Report and recommendations of the Environmental Protection Authority

Additional Tunnel Kiln (Whitemans Brick Plant) & Fluoride Scrubber (Midland Brick Operations) – inquiry under section 46 of the Environmental Protection Act 1986 to amend Ministerial Statement 322

Midland Brick Company Pty Ltd

Report 1662
December 2019
Inquiry under section 46 of the Environmental Protection Act 1986

The Minister for Environment has requested that the Environmental Protection Authority (EPA) inquire into and report on the matter of adding the proposal description and changing the implementation conditions relating to the Additional Tunnel Kiln & Fluoride Scrubber proposal, in order to remove completed conditions, and conditions and commitments managed by other agencies, incorporate relevant commitments onto conditions and updated the remaining conditions.

Section 46(6) of the Environmental Protection Act 1986 requires the EPA Report to include:

1. a recommendation on whether or not the implementation conditions to which the inquiry relates, or any of them, should be changed
2. any other recommendations that it thinks appropriate.

The following is the EPA’s Report and Recommendations to the Minister pursuant to s. 46(6) of the Environmental Protection Act 1986.

Dr Tom Hatton  
Chairman  
16 December 2019

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1. The proposal

The Midland Brick Company Pty Ltd (the proponent) currently operates the Additional Tunnel Kiln (Whitemans Brick Plant) & Fluoride Scrubber (Midland Brick Operations) which manufactures clay bricks and pavers at two separate factories located in Middle Swan, and a tunnel kiln and dryers at the Whitemans Brick Plant.

The Environmental Protection Authority (EPA) assessed the proposal at the level of Consultative Environmental Review, releasing its Report and Recommendations (Bulletin 691) in July 1993.

In this bulletin (herein referred to as Report), the EPA identified the following key environmental factors relevant to the proposal:

- Environmental emissions
- Fluoride effects on humans and animals
- Waste
- Noise.

In applying the Statement of Environmental Principles, Factors and Objectives (EPA 2018a) these factors are now represented by:

- Air Quality
- Social surroundings

The EPA concluded in Report 691, that the proposal is environmentally acceptable, provided the implementation of the proposal is carried out in accordance with the recommended conditions, and proponent commitments.

The then Minister for Environment approved the proposal for implementation, subject to the implementation conditions of Ministerial Statement 322 (6 October 1993).

Previously approved changes to the proposal and conditions

There have been no previous applications to change the proposal or to change the conditions in the Ministerial Statement prior to this.
2. Requested changes to conditions

The proponent requested the following changes to the implementation conditions of Ministerial Statement 322:

- change to the commitments in condition 1 (relating to proponent commitments and the design of the facility)
- removal of condition 2 (relating to gaseous fluoride emissions)
- removal of condition 3.1, 3.2 and 3.3 (relating to the monitoring program for acid gas)
- removal of condition 4 (relating to changes in site operations and specifications)
- removal of condition 7 (relating to the time limit for implementation of the project)
- removal of condition 8 (relating to progress and compliance reporting)
- amendment of the procedure conditions to reflect regulatory requirements and primary agency role with respect to compliance obligations.

In response to the proponent’s request, the Minister for Environment requested that the EPA inquire into and report on the matter of changing the implementation conditions relating to the proposal. This report satisfies the requirements of the EPA’s inquiry.

The EPA has discretion as to how it conducts this inquiry. The inquiry has considered:

- the currency of its original assessment (EPA Report 691)
- Ministerial Statement 322
- information provided by the proponent
- advice from relevant decision-making authorities
- any new information regarding the proposal’s potential impacts on the environment.

These documents are instructive in determining the extent and nature of the inquiry under s. 46 of the EP Act.

EPA policy and procedures

In December 2016, the EPA released a new suite of environmental impact assessment policy and guidance documents. These replaced EPA policy and guidance that were current at the time of receiving the change to conditions request. The EPA consulted with the proponent on the application of the current environmental impact assessment policy and guidance documents, relevant to the EPA’s assessment of the proposal.
In conducting this inquiry, the EPA has considered and given due regard to relevant current and former policy documents. The EPA followed the procedures in the *Environmental Impact Assessment (Part IV Divisions 1 and 2) Administrative Procedures 2016* (EPA 2016a) and the *Environmental Impact Assessment (Part IV Divisions 1 and 2) Procedures Manual 2016* (EPA 2018b).

The EPA had particular regard to *Environmental Factor Guideline – Air Quality* (EPA 2016b) and *Environmental Factor Guideline: Social Surroundings* (EPA 2016c).
3. Inquiry findings

The EPA considered that the following are the key environmental factors relevant to the change to conditions:

- Air Quality
- Social Surroundings.

3.1 Air Quality

The EPA’s environmental objective for this factor is to maintain air quality and minimise emissions so that environmental values are protected.

EPA Report 691

The EPA identified the main environmental issues requiring detailed consideration in this report as:

- potential for impacts from gaseous fluoride emissions
- potential for annoyance from acid gas emissions
- potential for annoyance from smoke, particulate and dust emissions.

Gaseous fluoride emissions

The brickmaking process involves the heating up of complex clay minerals with the subsequent liberation of water from the crystal structure and the formation of ceramic bonds or a glass phase which gives clay products their strength and durability. During this process, water from the clay and the products of combustion, predominantly carbon dioxide and water vapour, are vented to atmosphere. The heating process also liberates small quantities of fluoride and chloride which are naturally occurring in the clay minerals. Of these, fluoride produces the only environmental emission of concern. This is due to the extremely high sensitivity of some plant species to gaseous fluoride.

EPA Report 691 noted that the local environment had been the subject of many studies, the most recent and comprehensive at the time of the report being the Swan Valley Fluoride Programme undertaken by the EPA. The Swan Valley Fluoride Programme was carried out over a period of two years from July 1988 to August 1990, in association with the clay product manufacturers in the Midland area. The programme found that atmospheric hydrogen fluoride emissions emanating from the Midland Brick/Whitemans Brick complex were within their EPA licence requirements.

Fluoride is a naturally occurring mineral in all clays. Its concentration can vary typically from 50 ppm to 700 ppm. Chemical analysis of clays used by the proponent indicated that the typical fluoride concentration is in the order of 200 ppm, of which 15 per cent is retained in the product after firing. Hydrogen fluoride is liberated by the high temperature reaction of water vapour with fluoride containing minerals. This fluoride is contained in the exhaust gases which are vented through gas scrubbers.
At the time of the EPA Report, fluoride at the existing Whitemans plant was captured using a lime scrubber, before venting exhaust gases to the atmosphere. The typical removal efficiency for fluoride using this dry scrubbing technique was more than 90 per cent. The proponent indicated that one of the major advantages of this type of scrubber was it provided a fail-safe method of preventing so called ‘bursts’ of fluoride from escaping the brickworks.

In order to ensure there was no increase in fluoride emissions as a result of the new kiln, the proponent made a commitment to construct an additional fluoride scrubber at the existing Midland Brick operations, as well as an additional scrubber for the proposed kiln. This commitment (commitment 3.1) indicated that, with the proposed expansion of Whitemans Brick and associated improvements at the Midland Brick site, a small reduction in emissions under normal operating conditions, and a significant reduction in emissions with both plants operating at full capacity would result. The commitments were to be reflected in amended licence conditions for the complex.

To manage the impacts of gaseous fluoride emissions, the EPA made two recommendations:

- that the total mass hydrogen fluoride emitted from the proponent complex should:
  - during typical operation, not exceed 0.7g per second
  - with the plant at full capacity, maintain levels less than 0.8 g per second for 80 per cent of the time
  - never exceed 1.0 g per second.

- that emissions and impacts of fluoride be monitored and reported in accordance with the requirements of the EPA.

Acid gas emissions (hydrogen chloride)

During the combustion process, low concentrations of acid gases (mainly hydrogen chloride) are emitted via stacks. Acid gases are defined as being any substance which, when absorbed in distilled water, is capable of lowering its pH (that is increase its acidity).

The major component of acid gas emissions from brick kilns in Western Australia is hydrogen chloride. For this reason, acid gas emissions are often expressed as hydrogen chloride emissions.

At the time of Report 691, the EPA found there were no environmental standards for the emission of acid gases. However, the Victorian EPA had established a design criterion as a guideline for acceptable ground level concentrations. The Victorian EPA design criteria for hydrogen chloride was 320 µg/m³ for three-minute concentrations. Report 691 considered modelling results that indicated the Victorian design guideline would not be exceeded, even with the addition of a new kiln.

The EPA found that there was some uncertainty in determining whether or not acid gas emissions from future operations would have unacceptable environmental
impacts. To verify predictions that cumulative impacts would be acceptable from existing, plus proposed operations, the EPA recommended a monitoring programme be developed and implemented.

In Report 691 the EPA recommended the following:

- condition 3-1 – the proponent shall determine the extent of any environmental impacts arising from acid gas emissions from the combined operations.
- condition 3-2 – to achieve the objectives of condition 3-1, prior to commissioning, the proponent shall submit to the EPA an acid gas emission monitoring programme for the combined operations.
- condition 3-3 – within three months of commissioning, the proponent shall implement the acid gas emission monitoring programme required by condition 3-2.

**Smoke, dust and particulate emissions**

Report 691 stated that current operating licenses for both sites contained limits for the emission of smoke, dust and particulates and periodic monitoring had shown both sites were operating within current licence conditions.

The proponent noted that the licence limit for the concentration of airborne dust from the premises was 1,000 micrograms per cubic metre of air. This licence limit would continue to apply to cumulative dust levels emanating from the existing and proposed facilities at the Midland Brick Complex, which included the Whitemans Brick site.

The proponent was required to take all reasonable and practicable measures to prevent or minimise the generation of dust from all materials handling operations, stockpiles, open areas and transport activities.

The proponent committed (commitment 3.5) to meeting all of its existing licence requirements for dark smoke and dust emissions and the EPA was satisfied that the issues of smoke, particulate and dust emissions would be managed in an environmentally acceptable manner.

No ministerial conditions relating to dark smoke and dust emissions were recommended for the proposal.

**Assessment of the proposed change to conditions**

The EPA considers that the following current environmental policy and guidance is relevant to its assessment of the proposal for this factor:

- *Environmental Factor Guideline – Air Quality* (EPA 2016b)

The objective for Air Quality recognises the fundamental link between air quality and the environmental values supported by good air quality. It also recognises the principle of waste minimisation as set out in the *Environmental Protection Act 1986*
In the context of this factor and objective, the EPA’s primary focus is maintaining air quality and minimising emissions for human health and amenity.

From time to time, poor air quality can also impact other environmental factors. For example, dust may smother flora and vegetation. In these circumstances, environmental impact assessment of the potential impacts will be undertaken against the relevant environmental factor, in this example the environmental factor Flora and Vegetation.

The proponent engaged Terratree Pty Ltd (Terratree) to conduct an environmental impact assessment of fluoride emissions on surrounding vegetation in 2014. Terratree concluded that vegetation health condition and foliar injury indicated compliance with the Australian and New Zealand Environment Council (ANZEC) ambient air quality goals for fluoride.

Consistent with the principle of waste minimisation as set out in section 4A of the EP Act, the EPA encourages the application of all reasonable and practicable measures to minimise harmful emissions to air. This might include facility design, technology choice, operation and closure. Reasonable and practicable measures include those measures which have regard to, among other things, local conditions and circumstances (including costs) and the current state of technical knowledge.

Since project approval, the proponent has upgraded its emission abatement system from the traditional cascade limestone scrubber, to direct injection fabric filter scrubbers in all kiln exhausts.

The EPA has also conducted a review of the current regulatory instruments that apply to the facility in relation to air emissions. The Part V (EP Act) Operating Licence for the Midland Brick facility (Licensed as Boral Bricks under L4511/1967/13) requires the proponent to ensure that waste emitted to the air from emission points is done so in accordance with the conditions of the Licence. This includes limits on certain parameters and monitoring of point source emissions including total oxides of sulphur (as SO2); hydrogen chloride, hydrogen fluoride, particulates, oxides of nitrogen, and carbon monoxide.

The Licence includes hydrogen fluoride (HF) emission limits in concentrations which can be converted to mass emission rates. The proponent is required to monitor HF emissions and report them to Department of Water and Environmental Regulation (DWER) as both concentrations and emission rates. The Licence places a limit of 20 milligrams/cubic metre (mg/m³) on each of the four stacks emitting at the plant. HF emissions are determined quarterly by stack testing, with typical monitoring reports showing site wide HF emissions at less than 0.1 grams per second (g/s). Licence concentration limits on each stack mean that with all stacks operating at the licence limit, the site emission rate would be approximately 0.8 g/s.

The proponent is also required to implement an improvement program, and use all reasonable and practical measures to prevent, and where that is not practical, to minimise dust emissions from the Premises.
The DWER has confirmed that annual reporting of stack testing from Midland Brick is compliant with licence limits.

The proponent has committed to meeting all existing Licence requirements for dark smoke and dust emissions. The EPA notes that the Licence does not include any requirements for dark smoke emissions at Midland Brick facility, furthermore such emissions are unlikely given the technology currently employed onsite.

The EPA considers these measures are reasonable to maintain air quality and to minimise emissions so that environmental values are protected.

Furthermore, the EPA considers that the environmental factor *Flora and Vegetation* is adequately considered and addressed through these regulatory instruments and does not require additional consideration with regards to dust impacts on vegetation (e.g. smothering).

In consideration of the above information, that the proposal has not changed since the original EPA assessment, and noting the requirements of the proponent’s Operational Licence, the EPA considers that:

- there is no significant or additional information that justifies the reassessment of issues raised by the original proposal
- air emissions are adequately managed by the Licence.

The EPA is therefore satisfied that the conditions 2, 3 and 8 relating to air emissions, monitoring, auditing and compliance can be removed from the Ministerial Statement 322, and regulated through the Part V operating licence for the facility (L4511/1967/13).

The EPA recommends that condition 8 be replaced with a contemporary compliance and reporting condition.

### 3.2 Social Surroundings (noise)

The EPA considers that the following current environmental policy and guidance is relevant to its assessment of the proposal for this factor:


The EPA’s environmental objective for this factor is to protect social surroundings from significant harm.

The objective recognises the importance of ensuring that social surroundings are not significantly affected as a result of implementation of a proposal or scheme.

**EPA Report 691**

The EPA identified the main environmental issue related to social surroundings, requiring detailed consideration as potential for noise emissions to upset nearby residents.
During assessment of the original proposal, the relocation of the scrubber and installation of a new larger exhaust fan was identified by Herring Storer Acoustics as a possible source of increased noise. At the time of this assessment, the proponent provided a commitment should further noise emissions occur, appropriate action would be taken to ensure compliance with noise regulation requirements. Report 691 found that monitoring of the current plant noise indicated emissions were below ambient levels, and it was anticipated that the second kiln was unlikely to cause any change to (current) noise emissions.

At the time of the original assessment, the EPA had established acceptable noise levels that were to be applied to residences throughout Western Australia. These noise levels at residences were not to exceed:

- 40 dB(A) from 10pm to 7am, every day
- 45 dB(A) from 7pm and 10pm every day and on Sunday and public holidays
- 50 dB(A) from 7am and 7pm on Monday to Saturday.

To manage impacts from noise, the EPA did not recommend any conditions, however required that the proponent commit to complying with the relevant noise regulations and established/agreed noise levels.

The proponent made a commitment to comply with the noise regulations and to carry out further noise reduction measures if necessary. The EPA was satisfied that, with the commitments given by the proponent, the issue of noise emissions could be managed in an environmentally acceptable manner.

**Assessment of the proposed change to conditions**

The EPA considers that the following current environmental policy and guidance is relevant to its assessment of the requested changes to the proposal for this factor:


The *Environmental Protection Noise Regulations 1997* superseded the noise regulations and requirements referenced in EPA Report 691. The EPA notes that the regulations are a standalone statutory requirement.

In consideration of the updated regulations, and existing noise management requirements as part of the proponent’s operating licence, the EPA considers that there is no significant or additional information that justifies the reassessment of issues raised by the original proposal.

The EPA is therefore satisfied that the commitment relating to noise management be removed from Ministerial Statement 322, as noise can be appropriately regulated though the provisions of the *Environmental Protection Noise Regulations 1997*. 
3.3 Other conditions

The proponent made a series of commitments in accordance with condition 1 of Ministerial Statement 322, and in response to issues raised following public submissions on the Consultative Environmental Review. These commitments are an attachment to Ministerial Statement 322. The proponent is now seeking to remove or amend the following commitments from the condition:

- commitment 1: Waste management
- commitment 2: Noise management
- commitment 3: Stack emissions
- commitment 4: Biological surveys
- commitment 5: Swan Valley Fluoride Programme
- commitment 6: Technological Change.

Commitment 1: Waste management

The waste management commitments are currently managed through a Part V licence, waste management contractors and approved site practices.

The EPA considers it appropriate to remove Commitment 1 from Ministerial Statement 322, as waste from the proposal can be appropriately managed through other legislation.

Commitment 2: Noise management

The EPA considers that the site can be appropriately managed under the Environmental Protection (Noise) Regulations 1997.

The EPA considers it appropriate to remove this commitment 2 from Ministerial Statement 322.

Commitment 3: Stack emissions

This commitment relates specifically to emissions of HF, ambient fluoride and smoke and dust emissions.

Given stack emissions are strictly regulated under the sites’ Part V operating licence, the EPA considers it appropriate to remove this commitment 3 from Ministerial Statement 322.

Commitment 4: Biological surveys

This commitment currently requires that the proponent engage a consultant acceptable to the EPA to assess the impact of fluorides on vegetation in the vicinity of the brickworks.

The proponent proposes to amend commitment 4 to reference a five-yearly assessment by a consultant, or when there is a significant emission of HF.
The EPA notes that the proponent commissioned a biological survey to be undertaken by Terratree in November 2014. The results of the survey concluded that “in general vegetation health and foliar injury indicated compliance with ANZEC ambient air quality goals for fluoride”.

The EPA considers it appropriate to amend commitment 4 and recommends a new ministerial condition be imposed which includes a timeframe for undertaking the biological surveys, and subsequent reporting and compliance obligations to ensure there are no longer term impacts to vegetation health from hydrogen fluoride emissions.

The biological surveys shall be undertaken in the same location as previous surveys as a baseline.

**Commitment 5: Swan Valley Fluoride Programme**

The *Swan Valley Fluoride Programme* was a comprehensive study undertaken by the EPA. The study was carried out over a period of two years from July 1988 to August 1990, in association with the clay product manufacturers in the Midland area and resulted in a number of recommendations.

The proponent committed to accepting these recommendations, which included conducting ongoing fluoride monitoring programs; conducting occasional biological surveys to assess fluoride induced stress on vegetation; and maintenance of pollution control equipment to a standard which ensures airborne fluoride levels are kept below acceptable air quality standards adopted by the EPA.

The proponent considers it has fulfilled this commitment, and the recommendations of the Programme, and are seeking to have commitment 5 removed from the ministerial statement.

The EPA considers the monitoring and maintenance aspects of this commitment can be appropriately regulated under Part V of the EP Act and recommends removal of this commitment from Ministerial Statement 322.

**Commitment 6: Technological Change**

The proponent committed to keep up to date with emission control technology, and to implement improvements in emission control technologies where practical.

In 2006, the proponent initiated a program to replace all cascade limestone scrubbers with direct injection fabric filter scrubbers (DIFF) on all kiln exhausts.

The EPA considers that the Part V EP Act licence is the most appropriate regulatory tool for ensuring best practice approaches to emissions, and therefore recommends removal of this Commitment 6 from Ministerial Statement 322.
4. Conclusions and recommendations

**Change to condition 1**

The proponent has requested a revision of condition 1, seeking a change in the Environmental Management Commitments Consolidated List attached to Ministerial Statement 322. The EPA considers it is appropriate to remove the commitments detailed above (section 3.3) where they can be appropriately regulated under Part V of the EP Act, and an amendment to commitment 4 of condition 1.

**Change to condition 2**

The proponent has requested removal of condition 2 applying to gaseous fluoride emissions. The EPA considers it is appropriate to remove this condition as it can be appropriately regulated under Part V of the EP Act.

**Change to conditions 3.1, 3.2 and 3.3**

The proponent has requested removal of conditions 3.1, 3.2 and 3.3 relating to the monitoring program for acid gas. The EPA considers it is appropriate to remove these conditions as the monitoring program can be appropriately enforced and regulated under Part V of the EP Act.

**Change to condition 4**

The proponent has requested removal of condition 4 which relates to changes to proposal. The condition requires that the proposal conform in substance with what is set out in any designs, specifications, plans or other technical material submitted by the proponent to the EPA.

The EPA acknowledges that past changes to the site, including an update to the emission abatement system in 2006, were progressed through the EPA and (former) Department of Environment Regulation (DER).

Given the proximity of the site to private residences, the EPA considers the intent of this condition shall remain in Ministerial Statement 322, to ensure that the proposal as assessed (environmental factors) and the key receptors identified through this assessment remain current.

Any changes to the facility that may cause impacts additional to, or different from those approved under Ministerial Statement 322, must be referred to the EPA for consideration and assessment.

The EPA recommends replacement of condition 4 with a new contemporary condition relating to plans and reports.

**Condition 5**

The EPA recommends retaining condition 5 applying to decommissioning and rehabilitation, however this condition will be amended and replaced with a new contemporary condition.
Condition 6
The EPA recommends deletion of condition 6 applying to proponent ownership, control and management of the project. This detail is captured in the proposal summary.

Change to condition 7
The proponent is requesting removal of condition 7 which relates to the time limit for substantial commencement of the project.

The EPA recommends removal of this condition given the project, including the additional tunnel kiln, was constructed within the five-year time limit stipulated in the condition.

Change to condition 8
The proponent is seeking to remove condition 8 from Ministerial Statement 322, which requires the preparation and submission of progress and compliance reports, to help verify the environmental performance of the project, in consultation with the EPA.

The proponent is required to submit an annual audit and compliance report to the DWER in accordance with their Part V licence (L4511/1967/13). This includes a summary and review of emissions to air and ambient air monitoring results, and a complaints summary.

The EPA recommends this condition be removed from Ministerial Statement 322, as the requirement for monitoring and reporting is regulated under the provisions of the Part V EP Act licence. However, the EPA will still need to verify compliance with the additional conditions of the Ministerial Statement, including the environmental management commitments.

The EPA therefore recommends a new ministerial condition for Ministerial Statement 322, which requires a compliance assessment report and a compliance assessment plan detailing any potential non-compliances, preventative and corrective actions. All environmental plans and reports required under the new condition will be made publicly available.

Change to procedure conditions
The proponent has requested an amendment or removal of the conditions which name the EPA as the regulatory authority responsible for verifying compliance of the works associated with Ministerial Statement 322, citing that the majority of the compliance obligations involves monitoring. The EPA does not recommend removing these conditions. The Chief Executive Officer of the Department of the Public Service of the State is responsible for the administration of s. 48 of the EP Act, and as such the condition should be amended.

The EPA recommends the new Ministerial Statement includes the above recommended compliance condition.
Conclusions
In relation to the environmental factors, and considering the information provided by the proponent and relevant EPA policies and guidelines, the EPA concludes that:

- There are no changes to the proposal.
- There is no significant new or additional information that changes the conclusions reached by the EPA, under any of the relevant environmental factors, since the proposal was assessed by the EPA in Report 691 (July 1991).
- No new significant environmental factors have arisen since its assessment of the proposal.
- The impacts to the key environmental factors are considered manageable, based on the requirements of existing conditions, regulation under Part V of the EP Act, and the imposition of the attached recommended conditions.

Recommendations
Having inquired into this matter, the EPA submits the following recommendations to the Minister for Environment under s. 46 of the EP Act:

1. While retaining the environmental requirements of the original conditions of Ministerial Statement 322, it is appropriate to:
   - remove the commitments of condition 1 (Proponent Commitments)
   - add a new condition to replace commitment 4 (Biological Surveys)
   - remove implementation condition 2 (Gaseous Fluoride Emissions)
   - remove implementation condition 3 (Acid Gas Emissions Monitoring)
   - remove implementation condition 6 (Proponent)
   - remove implementation condition 7 (Time Limit on Implementation)
   - replace condition 4 (Implementation) and condition 8 (Compliance Auditing) with new contemporary compliance reporting condition
   - replace condition 5 (Decommissioning) with a new contemporary condition.

2. Replace Ministerial Statement 322 with a new Ministerial Statement in the manner provided for in the attached recommended Statement.

3. After complying with s. 46(8) of the EP Act, the Minister may issue a statement of decision to change conditions 1, 2, 3, 4, 5, 6, 7 and 8 of Statement 322 in the manner provided for in the attached recommended Statement (Appendix 1).
References

EPA 2016a, *Environmental Impact Assessment (Part IV Divisions 1 and 2) Administrative Procedures 2016*, Environmental Protection Authority, Perth WA.

EPA 2016b, *Environmental Factor Guideline – Air Quality*, Environmental Protection Authority, Perth, WA.

EPA 2016c, *Environmental Factor Guideline – Social Surroundings*, Environmental Protection Authority, Perth, WA.

EPA 2018a, *Statement of Environmental Principles, Factors and Objectives*, Environmental Protection Authority, Perth, WA.

Appendix 1: Identified Decision-Making Authorities and recommended environmental conditions

Identified Decision-making Authorities

Section 45 of the EP Act requires the Minister for Environment to consult with decision-making authorities (DMAs), and if possible, agree on whether or not the proposal may be implemented, and if so, to what conditions and procedures, if any, that implementation should be subject.

The following decision-making authorities have been identified for the purposes of s. 45 as applied by s. 46 (8) of the EP Act.

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<td>Environmental Protection Act 1986 (Works Approval and Licence)</td>
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<td>2. Chief Executive Officer, City of Swan</td>
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RECOMMENDED ENVIRONMENTAL CONDITIONS

STATEMENT TO CHANGE THE IMPLEMENTATION CONDITIONS APPLYING TO A PROPOSAL
(Section 46 of the Environmental Protection Act 1986)

MIDLAND BRICKWORKS

Proposal: The proposal is to operate a clay brickmaking facility at 102 Great Northern Highway, Middle Swan 6065.

Proponent: Midland Brick Company Pty Ltd
Australian Company Number 008 674 244

Proponent Address: 130 Fauntleroy Ave
Perth Airport WA 6105

Report of the Environmental Protection Authority: 1662

Preceding Statement/s Relating to this Proposal: 322

Pursuant to section 45 of the Environmental Protection Act 1986, as applied by section 46(8), it has been agreed that the implementation conditions set out in Ministerial Statement No. 322, be changed as specified in this Statement.

This Statement authorises the implementation of the proposal described and documented in Tables 1 and 2 of Schedule 1. The implementation of the proposal is subject to the following implementation conditions and procedures which replace and supersede all previous conditions and procedures of Statement 322 and details definitions of terms and phrases used in the implementation conditions and procedures.

1 Proposal Implementation

1-1 When implementing the proposal, the proponent shall not exceed the authorised extent of the proposal as defined in Table 2 of Schedule 1, unless amendments to the proposal and the authorised extent of the proposal have been approved under the EP Act.

2 Contact Details

2-1 The proponent shall notify the CEO of any change of its name, physical address or postal address for the serving of notices or other correspondence within twenty-eight (28) days of such change. Where the proponent is a corporation or an association of persons, whether incorporated or not, the postal address is that of the principal place of business or of the principal office in the State.
3 **Compliance Reporting**

3-1 The proponent shall prepare, submit and maintain a Compliance Assessment Plan to the CEO at least six (6) months prior to the first Compliance Assessment Report required by condition 3-6.

3-2 The Compliance Assessment Plan shall indicate:

1. the frequency of compliance reporting;
2. the approach and timing of compliance assessments;
3. the retention of compliance assessments;
4. the method of reporting of potential non-compliances and corrective actions taken;
5. the table of contents of Compliance Assessment Reports; and
6. public availability of Compliance Assessment Reports.

3-3 After receiving notice in writing from the CEO that the Compliance Assessment Plan satisfies the requirements of condition 3-2, the proponent shall assess compliance with conditions in accordance with the Compliance Assessment Plan required by condition 3-1.

3-4 The proponent shall retain reports of all compliance assessments described in the Compliance Assessment Plan required by condition 3-1 and shall make those reports available when requested by the CEO.

3-5 The proponent shall advise the CEO of any potential non-compliance within seven (7) days of that non-compliance being known.

3-6 The proponent shall submit to the CEO the first Compliance Assessment Report fifteen (15) months from the date of issue of this Statement addressing the twelve (12) month period from the date of issue of this Statement and then annually from the date of submission of the first Compliance Assessment Report, or as agreed in writing by the CEO.

The Compliance Assessment Report shall:

1. be endorsed by the proponent’s CEO or a person delegated to sign on the CEO’s behalf;
2. include a statement as to whether the proponent has complied with the conditions;
3. identify all potential non-compliances and describe corrective and preventative actions taken;
(4) be made publicly available in accordance with the approved Compliance Assessment Plan; and

(5) indicate any proposed changes to the Compliance Assessment Plan required by condition 3-1.

4 **Public Availability of Plans and Reports**

4-1 Subject to condition 3-2, within a reasonable time period approved by the CEO of the issue of this Statement and for the remainder of the life of the proposal the proponent shall make publicly available, in a manner approved in writing by the CEO, all environmental plans and reports required under this Statement.

4-2 If any parts of the plans and reports referred to in condition 4-1 contains particulars of:

(1) a secret formula or process; or

(2) confidential commercially sensitive information,

the proponent may submit a request for approval from the CEO to not make those parts of the plans and reports publicly available. In making such a request the proponent shall provide the CEO with an explanation and reasons why the data should not be made publicly available.

5 **Decommissioning**

5-1 At least six (6) months prior to decommissioning, the proponent shall prepare and submit a Decommissioning and Rehabilitation Plan, to the satisfaction of the CEO.

5-2 The proponent shall implement the Decommissioning and Rehabilitation Plan required by condition 5-1.

6 **Flora and Vegetation – Impact of Fluorides**

6-1 The proponent shall manage the implementation of the proposal to meet the following objective:

(1) minimise the impact of fluorides on vegetation health in the vicinity of the brickwork, as far as practicable.

6-2 In order to meet the objective of condition 6-1, the proponent will undertake a vegetation health surveys in accordance with condition 6-3, as approved by the CEO, to assess the impacts on fluorides on vegetation in the vicinity of the brickworks.
6-3 The vegetation health survey required by condition 6-2 will be undertaken every five years, from the date of issue of this Statement.

6-4 The proponent shall provide the results of the vegetation health survey in the annual Compliance Assessment Report required by condition 3-6.

6-5 If the surveys required by condition 6-2 detect a detrimental impact on vegetation health from fluoride emissions, the proponent shall report to the CEO within twenty-one (21) days of the detrimental impact being known, and provide proposed mitigation measures and timeframes for implementation, to the satisfaction of the CEO, to reduce further impact on vegetation in the vicinity of the brickworks.
Schedule 1

Table 1: Summary of the Proposal

<table>
<thead>
<tr>
<th>Proposal Title</th>
<th>Midland Brickworks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short Description</td>
<td>The proposal is to operate a clay brickmaking facility at 102 Great Northern Highway, Middle Swan 6065.</td>
</tr>
</tbody>
</table>

Table 2: Location and authorised extent of physical and operational elements

<table>
<thead>
<tr>
<th>Element</th>
<th>Authorised Extent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical elements</strong></td>
<td></td>
</tr>
<tr>
<td>Project life</td>
<td>50 years</td>
</tr>
<tr>
<td>Area of disturbance</td>
<td>65.83 hectares</td>
</tr>
<tr>
<td>Brickworks and associated infrastructure</td>
<td>Five kilns, four stacks and associated storage and laydown facilities</td>
</tr>
<tr>
<td><strong>Operational elements</strong></td>
<td></td>
</tr>
<tr>
<td>Brick manufacturing</td>
<td>No more than 1,000,000 tonnes per year</td>
</tr>
<tr>
<td>Water management</td>
<td>Five settlement ponds</td>
</tr>
</tbody>
</table>

Table 3: Abbreviations and Definitions

<table>
<thead>
<tr>
<th>Acronym or Abbreviation</th>
<th>Definition or Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEO</td>
<td>The Chief Executive Officer of the Department of the Public Service of the State responsible for the administration of section 48 of the <em>Environmental Protection Act 1986</em>, or his delegate.</td>
</tr>
<tr>
<td>EPA</td>
<td>Environmental Protection Authority</td>
</tr>
<tr>
<td>EP Act</td>
<td><em>Environmental Protection Act 1986</em></td>
</tr>
<tr>
<td>ha</td>
<td>Hectare</td>
</tr>
</tbody>
</table>

Figures (attached)

Figure 1: Location of Midland Brickworks
Figure 1. Location of Midland Brickworks
Schedule 2

Coordinates defining the approved development envelope for the Midland Brickworks are held by the Department of Water and Environmental Regulation (Document Reference Number: AC07-2015-0021).