MALAGA BRICK AND TILE WORKS - MALAGA

IBT LTD

Report and Recommendations
of the
Environmental Protection Authority

Environmental Protection Authority
Perth, Western Australia
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BACKGROUND

IBT Pty Ltd has submitted a Notice of Intent (NOI) to the EPA for a brick and tile plant at Malaga, appropriately 12 km north-north east of Perth. The EPA requested that the proponent prepare a Notice of Intent (NOI) for referral to the EPA for environmental assessment. The EPA examined the NOI and sought additional information on various aspects of the project from the proponent. On the receipt of this additional information the EPA assessed the environmental impacts of the project and gives its advice in this assessment report.

PROPOSAL

The proposal involves the production of 50 million bricks per year. The proposed site for the plant is in the Malaga industrial area. (See attached figure). The site is surrounded to the south and east by industrial, or proposed industrial, land. To the north is the proposed extension to the Ballajura residential estate and to the west a Parks and Recreation Reserve which backs on to the Koondoola residential area. The distance from the plant to the closest residential area would be over 600 m.

In considering the NOI the EPA gave particular consideration to the following environmental issues:

. the effect of air emission of fluoride on the surrounding areas;

. the effect of noise emissions from the plant on the surrounding residential areas; and

. the impact of the transport of raw materials and product to and from the site.

These are discussed below.

ENVIRONMENTAL IMPACTS AND MANAGEMENT

Potenial environmental impacts are identified and discussed below.

(a) Fluoride emissions. The plant is employing proven European technology for its kiln and scrubber. Under worst atmospheric conditions the projected 3 month average fluoride Ground Level Concentrations (GLC's) would be 1 microgram per cubic meter (ug/m3) at 600 m from the plant without scrubbing, and 0.05 ug/m3 with scrubbing. This correlates with a mass fluoride emission rate of 0.14 gram per second (g/s). The EPA considers that a fluoride GLC of 1 ug/m3 at a distance of 600 m from the plant should not cause unacceptable environmental impacts. Consequently with a scrubber installed which should reduce the actual emission level to a projected 20% of the unscrubbed emission, the environmental impact should be negligable.

The proponent is confident these levels can be achieved because of the following factors:

. the kiln design employs rapid heating of the green brick which tends to seal the brick. 30 - 70% of the fluoride is retained in the brick;

. close control and minimisation of the air flows in the kiln results in less fluoride being entrained in the exhaust gas stream;

. the scrubber to be installed is of high efficiency, up to 98%. However, a figure of 95% has been used in calculations in the NOI;

. the clay to be utilised has been extensively tested for fluoride content and the value used in the calculations of emissions is representative of that which will be used in production; and

. all gaseous process emissions are being released to atmosphere from a 35 m stack.

(b) Noise emissions from the plant will be minimised by locating the clay storage buildings between the process sections of the plant and the nearest residential areas.

Vehicles operating on the site are being designed to minimise noise emitted.

There will be an increase in the number of trucks using the access routes to and from the plant. The roads will be able to cope with the additional traffic. However, some reconfiguration of intersections may be required.

CONCLUSIONS AND RECOMMENDATIONS

1. Based on the information supplied in the NOI and the additional information supplied by the proponent the Environmental Protection Authority has concluded that the project is environmentally acceptable and recommends that it could proceed subject to the commitments given in the Notice of Intent and the conclusions and recommendations.

2. The project will be using scrubbing technology which is new to this State. The EPA considers that the performance of the scrubber should be monitored to determine its operation under local conditions and that a condition of its licencing under the Environmental Protection Act will be that it continues to operate at low levels of fluoride emissions and a level of environmental impact acceptable to the EPA.

3. The Environmental Protection Authority recommends that:

    . the fluoride mass emission rate should never exceed 1 gram per second from the whole of the plant;

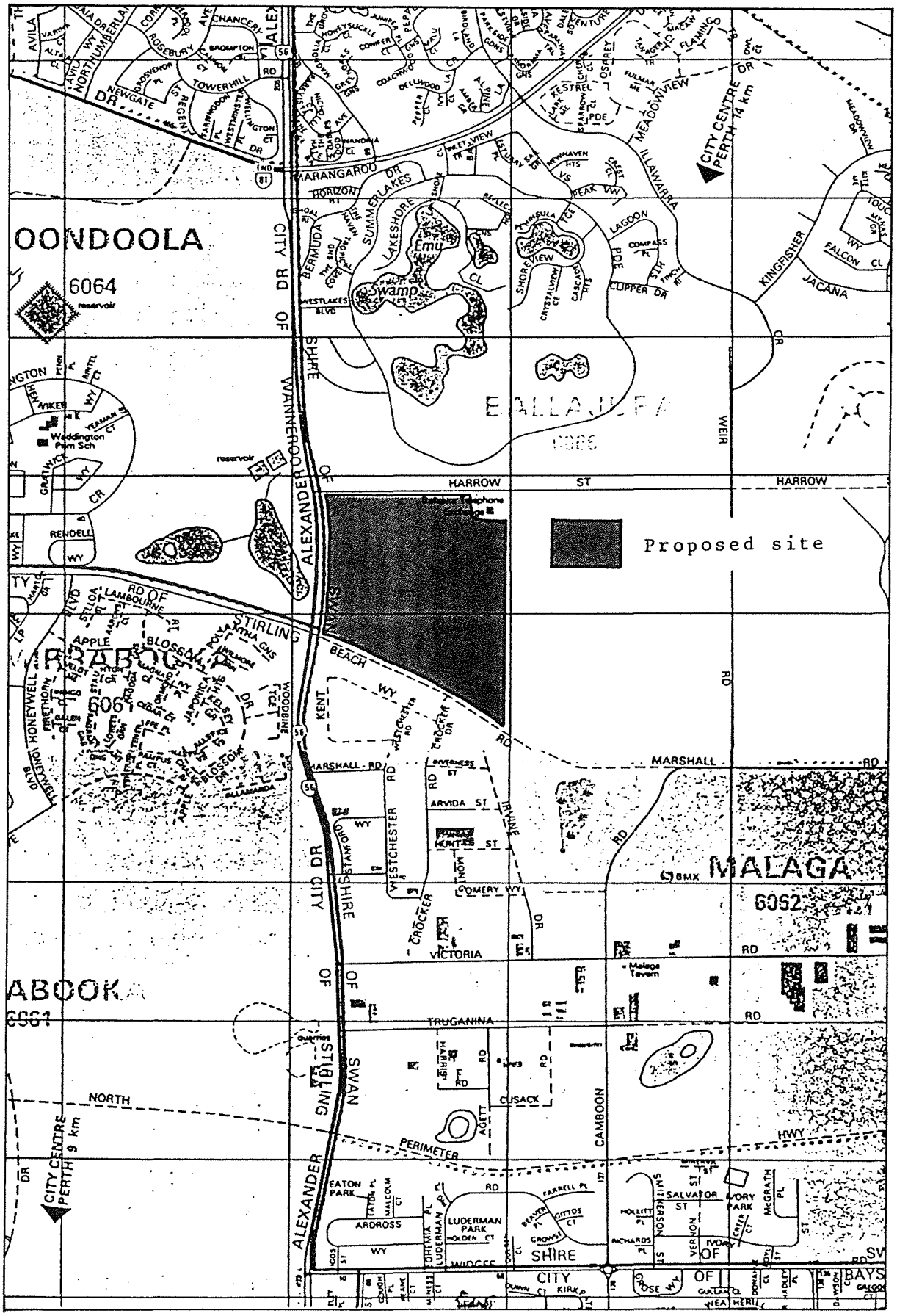
    . all gaseous process emissions should be vented to atmosphere through a 35 m stack;

    . the proponent perodically monitors the gaseous emissions from the plant and report to the EPA on commencement of operations and thereafter upon requiest of the EPA;

    . the monitoring programme includes details of sampling the gaseous emissions before and after scrubbing; and

    . the monitoring programme is submitted to the EPA for approval.

4. If the proponent is unable to meet the above conditions, or the operations of the plant are having a detrimental impact on the surrounding area, the EPA will require, as a condition of licence, that the proponent modify its operation so that gaseous emissions are reduced to a level acceptable to the EPA.



The proposed site.