

# Application for postponement of NEMAQA Minimum Emissions Standard (MES) compliance time frames for Consol Glass Plant in Nigel, Gauteng Province

## BACKGROUND INFORMATION DOCUMENT

21 February 2019

### PURPOSE OF THIS DOCUMENT

This Background Information Document (BID) has been structured to provide all potential Interested and Affected Parties (I&APs) with a concise overview of the proposed project activities as well as the associated licencing and permitting processes. Furthermore this BID also intend to provide I&APs with information relating to the manner in which I&APs can voice any issues concerning the proposed project. The compilation and distribution of this BID form part of the Public Participation Process for the project.

Stakeholder that complete and return the registration form included with the BID, will be included in the stakeholder database and receive further documents for review and comment. Your comment will ensure that all issues of concern are incorporated. To raise your concerns, please complete the enclosed registration sheet, write a letter, call or e-mail the public participation office. All documents will be available on the internet at [www.zitholele.co.za/environmental](http://www.zitholele.co.za/environmental), under heading "Consol Glass MES Postponement Applications".

**For enquiries, please contact:** Dr Vosloo Mathys/  
Mrs Tebogo Mapinga  
Zitholele Consulting (Pty) Ltd  
PO Box 6002, Halfway  
House, 1685  
Tel: 011 207 2060  
Fax: 086 674 6121  
E-mail:  
[consolbar@zitholele.co.za](mailto:consolbar@zitholele.co.za)

### 1. BACKGROUND AND DESCRIPTION OF THE PROJECT

Consol Glass (Pty) Ltd (Consol) is Africa's largest glass manufacturer. The South Africa operations produce glass packaging products for a wide range of industries in the beverage and food sectors. Consol directly export products to 17 different countries, primarily in the broader sub-Saharan African region. Consol has been manufacturing glass for more than 70 years and has the capacity to produce approximately 850,000 tonnes of container glass per annum in its four glass manufacturing plants. The Consol manufacturing plants are located in Bellville in the Western Cape, and Clayville, Nigel and Wadeville in Gauteng.

Consol Glass (Pty) Ltd currently operates a glass container manufacturing plant in Pretoriusstad, Nigel. This plant is operated in terms of its current Atmospheric Emission Licence (AEL), which was issued by the licencing authority, Ekurhuleni Metropolitan Municipality (EMM), on 24 April 2018. The AEL authorises Listed Activity 5.8 (Production of glass containers, flat glass, glass fibre and mineral wool) to be undertaken at the facility.

The 2013 Minimum Emission Standards (MES) published under the National Environmental Management: Air Quality Act, No 39 of 2004 (NEM: AQA) specify limits for 'existing plants' effective from 1 April 2015, and more stringent 'new plant' limits, to which existing emitters need to comply with by 1 April 2020. Existing plants operated by Consol Glass therefore need to comply with the MES for new plant by 1 April 2020.



Figure 1: Location of the Consol Glass Plant in Pretoriusstad near Nigel

## 2. DESCRIPTION OF THE STUDY AREA

The study area is located on Erf 104, portion 0, Pretoriusstad Extension 7, which is approximately 3km northwest of Nigel Central Business District within the jurisdiction of Ekurhuleni Metropolitan Municipality (EMM), Gauteng Province. The site can be accessed via Visagie Road, which is located on the eastern boundary of the study area. The site is approximately 40 hectares in extent.

## 3. THE GLASS MANUFACTURING PROCESS

The production process of glass includes the steps of batching, melting, forming, annealing and inspection. After forming the glass containers, the inspection process then ensures that the containers comply with strict quality standards. Any rejected containers from the inspection process are re-covered and re-enter the production process eliminating waste and reducing emissions. This is a continuous process over the lifetime of the furnace where raw material is fed into the furnace at the same rate as which containers are produced. Such a lifetime differs between furnace suppliers, but is generally expected to be between 10 and 12 years. Thus any interruption, no matter how long or short deteriorate the life expectancy of the furnace and come at a huge cost to the business.

Part of Consol's Corporate Social Investment and environmental responsibility includes the process of procuring glass from the market and operating recycling plants that process the material to sufficient quality standards to be reused in the manufacturing of glass containers. Glass is 100% recyclable and through this process is recycled in country at the company's Bellville and Clayville operations to reduce the environmental influence on transporting this glass between the northern and southern parts of South Africa. The locations were specifically selected in the main centres at the biggest operations to ensure efficiency in the supply chain and limit further emissions through transportation of glass.

## 4. NEED AND DESIRABILITY OF THE PROJECT

Consol is committed to compliance with the NEM:AQA and the commitments included in each of the AEL's. Furthermore, Consol has on a continuous basis complied with the NEM: AQA 2015 air emissions standards and strives to continuously improve their compliance track record. Consol has engaged on various platforms with other industries and is in the process of planning to ensure compliance to the much stricter 2020 air emissions standards.

Due to the complexities of glass manufacturing process, the feasibility of shutting down a furnace mid-way through its lifetime is not an option. Scheduled maintenance occurs at the end of life where furnaces are then cooled down and refractory material replaced as well as structural elements where required. Such maintenance interruption occurs over a two to three months period which then provides an opportunity to modernise if required.

The growth in the South African container glass market has necessitated Consol to evaluate the possibility of expanding the Nigel Plant through the construction of an additional furnace within the next five years. The first furnace was therefore designed with the option to add abatement equipment. The design allows for furnace 1 (N1) operations to continue whilst the new second furnace (N2) (which includes a combined furnace 1 and 2 abatement system) is installed. It is envisaged that during the construction of the second furnace, the abatement equipment will be installed allowing compliance with 2020 MES 'new plant' standards.

Consol is therefore undertaking an application for postponement from MES compliance timeframes as provided for in terms of Section 11 of GN 893 in order to align the installation of the abatement with its furnace maintenance shut downs over the next 5 years.

## 5. LEGAL REQUIREMENTS

Consol's Nigel plant is currently in possession of an AEL authorising the undertaking of Listed Activity No. 5.8, issued by the Ekurhuleni Licensing Authority. This plants are therefore required to meet the MES under normal operating conditions contained in GN 893. In accordance with Section 21, an existing plant must comply with MES for new plants by 1st April 2020, as presented in Table 1.

**Table 1: Subcategory 5.8 Glass and Mineral Wool Production**

<b>Description:</b>	The production of glass containers, flat glass, glass fibre and mineral wool.		
<b>Application:</b>	Facilities with a capacity of producing more than 100 tons/month of glass.		
<b>Substance or mixture of substances</b>		<b>Plant Status</b>	<b>mg/Nm<sup>3</sup> under normal conditions of 273 Kelvin and 101.3 kPa</b>
<b>Common Name</b>	<b>Chemical Symbol</b>		
Particulate matter	N/A	New	30
		Existing	140

The most recent amendment to the list of activities and associated MES was published under GN No. 1207, Gazette No. 42013 dated 31 October 2018. In terms of Regulation 11A of GN 1207 an existing plant may apply for postponement with the compliance timeframes for MES for 'new plant' to the NAQO.

## **6. ABATEMENT TECHNOLOGY OPTIONS**

Consol propose to reduce PM emissions through either a) electrostatic precipitators (ESP) or b) ceramic candle filters. An ESP is a filtration device that removes fine particles, like dust and smoke, from a flowing gas using the force of an induced electrostatic charge minimally impeding the flow of gases through the unit. The melting furnace contributes over 99 % of the total emissions from a glass plant, both particulates and gaseous pollutants. ESPs have an efficiency up to 99 % in the collection of particulates.

Glass plants have used ceramic filter systems for the control of furnace emissions for a number of years. The companies that first adopted the technology on a commercial scale have elected to build additional systems, and other companies have followed. Ceramic filter systems are currently operating using low density rigid ceramic filters for other hot gas applications are found wherever there is a need to remove PM, sulphur dioxide and nitrogen dioxide using a single pollution control device.

The various factors associated with each of these devices will be taken into account during the planning process when selecting the most apt abatement technology. The key consideration is that regardless of which technology is selected, the abatement systems will be designed and guaranteed to comply with the new plant MES.

## **7. POSTPONEMENT OF COMPLIANCE TIMEFRAMES PROCESS**

An application for postponement of MES compliance timeframes are prepared in accordance with Regulation 12 of GN 893, as amended, and includes the following documentation:

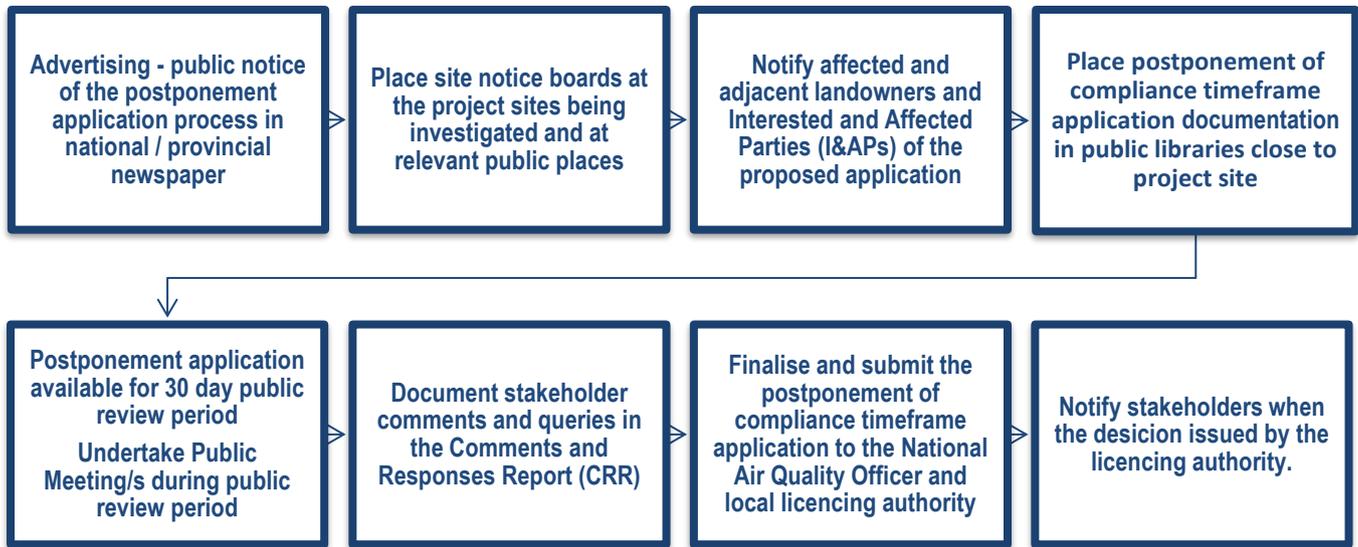
1. Atmospheric Impact Report (AIR) prepared in accordance with the Regulations prescribing the format of the AIR (GN No. 747, Government Gazette 36904 dated 11 October 2013). The modelling that informed the AIR was conducted in accordance with the Regulations regarding Air Dispersion Modelling (ADM);
2. Motivation and Justification for the Postponement Application; and
3. Public Participation Process Report outlining the public participation process (PPP) conducted in accordance with the National Environmental Management Act (NEMA), Act 107 of 1998 Environmental Impact Assessment Regulations (GN No. 1540). This report includes public comments and responses.

## **8. PUBLIC PARTICIPATION PROCESS**

As an important element in undertaking the postponement application process for the proposed project, Zitholele Consulting will conduct the public participation process as set out in the NEMA EIA regulations, as amended. Applicable guidelines and best practice procedures will furthermore be taken into consideration. The public participation process will enable stakeholders to contribute to the process through information sharing and to review and comment on the postponement application documentation prior to submission to the licencing authority. The steps of the public participation component are outlined in Figure 2.

As part of the PPP, a 30-day public review and comment period, which provide the opportunity to review and comment on the application for Postponement of the Compliance Timeframes for the Consol Nigel Plant, will commence on 21 February 2019 and conclude on 25 March 2019.

Public Meetings will be held to provide stakeholders and I&AP the opportunity to engage with the applicant and team during the public review period. Details of the public meeting will be communicated to all registered I&APs at least 2 weeks prior to the public meeting taking place to provide sufficient time to coordinate their attendance at the meeting.



**Figure 2: Process Flow of the Public Participation Process**

## 9. AVAILABILITY OF APPLICATION DOCUMENTATION

The postponement application documentation and related information for the Nigel plant will be available for public review at the following places from 21 February 2019:

Consol Plant	Public Venue	Address
Nigel	Nigel Library	Hendrik Verwoerd St, Nigel
	Consol Security Office	1 Visagie Road, Pretoriusstad, Nigel

Information pertaining to the individual applications and public meetings can be viewed on Zitholele Consulting’s website: [www.zitholele.co.za/environmental/](http://www.zitholele.co.za/environmental/), under heading “Consol Glass MES Postponement Applications”, sub-heading “Nigel Plant”, and at the public venues listed above.

## 10. PUBLIC COMMENT ENCOURAGED

Interested and Affected Parties (I&APs) are invited to participate by registering as an I&AP and commenting on the application documentation in the following ways:

1. Download BID at the link: [www.zitholele.co.za/environmental/](http://www.zitholele.co.za/environmental/), under heading “Consol Glass MES Postponement Applications”, sub-heading “Nigel Plant”, or obtain copy at the public venues mentioned in this BID.
2. Register in writing by completing and returning the registration form attached to the BID to the PPP desk at the contact details specified below.
3. Register via SMS by texting **consol nigel**, followed by your name, contact numbers and email address to 45776 (bundled and free SMSes not applicable).
4. Request BID or more info from PPP desk at contact details specified below.
5. Review and comment on documents made available on the Zitholele Consulting website: [www.zitholele.co.za/environmental/](http://www.zitholele.co.za/environmental/), under heading “Consol Glass MES Postponement Applications”, sub-heading “Nigel Plant”.

**I&APs may contact the PPP desk at the following detail below:**

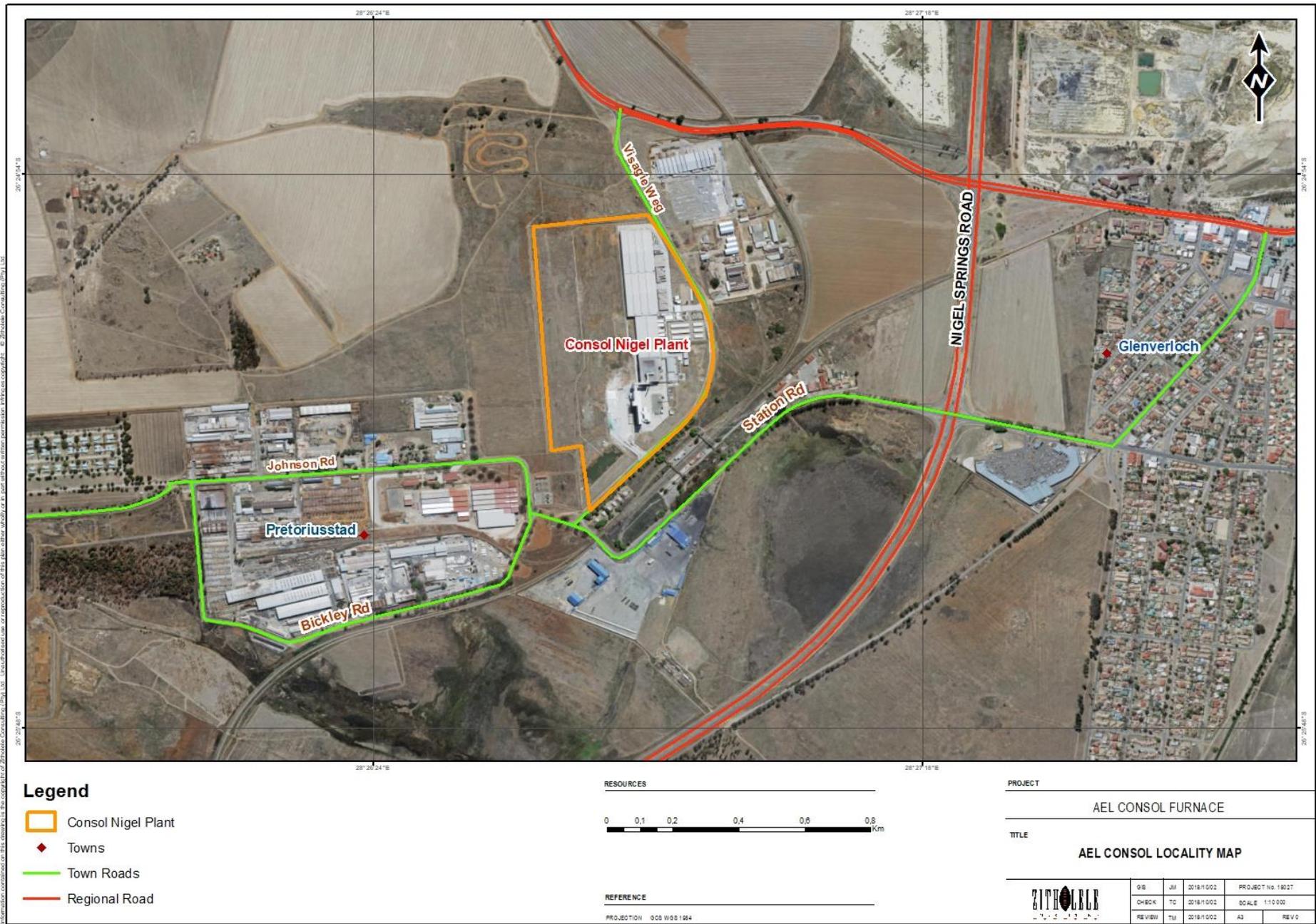
Zitholele Consulting (Pty) Ltd, Dr. Mathys Vosloo / Mrs Tebogo Mapinga  
 Tel: (011) 207 2060, Fax: 086 674 6121, Email: [consolbar@zitholele.co.za](mailto:consolbar@zitholele.co.za)  
 P O Box 6002, Halfway House, 1685

## **11. MAP OF PROJECT LOCATION**

A locality map of the proposed project can be found in Figure 3 below.

## **12. BID COMMENT SHEET**

A comment sheet associated with this application is included at the end of this BID. Please complete and return to the PPP desk by hand delivery to the offices of Zitholele Consulting, scan and email to the email address provided, fax to fax number provided or by submitting your comments telephonically to the PPP desk via the landline number specified in the left column on page 1 of this BID.



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Figure 3: Locality Map of the Consol Nigel Plant

**APPLICATION FOR POSTPONEMENT OF NEMAQA  
MINIMUM EMISSIONS STANDARD (MES)  
COMPLIANCE TIME FRAMES FOR CONSOL GLASS  
PLANT IN NIGEL, GAUTENG PROVINCE  
STAKEHOLDER REGISTRATION SHEET**



**EIA Public Participation Office**  
Mathys Vosloo / Tebogo Mapinga  
P O Box 6002, Halfway House, 1685  
Tel: 011 207 2060, Fax: 086 674 6121  
Email: [consolbar@zitholele.co.za](mailto:consolbar@zitholele.co.za)

*Please complete and return to the EIA Public Participation Office (as above) before 25 March 2019*

<b>TITLE</b>		<b>FIRST NAME</b>	
<b>INITIALS</b>		<b>SURNAME</b>	
<b>ORGANISATION</b> (Please do not use any acronyms)			
<b>POSTAL ADDRESS</b>		<b>POSTAL CODE</b>	
<b>TEL NO</b>			
<b>CELL</b>			
<b>FAX NO</b>			
<b>EMAIL</b>			
<b>DISCLOSURE OF INTEREST</b>			
<b>SIGNATURE</b>		<b>DATE</b>	

**COMMENTS (Please use separate sheets if necessary)**

1. I have the following concern / questions / queries.

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2. I would like to receive further communication through the following means of communication.

<b>Email</b>		<b>Fax</b>		<b>SMS</b>		<b>Other</b>	
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*Please note to ensure your contact details for the communication method chosen are correctly captured above.*

3. Any other comments you may have:

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**THANK YOU FOR REGISTERING AN INTEREST IN THIS PROCESS**