



Office of the Appeals Convenor
Environmental Protection Act 1986

REPORT TO THE

MINISTER FOR ENVIRONMENT

**APPEAL AGAINST THE ENVIRONMENTAL PROTECTION AUTHORITY
DECISION NOT TO ASSESS PROPOSAL**

Bitumen Emulsion Plant - Maddington

Proponent:

Downer EDI Works Pty Ltd

Appeal number 028 of 2009

June 2009

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Introduction

This report deals with an appeal lodged by the Bickley Ward Progress and Ratepayers Association (Inc) (the appellant) against the decision of the EPA not to assess a proposal by Downer EDI Works Pty Ltd for a Bitumen Emulsion Plant at 5 Marion Road, Maddington. The EPA advertised its decision on 19 January 2009, and one appeal was received.

This document is the Appeals Convenor's formal report to the Minister for the Environment under Section 109(3) of the EP Act.

Background and Proposal Description

The subject site (the site) is located on the south eastern side of Bickley Brook in the City of Gosnells within the industrial precinct. Residential properties are located to the north, north east and west of the proposed site. Figure 1 shows the location of existing dwellings in relation to the proposed bitumen plant. The closest dwelling is within approximately 80m from the boundary of the proposed premises.

A development application for the proposed Bitumen Emulsion Plant at 5 (Lot 24) Marion Road, Maddington was submitted to the City of Gosnells (the City). On 24 March 2009 the City refused the application for the following reasons:

1. The document titled "Guidance of the Assessment of Environmental Factors (in accordance with the *Environmental Protection Act 1986*) Separation Distances between Industrial and Sensitive Land Uses", EPA June 2005, (Guidance Statement No.3) specifies a recommended buffer distance of 1000 metres between asphalt plants and sensitive land uses such as residential zoned land. With respect to the proposal, the applicant has not satisfactorily demonstrated that surrounding residents as close as 80 metres to the proposed plant will not experience negative or detrimental impacts as a result of the proposal.
2. The proposal is inconsistent with orderly and proper planning due to the proximity of the proposed bitumen plant in relation to residential land uses. The proposal may be better suited to a central location within a General Industry zone.

This decision is the subject of an application for review to the State Administrative Tribunal (SAT).

The appellant indicated that it has a number of concerns with this proposal and feels that it would be inappropriate for the approvals process to proceed at anything less than a formal assessment. The appellant believes that formal assessment would allow for adequate consultation and investigation of impacts that this facility may have, in isolation and in conjunction with other pollution sources in the area. The appellant suggested that it does not believe that it is appropriate for this proposal to proceed, under Part V of the Act (that is Work Approval and Licence).

The appellant expressed concern that, if the proposal was not formally assessed by the EPA, the regulatory outcome would not be adequate. The appellant stated that it has been disappointed with previous situations where its members, and the rest of the community have been subjected to unacceptable impacts from facilities that have:

- not complied with their EP Act Licence, after proceeding without formal assessment; and
- have not had adequate regulatory intervention, despite having un-acceptable impacts on residents.

Figure 1: Proposed Location for the Bitumen Emulsion Plant at 5 (Lot 24) Marion Road, Maddington.



The appellant stated that there is considerable concern, at present, over the operation of plants that handle bitumen and bitumen related products, particularly when the facility is located in close proximity to sensitive land uses. The appellant believes that this proposal has not currently obtained a "community licence to operate" as the community has not been adequately advised of the proposal and its potential impacts (both individually and cumulatively). If this proposal were allowed to proceed without a formal assessment by the EPA, the appellant believes that it would deprive the community of the opportunity to adequately assess this proposal, and deem whether it is an appropriate proposal for the local community or not.

The appellant requested that the Minister instruct the EPA to formally assess this proposal, so that there is a clear statutory pathway under which the community can have access to adequate information and adequate consultation. The appellant believes that under a formal assessment by the EPA, the proposal will be subjected to an appropriate level of scrutiny to assess its potential impacts, and to set appropriate operating conditions. The appellant suggested that facilities of this type cannot be adequately managed under Part V, as illustrated by recent events.

The appellant requested the Minister to instruct the EPA to set an assessment level of Public Environmental Review (PER) for this proposal stating that the PER is generally for proposals that demonstrate local significance and raise a number of significant environmental factors,

some of which are complex. The appellant stated that this proposal has insufficient buffer distance to sensitive land uses, there are a number of complex issues that need to be scientifically studied and that there is also a need for a meaningful consultation and comment period to be included in the formal assessment.

Overview of appeal process

Pursuant to section 106 of the EP Act, a report was obtained from the EPA on the matters raised in the appeal. In accordance with normal procedures, the proponent was also given a summary of the appeal so that it could respond to the issues raised during the appeal investigation process.

The environmental appeals process is a merits based process. For appeals against EPA decision not to assess, appeals normally consider questions of environmental significance, relevance of factors, additional information not considered by the EPA, and whether other approvals processes can adequately address the relevant environmental factors.

Outcomes sought by appellants

The appellant is seeking for the Minister to direct the EPA to set an assessment level of Public Environmental Review (PER) for this proposal and to set criteria if approved.

Grounds of appeal

The grounds of appeal are summarised as follows:

1. Location / Buffer Distances
2. Lack of Consultation:
3. Environmental Impacts:
4. Similar Proposals: and
5. Current Environmental Record.

These issues are addressed as follows.

Ground 1: Location / Buffer Distances

Appellant's concerns

The appellant stated that this proposal is located within 100 metres of sensitive land uses (approx 800m to schools). The appellant noted that technically, there is no buffer listed in EPA Guidance Statement No. 3 for a Bitumen Emulsion Plant, but said that there is a buffer distance of 1,000 metres for an "Asphalt works, where asphalt is mixed and prepared". The appellant believes that since the definition of asphalt and bitumen are generally interchangeable, it is apparent that the proposed facility is, in fact, an "Asphalt works" and should have a 1,000m buffer to sensitive land uses.

The appellant suggested that if the proposal does not comply with this buffer distance, the EPA Guidance Statement No. 3 dictates that "a scientific study based on site and industry specific information must be presented to demonstrate that a lesser distance will not result in unacceptable impacts".

The appellant suggested that the location of the sensitive land uses are generally west and north west of the proposed plant, which will be likely to be downwind of both the prevailing south-westerly and easterly winds.

The appellant does not believe that "Not Assessed — Managed under Part V of the EP Act" is sufficiently scientific to satisfy this requirement.

EPA response

The EPA stated that there are more than 25 similar projects in Western Australia which are managed under Part V of the *Environmental Protection Act (1986)* and that the Department of Environment and Conservation (DEC) advises that while some of these sites have in the past generated odour complaints, no significant environmental impacts have arisen from bitumen or asphalt processing plants.

Proponent's response

The proponent stated that the DEC provides the following definitions (refer Appendix B of the Guide to Works Approvals).

- Asphalt manufacturing: *premises on which hot or cold mix asphalt is produced using crushed or ground rock aggregates mixed with bituminous or asphaltic materials.*
- Bitumen Manufacturing: *premises on which bitumen is mixed or prepared.*

The proponent suggested that bitumen manufacturing is simply the mixing of bitumen (with water or polymers) to produce bitumen emulsions whilst asphalt production incorporated the mixing of bitumen with aggregate.

The proponent went on to state that the proposed bitumen emulsion plant would not exceed the guideline limits for the emissions of noise and odour and that dust emissions are not associated with this process. The proponent continued by saying that because the impacts associated with the manufacturing of asphalt and bitumen are very different, it is not reasonable to apply the separation distance of 1,000 metres.

Ground 2: Lack of Consultation

Appellant's concerns

The appellant stated that the community consultation had been minimal to date, consisting of a letter drop (with no pertinent information enclosed) to 300 properties within 300m of the proposed facility. The outcome resulted in 71% of responses raising objections.

The appellant believes that this level of consultation is woefully inadequate and that there does not appear to have been any advertisements in the local media advising of the proposal.

The appellant believes that if the process is allowed to proceed as "Not Assessed", then there will be no compulsion or statutory requirement for meaningful consultation. The appellant also said that it would appear that the current consultation plan would not engage until after the approvals were obtained and that this is clearly unacceptable as consultation should be made prior to approvals being sought.

EPA response

The EPA stated that there is a requirement for proponents to conduct adequate community consultation as part of an application for a works approval under Part V of the EP Act. It was also pointed out that works approvals are advertised by DEC for public comment, providing the public with an opportunity to have input into the process and that there is also an appeals process for conditions imposed during the works approval process.

Proponent's response

The proponent said that prior to submission of the works approval application, Downer EDI Works executed a program of stakeholder consultation. The proponent said that the City of Gosnells was consulted, taking due cognisance of the results of their community consultation process undertaken during July and August 2008.

The proponent also said that following discussions with the City it was determined that a letter drop to 300 properties within a 300m radius of the Maddington premises, that is, the same process that the City undertook during July 2008, would be most appropriate. The proponent indicated that it aimed to provide the same residents with information on the Environmental Impact Assessment (EIA) which was being undertaken during October 2008 and to extend an open invitation to residents to contact Downer EDI Works to view/assess the EIA document or to address any further concerns/issues.

The proponent said that owing to the limited potential environmental impacts associated with this project it was determined that this level of consultation was adequate and that a register of all community consultation had been maintained.

The proponent stated that the works approval application was submitted to the DEC on the 30th October 2008. The proponent suggested that the long lead time for processing works approval applications and the limited timeframe for implementation of this project necessitates processing of the application and on-going community consultation to occur concurrently.

Ground 3: Environmental Impacts

Appellant's concerns

The appellant said that the Association is concerned that this proposal will exacerbate current environmental impacts that exist in the area for the following reasons:

a. **Ambient Air Quality:**

The Association has had concerns over the air quality in the area and has lobbied previous Ministers for the re-establishment of an air monitoring station in the Kenwick area, which was apparently closed down despite having high air pollutant readings. The area is not sufficiently studied, such that there can be a definitive statement that any new proposal that has the capacity to pollute, is "safe" and "acceptable". It is the Association understanding that the DIRECTIVE 2004/107/EC has set an annual average ambient level of Benzo(a)pyrene to be $1\text{ng}/\text{m}^3$ as a measure of ambient polycyclic aromatic hydrocarbons (PAH) concentrations. This facility will add to this, and there is currently no ambient information that the Association is aware of which would demonstrate that our ambient air quality is not currently compromised.

b. **Odour (Chemical Emissions):**

The Association has concerns over any potential additional odour source in the area. The area is currently "host" to two intensive poultry farms that have unacceptable odour emissions, which despite numerous complaints and correspondence with all levels of government, absolutely nothing has been done. There are also a number of facilities that are operating within the Maddington Industrial Area that also have odourous chemical emissions. The proposed site has operations that are already "well in excess" of the odour emission guidelines.

c. **Surface Water / Groundwater Contamination:**

The Association has concerns over any potential additional industrial discharges into Bickley Brook. It would appear that Bickley Brook is already degraded to an abysmal

state, and the mere suggestion that it would be appropriate to discharge any additional potentially contaminated wastewater or stormwater is not appropriate. The ANZECC guidance seems to suggest that most PAH's have freshwater trigger levels of less than 20pg/L, which would be an extremely optimistic level to be achieved by the suggested triple interceptor "treatment plant".

The Association stated that it believes that there are sufficient grounds for appeal on adverse environmental impact reasons to demonstrate that the proposal should be formally assessed.

EPA response

The EPA stated that according to the DEC, effective management actions are available to proponents where unacceptable odour levels are detected, and that these would be enforced by licence conditions as required. The EPA went on to say that licence conditions would also be applied to prevent discharge of contaminated water to the environment.

Proponent's response

In relation to ambient air quality, the proponent said that whilst they could not comment on ambient air quality monitoring and suspension of monitoring programs, the Concise International Chemical Assessment Document 59 for Asphalt (Bitumen) by the National Institute for Occupational Safety and Health, USA, concludes:

"The extremely limited nature of available data to serve as a basis for estimation of exposure of the general population should be borne in mind when attempting to determine exposure of the general population to bitumen fumes and vapours. The concentrations of polar aromatics (polars), naphthene aromatics (aromatics), and saturates measured in air samples collected 2.0m to 83.6m from the source were extremely low in comparison to occupational exposures determined in the various sectors of the asphalt industry."

The proponent went on to say that whilst PAH has not been measured, it is of the opinion that concentrations from the facility will not pose a threat to surrounding communities as there is currently little evidence that show site/plant workers, those in close contact with the process and use of bitumen, are at risk.

In relation to odour, the proponent stated that during the life of Downer EDI Works (and formally Emoleum) operations at the Maddington premises, there have been no complaints or concerns raised regarding existing odour from any local residents or businesses within the area. However, the proponent went on to state that an Odour Impact Assessment for the proposed facility indicated that current odour emissions from the existing wash bay are in excess of the guideline levels.

The proponent stated that the company has investigated several opportunities to reduce the odour emissions from the existing wash bay. The proponent concluded that the emissions are caused by the use of kerosene in the cleaning (essential for maintenance) of road surfacing vehicles and that the proponent is currently trialling an alternative product, Citraforce, which has a citrus aroma, and that provided it does not pose any unforeseen risks to human health or the environment the change will be implemented permanently.

The proponent stated that in relation to Surface Water/Ground Water Contamination, the proponent proposed to discharge water from the roof of the shed and driveways into the creek once it has been treated by a triple interceptor. The proponent went on to say that water from the loading gantries and plant area (enclosed within the shed) will be processed in the existing Treatment Plant prior to discharge to sewer in accordance with current practice

and a Trade Waste Permit issued by the Water Corporation.

The proponent also indicated that it is proposing to implement a strict monitoring program which will be included in the Environmental Management System for the proposed new bitumen plant.

Ground 4: Similar Proposals

Appellant's concerns

The appellant said that it understood that one of the criteria used during the decision making process was that "the EPA has never formally assessed a bitumen plant" (Personal communication, Jan 2009). The appellant stated that this concerns the Association somewhat, and suggested that it may demonstrate why there are operational problems with a bitumen plant in Baldivis. The appellant went on to state that just because the EPA may never have formally assessed a proposal before, this reasoning is not appropriate justification for not assessing a new proposal, suggesting that times and community expectations change.

~~The appellant stated that it seeks to avoid similar problems for its community and as such requires the proposal to be formally assessed, so that it does not fall victim to the clearly inadequate "Managed under Part V of the EP Act (Works Approval)" that has occurred with other proposals.~~

EPA response

The EPA stated that there are more than 25 similar projects in Western Australia which are managed under Part V of the *Environmental Protection Act (1986)*. It said that the DEC advises that while some of these sites have in the past generated odour complaints, no significant environmental impacts have arisen from bitumen or asphalt processing plants.

Proponent's response

The proponent stated that the plant in Baldivis is by definition an Asphalt Plant, that asphalt and bitumen facilities are different and as such, pose somewhat different potential environmental impacts. The proponent went on to say that the potential environmental impacts associated with the construction and operation of a bitumen plant can be successfully managed under Part V of the EP Act.

Ground 5: Current Environmental Record

Appellant's concerns

The appellant stated that it would appear that previous operations at the proposed site had already caused a hydrocarbon spill into Bickley Brook and that it is also apparent from the proponent's documentation that they currently are in breach of odour guidelines at the current site. The appellant stated that this information did not allay the concerns of the Association, that the proposal will be an appropriate facility, or will be managed sufficiently well as to prevent environmental damage or harm.

The appellant said that these exceedances suggested that there is a requirement for higher level of scrutiny on the current and proposed operations, which would be assisted by formally assessing the proposal.

The appellant said that it had been suggested that the site currently operated in Cannington (by the same operator) has previously caused pollution events.

EPA response

The EPA provided no input into this ground of appeal.

Proponent's response

The proponent said that the hydrocarbon spill at the Maddington premises occurred in December 2005 while the operation was owned by Emoleum and that the root cause of the incident was not determined. The proponent went on to say, however, that remedial action was taken in consultation with the DEC and that there have been no further issues following that incident.

The proponent stated that in July 2007, Downer EDI Works purchased the Cannington bitumen plant from Coventry Group and that the facility has been in operation since the 1950's.

The proponent said that it had identified several concerns at the Cannington facility and that they were proposing to construct a new bitumen plant at the Maddington premises and to decommission the Cannington facility. The proponent concluded that it was not possible to upgrade the Cannington facility due to its condition/age and that the lease expires for that site in mid 2009.

Conclusion and Recommendation

A relevant consideration in investigating an appeal against the decision of the EPA not to assess a proposal is whether other approvals processes can adequately address the environmental factors relevant to the operation.

In this regard, it is noted that the facility is a prescribed premises under the provisions of Part V of the EP Act and the proponent has already applied to obtain a Works Approval. An operating licence issued by the Department of Environment and Conservation would also be required if a works approval were issued by the DEC and the City of Gosnells is the decision making authority in relation to planning approvals.

The Department of Environment and Conservation received an application for a works approval from Downer EDI Works Pty Ltd on 9 August 2008. The application to construct a bitumen plant which was being assessed under Schedule 1 of the *Environmental Protection Regulations 1987, Category 36, Bitumen Manufacturing, premises on which bitumen is mixed or prepared for use at places or premises other than those premises.*

The proposal was subsequently referred to the EPA by the Association and the EPA examined the proposal and published its decision as Not Assessed – Managed under Part V (Works Approval), which is the subject of this appeal.

Based on the referral documentation provided, the EPA stated that there are more than 25 similar projects in Western Australia which are managed under Part V of the *Environmental Protection Act (1986)* and that while some of these sites have in the past generated odour complaints, no significant environmental impacts have arisen from bitumen or asphalt processing plants.

On this basis, the EPA considered that the proposal was not expected to have a significant effect on the environment; and that as a result, formal environmental impact assessment was not considered necessary.

During the appeal investigation, the City of Gosnells refused the application for the proposed bitumen emulsion plant on the grounds that the EPA Guidance Statement 3, which provides guidance on separation distances between industrial and sensitive land uses, specifies a recommended buffer distance of 1,000 metres between asphalt plants and sensitive land uses such as residential zoned land.

In response to this issue, the proponent stated that, as the impacts associated with the manufacturing of asphalt and bitumen are very different, it is not reasonable to apply the separation distance of 1,000m. However, on this important matter, the proponent's documentation submitted during the appeals process did not provide any evidence as to whether the proposed 80 metre buffer is adequate. Any proposed separation distance should be supported by a scientific study based on-site and industry specific information consistent with EPA current policy.

The documentation provided to the EPA does not appear to include critical information in relation to existing odours from current operations on the site. Further to this, the proponent did not provide details on any proposed measures designed to capture or treat bitumen fumes at the proposed site.

I also note recent advice from the DEC that at this stage it is unable to sufficiently assess the emissions and discharges risk to the environment as further information is required.

The EPA in determining whether or not to assess a proposal is guided by Section 4.1 of the *Environmental Impact Assessment Administrative Procedures 2002*. In particular, Section 4.1.2 (iii) requires the EPA to specifically consider "*the extent of emissions and their potential to unreasonably interfere with the health, welfare, convenience, comfort or amenity of people*".

In considering the potential environmental issues associated with this proposal and the analysis of the appeal grounds, it can be reasonably concluded that there is currently insufficient information to determine the extent of emissions and their potential to unreasonably interfere with the health, welfare, convenience, comfort or amenity of nearby residents.

It is therefore recommended that appeal be upheld to the extent that the proposal is remitted back to EPA for the making of a fresh decision as to whether or not to assess the proposal.

In remitting the proposal to the EPA, it is expected that the proponent will need to demonstrate whether the 80 metre separation distance between the proposed bitumen emulsion plant and nearby residential areas is sufficient to meet noise, dust, and air quality standards, particularly odour. It is also reasonable to expect that the proponent will consult with the local community during this process.



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