTS & REPORTS	**SHE-MSP-Env-03.331**			
	Have any complaints been recorded and investigated?			
	Have any incidents occurred?			
	Have any incidents been reported to regulators as required?			

1.4 Contingency Plans and Environmental Improvement

1.4.1 Monitoring Effectiveness of Environmental Management Measures

DPIE consent condition C1 (d) (ii) states:

C1 Management plans required under this consent must be prepared in accordance with relevant guidelines, and include:

(d) a program to monitor and report on the:

(ii) effectiveness of the management measures set out pursuant to paragraph (c) above

The Environmental Status Report includes several features that allow for the assessment of the effectiveness of the environmental management measures that will be put in place. These include:

- Has there been any Increased risk of hazard / fire?
- Is Traffic moving smoothly as designed?
- Has asbestos been disposed of to standard
- Is all pollution control equipment operating correctly?
- Are any additional pollution controls required?
- Are initiatives to reduce waste functioning successfully?
- Is waste for disposal stored correctly and removed regularly?
- Is stormwater flowing as designed?
- Are all Erosion and Sedimentation Controls in place and operating as required?
- Are all waste treatment or sewage (porta-loo) systems operating correctly?
- Has any Unexpected Contamination been discovered on site?
- Do fences and gates prevent vehicle/person/animal access as appropriate?
- Are existing dust suppression controls (sweeping/watercart/etc) effective?
- Is any dust potentially escaping off-site?
- Are there are any potential off-site noise impacts?
- Are all liquid containers stored appropriately in suitable locations?

If the answer to any of these and many other questions, as part of the Environmental status report, indicates a problem, then the Project Manager (currently Jeremy Foster) will be notified and he will take action to rectify the problem. For example, if the answer to the question: Are all Erosion and Sedimentation Controls in place and operating as required? Is NO, then the Hazard Reporting and Risk Control Procedure (Austral Bricks / Brickworks procedure ID: SHE-MSP-All-06.001) will be followed until the issue is resolved to the Project Managers satisfaction.

While this is being done the report will be submitted to DPIE, so if there are any questions, they can be directed to the Austral Bricks Project Manager.

1.4.2 Contingency Planning

DPIE consent condition C1 (e) states:

C1 Management plans required under this consent must be prepared in accordance with relevant guidelines, and include:

(e) a contingency plan to manage any unpredicted impacts and their consequences, and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;

Austral Bricks Contingency Planning is based on the regular and consistent involvement of the Project Manager, Environmental Manager and Project Support Engineer. The Project Manager (currently Jeremy Foster) has worked on many Austral Bricks projects in several locations for many years. Austral Bricks employs an Environmental Manager (currently Cassandra Steppacher) with several years of experience on the Horsley Park site and a Project Support Engineer (currently Mal Mellows) who has managed factories on the Horsley Park site and who has held many other positions on the Horsley Park and other sites including managing construction and demolition projects.

It is unlikely that one formulaic Contingency Plan Procedure could accommodate all "unpredicted impacts and their consequences" and then ensure that any ongoing impacts were reduced to acceptable levels. The first part of Austral Bricks Contingency Planning is to have the core team involved from the start in the preparation of the CEMP and then through the assessment of the environmental management of the project with the environmental status report. As described in the previous section the environmental status report includes a feedback loop with the Hazard Reporting and Risk Control Procedure, that is initiated whenever something in the status report is not as it should be. This is not always serious issue, but it is an effective way of highlighting potential trouble spots that may arise.

It is worth noting that the Purpose of the Hazard Reporting and Risk control procedure post failure is: *To facilitate failed day-to-day processes being identified, investigated or assessed and rectified to prevent their recurrence*.

The second part of the preparation for any "unpredicted impacts and their consequences" is to be open to comments from DPIE, EPA and Fairfield Council. Austral Bricks is committed to working with DPIE, EPA and Fairfield Council throughout the project, with the understanding that many sets of eyes reviewing the environmental performance will be more effective than just one.

1.4.3 Improvement over time

DPIE consent condition C1 (f) states:

C1 Management plans required under this consent must be prepared in accordance with relevant guidelines, and include:

(f) a program to investigate and implement ways to improve the environmental performance of the development over time;

As stated in the previous sections Austral Bricks intends to use the environmental status report as the method for investigating and implementing ways to improve environmental performance over time. Each time that there is an entry in the environmental status report, that is a record of how the environmental controls are performing. It is expected that in most cases the entries will show that the performance is very good. When questions such as:

- Are any drains or grates blocked?
- Is any dust potentially escaping off-site?
- Are there are any potential off-site noise impacts?

Are answered NO, month after month, this is an indication that the procedures that have been put in place are working effectively.

If there are questions on the environmental status report that are indicating, even once, that there may be a problem with the environmental controls, that will initiate action by the project manager to resolve the issue raised in the Hazard Reporting and Risk Control Procedure. The Project Manager can call on the Environmental Manager, the Project Support Engineer and several others to offer guidance on the best resolution of the issue. In some cases this may result in a slight modification or even a complete change to the management procedures that the project started off with. In some cases the conditions on the project may indicate that the even the previous procedures that have been largely successful, must change. It is anticipated that as more and more of the excavated area is covered with hardstand and vegetation, changes may be required in how the erosion and sedimentation controls are situated. By using this technique the Project Manager can develop the best set of procedures that suit the project under each set of circumstances and through the experience of understanding what is working best at each location.

1.4.4 Protocol for failure to comply with statutory requirements

DPIE consent condition C1 (g) (iii) states:

C1 Management plans required under this consent must be prepared in accordance with relevant guidelines, and include:

(g) a protocol for managing and reporting any:

(iii) failure to comply with statutory requirements; and

As described in previous sections Austral Brick plans to manage any failure to comply with statutory requirements using the Hazard Reporting and Risk Control Procedure. Anytime there is any breach of environmental procedures or failure of some kind of environmental controls, even if it is not a statutory failure, any worker on site is required to report it to their supervisor, who is required to report it to the Project Manager. When the Project Manager receives the report and determines that it is serious enough to justify using the Hazard Reporting and Risk Control Procedure, he/she will gather the necessary information, receive the opinions of his/her senior management team and then follow the procedures.

Austral Brick protocol for reporting any failure to comply with statutory requirements will be:

1) Ensure that all personnel are safe
2) Ensure that there is no longer any significant risk to the environment and that any required clean-up has been successfully completed.
3) Contact EPA on 131-555 if the statutory failure relates to the EPA Licence or EPA Legislation.
4) Austral Bricks goal is to inform the Planning Secretary on the first day of the incident on compliance@planning.nsw.gov.au, but always within seven days after becoming aware of any statutory failure or non-compliance.
5) Initiate the Hazard Reporting and Risk Control Procedure
6) Report further to EPA and the Planning Secretary if there is further significant information that may be of value to EPA and DPIE.

2. Conditions of Consent

There are two sets of Conditions that this CEMP must meet in order to gain approval from the Secretary of the Department of Planning, Industry and Environment (DPIE). The first is the DPIE conditions and the second is the NSW EPA Conditions. Not every condition in these two documents is relevant to the CEMP. Each one that is relevant is included in the pertinent chapter in which it is addressed.

2.1 DPIE Conditions

On 18 May 2020, Anthea Sargeant, Executive Director, Regions, Industry and Key Sites Assessments for the NSW Department of Planning, Industry and Environment (DPIE) issued a Development Consent under Section 4.38 of the Environmental Planning and Assessment Act 1979 for Application Number SSD-9601. The

Development is defined in part as “Upgrade works to the Horsley Park Brickworks Plant 2 facility.”

The DPIE consent document has 96 conditions over 12 pages and Appendices 1, 2 and 3 which include additional requirements with the entire document being 33 pages. Appendix 1 shows the Development Layout Plans. Several of these plans are included in this CEMP. Appendix 2 includes Austral Bricks Management and Mitigation Measures as first listed in the Environmental Impact Statement. According to Consent Condition A2 (e), the development may only be carried out in accordance with these measures. The Appendix 2 measures that relate to a pertinent aspect of the CEMP are included in the appropriate section of this CEMP. Appendix 3 is the Incident and Notification Requirements. These are included in the Incident Notification and Reporting Chapter of this CEMP.

2.2 EPA Conditions

Following the DPIE Response to Submissions, the NSW EPA prepared Recommended Conditions of Consent (Application Number SSD-9601) for the upgrade of Brickworks Horsley Park Plant 2 facility as defined in a letter from the EPA to the DPIE, dated 24 February 2020.

The CEMP is not mentioned in the EPA conditions, but several of the conditions include the expressions “prior to construction” and the headings “Pre-Construction” and “Construction.” In order to meet these conditions, many of which are similar in nature to the DPIE conditions, Austral Brick determine that the EPA conditions, where appropriate, should be included in the CEMP. These relevant conditions are included in their respective pertinent chapter of this CEMP.

2.3 DPIE conditions C2, C3, C4

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

C2. The Applicant must prepare a Construction Environmental Management Plan (CEMP) in accordance with the requirements of condition C1 and to the satisfaction of the Planning Secretary.

C3. As part of the CEMP required under Condition C2 of this consent, the Applicant must include the following:
- (a) Construction Traffic Management Plan (see Condition B14);
- (b) Erosion and Sediment Control Plan;
- (c) Construction and Demolition Waste Management Plan (see Condition B38); and
- (d) Community Consultation and Complaints Handling.

C4. The Applicant must:
- (a) not commence construction of the development until the CEMP is approved by the Planning Secretary; and
- (b) carry out the construction of the development in accordance with the CEMP approved by the Planning Secretary and as revised and approved by the Planning Secretary from time to time.

2.4 General Conditions for preparation of CEMP

MANAGEMENT PLAN REQUIREMENTS

C1. Management plans required under this consent must be prepared in accordance with relevant guidelines, and include:
- (a) detailed baseline data;
- (b) details of:
  - (i) the relevant statutory requirements (including any relevant approval, licence or lease conditions);
  - (ii) any relevant limits or performance measures and criteria; and
  - (iii) the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures;
- (c) a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria;
- (d) a program to monitor and report on the:
  - (i) impacts and environmental performance of the development;
  - (ii) effectiveness of the management measures set out pursuant to paragraph (c) above;
- (e) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;
- (f) a program to investigate and implement ways to improve the environmental performance of the development over time;

(g) a protocol for managing and reporting any:
  (i) incident and any non-compliance (specifically including where the impact assessment criteria or performance criteria is exceeded);
  (ii) complaint;
  (iii) failure to comply with statutory requirements; and
(h) a protocol for periodic review of the plan.

Note: The Planning Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans

REVISION OF STRATEGIES, PLANS AND PROGRAMS

C8. Within three months of:
  (a) the submission of an incident report under condition C11;
  (b) the submission of an Independent Environmental Audit under condition C17; (only appropriate during operation)
  (c) the approval of any modification of the conditions of this consent; or
  (d) the issue of a direction of the Planning Secretary under condition A2(b) which requires a review, (A2(b) in accordance with all written directions of the Planning Secretary)

C9. the strategies, plans and programs required under this consent must be reviewed, and the Planning Secretary must be notified in writing that a review is being carried out.

C10. If necessary to either improve the environmental performance of the development, cater for a modification or comply with a direction, the strategies, plans and programs required under this consent must be revised, to the satisfaction of the Planning Secretary. Where revisions are required, the revised document must be submitted to the Planning Secretary for approval within six weeks of the review.

Note: This is to ensure strategies, plans and programs are updated on a regular basis and to incorporate any recommended measures to improve the environmental performance of the development.:

2.5 Specific DPIE Conditions to be resolved separately

2.5.1 Demolition – DPIE Condition A15

DPIE Condition A15 states:

A15. All demolition must be carried out in accordance with Australian Standard AS 2601-2001 The Demolition of Structures (Standards Australia, 2001).

Austral Brick intends to carry out all demolition in accordance with AS 2601-2001.

2.5.2 Compliance / Training – DPIE Condition A17

DPIE Condition A17 states:

A17. The Applicant must ensure that all of its employees, contractors (and their sub-contractors) are made aware of, and are instructed to comply with, the conditions of this consent relevant to activities they carry out in respect of the development.

Austral Brick has a well-established training system for new employees, contractors and other specialised areas. This training system will be expanded for the workers on the Plant 2 Upgrade. Earthworks contractors will receive training with respect to the unexpected identification of contamination and the unexpected identification of a sensitive aboriginal heritage items. Training is also integral to the Pollution Incident Response Management Plan (PIRMP).

2.5.3 Imported Soil – DPIE Condition B18

DPIE Condition B18 states:

B18. The Applicant must:
(a) ensure that only VENM, ENM, or other material approved in writing by EPA is brought onto the site;
(b) keep accurate records of the volume and type of fill to be used; and
(c) make these records available to the Planning Secretary upon request.

There is no current plan for any imported soil to be brought to the site. If this ever changed Austral Brick would abide by DPIE Condition B18.

2.5.4 Biodiversity - DPIE Conditions B30, B31, B32

DPIE Conditions B30, B31 and B32 state:

B30. Prior to any clearing or construction works, the Applicant must purchase and retire three ecosystem credits to offset the removal/disturbance of native vegetation at the site. The ecosystem credits must be retired in accordance with the requirements of the EES Group's Biodiversity Offsets Scheme and the Biodiversity Conservation Act 2016.

B31. The requirement to retire ecosystem credits (see Condition B30) may be satisfied by payment to the Biodiversity Conservation Fund of an amount equivalent to the number and classes of ecosystem credits, as calculated by the EES Group's Biodiversity Offsets Payment Calculator.

B32. The Applicant must provide the Planning Secretary with evidence that: (a) the retirement of ecosystem credits has been completed (see Condition B30); or (b) a payment has been made to the Biodiversity Conservation Fund (see Condition B31), prior to undertaking any clearing of native vegetation or activities that have the potential to impact upon native vegetation.

The retiring of Ecosystem credits by Austral Brick management (currently the Executive General Manager Property & Development, Brickworks Land & Development is managing this issue) has been completed. The evidence of the retired credits will be communicated to the DPIE Secretary in a separate transmission.

2.5.5 Hazards and Risk - DPIE Condition B33

DPIE Condition B33 states:

B33. At least one month prior to the commencement of construction of the development. (except for construction of those preliminary works that are outside the scope of the hazard studies), or within such further period as the Planning Secretary may agree,. the Applicant must prepare and submit for the approval of the Planning Secretary the studies set out under subsection (a) below (the pre-construction studies). Construction, other than of preliminary works, must not commence until approval has been given by the Planning Secretary and, with respect to the Fire Safety Study, approval has also been given by Fire and Rescue NSW.

(a) A Fire Safety Study for the development. This study must cover the relevant aspects of the Department's Hazardous Industry Planning Advisory Paper No. 2, 'Fire Safety Study Guidelines' and the New South Wales Government's Best Practice Guidelines for Contaminated Water Retention and Treatment Systems (NSW HMPCC, 1994). The study must also be submitted to Fire and Rescue NSW for approval.

The Fire Safety Study will be prepared and submitted separate from the requirements of this CEMP.

2.5.6 Storage of Chemicals – DPIE Conditions B36 and B37

DPIE Conditions B36 and B37 state:

B36. The Applicant must store all chemicals, fuels and oils used on-site in accordance with: (a) the requirements of all relevant Australian Standards; and (b) the NSW EPA's Storing and Handling of Liquids: Environmental Protection – Participants Manual' if the chemicals are liquids.

B37. In the event of an inconsistency between the requirements B36(a) and B36(b), the most stringent requirement must prevail to the extent of the inconsistency

Austral Brick will have very few chemicals, fuels and oils stored on site, but they will be stored according to the standards listed in B36.

2.5.7 Non-Compliance Notification – DPIE Conditions C12, C13 and C14

DPIE Conditions C12, C13 and C14 state:

C12. The Planning Secretary must be notified in writing to compliance@planning.nsw.gov.au within seven days after the Applicant becomes aware of any non-compliance.

C13. A non-compliance notification must identify the development and the application number for it, set out the condition of consent that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance.

C14. A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.

Austral Brick intends to meet these conditions in a reporting process similar to the reporting of an incident with respect to DPIE condition C11 and described in later sections of this CEMP.

2.5.8 Access to Information – DPIE Condition C20

DPIE Condition C20 states:

C20. At least 48 hours before the commencement of construction until the completion of all works under this consent, the Applicant must:

(a) make the following information and documents (as they are obtained or approved) publicly available on its website:
  (i) the documents referred to in condition A2 of this consent and the final layout plans for the development;
  (ii) all current statutory approvals for the development;
  (iii) all approved strategies, plans and programs required under the conditions of this consent;
  (iv) regular reporting on the environmental performance of the development in accordance with the reporting requirements in any plans or programs approved under the conditions of this consent;
  (v) a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs;
  (vi) a summary of the current stage and progress of the development;
  (vii) contact details to enquire about the development or to make a complaint;
  (viii) a complaints register, updated monthly;
  (ix) the Compliance Reporting of the development;

(x) audit reports prepared as part of any independent audit of the development and the Applicant's response to the recommendations in any audit report;
(xi) any other matter required by the Planning Secretary; and

(b) keep such information up to date, to the satisfaction of the Planning Secretary.

Austral Brick intends to keep all the information and documents listed in items (i) to (xi) publicly available on the Austral Bricks website. The exact location and web address of the information had not been decided at the time of the writing of this CEMP.

2.5.9 Detention Basin Location - Appendix 2 (h) Surface Water

Appendix 2 Item (h) Surface Water (page 29/33 of DPIE Consent conditions) states:

(h) The necessary detention capacity would be provided by the construction of a single detention tank in the southwestern corner of the proposed development (i.e. within Catchment A), just before flows are discharged towards the existing dam.

Through the course of their analysis of the stormwater management of the Plant 2 site, AT&L found a better option than the southwest detention tank. AT&L SWMP and Civil Engineering Design Report section 3.4.5 states:

3.4.5. Detention Basin Design
It is proposed that the necessary on-site detention capacity will be provided by the construction of a single detention basin to the northwest of the proposed development, immediately upstream of the location where stormwater flows are discharged from the primary development catchment ("A") into Eastern Creek.

Therefore, the AT&L section 3.4.5 option will be followed rather than the Appendix 2 (h) option.

3. Construction Traffic Management Plan

Ason Group's Construction Traffic Management Plan was submitted through the DPIE Major Projects website on 28 July. That CTMP takes precedence over statements included this chapter.

3.1 DPIE Conditions of Consent

Construction Traffic Management Plan

B14. Prior to the commencement of construction, the Applicant must prepare a Construction Traffic Management Plan for the development to the satisfaction

of the Planning Secretary. The plan must form part of the CEMP required by condition C2 and must:

(a) be prepared by a suitably qualified and experienced person(s);
(b) be prepared in consultation with Council;
(c) detail the measures that are to be implemented to ensure road safety and network efficiency during construction;
(d) detail heavy vehicle routes, access and parking arrangements;
(e) include a Driver Code of Conduct to:
    (i) minimise the impacts of earthworks and construction on the local and regional road network;
    (ii) minimise conflicts with other road users;
    (iii) minimise road traffic noise; and
    (iv) ensure truck drivers use specified routes;
(f) include a program to monitor the effectiveness of these measures; and
(g) if necessary, detail procedures for notifying residents and the community (including local schools), of any potential disruptions to routes.

B15. The Applicant must:

(a) not commence construction until the Construction Traffic Management Plan required by condition B14 is approved by the Planning Secretary; and
(b) Implement the most recent version of the Construction Traffic Management Plan approved by the Planning Secretary for the duration of construction.

Ason Group has prepared a Construction Traffic Management Plan which is available with this CEMP. Austral Brick intends to meet the requirements of conditions B14 and B15. The following sections briefly describe how that will be done.

3.2 Suitably Qualified and Experienced Persons

Ason Group is an experienced Traffic management consultant. The following is from their website:

> Ason Group is a specialist traffic and transportation planning and engineering firm providing consultancy services to both the private and public sectors. We provide services related to all aspects of transportation planning and specialise in development approvals and construction certification.
> https://www.asongroup.com.au/
>
> Director Andrew Johnson has a Bachelor of Civil Engineering and has been working in the field of Traffic Engineering and Transport Planning since 2003, establishing Ason Group, a company specialising in Traffic and Transport Planning, in 2014.

Rebecca Butler-Madden the principal author of the Assessment has an MSc in Transport and Planning and five years professional experience in traffic management and transport.

Another valuable contributor to the traffic analysis is James Laidler James has a Bachelor of Civil Engineering (University of Technology, Sydney) and has been working in traffic engineering in the transport planning and transport construction industries for over eight years. During this time, James has been involved in numerous projects for both private organisations and government agencies, including CPB Samsung John Holland Joint Venture (WestConnex M4 Extension project) and The Hills Shire Council.

3.3 Consultation with Council

Ason Group provided Willow Tree Planning a letter dated 18 December responding to four questions from Fairfield City Council regarding Ason Group's Transport Assessment Report submitted as Appendix 5 of the EIS. It is assumed that Ason Group's responses to the Council questions were sufficient because none of the specific issues raised by Council were added to the Conditions of Consent. A summary of the four questions is as follows (responses in Red):

1. 18 paved car parking spaces is not enough for 35 staff. Unpaved parking areas have at least 50 spaces which is how Plant 2 operates now.
2. What is the largest vehicle anticipated to service the site? 26m B-Double.
3. What types of vehicles will use the loading docks. 12.5m HRV's no change from the existing loading dock usage.
4. Any changes to the existing service arrangement. No changes.

On 27 July Kerren Ven, Strategic Planner | Strategic Land Use Planning, sent the following email to Austral Brick's Project Manager, Jeremy Foster.

Council's Traffic Branch has reviewed the submitted Construction Traffic Management Plan (CTMP) prepared by Ason Group dated 21 July 2020 ref. 1417r01v1 for the proposed upgrade of Plant 2 at the Austral Brick site and no issued regarding the CTMP, subject to the following comments:

1. Queuing on Ferrers Road will not be permitted.
2. Request for provision of "Work Zone" on Ferrers Road will not be supported.
3. Any oversize or over-mass vehicle travelling to and/ or from the site will require a permit from National Heavy Vehicle Regulator.

Please keep this email upon lodgement of the CTMP to the Department to satisfy Condition B14 of SSD-9601 consent.

If you have any questions, please do not hesitate to contact me on 9725 0878.

3.4 Measures to ensure road safety and network efficiency

3.4.1 Recommended mitigation measures

Ason Group proposes the: following mitigation measures in Section 8.5 of their Transport Assessment Report to ensure road safety and network efficiency.

While the traffic impacts of construction are likely to be negligible, the following measures are expected to be further investigated in order to minimise the impacts of the construction activities on the local road network:

- Traffic control between the Access Road and Plant 2 Site;
- Scheduling of deliveries outside of the commuter peak;
- Appropriate approvals for any over-sized vehicle deliveries; and
- The use of Wallgrove Road as the designated construction vehicle route.

The first three dot points are planned to be used during the construction and demolition program. Austral Brick plans to use Ferrers Road as the designated construction vehicle road, following an analysis by Ason using RMS data to show that this would be a superior route for traffic coming in from the north.

3.4.2 Ferrers Road as designated construction vehicle route

Following submittal of the EIS, Austral Brick management began working with Ason Group with respect to the safety and traffic flow issues surrounding the use of the Austral Brick Internal Access Road across the site to the Plant 2 site from Wallgrove Road. Some of the issues included:

- Possible increased traffic volumes at the Wallgrove Road / Internal Access Road turn in compared to normal operation. Currently, the majority of Plant 2 workers enter via Ferrers Road. With the brickmaking operation of Plant 2 shutting down these workers no longer enter the site, but an approximately equal number of workers and delivery trucks will enter the site each day during the peak of construction. If a majority of these vehicles are directed to enter at Wallgrove Road, traffic volumes at Wallgrove Road / Internal Access Road turn in will increase potentially causing more congestion issues on Wallgrove Road than are currently being experienced.
- Possible increased traffic volumes across the internal access road in front of sales and operation businesses. The volume of traffic across the site follows the same logic described in the previous dot point. This included some concerns that contractor traffic would not adhere to internal access road speed limits and safety concerns while traveling from Wallgrove Road to the Plant 2 site along the internal access road.

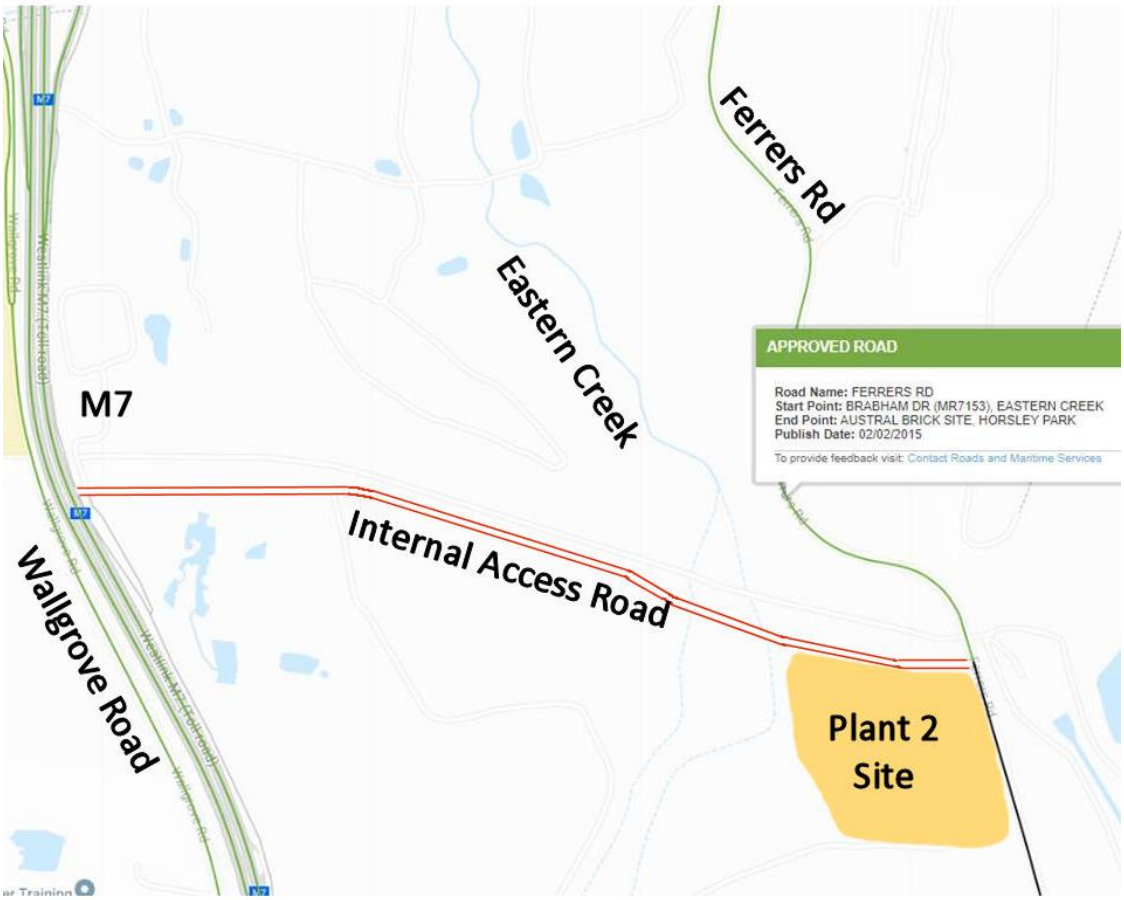

Figure 3-1 - Heavy vehicle restricted access map from RMS website – Approved Road (Link: https://www.rms.nsw.gov.au/business-industry/heavy-vehicles/maps/restricted-access-vehicles-map/map/index.html)

Ason Group provided the following assessment of Ferrers Road for larger vehicles. Ferrers Road does allow for larger GML and CML vehicles (19m – 26m B-doubles) until the access into the Austral Site – this is highlighted in **Figure 3-1**. The black line along Ferrers Road indicates that these trucks can drive along that specific section of Ferrers road in a southbound direction only and encompasses Ferrers Road from the Austral Site access to The Horsley Drive.

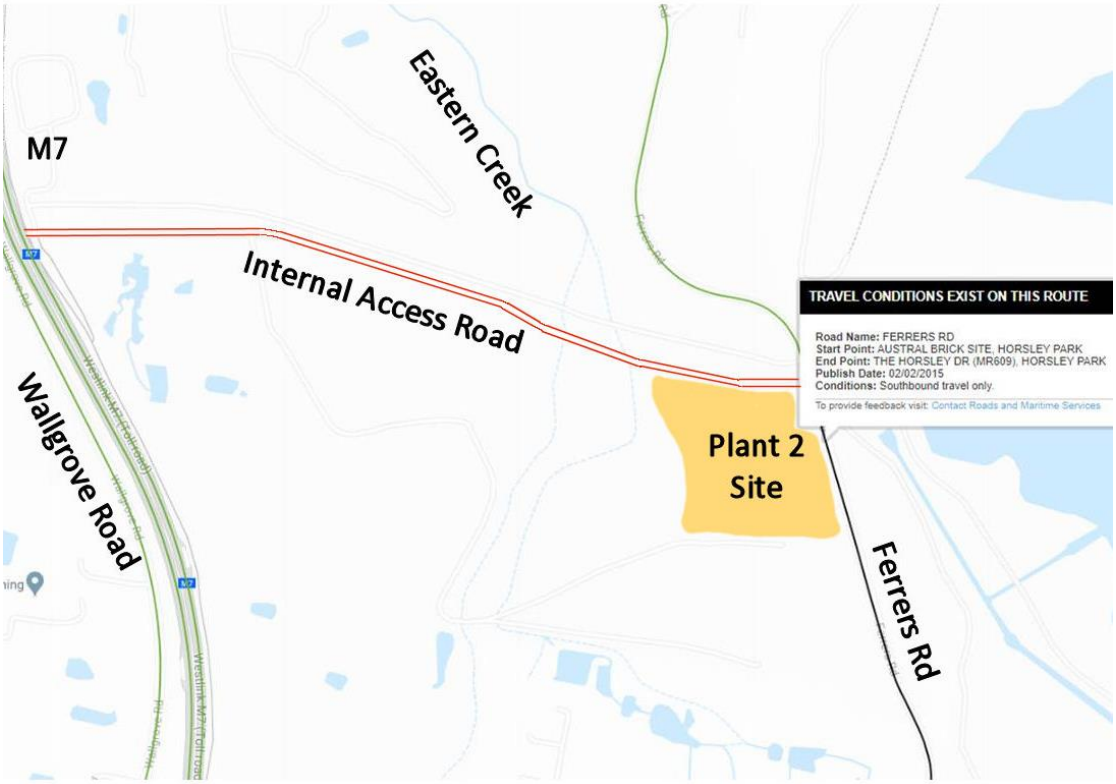

Figure 3-2 - Heavy vehicle restricted access map from RMS website – Travel Conditions Exist on this Road (Ferrers Road)

Notwithstanding, heavier vehicles (HML classifications)as outlined in **Tables 3-1 and 3-2** (Link: https://www.nhvr.gov.au/files/201707-0577-common-heavy-freight-vehicles-combinations.pdf) are not allowed on Ferrers Road, and if they were to be utilised then would most likely be required to access the site from Wallgrove Road.

There will be a number of wide loads & escorted loads to the site – the routes for these vehicles will be specific to their permits / approvals & route directions as instructed by the roads authorities. There will be no impact on Ferrers Road where these wide loads and escorted loads are not permitted on Ferrers Road.

National Heavy Vehicle Regulator
Common Heavy Freight Vehicle Configurations

	Description	Maximum Length (metres)	Maximum Regulatory Mass under GML (tonnes)	Maximum Regulatory Mass under CML (tonnes)	Maximum Regulatory Mass under HML (tonnes)
1. COMMON RIGID TRUCKS - GENERAL ACCESS					
(a)	2 Axle Rigid Truck	≤ 12.5	15.0	CML does not ap-	-
(b)	3 Axle Rigid Truck	≤ 12.5	22.5	23.0	-
(c)	4 Axle Rigid Truck	≤ 12.5	26.0	27.0	-
(d)	4 Axle Twinsteer Rigid Truck	≤ 12.5	26.5	27.0	-
(e)	5 Axle Twinsteer Rigid Truck	≤ 12.5	30.0	31.0	-
2. COMMON SEMITRAILER COMBINATIONS - GENERAL ACCESS					
(a)	3 Axle Semitrailer	≤ 19.0	24.0	-	-
(b)	4 Axle Semitrailer	≤ 19.0	31.5	32.0	32.0
(c)	5 Axle Semitrailer	≤ 19.0	35.0	36.0	37.5
(d)	5 Axle Semitrailer	≤ 19.0	39.0	40.0	40.0
(e)	6 Axle Semitrailer	≤ 19.0	42.5	43.5	45.5

Table 3-1 – National Heavy Vehicle Regulator Common Heavy Freight Configurations – Common Rigid Trucks and Common Semitrailer Combinations. (Link: https://www.nhvr.gov.au/files/201707-0577-common-heavy-freight-vehicles-combinations.pdf)

	Description	Maximum Length (metres)	Maximum Regulatory Mass under GML (tonnes)	Maximum Regulatory Mass under CML (tonnes)	Maximum Regulatory Mass under HML (tonnes)
3. COMMON RIGID TRUCK AND TRAILER COMBINATIONS (General access when complying with prescribed mass and dimension requirements)					
(a)	 2 Axle Truck and 2 Axle Dog Trailer	≤ 19.0	30.0	-	-
(b)	 2 Axle Truck and 2 Axle Pig Trailer	≤ 19.0	30.0	CML does not ap	-
(c)	 3 Axle Truck and 2 Axle Dog Trailer	≤ 19.0	40.5	41.0	-
(d)	 3 Axle Truck and 2 Axle Pig Trailer	≤ 19.0	37.5	CML does not ap	-
(e)	 3 Axle Truck and 3 Axle Dog Trailer	≤ 19.0	42.5	43.5	-
(f)	 3 Axle Truck and 3 Axle Pig Trailer	≤ 19.0	40.5	CML does not ap	-
(g)	 3 Axle Truck and 4 Axle Dog Trailer	≤ 19.0	42.5	43.5	-
(h)	 4 Axle Truck and 3 Axle Dog Trailer	≤ 19.0	42.5	43.5	-
(i)	 4 Axle Truck and 4 Axle Dog Trailer	≤ 19.0	42.5	43.5	-
4. COMMON B-DOUBLE COMBINATIONS - CLASS 2					
(a)	 7 Axle B-double	≤ 19.0	55.5	57.0	57.0
(b)	 8 Axle B-double	≤ 26.0	59.0	61.0	62.5
(c)	 8 Axle B-double	≤ 26.0	59.0	61.0	62.5
(d)	 9 Axle B-double	≤ 26.0	62.5	64.5	68.0

Table 3-2 – National Heavy Vehicle Regulator Common Heavy Freight Configurations – Common Rigid Truck and Trailer Combinations and Common B-Double Combinations. (Link: https://www.nhvr.gov.au/files/201707-0577-common-heavy-freight-vehicles-combinations.pdf)

3.5 Heavy Vehicle Routes, Access and Parking

It is expected that during the most intensive phase of construction, it is estimated that 60 contractors could be on-site at any one time. It is noted that this estimate requires further consideration, when a Contractor has been appointed. Notwithstanding, sections below outline the general principles for managing construction traffic through the construction period.

3.5.1 Potential Haulage Routes

Haulage routes are discussed in the previous section (3.4) in reference to the change from the original Ason Group recommendation of using Wallgrove Road for all heavy haulage to using Ferrers road for the majority of heavy vehicle traffic and only using Wallgrove Road for very heavy loads above the limit of Ferrers Road as defined on the National Heavy Vehicle Regulator website.

The movement of construction materials would be managed through the scheduling of deliveries, and would generally provide for minimal staff and truck movements during the peak periods.

3.5.2 Proposed Work Hours (Ason section 8.2)

It is expected that construction works would be undertaken during standard working hours, which are

- Monday to Friday: 7:00 AM to 3:00 PM
- Saturday: 8:00 AM to 1:00 PM
- Sunday and public holidays: No planned work.

3.5.3 Construction Traffic Generation (Ason section 8.3)

Light vehicle traffic generation would be associated with construction staff movements to and from the Plant 2 Site. Based on the work hours outlined above, it is not expected that any additional trips would be generated during the traditional commuter peak hours (7:00AM – 9:00AM and 4:00PM – 6:00PM) with staff expected to arrive between 6:30AM - 7:00AM prior to starting a shift and depart between 3:00PM – 3:30PM following the shift end.

Similarly, further to appropriate scheduling of construction deliveries, it is not expected that more than 4 truck trips would be generated in the AM and PM peak periods.

As such, the additional trip generation of the Plant 2 Site is expected to have no impact on the operation of the local road network.

3.5.4 Construction Traffic (Willow Tree EIS page 108/153)

Over the full construction period, light vehicle trips are likely to result in up to 10 vehicles per hour based on the workforce numbers (estimated to be around 60 staff). Furthermore, it is anticipated that under a worst-case scenario no more than 10 truck movements per day would be required for the delivery of constructions materials to the Plant 2 site. Few if any of these trips would be generated during the commuter peak periods.

3.5.5 Construction Staff Parking 8.4

As detailed in Section 6, the Plant 2 Site car park currently provides a minimum capacity of 50 parking spaces. Further the Plant 2 Site has large hardstand areas which are currently largely used for storage. As such, noting the large size of the Site, it is expected that the Site would suitably be able to provide for the peak construction staff alongside Plant 2 operational staff within the Site boundaries.

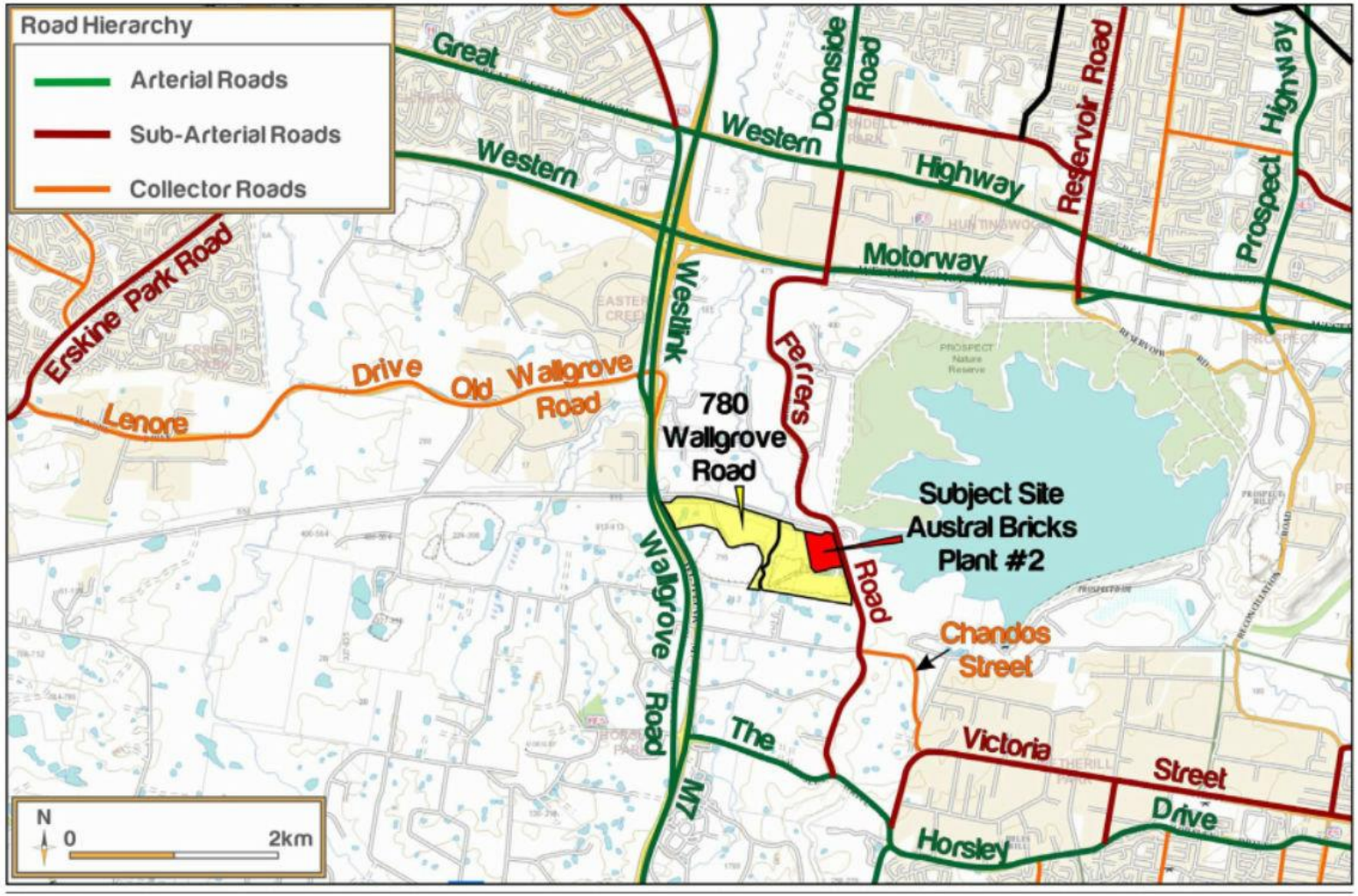

Figure 2: Site Context and Road Hierarchy (Top Half Ason Group page 12/44)

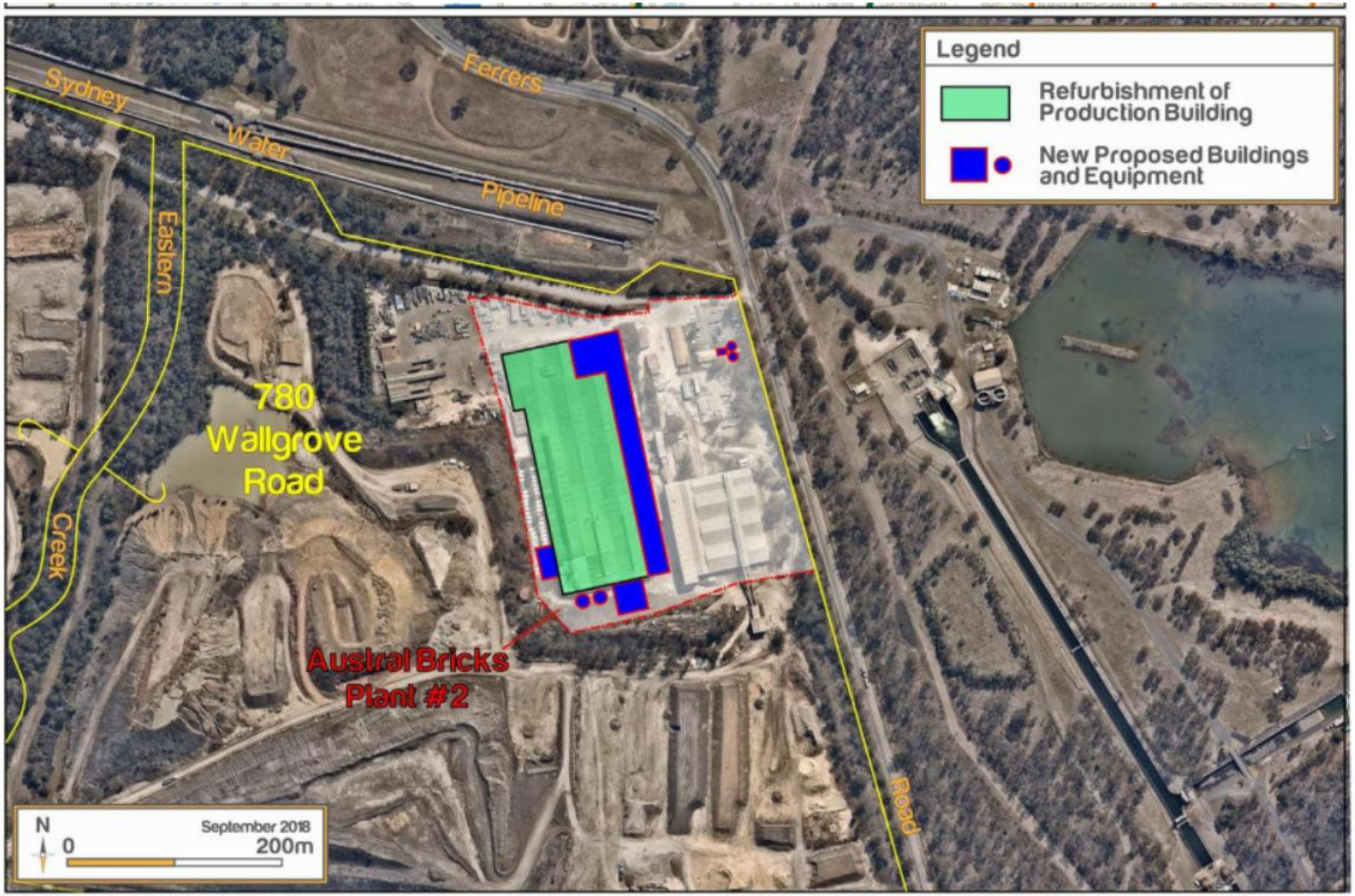

Figure 2: Site Context and Road Hierarchy (Bottom half Ason Group page 12/44)

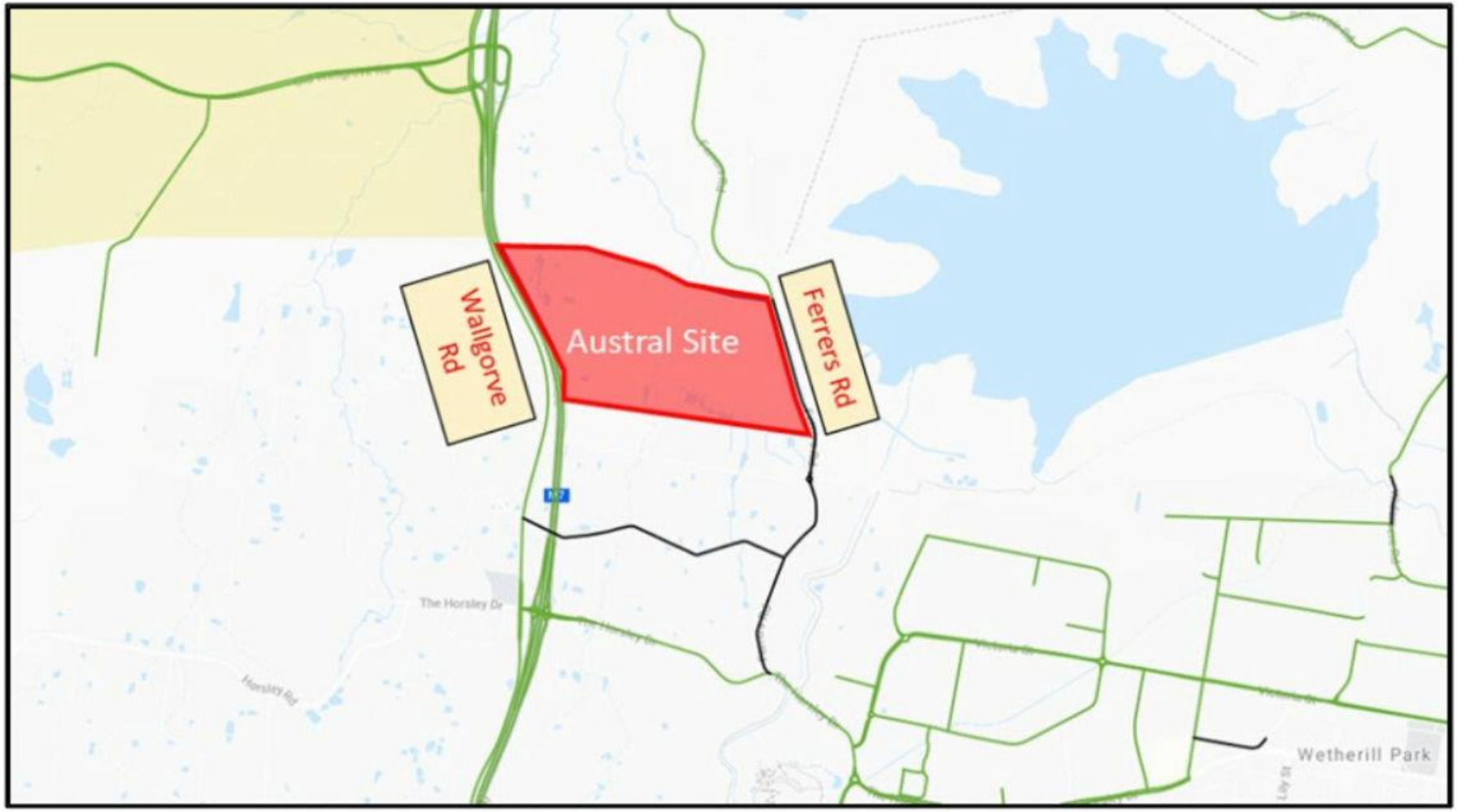

Figure 3: RMS Approved B-Double Route Map (Ason Group page 14/44)

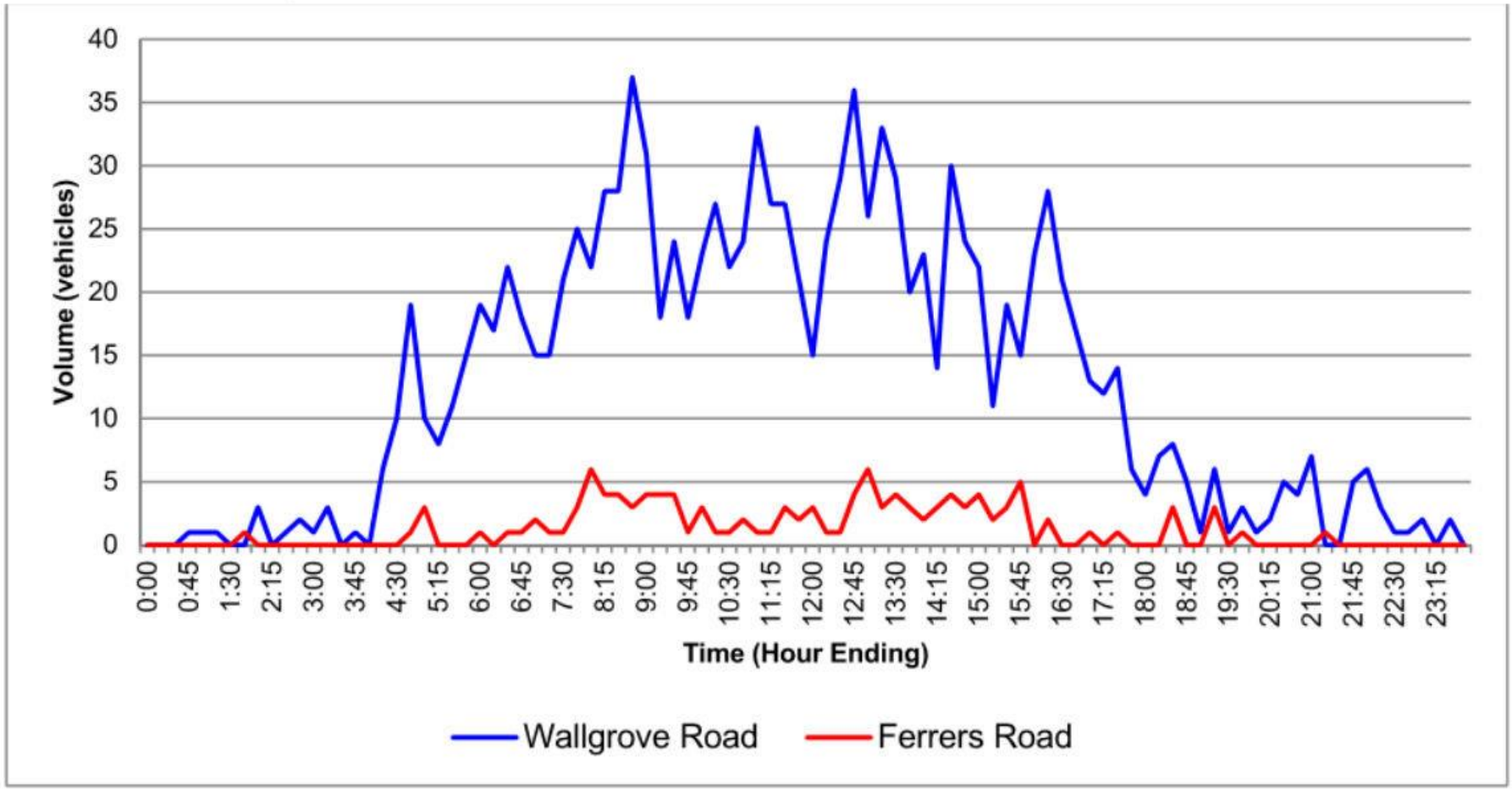

Figure 4: Existing Austral Site Traffic (Ason Group page 15/44)

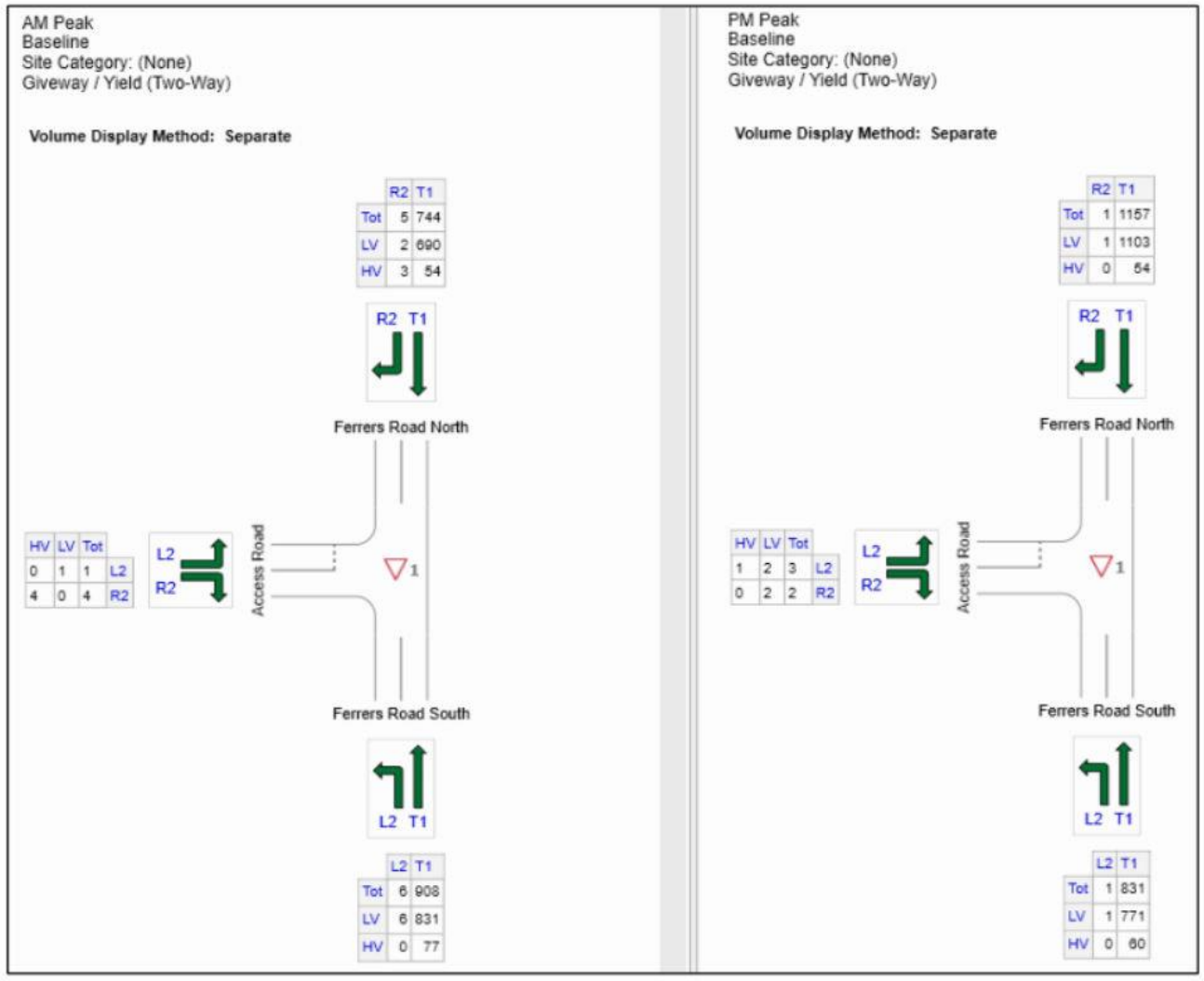

Figure 5: Peak Period Intersection Flows (Ason Group page 16/44)

3.6 Driver Code of Conduct

DPIE Condition B14 is as follows:

B14. Prior to the commencement of construction, the Applicant must prepare a Construction Traffic Management Plan for the development to the satisfaction of the Planning Secretary. The plan must form part of the CEMP required by condition C2 and must:

(e) include a Driver Code of Conduct to:

(i) minimise the impacts of earthworks and construction on the local and regional road network;

(ii) minimise conflicts with other road users;

(iii) minimise road traffic noise; and

(iv) ensure truck drivers use specified routes;

Austral Brick has a training and induction program for its own drivers and machine operators that includes minimising impacts outside the Horsely Park site, respect for other road users and ensuring that equipment operators only use the routes that are appropriate to their assigned tasks. These are similar to the code of conduct required in condition B14.

With respect to the specific conditions of Condition B14 there will generally be no more traffic on the roads than during normal operations so the need for a strict Code of Conduct which implies significantly increased traffic loads which would strain the road network and cause drive stress and strain is generally unwarranted. Ason Group and The EIS clearly state

EIS section 3.5:

> The factory would be closed during the new building and kiln works, so traffic would remain stable with the construction traffic replacing the operational traffic.

EIS section 4.3:

> Due to the minor increase to the footprint of the existing buildings, and the fact there would be no additional traffic generation stemming from the proposed development, the proposed development is not considered to be Traffic Generating Development, and no referral is required to be made to the RMS.

Ason Group Transport Assessment Report Impact section 8.5 Construction Mitigation Measures notes in part:

> While the traffic impacts of construction are likely to be negligible

EIS section 6.9:

> Overall, it is considered that the proposed development can proceed without significant traffic and transport impacts.

No soil will be taken off site so there will be no impact of earthworks on the local road network except when the equipment is brought to the site and then when it is taken away.

3.7 Monitoring Program

The NSW Environmental Manager and the Construction Project Manager will monitor traffic and provide a report as described in Section 1.3 of this CEMP.

The negligible traffic impacts do not warrant any more sophisticated data collection system.

3.8 Potential Disruption of routes

As described in the Ason Group report and noted in section 3.6 above, there is no anticipated disruption of local traffic routes through the construction process.

As described in Section 8.3 Construction Traffic Generation of the Ason Group Transport Assessment Report:

> As such, the additional trip generation of the Plant 2 Site is expected to have no impact on the operation of the local road network.

4. Erosion and Sedimentation Control

AT&L's Erosion and sedimentation Control Drawings were submitted with the Erosion and Sedimentation Control Plan document through the DPIE Major Projects website on 15 July 2020.

4.1 DPIE Conditions B19

Erosion and Sediment Control

B19. Prior to the commencement of any construction or other surface disturbance the Applicant must install and maintain suitable erosion and sediment control measures on-site, in accordance with the relevant requirements of the *Managing Urban Stormwater: Soils and Construction - Volume 1: Blue Book (Landcom, 2004)* guideline and the Erosion and Sediment Control Plan included in the CEMP required by condition C2.

4.2 Protection of Vegetation

4.2.1 DPIE Condition Appendix 2 Item (b)

DPIE Appendix 2 Item (b) Biodiversity states:

(b) The following mitigation measures are recommended to protect biodiversity adjacent to impact areas during construction:
   a) Vegetation protection:
      (i) To avoid unnecessary removal or damage to the adjacent vegetation, the clearing area would be clearly demarcated and signed, where appropriate, to ensure no vegetation beyond these boundaries is removed;
      (ii) Clearing works and equipment would be excluded from areas outside the clearing area;
      (iii) Site inductions would be given by the civil contractor to ensure all site workers and visitors are aware of any no-access areas;
      (iv) In any area in which construction machinery is to be used with the potential to damage surrounding vegetation to be retained, temporary construction fencing would be installed to protect vegetation to be retained. Temporary fencing would be of a metal construction fence at least 2m high so it physically protects vegetation as well as visually delineates vegetation to be retained. This fencing would remain in place until all works have been finished in adjoining areas; and
      (v) No vehicles or machinery would be permitted to enter areas of vegetation to be retained;
   b) Erosion, sedimentation and pollution control:
      (i) The amount of exposes soils at the site at any given time would be minimised;
      (ii) All stockpiled soils would be adequately covered when not in use to prevent erosion from heavy rainfall;
      (iii) Sediment fences would be established around the perimeter of the site to prevent the impacts of sedimentation on the adjoining vegetation;
      (iv) During development, precautions would be taken to ensure that no pollution, such as petrochemical substances or water containing suspended solids, escapes the construction site;
      (v) Pollution traps would be installed where required; and
      (vi) Efficient removal of pollution to an offsite location would be undertaken to help minimise pollution impacts.

These vegetation protection measures are recommendations that Austral Brick will consider when developing the erosion and sedimentation control plans and when deciding how to locate the various control measures. Description of the vegetation protection procedures will be included in the Erosion and Sedimentation Control

5. Stormwater Drainage Plan

5.1 DPIE Conditions B21

Stormwater Drainage Plan

B21. Prior to construction, a certificate from a suitably qualified person shall be submitted to the Certifier certifying that:

(a) satisfactory arrangements have been made for the disposal of stormwater;

(b) the proposed development and alterations to the natural surface contours will not impede or divert natural surface water runoff so as to cause a nuisance to adjoining properties;

(c) the piped drainage system has been designed to an Average Recurrence Interval of not less than that in accordance with Council's Stormwater Management Policy 2017. –

5.2 Suitably Qualified Person

Simon Haycock, Associate Director – Senior Engineer, at AT&L Civil Engineers and Project Managers, has a BEng in Civil Engineering at the University of Auckland and 12 years experience covering wide variety of civil engineering projects in Queensland, New South Wales, the United Kingdom and New Zealand. Simon is a Registered Professional Engineer of Queensland, National Engineers Register member and Member of the Institute of Engineers Australia.

5.3 Disposal of Stormwater

AT&L Civil Engineers and Project Managers, [Revised] Brickworks Plant 2 Upgrade, Soil and Water Management Plan & Civil Engineering Design Report (March 2020), explains the disposal of stormwater in detail in Section 3 entitled Stormwater Management. The disposal of stormwater is also explained (based on AT&L, March 2020) in the following chapter of this CEMP entitled Water Quality Management Plan.

5.4 Natural Surface alterations - impacts on adjoining properties

There will be no impacts on adjoining properties due to the proposed development. Any alterations to the natural surface contours will not impede or divert natural surface water runoff so as to cause a nuisance to adjoining properties. As described in Section 3.2 of AT&L (March 2020) entitled Hydrology, natural surface water runoff will drain to Eastern Creek at the same point that it currently drains to Eastern Creek. The volumes and intensity of natural surface runoff will be mitigated by a new on-site detention basin, described in Section 3.3 of AT&L (March 2020).

5.5 Drainage System designed in accordance with Council Policy

5.5.1 AT&L Background

The AT&L SWMP and Civil Engineering Design Report makes it clear from the very start of the report that the Drainage system has been designed in accordance with not only Fairfield City Council's Stormwater Policy but Council's other standard engineering requirements. The very first section (section 1.1 Background) in the AT&L report states:

> This report has been prepared to address both Fairfield City Council's standard engineering requirements and the Secretary's Environmental Assessment Requirements as issued 16 November 2018.

5.5.2 On-Site Detention Flowrate

Section 3.4 On-Site Detention 3.4.1 Planning Requirements of AT&L (March 2020) states:

> Fairfield City Council's *Stormwater Management Policy, September 2017* Section 4.3 identifies that on-site detention is required within the Rural Zone, within which the subject site is located, for all development greater than 30m^2 area.

Section 3.4.2 Design Standards of AT&L (March 2020) states:

Council's policy specifies that the proposed OSD system must satisfy the following requirements:

- Permissible Site Discharge (PSD) of 78L/s/ha for the 5, 15, 30, 60, 180, 360 and 540-minute duration storms for the 5 and 100 year ARI storm events for the developed site;
- Site Storage Requirements (SSR) of 4.09m3 per 100m^2 of developed site using the simplified method.

Catchment A drains 6.0 hectares so: 6.0 ha x 78 L/sec/ha = 468 Litres per second

Further statements in Sections 3.4.3 Analysis and 3.4.4 Results show that the design has been done in accordance with Council's design requirements:

> The proposed detention basin has been configured to mitigate peak flows for all designated storm durations for the 5 year ARI (18% AEP) and 100 year ARI (1% AEP) storm events in accordance with Council's required design parameters.

The results of the hydraulic analysis indicated that the proposed OSD basin detailed on Drawing DAC015 has sufficient capacity to mitigate the peak flows off the new

development area (Catchment A) in accordance with Council requirements. The results are shown in Table 3.3 below.

Table 3.3 - *Peak Stormwater Flows for the 5 year and 100 year ARI events*

Storm Duration	Allowable PSD (78L/sec/Ha)	5 YR ARI flow	100 YR ARI flow
5 min duration	468 L/s	0 L/s	197 L/s
10 min duration		69 L/s	341 L/s
20 min duration		319 L/s	378 L/s
30 min duration		335 L/s	391 L/s
60 min duration		355 L/s	414 L/s
180 min duration		347 L/s	415 L/s
360 min duration		354 L/s	414 L/s
540 min duration		351 L/s	406 L/s

Table 5-1 – Table 3.3 from AT&L (March 2020) – Peak Stormwater Flows for the 5 year and 100 year ARI events

5.5.3 On-Site Detention Storage Requirements

From Section 3.4.2 of AT&L (March 2020):

- Site Storage Requirements (SSR) of 4.09m3 per 100m^2 of developed site using the simplified method.

6.0 hectares = 60,000 m^2 = 600 x 100 m^2
4.09m3 per 100m^2 x 600 = 2454 m^3

From Section 3.4.5:

> The proposed basin analysed above has a total storage volume of approximately 3,800m3 below the proposed emergency overflow level (RL56.6). The floor level of the basin is RL 54.7 resulting in a depth of 1.9m below the spillway level. To be conservative, this volume does not include an additional approx. 1,000m3 volume within the sediment settling and storage zones at the southern end of the basin.

AT&L Stormwater design drawings are listed in the Appendices of this CEMP, but are not attached as the file size gets too big for easy emailing. They will be filed separately to the DPIE Major Projects website.

6. Water Quality Management Plan

6.1 EPA Condition 24

EPA Condition 24 states:

24. Prior to construction, the Proponent must develop a Water Quality Management Plan. This plan should include but not necessarily be limited to the following requirements:
    a) provide information on any water discharges including location, volumes, water quality, monitoring programs and frequency of discharge;
    b) describe how stormwater will be managed during the construction phase;
    c) characterise potential water pollutants at the site and any associated mitigation and management measures; and
    d) demonstrate that all practical options to avoid discharge have been implemented and environmental impact minimised where discharge is necessary.

Each of these issues is discussed in the following sections.

6.2 Water Discharges

6.2.1 Location

The construction site is divided into two new catchments, A and B, as shown in **Figure 6-1** (from AT&L March 2020). Catchment A discharges through the new On-Site Sedimentation Basin to Eastern Creek. Catchment B discharges to an existing channel which has received runoff from the Plant 2 site in previous years. That channel then drains to Eastern Creek as shown in **Figure 6-1**.

Figure 4 – *Proposed Stormwater Catchments*

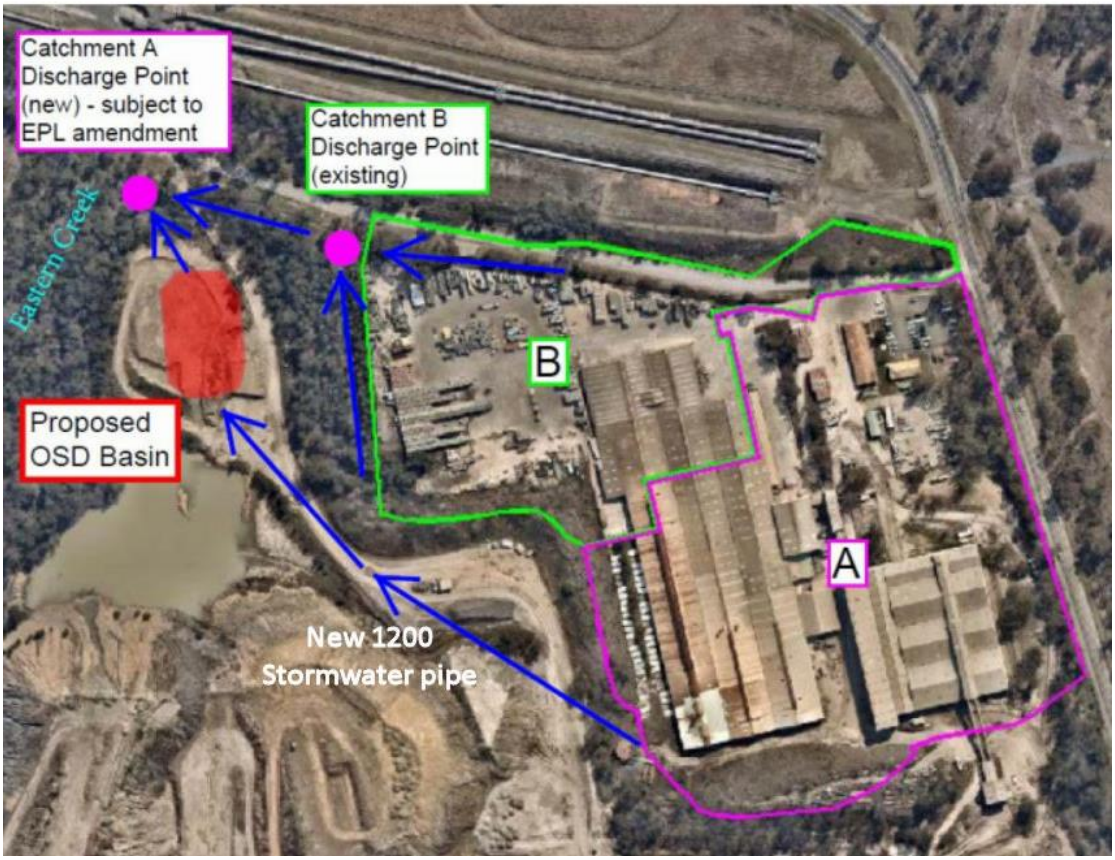

Figure 6-1 – Figure 4 from AT&L Revised SWMP (March 2020)

6.2.2 Volumes – Catchment A

The following is from section 3.4.2 (Design Standards), 3.4.3 (Analysis) and 3.4.4 (Results) of AT&L (March 2020) entitled Proposed Catchment B:

Council's policy specifies that the proposed OSD system must satisfy the following requirements:

- Permissible Site Discharge (PSD) of 78L/s/ha for the 5, 15, 30, 60, 180, 360 and 540-minute duration storms for the 5 and 100 year ARI storm events for the developed site;
- Site Storage Requirements (SSR) of 4.09m3 per 100m2 of developed site using the simplified method.

A runoff routing analysis has been undertaken using DRAINS hydraulic modelling software. The proposed detention basin has been configured to mitigate peak flows for all designated storm durations for the 5 year ARI (18% AEP) and 100 year ARI (1% AEP) storm events in accordance with Council's required design parameters.

The results of the hydraulic analysis indicated that the proposed OSD basin detailed on Drawing DAC015 has sufficient capacity to mitigate the peak flows off the new

development area (Catchment A) in accordance with Council requirements. The results are shown in Table 3.3 below.

Table 3.3 - *Peak Stormwater Flows for the 5 year and 100 year ARI events*

Storm Duration	Allowable PSD (78L/sec/Ha)	5 YR ARI flow	100 YR ARI flow
5 min duration	468 L/s	0 L/s	197 L/s
10 min duration		69 L/s	341 L/s
20 min duration		319 L/s	378 L/s
30 min duration		335 L/s	391 L/s
60 min duration		355 L/s	414 L/s
180 min duration		347 L/s	415 L/s
360 min duration		354 L/s	414 L/s
540 min duration		351 L/s	406 L/s

Table 6-1 – Table 3.3 from AT&L (March 2020) – Peak Stormwater Flows for the 5 year and 100 year ARI events

6.2.3 Volumes – Catchment B

The following is from section 3.2.2.2 of AT&L (March 2020) entitled Proposed Catchment B:

> There are no new development areas proposed within Catchment B and the existing discharge location and characteristics will be maintained. There is also a significant reduction in the catchment size from 5.5ha to 3.8ha due to the following:
>
> - some upstream areas are to be diverted into the new Catchment A drainage network as part of the proposed upgrade works; and
> - the majority of the factory roofwater will be diverted towards the new rainwater tanks at the southern end of the building in Catchment A, leaving only a smaller roof catchment draining north into Catchment B.
>
> Based on the above factors, there is no intention to provide any OSD within this catchment. The existing discharge point will be maintained and will receive reduced peak flows due to the reduction in catchment area.

Considering that significant parts of the roof area will now be diverted to Catchment A, it is likely that the discharge volumes will be even less than the proportional drop of 31% due to the drop in catchment size from 5.5 hectares to 3.8 hectares.

6.2.4 Water Quality

The following is excerpted from Section 3.5. Water Quality Treatment, 3.5.1. (Planning Requirements), 3.5.2 (Existing Treatment) and 3.5.3 (Proposed Treatment) of AT&L (March 2020):

Fairfield City Council's Stormwater Management Policy September 2017 Section 6.3 identifies that water quality treatment is not required within the Rural Zone area, within which the subject site is located.

However, since the site is located within the Western Sydney Parklands, it is subject to the State Environmental Planning Policy (Western Sydney Parklands) 2009. Clause 13 of the SEPP states the following:

"Development consent must not be granted to any development on land in the Western Parklands unless the consent authority is satisfied that the development will have a neutral or beneficial impact on the quality of the water in the bulk water supply infrastructure shown on the BulkWater Supply Infrastructure Map".

The subject site has an existing stormwater quality treatment regime which is undertaken by Austral staff in accordance with the terms of their Environmental Protection License (EPL). The 100 percentile concentration limits are:

- Oil and Grease 10 mg/L
- pH 6.5 to 8.5
- Total Suspended Solids 50 mg/L
- Turbidity 150 nephelometric turbidity units

Runoff from Catchment A is currently discharged to the existing dam adjacent to Eastern Creek, where it is impounded and then pumped to another basin on the western side of Eastern Creek (beside Plant 1). The water in this basin is dosed with a chemical flocculant and once the sediment has dropped out and the water reaches the required target values for turbidity, total suspended solids, oil/grease and pH, it is pumped out into the Eastern Creek riparian corridor at a discharge point designated in the EPL. Test results are documented and filed by Austral's environmental staff.

Catchment B currently discharges via a separate route to Eastern Creek at the northern end of the site. This drainage alignment does consist of some vegetation which may be providing some ad-hoc treatment along the length of the drainage path.

As part of the proposed development works, the existing treatment methodology outlined above will be adapted and improved.

The redevelopment of Plant 2 is focused on Catchment A. In order to achieve the required pollutant load reductions, a treatment train approach will be implemented, including the following:

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

No changes are proposed to the Catchment B drainage corridor.

6.2.5 Discharge Limits - DPIE Condition B20

DPIE Condition B20 states:

B20. The development must comply with section 120 of the POEO Act, which prohibits the pollution of waters, except as expressly provided for in an EPL.

Austral Brick has always worked to meet the conditions of its EPA Licence No 546 and will continue to work to meet those through the construction as described in the following section.

6.2.6 Monitoring Programs

NSW EPA Licence 546 requires water sampling. The monitoring locations are listed in section 3.1 (**Table 6-2**) and the water quality limits are listed in section L3.5 (**Table 6-3**). The sample point locations may change following the completion of the Plant 2 upgrade to better reflect where the water is being discharged from the site. Monitoring will be carried on through the construction period as required by the EPA Licence.

P1.3 The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.

Water and land

EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
1	Discharge to waters and water quality monitoring	Discharge to waters and water quality monitoring	Overflow outlet from sediment pond at Plant 1 to Eastern Creek on the eastern side of Pit 1 - MGA coordinates advised by licensee in correspondence to EPA dated 13 March 2020 (DOC20/294924).
2	Discharge to waters and water quality monitoring	Discharge to waters and water quality monitoring	End of 200 mm diameter pipe from pump located adjacent to Plant No. 2 Pit - MGA coordinates advised by licensee in correspondence to EPA dated 13 March 2020 (DOC20/294924).
3	Discharge to waters and water quality monitoring	Discharge to waters and water quality monitoring	Outlet of 150 mm pipe that discharges from a pump located adjacent to Pit 3 - MGA coordinates advised by licensee in correspondence to EPA dated 13 March 2020 (DOC20/294924).

Table 6-2 – Water and land monitoring points from EPL 546 item P1.3

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Oil and Grease	milligrams per litre	-	-	-	10
pH	pH				6.5-8.5
Total suspended solids	milligrams per litre	-	-	-	50
Turbidity	nephelometric turbidity units	-	-	-	150

Table 6-3 – Water quality limits for Points 1, 2 and 3 from EPL 546 item L3.5

The defining section is L3.1

L3.1 For each monitoring/discharge point or utilisation area specified in the table\s below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.

6.2.7 Frequency of Discharge

Frequency of Discharge will depend on the frequency of intense storm events. There will be no discharge in light rain from Catchment A because the On-Site Detention Basin has over 1000 m^3 of storage volume depending on previous rains. The discharge from Catchment B will be a lower flow than in previous years, since the area of the catchment has been reduced from 5.5 to 3.8 hectares, but at about the same frequency.

6.3 Stormwater Management during Construction

Stormwater Management during construction is thoroughly described in the Erosion and Sedimentation Control Plan included in this CEMP.

6.4 Potential Water Pollutants

The following is from section 2.4.1 of AT&L (March 2020) entitled Sources of Pollution:

The activities and aspects of the works that have potential to lead to erosion, sediment transport, siltation and contamination of natural waters include:

- Earthworks undertaken immediately prior to rainfall periods
- Work areas that have not been stabilised
- Extraction of construction water from waterways during low rainfall periods
- Clearing of vegetation and the methods adopted, particularly in advance of construction works
- Stripping of topsoil, particularly in advance of construction works
- Bulk earthworks and construction of pavements
- Works within drainage paths, including depressions and waterways
- Stockpiling of excavated materials
- Storage and transfer of oils, fuels, fertilisers and chemicals
- Maintenance of plant and equipment
- Ineffective implementation of erosion and sediment control measures
- Inadequate maintenance of environmental control measures
- Time taken for the rehabilitation / revegetation of disturbed areas

Section 3.5. Water Quality Treatment, 3.5.1. Planning Requirements Page 23 of AT&L (March 2020) states:

Fairfield City Council's Stormwater Management Policy September 2017 Section 6.3 identifies that water quality treatment is not required within the Rural Zone area, within which the subject site is located.

6.5 Mitigation Measures for Potential Water Pollutants

The following is from section 2.4.4 of AT&L (March 2020) entitled Construction Methodology:

Pre-Construction

The following erosion control measures will be implemented prior to commencement of construction to minimise disturbance and ensure the performance criteria for water quality are met:

- Designation and marking of transport routes across undisturbed portions of the site to ensure minimal vegetation disturbance. Transport routes will be provided with stabilised construction entry/exits (e.g. Blue Book SD6-14) at the designated access points;
- Installation of the sediment basin described in Section 7.2 will occur before bulk earthworks across the site begin so that sediment-laden runoff from the works can be captured and treated;
- Diversions will be constructed to divert clean stormwater away from exposed soils and development areas;
- Existing vegetated buffer zones/bunds are to be fenced off;
- Filter rolls or geotextile inlet filters (e.g. Blue Book SD6-11 & 6-12) to be installed around all existing stormwater inlet gullies; and
- All site personnel to complete an environmental induction covering the erosion and sediment controls.

During Construction

Measures to mitigate water quality impacts during the construction phase will include:

- Sediment fences (e.g. Blue Book SD6-8) to be erected at the base of all batters and stockpiles to prevent sediment-laden stormwater from flowing into the Eastern Creek riparian zone;
- Regular dust suppression on exposed areas by water truck or use of chemical dust suppressant;
- Progressive stabilisation of filled and disturbed areas;
- Regular inspections as soon as practicable after storm events to check and maintain controls;
- Sediment to be removed from fences when controls are 40% full and at the completion of construction. All material to be re-used or stored on-site in a controlled manner or taken off-site for re-use or disposal at a licensed waste disposal facility;
- Filter rolls or geotextile inlet filters (e.g. Blue Book SD6-11&6-12) to be installed around all new stormwater inlet gullies;
- Monitoring of water quality to determine the effectiveness of the sediment and erosion control management practices; and
- The proposed on-site detention basin is to be utilised as a temporary sediment control basin during the construction phase. The basin shall not be converted into the final/ultimate basin until all building and construction works have been completed and at least 90% of the site is stabilised.

Erosion and sediment control measures will remain in place for the duration of construction works and following completion until the site is fully stabilised.

6.6 Site Inspection and Maintenance

The following is from AT&L Revised SWMP and Civ Eng Design Report (March 2020)
The inspection and maintenance requirements outlined in this section will need to be carried out as long as either earthworks are being conducted and/or the site subsoils are exposed. The Contractor's site representative will inspect the site after every rainfall event and at least weekly, and will:

- Inspect and assess the effectiveness of the SWMP and identify any inadequacies that may arise during normal work activities or from a revised construction methodology. Construct additional erosion and sediment control works as necessary to ensure the desired protection is given to downstream lands and waterways;
- Ensure that drains operate properly and make any repairs in a timely manner;
- Remove spilled sand or other materials from hazard areas, including lands closer than 5 metres from areas of likely concentrated or high velocity flows especially waterways and paved areas;
- Remove trapped sediment whenever less than design capacity remains within the structure;
- Ensure rehabilitated lands have affectively reduced the erosion hazard and to initiate upgrading or repair as appropriate;
- Maintain erosion and sediment control measures in a fully functioning condition until all construction activity is completed and the site has been rehabilitated;
- Remove temporary soil conservation structures as the last activity in the rehabilitation.

6.7 Minimisation of Environmental Impacts of Discharge

The source of discharge from the site is stormwater runoff which is unavoidable and natural. Austral Brick has endeavoured to minimise the environmental impact of the discharge of stormwater runoff by implementing the erosion and sedimentation controls described in NSW Government's Managing Urban Stormwater – Soils and Construction Blue Book Volume 1, 4th Edition, March 2007 and the Stormwater planning and design requirements of the Fairfield City Council Stormwater Management Policy September 2017.

Section 3.5.4. Water Quality Modelling of AT&L (March 2020) indicates that the measures to be implemented will be successful.

7. Construction and Demolition Waste Management Plan

A separate Construction and Demolition Waste Management Plan with more detail has been submitted to the DPIE Major Projects site.

7.1 DPIE Conditions of Consent B38 and B39

Construction and Demolition Waste Management

B38. Prior to the commencement of construction, the Applicant must prepare a Construction and Demolition Waste Management Plan for the development to the satisfaction of the Planning Secretary. The Plan must form part of a CEMP in accordance with condition C2 and must:

(a) detail the quantities of each waste type generated during construction and the proposed reuse, recycling and disposal locations; and

(b) be implemented for the duration of construction works.

B39. The Applicant must:

(a) not commence construction until the Construction and Demolition Waste Management Plan is approved by the Planning Secretary.

(b) implement the most recent version of the Construction and Demolition Waste Management Plan approved by the Planning Secretary.

7.2 Quantities of Waste

Detailed discussions of Waste Quantities are included in the Construction and Demolition Waste Management Plan submitted separately to the DPIE Major Projects website. Revised Demolition Waste quantities are shown in **Table 8-1**.

Table 8-1 – Estimated Demolition Waste (updated by Brickworks Management)

Type of Waste Generated	Reuse	Recycling	Disposal	Method of reuse, recycling or disposal
	m^3 or tonnes	m^3 or tonnes	m^3 or tonnes	
Bricks	150-170 m^3			
Metal		80-90 tonnes (steel)		
Hazardous / Special Waste			150-170 m^3 (Asbestos)	Waste Mmt Centre
Concrete			180-190 m^3	
Metal Offcuts		10 m^3		
Paper / Cardboard		4 m^3		
Total	**150-170 m^3**	**80-90 tonnes 14 m^3**	**330-360 m^3**	

Construction waste is estimated at 93,000 m^3 of excavated material to be reused, 2m^3 of bricks and pavers to be reused, 12 m^3 of timber, metal offcuts, packaging and cardboard to be recycled and 10 m^3 of concrete, tiles, fixtures and containers to be disposed of to a local waste management centre.

7.3 Proposed Reuse, Recycling and Disposal Locations

The 93,000 m^3 of excavated material will be reused in earthworks. The following is from section 2.3.1 of AT&L's Soil and Water Management Plan and Civil Engineering Design Report.

> The required total cut volume is estimated to be approximately 93,000m3 across the site.
>
> Approximately 40,000m^3 of this cut is related to the development works around Plant 2. This volume is primarily generated from excavation into existing berms around the perimeter of the existing facility.
>
> The remaining 53,000m^3 of cut is required in order to remove the existing clay stockpile at the proposed basin location and then excavate the basin itself below natural ground level.
>
> The cut material will be relocated to a stockpile on the wider site in a suitable location to be confirmed closer to the time of construction (to suit quarry activities). It is noted that there are numerous existing stockpile areas spread across the wider Brickworks site.

The 2m^3 of bricks and pavers will be crushed and reused in the brickmaking process.

The 12 m^3 of timber, metal offcuts, packaging and cardboard to be recycled or disposed offsite of in an appropriate manner

The 10 m^3 of concrete, tiles, fixtures and containers to be disposed of to a local Waste Management Centre.

Portable, self-contained toilet and washroom facilities will be provided at the site and will be regularly emptied and serviced by a suitably qualified contractor.

All office, lunchroom and change room garbage will be disposed of via a council approved system to a local Waste Management Centre.

7.4 Mitigation of Potential Construction Waste Impacts

DPIE Condition Appendix 2 (m) Waste Management includes several points that are recommended for the mitigation of potential waste impacts. These are listed and commented on in Chapter 4 of the CEMP Waste Management Plan submitted separately to the DPIE Major Projects website.

7.5 Waste Management Statutory Requirements

DPIE Conditions B40 to B44 state:

B40. All waste materials removed from the site must only be directed to a waste management facility or premises lawfully permitted to accept the materials.
B41. The Applicant must assess and classify all liquid and non-liquid wastes to be taken off site in accordance with the latest version of EPA's Waste Classification Guidelines Part 1: Classifying Waste (EPA, 2014) and dispose of all wastes to a facility that may lawfully accept the waste.
B42. Waste generated outside the site must not be received at the site for storage, treatment, processing, reprocessing, or disposal.
B43. The Applicant must retain all sampling and waste classification data for the life of the development in accordance with the requirements of EPA.
B44. The collection of waste generated during operation of the development must be undertaken between 7am to 10pm Monday to Friday.

Austral Bricks is committed to meeting DPIE conditions B40 to B44 throughout the construction period. Austral Bricks has made plans to collect and remove the asbestos waste in the roofing materials according to WorkSafe Authority and EPA requirements. All asbestos work will be carried out by contractors licenced by NSW to carry out asbestos removal work.

8. Community Consultation and Complaints Handling

A Community Consultation and Complaints Handling Plan has been submitted separately to the DPIE Major Projects website. The following brief sections are summaries from that plan.

8.1 DPIE Condition C3(d)

The full context of Item C3(d) is as follows:

C1. Management plans required under this consent must be prepared in accordance with relevant guidelines, and include:
    (g) a protocol for managing and reporting any:
        (ii) complaints;

C2. The Applicant must prepare a Construction Environmental Management Plan (CEMP) in accordance with the requirements of condition C1 and to the satisfaction of the Planning Secretary.

C3. As part of the CEMP required under Condition C2 of this consent, the Applicant must include the following:
(d) Community Consultation and Complaints Handling;

8.2 Community Consultation

The community consultation portion of the Community Consultation and Complaints Handling Report submitted separately was prepared based on the Community Consultation Report prepared by Willowtree Planning and located in Appendix 17 of the EIS.

8.2.1 Willow Tree Community Consultation Executive Summary

The following statement from the Executive Summary of the Willowtree Community Consultation report summarises the results of the community consultation.

> No significant matters of concern were raised by any of the consulted stakeholders, and it is considered that all relevant technical matters which were raised have been sufficiently dealt with by the supporting technical studies included as Appendix 2 to Appendix 16 of the Environmental Impact Statement (EIS), as well as in the planning assessment contained within the EIS itself.
>
> It is important to note, that the feedback outlined throughout this Report should not be interpreted as being a complete representation of the full range of views from all stakeholders. However, it is an accurate assessment of the feedback recorded to date.

8.2.2 List of Groups Contacted

The following groups were consulted and their responses are included in the Appendices of the Willow Tree Planning Community Consultation Report.

- NSW DEPARTMENT OF PLANNING AND ENVIRONMENT
- FAIRFIELD CITY COUNCIL
- OFFICE OF STRATEGIC LANDS
- ROADS AND MARITIME SERVICES
- TRANSPORT FOR NSW
- FIRE AND RESCUE NSW
- OFFICE OF ENVIRONMENT AND HERITAGE
- ENVIRONMENT PROTECTION AUTHORITY
- DEPARTMENT OF PRIMARY INDUSTRIES
- LOCAL COMMUNITY AND NEIGHBOURHOOD CONSULTATION

8.3 Complaints Handling

Complaints will be handled by the Environmental Manager as is currently done for all Plant 1, 2 and 3 complaints at Horsley Park. The following sections are excerpted from Austral Bricks Procedure Env-MSP-All-07.011 – Environmental Complaints and then updated to include the Construction Project Manager.

8.3.1 Responsibilities

Position	Responsibilities	Authorities
Site Manager	Record any complaints directly received in the SHE- Frm – Env-03.333 Enviro Complaint Register. Notify management and Environmental Manager of any complaints received. Investigate complaint and mitigate the cause if applicable.	Investigate sources of a complaint. Provide adequate resources.
Environmental Manager	Document and report any complaints received Investigate complaint and mitigate the cause if applicable.	Investigate sources of a complaint. Report any to Management, DPIE and National Environmental Manager
Construction Project Manager	Assist Environmental Manager in mitigating the cause if applicable	Investigate sources of a complaint. Work with DPIE and Environmental Manager

8.3.2 Procedure

The Environmental Manager shall ensure that there is an environmental hotline advertised, currently:

Environmental Hotline 1800 635 620

The Site Manager and/or the Environmental Manager shall ensure that all environmental complaints received are recording in the National Complaints register.

The Environmental Manager or Site Managers shall ensure that the NSW Manufacturing Manager, the Construction Project Manager and National Environmental Manager have been notified of the complaint. The Environmental Manager will also ensure that the DPIE Planning Secretary is emailed at compliance@planning.nsw.gov.au if there are any complaints about the construction or complaints that might be related to the construction.

The Environmental Manager shall investigate the source of any complaint received and liaise with the Site Manager and the Construction Project Manager to attempt to rectify any know sources of a complaint.

The Environmental Manager shall ensure the complaint is recorded in the Austral Brick Monthly Report, the Plant 2 Upgrade Environmental Status Report and in the National Complaints Register.

9. Dust Control Strategies

Austral Bricks intends to abide by DPIE Consent Conditions B2 and B3.

Dust Minimisation

B2. The Applicant must take all reasonable steps to minimise dust generated during all works authorised by this consent.

B3. During construction, the Applicant must ensure that:
- (a) exposed surfaces and stockpiles are suppressed by regular watering;
- (b) all trucks entering or leaving the site with loads have their loads covered;
- (c) trucks associated with the development do not track dirt onto the public road network;
- (d) public roads used by these trucks are kept clean; and
- (e) land stabilisation works are carried out progressively on site to minimise exposed surfaces.

10. Air Quality Management Plan

A separate Air Quality Management Plan with more detail has been submitted to the DPIE Major Projects site.

10.1 NSW EPA condition 2

2. Prior to construction, the Proponent must develop an Air Quality Management Plan. This plan should include but not necessarily be limited to the following requirements:
   a. Identification of all major sources of air emissions including off road transport sources;
   b. List of controls to prevent and minimise air pollution;
   c. List of protocols that describe how plant and equipment are maintained to prevent and minimise air pollution;
   d. All procedures and preparatory measures that mitigate the impact of adverse weather;
   e. All procedures and preparatory measures that mitigate air pollution impacts when the site is unattended;

f. Procedures for monitoring air emissions from the site; and
g. Reactive/proactive management systems that include derived action levels and contingency measures in the event that monitoring results approach or likely to exceed the relevant compliance criteria or a non-compliance.

10.2 Major Sources of air emissions

The following is from Section 9.3 of Airlabs Environmental, Air Quality Impact Assessment.

Construction based activities, which have a potential to generate dust emissions include:

- Earthwork operations such as excavation and topsoil stripping.
- Handling of spoil and structural fill material.
- Wind erosion from temporary exposed areas and stockpiles.
- Wheel generated dust from haulage on work areas.

10.3 Controls and Mitigation Measures

The following is from Section 9.3 of Airlabs report.

Table 10-1 – Airlabs Table 17: Construction Dust Mitigation Measures

Source of Dust	Mitigation Measure	Timing
General	Identify dust-generating activities and inform site personnel about location	Throughout construction
	Identify adverse weather conditions (dry and high wind blowing from dust source to sensitive receptors) and halt dust emitting activities if visible dust impacts are identified at sensitive receptors.	Throughout construction
Handling of spoil and structural fill material	Minimise drop height for material handling equipment.	Throughout construction
Wind generated dust from temporary stockpiles and exposed areas	Apply watering through water trucks or sprinklers.	As required
	Progressive staging of dust generating activities throughout the day to avoid concurrent dust emissions.	Throughout construction
	Minimise exposed area if possible.	Throughout construction
	Minimise amount of temporary material stockpiled if possible.	Throughout construction
Wheel generated dust during hauling	Restrict vehicle movement to haul routes that are watered regularly.	Throughout construction
	Cleaning of haul roads.	As required
	Speed restrictions	Throughout construction

10.4 Protocols for Plant and Equipment Maintenance

Austral Brick has operated under the strict operation and maintenance requirements of EPA Licence No. 546 for 20 years. There will be no change to these strict requirements for the period of the upgrade of Plant 2.

Austral Brick intends to meet the conditions of DPIE Condition A28 as part of all it's activities on the Plant 2 Upgrade site.

DPIE Condition A28 states:

A28. All plant and equipment used on site, or to monitor the performance of the development must be:
(a) maintained in a proper and efficient condition; and
(b) operated in a proper and efficient manner.

10.5 Heavy Vehicle Routes, Access and Parking

Figure 10-1 shows that the primary access point for all traffic to the Plant 2 site will be via Ferrers Road.

The following are selected passages from section 6.9 of the EIS by Willow Tree Planning.

The Plant 2 site has limited access to public transport facilities and the proposed development would have little impact on the surrounding public transport and walking and cycling infrastructure due to the high percentage of car users.

Access to the site is off the internal access road which runs east-west through the parent site, connecting Wallgrove Road with Ferrers Road.

Over the full construction period, light vehicle trips are likely to result in up to 10 vehicles per hour. It is anticipated that under a worst-case scenario no more than 10 truck movements per day would be required for the delivery of constructions materials to the Plant 2 site. Few if any of these trips would be generated during the commuter peak periods.

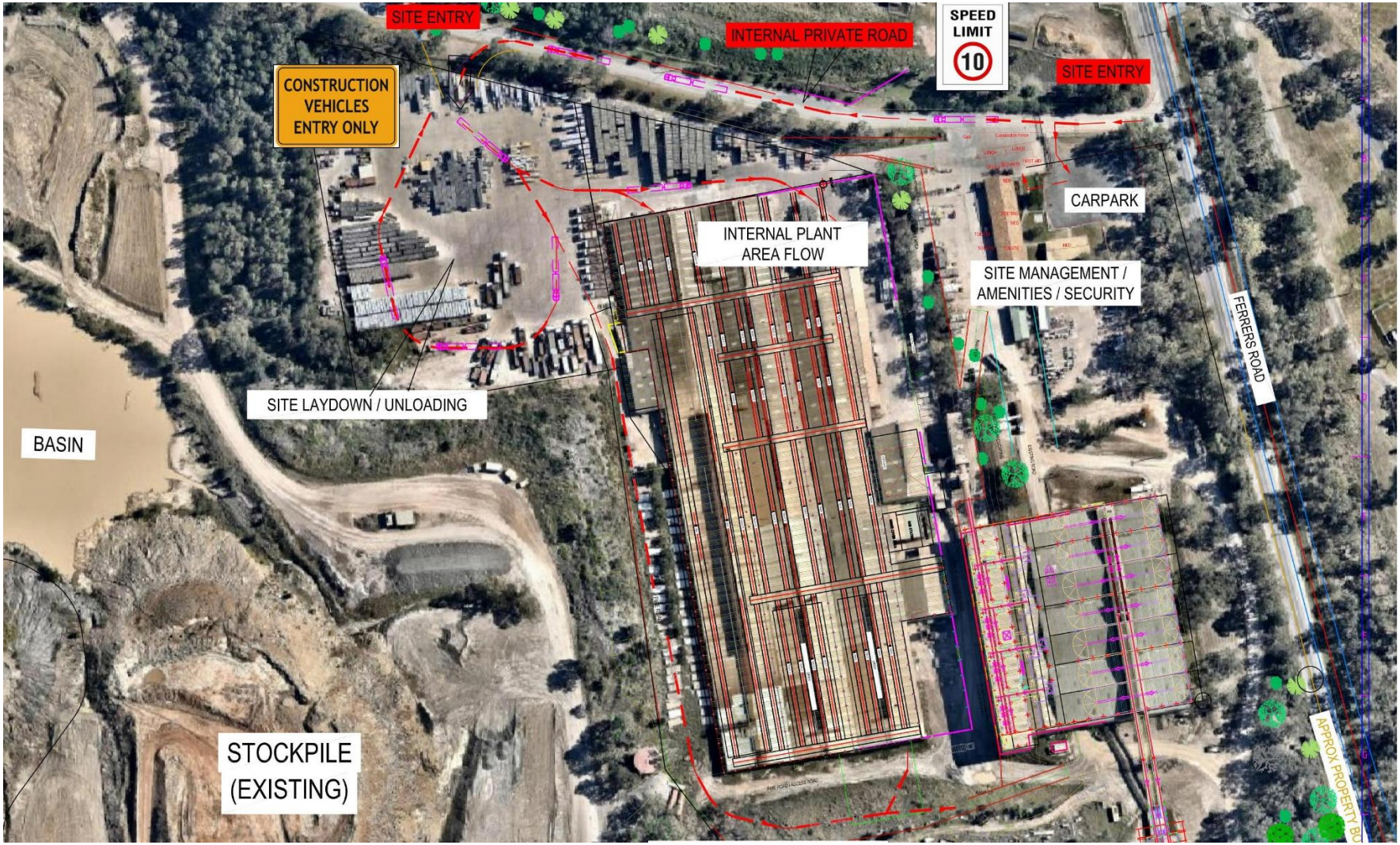

Figure 10-1 – Traffic patterns for Plant 2 Upgrade from Brickworks Management

10.6 Procedures for adverse weather and unattended site

Airlabs has concluded that there is minimal risk of dust impacts during the construction works as described in section 9.3 of their Air Quality Impact Assessment.

> Given that construction activities are progressive and transient in nature, the potential for the aforementioned activities to adversely impact the local air quality is low. Moreover, construction activities would take place sporadically over a large area which would significantly limit the potential for any adverse off-site impacts.

This low risk will be taken into account during extended dry periods followed by high winds. If the environmental Manager believes there may be potential of offsite impacts, the project manager will be contacted and potential dust causing works will be shut down.

The potential for adverse off-site air quality impacts is considered to be low at all times during active construction, therefore risk is considered to be even lower when the construction site is unattended. For this reason Austral Brick has not developed any extra or added mitigation measures to control dust when the construction site is unattended.

10.7 Air Quality Monitoring

The EPA Licence (No. 546) for the Horsley Park site requires a broad range of air quality monitoring all related to emissions from the stacks of the brick factories. All of the relevant air quality monitoring will continue through the construction period. The Licence does not require any specific dust monitoring on the property boundaries.

In order for any dust monitoring device to be useful in determining whether dust is impacting neighbours, it should be located between the most likely and most significant source of dust and the most sensitive receptors. It is also best if the dust monitor is located on the property boundary because then there can be no question that all the potential dust that is crossing the boundary towards the sensitive receptors, is being captured by the dust monitors.

Austral Bricks has investigated Dust Deposition Gauges, high volume air samplers, light scatter or beta attenuation dust monitors for dust sampling on the southern boundary of the site between Plant 2 and the residences on Chandos Road and has determined that the costs far outweigh the benefits of establishing any of these air monitoring options.

10.8 Management Systems approach regarding potential exceedances

Austral Brick will carry out the mitigation measures described in Table 10-1 (Airlabs Table 17) shown above.

Since there will not be any dust monitoring for the reasons described in the previous section, Austral Brick does not have any specific contingency measures in the event that monitoring results approach or are likely to exceed the relevant compliance criteria.

11. Noise Control Procedures

11.1 Work Hours During Construction

Austral Bricks intends to abide by DPIE Consent Conditions B11 and B12 and EPA Consent Conditions 15 and 16.

B11. The Applicant must comply with the hours detailed in Table 1.

Table 11-1 – DPIE Table1 Hours of Work

Activity	Day	Time
Demolition, earthworks and construction	Monday – Friday Saturday	7 am to 6 pm 8 am to 1 pm
Operation	Monday - Sunday	24 hours

B12. Works outside of the hours identified in condition B11 may be undertaken in the following circumstances:
- (a) works that are inaudible at the nearest sensitive receivers;
- (b) for the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons; or
- (c) where it is required in an emergency to avoid the loss of lives, property or to prevent environmental harm.

15. All work and activities must only be conducted between:
    a. 7:00am and 6:00pm Monday to Friday;
    b. 8:00am and 1:00pm Saturday; and
    c. not be undertaken on Sunday or public holidays.

16. The hours of operation specified in condition 15 may be varied with written consent if the EPA is satisfied that the amenity of the residents in the locality will not be adversely affected.

Austral Bricks has made it clear prior the EIS and through the approval process that it intends to adhere to the proscribed working hours except with the written consent of the Secretary or in the extraordinary conditions listed above

11.2 Construction Noise Limits and mitigation measures

Austral Bricks intends to abide by DPIE Consent Condition B13 and EPA Consent Conditions 17, 19, 20 and 21.

B13. The development must be constructed to achieve the construction noise management levels detailed in the *Interim Construction Noise Guideline (DECC, 2009)* (as may be updated or replaced from time to time). All feasible and reasonable noise mitigation measures must be implemented and any activities that could exceed the construction noise management levels must be identified and managed in accordance with the management and mitigation measures in the Appendix 2.

Benbow Noise Impact Assessment Chapter 1 says that the noise survey has been prepared in accordance with the *Interim Construction Noise Guideline (DECC, 2009).*

17. All feasible and practicable noise mitigation and management measures must be implemented to minimise noise impacts. If noise exceeds the project specific noise management levels, as described in the NSW Interim Construction Noise Guideline (DECC, 2009), the Proponent must investigate, establish the reason for the noise exceedance and implement all additional feasible and practicable measures.

Mitigation measures are detailed in the following chapter.

19. Noise generated at the premises must not exceed the noise limits presented in Table 6.2: Project Noise Trigger Levels (PNTL) for Operational Activities in report Noise Impact Assessment for Austral Bricks Pty Ltd, 780 Wallgrove Road, Horsley Park. Ref. 181134_Rep_Rev6 August 2019.

Benbow Noise Impact Assessment showed no exceedance-Table 9-3.

20. For the purposes of determining the noise generated at the site, the modification factors in Fact Sheet C of the Noise Policy for Industry (EPA, 2017) must be applied, as appropriate, to the noise levels measured by the noise monitoring equipment.

21. To determine compliance with the LAeq(15 minute) noise limits in Condition 19, the noise measurement equipment must be located:
    a) approximately on the property boundary, where any dwelling is situated 30 metres or less from the property boundary closest to the premises; or
    b) within 30 metres of a dwelling façade, but not closer than 3m, where any dwelling on the property is situated more than 30 metres from the property boundary closest to the premises; or, where applicable
    c) within approximately 50 metres of the boundary of a National Park or a Nature Reserve.

These B21. guidelines are taken from the Noise Policy for Industry (2017). Benbow's Noise Impact Assessment notes in Chapter 4 that the monitoring has been conducted in accordance with the Noise Policy for Industry (2017).

11.3 Vibration

Austral Bricks intends to abide by EPA Consent Conditions 18 and 22.

18. Activities must be undertaken in a manner that will minimise vibration impacts

22. Activities must be undertaken in a manner that will minimise vibration impacts

EPA Conditions 18 and 22 are exactly the same.

The following is from Section 10.1 of Benbow Environmental's Noise Impact Assessment.

> The construction activities will not utilise equipment that generates significant vibration apart from the jackhammer.
>
> From Table 3-1, no surrounding receivers are located within the immediate vicinity of any surrounding residential or non-residential receivers. Therefore, given the distances to surrounding receivers, it is considered unlikely that cosmetic damage or human response to vibration will occur as part of the proposed construction works.

12. Noise Management Plan

The Noise Management Plan following the guidance from EIS Appendix 12, the Benbow Environmental Noise Impact Assessment, has been submitted separately to the DPIE Major Projects website. The following brief sections are summaries from that plan.

12.1 EPA Consent Condition 14

The consent condition for the preparation of the Noise Management Plan is Condition 14 shown below.

14. The Proponent must prepare a noise management plan that clearly outlines the recommended noise mitigation, monitoring and management measures to minimise noise and vibration impacts during construction and operation of the site. The noise management plan must include, but not necessarily limited to:
    a. the identification and assessment of all potential noise sources associated with the development
    b. the location of all sensitive receptors

c. proposed hours of operation
d. transport route(s) to be used
e. proposed noise mitigation measures.
f. respond to adverse weather conditions including temperature inversions
g. reactive management systems that include derived action levels and contingency measures in the event that monitoring results approach or likely to exceed the relevant compliance criteria.

12.2 Potential Noise Sources

The following information on Potential Noise Sources have been sourced from the Benbow Environmental Noise Impact Assessment.

The construction steps predicted to generate the most noise and the associated equipment to be use are as follows:

- Demolition works (Scenario 1): Jackhammer, Hand Tools, Truck
- Civil works (Scenario 2): 20T Excavator, backhoe, Roller, Dozer, Hand Tools, Truck;
- Concreting works (Scenario 3): Concrete mixer Truck, Concrete pump, Hand Tools; and
- Structure works (Scenario 4): Truck, Crane, Hand Tools.

12.3 Location of sensitive receptors

The following sections on the location of sensitive noise receptors have been sourced from Chapter 3 of the Benbow Environmental Noise Impact Assessment.

The location of each receptor is shown in an aerial photograph provided in Figure 3-1. These receptors were selected based on their proximity and directional bearing from the subject site. Receptors R1 to R8 are residential receptors. The nearest residential receptor is located approximately 730 m away from the location of the main production building.

The nearest sensitive receptors located to the south from the subject site are situated on large landholdings and the residences are located along Chandos Road, away from the subject site's boundary. Plant #2 is partially shielded from the Chandos Road residences by an existing stockpile.

R9 is Prospect Water Filtration Plant, R10 is Ferrers Road, R11 is Wallgrove Road and R12 is the Prospect Nature Reserve.

Figure 3-1: Nearest Sensitive Receptors

Figure 12-1 - Figure 3-1 from Benbow Environmental – Nearest Sensitive Receptors

12.4 Hours of operation during Construction and Demolition

As described above Austral will work only in the hours defined in the Conditions of Consent as shown below, except under the associated consent conditions.

- 7:00am and 6:00pm Monday to Friday;
- 8:00am and 1:00pm Saturday; and
- not be undertaken on Sunday or public holidays.

12.5 Transport Routes

The Transport routes planned for the Demolition and Construction are shown in **Figure 10-1** as provided by Brickworks Management. **Figure 10-1** is included in the Air Quality Management Plan section. All traffic is to enter from Ferrers Road.

12.6 Noise mitigation measures

The following Mitigation measures are will be employed for the duration of the demolition and construction period at the Plant 2 Upgrade.

12.6.1 Construction Hours

The Monday to Friday work hours of 7am to 6pm are the noisiest hours of the day to the residential receptor and therefore the least likely time that noisy equipment would disturb the nearest residences. This is confirmed in the NSW Interim Construction Noise Guideline 2009 and the Noise Policy for Industry 2017.

12.6.2 Distance to Receptors

Noise is attenuated over distance, so the further a receptor is away from the noise source, the quieter the noise will be at the receptor. Plant 2 is a significant distance from the nearest residential receptor. The nearest residences to Plant 2 are R5 and R6 which are 730 metres away.

12.6.3 Topography

Figure 12-2 shows that there is a significant berm to the south of Plant 2 that blocks noise from the Plant 2 area to any receptors to the south.

Figure 12-2 – Photo from the south east side of Plant 2 looking south.

12.6.4 Staged construction

As described in the Benbow Environmental Noise Impact Assessment the construction will be staged as shown in the Potential Noise Sources Chapter. This will limit the numbers of noisy equipment on site at one time reducing the noise impacts.

12.6.5 Monitoring

Monitoring has been carried out for many years at premises along Chandos Road that would be the most impacted by the Plant 2 Upgrade. The monitoring conducted over the years indicates that the Plant 2 noise on Chandos Road, where the most sensitive receptors are, has no impact compared to the traffic and the Gas Plant on Chandos Road.

12.7 Construction and Demolition Noise Impacts

A good indication that further extensive noise mitigation measures are not required is that the noise modelling carried out by Benbow Environmental clearly shows that there will be no noise impacts The modelling results even show that if extra pieces of equipment were added to the noise sources in each scenario the noise levels would still be far below the Interim Construction Noise Guideline requirements.

As section 9.2 of the Benbow Environmental Noise Impact Assessment summarises:

Results of the predictive noise modelling of the construction activities are shown in Table 9-3. It can be seen that the predicted noise levels comply with the construction noise criteria at all receivers during standard construction hours for all scenarios.

12.8 Impact of Temperature Inversions

Section 5.3 in the Benbow Environmental Noise Impact Assessment states:

> Temperature inversions are considered a feature where they occur more than 30% of the total night time during winter (June, July and August) between 6:00pm and 7:00am. This is different from the night noise assessment period over which inversions are to be assessed, which is from 10:00pm to 7:00am.
>
> This involves determining the percentage occurrence of moderate (Class F) and strong (Class G) inversions. Weak inversions (Class E) should not be included in the analysis.
>
> The analysis conducted on the 2017 weather data highlighted that during winter 18.5% of the nights presented temperature inversion conditions, therefore these effects have not been included in the noise impact assessment.

Further support for the Benbow Environmental conclusions regarding inversions are the construction noise modelling results. Inversion impacts rarely add more than 10 dB(A) to the calculated noise levels under Standard meteorological conditions Even the worst case modelling results had a margin of safety of over 20 dB(A) as shown in Table 12-1 (modified from Benbow Table 9-3).

Table 9-3 cut down to show only the loudest impacts

Table 9-3: Noise Modelling Results Associated with Construction Activities for L_{eq}, dB(A)

Receiver	PSNL ($L_{eq,15\ minute}$ dB(A)) Standard Hours	Scenario (Standard Hours) (L_{eq}, dB(A))			
		1[1]	2	3	4
R6	52	27 ✓	22 ✓	20 ✓	19 ✓
R7	52	28 ✓	24 ✓	19 ✓	17 ✓
R8	52	25 ✓	20 ✓	14 ✓	13 ✓

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

Table 12-1 - Benbow Environmental Table 9-3 cut down to just show the three loudest noise impact residences R6, R7 and R8.

For these reasons Austral believes that there is no compelling reason to employ any extra mitigation measures in the unlikely event of adverse weather conditions such as temperature inversions.

12.9 Response to unusual noise levels at sensitive receptors

As described in previous sections the modelled noise impacts at the nearest affected residences are all so far below the relevant noise compliance criteria that even under unusually loud noise conditions there would still be no impacts on the nearest residences.

13. Potential Contamination

13.1 Risk of Potential Contamination

Section 6.8 of the Willow Tree Planning EIS states:

> Given that no evident sources of mobile contamination could be visually identified onsite, it is considered that potential contaminants associated with past and present and uses are minimal.

13.2 Potential Contamination from Power Transformers

DPIE Condition Appendix 2 Contamination (j) and (k) state:

(j) The power transformers associated with the existing substation are considered to be a possible source of potential polychlorinated biphenyl contamination. Therefore, special consideration and caution would be given to any proposed demolition and excavation works at the substation.

(k) Subsurface conditions and any soils to be excavated within the footprint of the substation would be appropriately assessed for the presence of potential contaminants prior to disturbance.

Polychlorinated biphenyl (PCB) additives have not been used in Transformer oils for many decades. The Austral Bricks Project Management Team reports that over the years of normal maintenance, replacement of the mineral oil in the power transformers and topping up the transformers that used all over the Horsley Park site, there is very little if any PCB remaining in any of the transformers. They also report that in recent years there have been no incidents regarding leakage or spills of mineral oil from the transformers, that may have resulted in contaminated soil beneath the transformers.

Although this indicates that the risks of PCB contamination are negligible, Austral Brick recognises that there is still a risk of soil contamination from mineral oil which although much less toxic and persistent than PCB’s is still worth considering. Austral

Brick will exercise special consideration and caution when demolishing the transformers. Austral Brick will also assess the soils beneath the transformer location if excavation is required.

13.3 Unexpected Contamination Procedure

13.3.1 Condition B45 - Unexpected Contamination

Consent Condition B45 defines the DPIE requirements in the event of the discovery of unexpected contamination during the upgrade of Plant 2. The text is included below.

B45. Prior to the commencement of earthworks, the Applicant must prepare an unexpected contamination procedure to ensure that potentially contaminated material is appropriately managed. The procedure must form part of the of the CEMP in accordance with condition C2 and must ensure any material identified as contaminated must be disposed off-site, with the disposal location and results of testing submitted to the Planning Secretary, prior to its removal from the site.

13.3.2 Potential Contamination Procedure

1. If something is discovered that looks like it could be contaminated soil or some kind of contamination mixed with the soil, excavation and any other work in the area that might disturb the potential contamination in that area must cease and the supervisor and then the Environmental Manager must be contacted. NSW Environmental Manager, Cassandra Steppacher, phone 0425 341 106

2. If the determination is that there is no contamination, work can recommence in the area where the contamination was suspected.
3. Following the determination that it is a potentially contaminated site, care must be taken that no workers get any of the contaminated material on the skin or clothes and then the following steps should be taken.
4. Photographs should be taken of the potentially contaminated area and filed by the Environmental Manager.
5. Depending on the kind of potential contamination, a technical assessment of the kind of contamination should be made. Soil samples taken and sent to the lab for analysis. Gloves should be worn to be certain that no contamination gets on the hands of the person taking the sample.
    - 5a. If the soil is considered oily then Total Petroleum Hydrocarbons and BTEX should be analysed.
    - 5b. If there is may be asbestos pieces in the soil then the pieces should be collected and analysed for asbestos.
    - 5c. If the soil looks generally discoloured and with an odd texture, the soil may have to be analysed for a wide range of contaminants.

6. If there is certainty that there is significant contamination at the site, the environmental Manager should contact a certified Site Contamination Specialist. The attached link has a list of the certified specialists. http://www.cenvp.org/directory/
7. Following the initial sampling the site must be isolated and protected so that none of the potential contamination can escape into the environment, until the results come back from the lab
8. If the laboratory results indicate that there is some kind of significant contamination, then the site must be turned over to the guidance of a certified Site Contamination Specialist (CEnvP-SC) under the EIANZ Certified Environmental Practitioner Scheme (www.cenvp.org) as recognised under NSW EPA policy.
9. The site contamination specialist will then work with the Environmental Manager and the Project Manager to determine the best course of action.
10. Depending on the guidance from the Site contamination specialist and the type of contamination, the contaminated soil may have to be sent to a licenced treatment or disposal facility that accepts that specific type of waste.
11. Following the safe disposal or treatment of the contaminated material, a report will be prepared for the Planning Secretary including the laboratory analysis results and the paperwork indicating the location of the treatment or disposal.

13.3.3 Examples of Potential Soil Contamination

Appendix A has some photos of contaminated soil that might be similar to potential contamination in the unlikely event that any is found on the Horsley Park site.

14. Aboriginal Heritage Unexpected Finds Protocol

14.1 Consent Conditions

Consent Conditions B28 and B29 define the DPIE requirements in the event of the discovery of unexpected aboriginal heritage during the upgrade of Plant 2. The text is included below.

ABORIGINAL HERITAGE
Unexpected Finds Protocol

B28. If any item or object of Aboriginal heritage significance is identified on site:
   (a) all work in the immediate vicinity of the suspected Aboriginal item or object must cease immediately;
   (b) a 10 m wide buffer area around the suspected item or object must be cordoned off; and
   (c) the EES Group must be contacted immediately.

The EES Group is the Environment, Energy and Science Group of the NSW Department of Planning, Industry and Environment.

B29. Work in the immediate vicinity of the Aboriginal item or object may only recommence in accordance with the provisions of Part 6 of the National Parks and Wildlife Act 1974.

14.2 Procedure

1. If something is discovered that looks like it could be an aboriginal Heritage site or some aboriginal heritage artefacts of any kind mixed with the soil, excavation and any other work in the area that might disturb the potential aboriginal heritage in that area must cease and the supervisor and then the Environmental Manager must be contacted. NSW Environmental Manager, Cassandra Steppacher, phone 0425 341 106
2. If the determination is that there is no aboriginal heritage or artefacts, work can recommence in the area where the aboriginal heritage site was suspected.
3. Following the determination that it is an area with aboriginal heritage values the EES group of the DPIE should be contacted. They can be contacted through the EPA.
4. Photographs should be taken of the potential aboriginal heritage items and filed by the Environmental Manager.
5. Austral will ensure that any investigation is undertaken within the bounds of Part 6 of the National Parks and Wildlife Act 1974 (NPW Act), administered by the Office of Environment and Heritage NSW (OEH). Part 6 of the NPW Act provides specific protection for Aboriginal objects and declared Aboriginal places by establishing offences of harm. Harm is defined to mean destroying, defacing or damaging an Aboriginal object or declared Aboriginal place, or moving an object from the land.
6. The Environmental Manager will consult the Australian Association of Consulting Archaeologists Inc. (AACAI) (Homepage: www.aacai.com.au, Phone: (08) 8172 2111, Email: secretary@aacai.com.au) in order to make arrangements with an appropriate consultant to investigate the site.
7. Work in the immediate vicinity of the Aboriginal item or object may only recommence in accordance with the provisions of Part 6 of the National Parks and Wildlife Act 1974.
8. Following the appropriate completion of the recommendations of the Consulting Archaeologist and the OEH, a report will be prepared for the Planning Secretary including the pertinent reports or correspondence with the Consulting Archaeologist and the OEH.

Land and Groundwater investigated the potential for historical Heritage on the Heritage Council of NSW webpage, as part of their Preliminary Environmental Site Investigation Report, and found that “The site is not listed as being of significance.”

14.3 Conclusions from Biosis Aboriginal Due Diligence

Biosis conducted a Due Diligence Assessment of the Plant 2 sites and had the following conclusions.

> Based on the results of the background research and archaeological survey, the proposed impact areas have been assessed as holding low potential to contain Aboriginal sites. Discussions held with the LALC on site agree with this conclusion. It is recommended that no further archaeological assessment is required in advance of works within the impact areas, and that an unexpected finds protocol be established should be established as a contingency should any Aboriginal objects be identified during works. It is noted that the area along the margins of Eastern Creek, and the western most portion of the study area outside of the proposed impact areas, appears to have been subject to comparatively less disturbance. If future works are proposed within these areas further works in the form of a field investigation are recommended.

15. Incident Notification and Reporting Procedure

Austral Bricks has well established procedures for meeting the requirements of the Consent Conditions regarding Incident Notification and Reporting.

15.1 Consent Condition Requirements

The Primary DPIE Consent conditions are summarised in the following sections.

15.1.1 Condition C1 (g) (i)

C1. Management plans required under this consent must be prepared in accordance with relevant guidelines, and include:
   (g) a protocol for managing and reporting any:
      (i) incident and any non-compliance (specifically including where the impact assessment criteria or performance criteria is exceeded);

15.1.2 Condition C11

Incident Notification, Reporting and Response

C11. The Planning Secretary must be notified in writing to compliance@planning.nsw.gov.au immediately after the Applicant becomes aware of an incident. The notification must identify the development (including the development application number and the name of the development if it has one), and set out the location and nature of the incident. Subsequent notification requirements must be given and reports submitted in accordance with the requirements set out in Appendix 3.

15.1.3 Appendix 3

Appendix 3 of the DPIE Consent Conditions requires that the Secretary be made aware in writing of any environmental incident within seven days of Austral Brick becoming aware of the incident. The text of the consent condition requirements are included below.

WRITTEN INCIDENT NOTIFICATION REQUIREMENTS

1. A written incident notification addressing the requirements set out below must be emailed to the Planning Secretary at the following address: compliance@planning.nsw.gov.au within seven days after the Applicant becomes aware of an incident. Notification is required to be given under this condition even if the Applicant fails to give the notification required under condition C11 or, having given such notification, subsequently forms the view that an incident has not occurred.
2. Written notification of an incident must:
    a. identify the development and application number;
    b. provide details of the incident (date, time, location, a brief description of what occurred and why it is classified as an incident);
    c. identify how the incident was detected;
    d. identify when the applicant became aware of the incident;
    e. identify any actual or potential non-compliance with conditions of consent;
    f. describe what immediate steps were taken in relation to the incident;
    g. identify further action(s) that will be taken in relation to the incident; and
    h. identify a project contact for further communication regarding the incident.
3. Within 30 days of the date on which the incident occurred or as otherwise agreed to by the Planning Secretary, the Applicant must provide the Planning Secretary and any relevant public authorities (as determined by the Planning Secretary) with a detailed report on the incident addressing all requirements below, and such further reports as may be requested.
4. The Incident Report must include:
    a. a summary of the incident;
    b. outcomes of an incident investigation, including identification of the cause of the incident;
    c. details of the corrective and preventative actions that have been, or will be, implemented to address the incident and prevent recurrence; and
    d. details of any communication with other stakeholders regarding the incident.

15.2 DPIE Condition B27

B27. All incidents that affect or could affect the WaterNSW Pipelines corridor must be reported to WaterNSW immediately after the Applicant becomes aware of the incident.

Note: The incident notification is to be reported on WaterNSW's 24-hour Incident Notification Number 1800 061 069.

15.3 Austral Brick Incident Reporting Procedures - General

Austral Bricks has prepared a very detailed Pollution Incident Response Management Plan (PIRMP) for Plants 1, 2 and 3 at Horsley Park.

The Critical Steps in the PIRMP are:

- Evaluation
- Pre-emptive actions to prevent incidents
- Emergency incident response procedures
- Early warnings and Communications to neighbours
- Training
- Updating and Implementing the Plan

Austral Bricks plans to use the procedures in Chapter 5 of the PIRMP if an incident occurs during the upgrade of Plant 2 with modifications necessary to notify keep the project manager informed and to notify the DPIE. The main features of the procedures in PRIMP Chapter 5 are listed in the following sections.

15.4 Emergency Response and Notification Procedures.

15.4.1 Communications – Key Names and Contacts

Table: List of Key Jobs and 24 hour Contact Details

Job title	Contact Number
Construction Project Manager	Jeremy Foster – 0407 902 467
Environmental Manager	Cassandra Steppacher - 0425 341 106
Construction Project Support Engineer	Mal Mellows – 0407 285 448
Austral Brick Manufacturing Manager	Allen Jamba 0420 971 413
Operations Supervisor – Plant 21	George Alim 0418 964 886
Operations Supervisor – Plant 22	NA
Operations Supervisor – Plant 23	Geoff Wall - 0420 312 962

15.4.2 Responsibilities and Authorities

Responsibilities	Authorities
Construction Project Manager	
- Facilitate the gathering of information from contractors, witnesses and any others involved that will be required to adequately report to the DPIE and EPA of an environmental emergency	- Contact the DPIE and EPA in the event that the Environmental Manager is unable - Authorise written report
Environmental Manager	
- Assisting with advice, reporting and response process; - Ensuring the Plan is made available to staff responsible for implementing the plan and authorised officers under the POEO Act - Assisting in the notification of pollution incidents to the relevant authorities - Assistance with the implementation of response actions to pollution incidents - Assistance in communicating with neighbours and the local community about the Plan and when incidents of a certain nature occur - Ensuring that training responsible for activating about their roles in the Plan - Testing; and Reviewing this plan.	- Contact the DPIE and EPA - Obtain information from contractors, employees and witnesses. - Provide advice on controls and containment measures - Contact the regulatory authority in the event that the Manufacturing Manager is unable - Contact the appropriate regulatory authorities and lodge report - Prepare follow-up written report
Project Support Engineer	
- Ensure that all persons within their respective area are trained in the requirements of this procedure.	- In environmental emergencies, ensure appropriate controls are implemented - Notify Project Manager
Construction Contractors	
- To participate in any training associated with the requirements of this MSP. - Assist with implementing controls in the event of an environmental emergency	- Report incidents immediately to Austral Managers - Provide information as required

15.4.3 Notification Procedures in the event of an incident

WHAT TO DO IF A POLLUTION INCIDENT OCCURS

1. Take immediate action to ensure the safety of people at the site
2. If the incident presents an immediate threat to human health or property: Phone 000 for emergency assistance
3. Notify the Construction Project Manager and Environmental Manager of the incident
4. A supervisor of the incident is to fill out PIRMP Incident Notification form ENV-FRM-All-09.012A with the assistance of the Environmental Manager and provide to the Construction Project Manager
5. The DPIE and EPA must be notified in instances where it is reasonable to believe that material harm has, or will be, caused to the environment that is not trivial or results in actual or potential loss of property damage or clean-up costs exceed $10,000.
6. DPIE should be emailed at compliance@planning.nsw.gov.au. For smaller incidents, the Environmental Manager will make the decision regarding whether the incident is serious enough to contact DPIE.
7. The Construction Project Manager should notify all the relevant authorities listed below, in the order listed:

Order to call	Relevant Authorities	Number
1st	EPA	**131 555**
2nd	Ministry of Health (SSW Camperdown Public Health Unit)	**9515 9420**
3rd	WorkCover	**131 050**
4th	Local Authority- (Fairfield City Council)	**9725 0222**
5th	Fire and Rescue NSW – Pollution incident notification hotline	**1800 635 620**

8. Other authorities may need to be contacted depending on the nature of the incident,

Reason	Contact
The incident involves electricity	Endeavour Energy: 131 003
The incident threatens the large above ground water pipes (WaterNSW Pipes: 24 hour notification number)	Sydney Catchment Authority: 1800 061 069
The incident threatens the underground water pipes	Sydney Water: 13 20 90
The incident threatens the underground Gas pipeline	Jemena 131 909

9. If the call is answered by an operator, state: *"My name is ___(your name)__ from Austral Bricks, I am calling to report an environmental incident."*

The operator will then ask a series of questions, which may include:

- Location of incident (site address)
- Nature of incident (actual, potential, hydrocarbon, water, air pollution etc.)
- Time incident occurred/started
- Estimated extent/severity of environmental harm
- Have any controls been put in place?
- Have any other authorities been notified?
- EPA license number for the site
- Brickworks representative contact details

A reference/lodgment number will then be issued by the operator, which must be recorded and referred to if a written report is requested after the incident.

10. If the call goes through to an answering service, ensure a message is left with the following information:

- Name and contact number of the person calling
- Company name and site address
- Type of incident and when it occurred
- Any controls put in place

The caller will then receive a return call from the authority, at which time the operator will ask a series of further questions (see list above).

15.4.4 Provision of Written Report to the Planning Secretary

Following notification to the EPA of any environmental incident, a written report may be requested. Within seven days of the incident a report must be emailed to the Planning secretary at compliance@planning.nsw.gov.au . This report is to be prepared by the NSW Environmental Manager and authorized/signed off by the Construction Project Manager. This report must include the following information (where applicable):

i. the cause, time and duration of the event
ii. identify the development and application number
iii. the reference/lodgement number obtained at the time of telephone notification to the EPA
iv. identify the other organisations and stakeholders contacted regarding the incident;
v. the type, volume and concentration of every pollutant discharged as a result of the event
vi. identify how and when the incident was detected;
vii. identify any actual or potential non-compliance with conditions of consent;
viii. action taken by the applicant in relation to the event, including any follow-up contact with any complainants

ix. details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event;
x. Identify the names and contact details of the NSW Environmental Manager and the Construction Project Manager; and
xi. any other relevant matters.

Within 30 days of the incident a follow up report will be sent to the Planning Secretary, which will include:

a) Any additional pertinent details to be added to the previous summary of the events
b) outcomes of an incident investigation, including identification of the cause of the incident;
c) details of the actions that have been taken to prevent a similar incident from occurring again; and
d) details of any further communications with other stakeholders regarding the incident.

15.5 Spill and Air Based Emissions Incident Procedure

15.5.1 Spill Incident Procedure

Austral Bricks also maintains a Spill Incident procedure, ENV-MSP-ALL-09.013, which describes the on-site requirements for clean-up, spill kits, spill kit management and safety gear. Austral Brick has maintained Spill Kits on the Horsley Park site for many years and has stockpiles of absorbents and other materials needed to restock the Spill Kits when they are used. The Spill kits also include a form to be completed and submitted to the Environmental Manager in the event of a spill. The procedure also provides detailed instructions for safety checks, stopping the spill / leak, containing the spill / leak, cleaning up the spilled / leaked materials and then managing the waste generated by the clean-up. The reporting requirements are also included. Austral Brick will continue to use these procedures through the construction period.

Figure 15-1 – Site Plan of Plant 2 prior to the upgrade commencement showing Spill Kit locations and the location of the Diesel Tank. The Spill Kit locations will probably be moved at different stages of the demolition and construction.

15.5.2 Air Based Emissions Incident Procedure

Austral Bricks also maintains an Air Based Emissions Incident procedure, ENV-MSP-ALL-09.014, which describes the procedures for managing dust incidents, fire incidents, smoke incidents that may have resulted from a fire on site and odour incidents. These procedures will continue to be followed during the Plant 2 Upgrade Construction and Demolition.

15.6 EPA Licence Incident reporting requirements

Austral Brick is very familiar with the incident reporting management process. Brickworks / The Austral Brick Co Pty Ltd has had a NSW EPA Licence (No. 546) since March 2000. That licence includes strict conditions (R2) for incident reporting as described below. These conditions will continue to be followed during the Plant 2 Upgrade Construction and Demolition.

R2 Notification of environmental harm

R2.1 Notifications must be made by telephoning the Environment Line service on 131 555.

R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.

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Appendix A – Photos of Possible Contamination to familiarise workers with conditions that may require stoppage of work

Figure A1 – Differing colours and texture of soil may indicate contamination

Figure A2 – Differing colours and texture of soil at depth may indicate contamination

Figure A3 – An extreme example of a Differing coloured soil from an excavation near an old tannery with considerable dumping of the tanning chemicals

Figure A4 – Oily water or oil itself in the soil is a good indication of contamination

Figure A5 – Pieces of asbestos in soil. If asbestos is found there may be other construction contaminants

Figure A6 – A closer view of asbestos pieces. The asbestos fibres can be seen in the texture of the white pieces.

Figure A7 – Rubbish mixed with soil is an indication that there has been dumping which may mean that contaminants were mixed with the rubbish

Figure A8 – Rubbish mixed with soil. Often wire and concrete can be easily found and are a good indicator of dumping

Figure A9 – This soil is bound together in an unusual way indicating that perhaps some liquid was dumped with the plastic and metal pieces that can be seen .

Figure A10 – Plastic Rubbish lasts a long time in the environment so can indicate that there was dumping a long time ago.