

## SECTION 8 PUBLIC PARTICIPATION

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### 8.1 PUBLIC PARTICIPATION PERIOD 2 NOVEMBER 2006 – 3 DECEMBER 2006

The Public Participation Process commenced on the 2<sup>nd</sup> November 2006. An advertisement was placed in local newspapers on the 1<sup>st</sup> November 2006; and site notices were placed in prominent locations around De Hoek and neighbouring towns. Notices of the EIA and copies of the newspaper advertisements, as well as a brief summary of the Background Information Document (translated to Afrikaans) were distributed to neighbouring landowners, local farmers and other identified Interested and Affected Parties, on the same day. An Open Day was held on the 22<sup>nd</sup> November 2006, where identified I&APs were invited to attend one of three sessions where information regarding the proposed activity was presented. The lists of identified I&APs, as well as comments from registered Interested and Affected Parties (I&APs) are included in the Comments and Response Report. Public Participation closed on the 3<sup>rd</sup> December 2006, however as the specialist reports for De Hoek were not available for public viewing at that time, comments and queries have continually been received.

#### 8.1.1 Background information document (BID)

The BID contains information regarding the cement manufacturing process, the PPC factories around South Africa and a description of the proposed introduction of Secondary Materials at De Hoek. The BID is attached in Appendix C1. The BID was available online at <http://www.ebs.co.za> under the Documents link, and every attendee at the open day received an information pack including all Public Participation notices and a hard copy of the BID.

#### 8.1.2 Newspaper Advertisement

One English and one Afrikaans advertisement were placed in both the Swartland and the Weskus Herald on the 2<sup>nd</sup> November 2006. The content of these advertisements is attached in Appendix C2.

#### 8.1.3 Site Notices

Site Notices were prepared according to the specifications set out in the EIA regulations, each notice was A2 in size, with half the notice reflecting the Afrikaans text and the other half reflecting the English text. The site notices included basic information regarding the proposed activity, and the date time and venue of the Open Day at De Hoek.

#### 8.1.4 Identified Interested and Affected Parties

Prior to the commencement of the Public Participation Period, several groups of Stakeholders were identified:

1. **National Government Departments** – Representatives from DEAT, DME, DWAF, Department of Health were contacted and invited to a specific focus group meeting
2. **Non-Governmental Organisations** – NGOs were contacted and Focus group meetings were held with Richard Worthington of Earthlife Africa and Bobby Peek of groundWork and Carla Hudson of Wildlife and Environment Society of South Africa. Notes of these meetings are included in Appendix C4. The list of NGOs contacted, is included the list of identified I&APs included Appendix C5.

3. **Provincial Government Departments** – PPC engaged with the relevant local environmental authorities to introduce the proposed activity, in the latter part of 2005. Representatives of PPC and MES (then EBS) visited with WC DEA&DP on the 13<sup>th</sup> October 2005, prior to the submittal of any application documentation. A second meeting was held with the Department one month after submittal of the application and PoSS, on the 5<sup>th</sup> December 2005. During the Public Participation Process, the MEC and HOD of each provincial government department of the Western Cape was informed of the proposed activity in writing and invited to the Open Day at De Hoek.
4. **Local Authority** – The Mayor and Municipal Manager of both the District and Local Municipalities, as well as the Speaker and Air Pollution Officer of the local municipality were also informed of the process in writing and invited to the Open Day at De Hoek. At that time there was no appointed Ward Councillor, as a result the Ward Committee member for Ward 4 was also contacted.
5. **Sensitive Receptors** – Local Schools and Clinics at and around De Hoek were identified and the Public Participation notices were hand delivered to each facility.
6. **Adjacent Landowners and businesses** – Public Participation documentation including an invitation to the De Hoek Open Day, was hand delivered.
7. **Other Cement Companies and Institutes** – Public Participation documentation including an invitation to the De Hoek Open Day, was forwarded to Holcim, Natal Portland Cement and Lafarge Head Offices, as well as ACMP and the Cement and Concrete Institute.

A complete list of the identified I&APs that were contacted during the Public Participation Process is attached to this document as Appendix C5.

#### 8.1.5 Public Participation Documents

Letters to inform stakeholders of the proposed activity (attached as Appendix C6) and Open Day were compiled and distributed to identified I&APs together with a draft agenda for the Open Day, a copy of the newspaper notice and a short Afrikaans summary of the BID (attached as Appendix C6).

#### 8.1.6 Open Day and Registered Interested and Affected Parties

The Open Day was held on the 22<sup>nd</sup> November 2006 at the PPC De Hoek Manufacturing Plant. Two repeated sessions were conducted from 9:30am to 1pm and 1:30pm to 5pm. Each session comprised of the following presentations:

1. Introduction to PPC De Hoek and Cement Manufacturing Process by the General Manager,
2. Tour of the plant and discussion of process by PPC plant managers,
3. Technical overview of the proposed activity by PPC Group Operations Service Manager,
4. Overview of the Environmental Impact Assessment Process by the Environmental Consultant (MES),
5. Overview of the specialist studies and findings by the Environmental Project Leader (MES).

An independent translator was present to explain any part of the presentations in Tswana, to translate any questions from Tswana I&APs in English and to assist Tswana speakers to write their comments in English.

Forty-eight I&APs registered at the Open Day, the majority of whom were Plant personnel. The presentations from the Open Day and attendance registers are included in Appendix C8

## 8.2 PUBLIC PARTICIPATION PERIOD 2 NOVEMBER 2006 – 3 DECEMBER 2006

A second public meeting and comment period was conducted from the 3<sup>rd</sup> March to the 2<sup>nd</sup> April 2009. The objective of this second Public Participation Period was to afford the registered I&APs and any other potential stakeholders the opportunity to review the draft Scoping Report and findings of specialist investigations and to give comment. The findings of the specialist investigations and EIA studies were presented at the second public participation meeting and several copies of the draft Scoping Report were made available at PPC De Hoek and in Piketburg.

### 8.2.1 Background Information Document (BID) and Draft Environmental Impact Report (EIR)

The BID and EIR, as well as the specialist studies and comments register were posted on the Marsh Africa website <http://www.marsh-africa.com/sector/environment/ProjectsforPublicReview.php>. Every attendee at the Public Meeting received an information pack including all Public Participation notices and a hard copy of the Executive Summary of the EIR.

### 8.2.2 Newspaper Advertisement

One English and one Afrikaans advertisement were placed in the Tempo Nuus on the 26<sup>th</sup> February 2009. The content of these advertisements is attached in Appendix C2, and a copy of the advertisement follows.

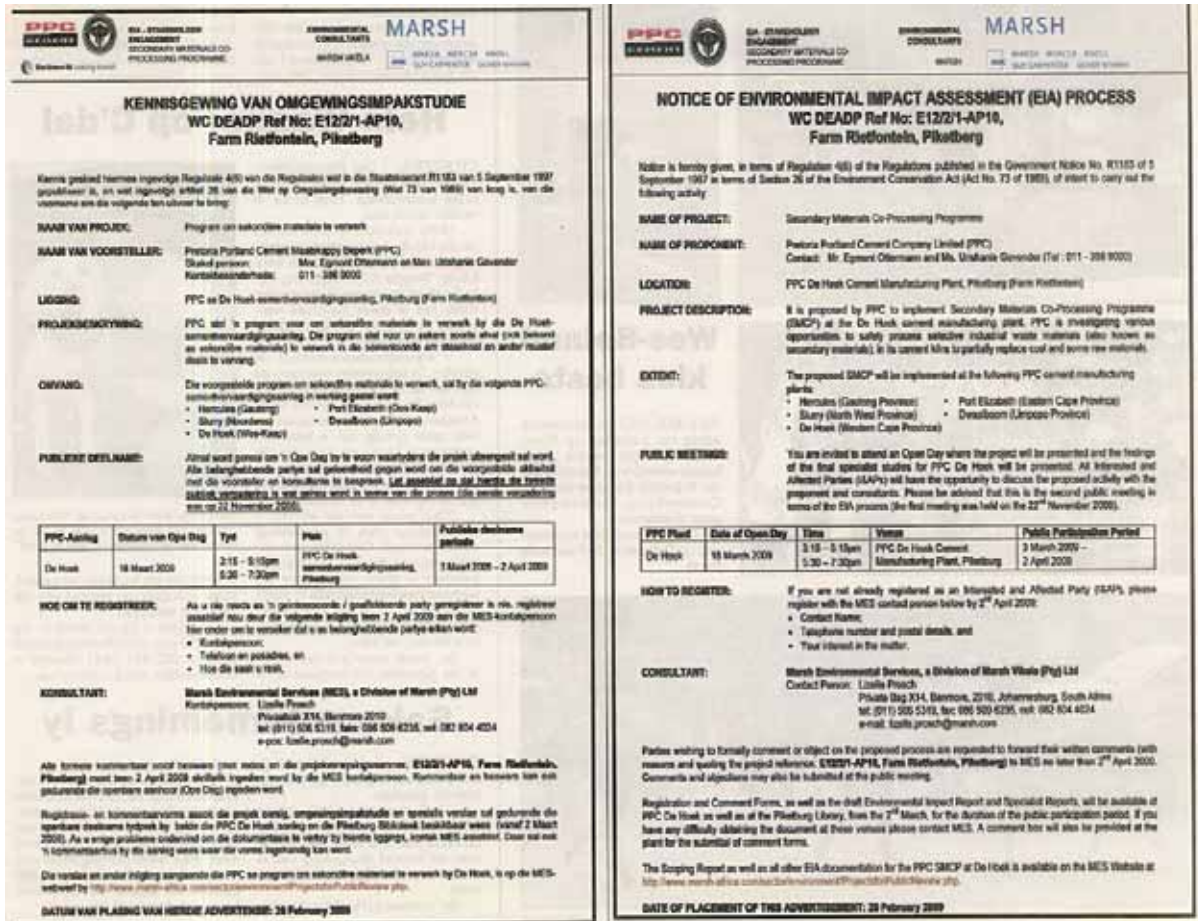



Figure 8-1: Copy of the newspaper advertisements placed the Tempo Nuus

8.2.3 Site Notices

Site Notices were prepared according to the specifications set out in the EIA regulations. Each notice was A2 in size and included basic information regarding the proposed activity, and the date time and venue of the second Public Meeting at PPC De Hoek. The notices were prepared in each of the three main local languages, English, Afrikaans and SeTswana, and at least two notices (and therefore at least two different languages) were placed at each location on site and in Piketburg.

Table 8-1: Table showing the location and languages of site notices placed in and around the plant.

Location of site notice	Languages	Photograph of notice
1. PPC De Hoek – Main Entrance,	Afrikaans English Xhosa	

Customer Entrance		
and Quarry Entrance		
2. Bergriveir Municipal Offices	Afrikaans English Xhosa	
3. Superspar, Piketburg		
4. Shoprite, Piketburg	Afrikaans Englis	
5. RSA Agri – Brokers / Magelaars, Piketburg	English	

Please note that Marsh proposed that posters in Afrikaans and Xhosa were also posted, but the owner of the Agri-mark requested that only an English notice was placed on the board.

### 8.2.4 Public Participation Documents

Letters to inform stakeholders of the proposed activity (attached as Appendix C6) and Public Participation Process were compiled and distributed to both registered I&APs together with a draft agenda for the Open Day, a copy of the newspaper notice and a short Afrikaans summary of the BID (attached as Appendix C6).

### 8.2.5 Open Day and Registered Interested and Affected Parties

The Open Day was held on the 22<sup>nd</sup> November 2006 at the PPC De Hoek Manufacturing Plant. Two repeated sessions were conducted from 9:30am to 1pm and 1:30pm to 5pm. Each session comprised of the following presentations:

1. Introduction to PPC De Hoek and Cement Manufacturing Process by the General Manager,
2. Tour of the plant and discussion of process by PPC plant managers,
3. Technical overview of the proposed activity by PPC Group Operations Service Manager,
4. Overview of the Environmental Impact Assessment Process by the Environmental Consultant (MES),
5. Overview of the specialist studies and findings by the Environmental Project Leader (MES).

An independent translator was present to explain any part of the presentations in Tswana, to translate any questions from Tswana I&APs in English and to assist Tswana speakers to write their comments in English.

Eighteen I&APs attended the Open Day. The presentations from the Open Day and attendance registers are included in Appendix C8

## 8.3 REGISTER OF INTERESTED AND AFFECTED PARTIES

During the Public Participation Periods, a total of 57 people registered as I&APs, excluding national I&APs. These were added to the Identified I&AP database which is included in Appendix C6. The comments and Response Register is included in Table 7-2. Copies of all written comments and objections are attached in Appendix C8. The comments have been grouped according to aspect and the names of the I&AP who submitted each comment is also recorded.

National stakeholders were informed of the proposed PPC Secondary Materials Co-Processing Programme and invited to attend the Open Days and submit comment during each Public Participation Period conducted for each of the five plants. As a result the NGOs and National Government either submitted comments for each plant, or waited until attending all the Open Days (for each plant) to comment. As a result, all responses received from NGOs and National Government were recorded separately in a National I&AP database and National Comments Register, and included in the Environmental Assessments for each of the five plants. These are included in Table 7-2.


## 8.4 ISSUES AND RESPONSE REGISTER

The table below includes all written comment received from Interested and Affected Parties during the Public Participation Process.

**Table 8-2: Issues Register**

<b>ISSUES REGISTER - PPC DE HOEK</b>				
	<b>Aspect</b>	<b>Comment</b>	<b>I&amp;AP Name</b>	<b>Response</b>
<b>1</b>	<b>Secondary Materials</b>	Concerns are issues such as selection and mixes of waste at point of origin, possible unknown contaminants in waste streams, and means of transport to PPC site, storage and handling on PPC site prior to final incineration as well as final disposal of unwanted waste material.	<b>P Fabricius (West Coast District Municipality)</b>	In order to address the risks posed by inappropriate secondary materials on emissions, as well as to avoid compromising the quality of clinker produced and kiln stability, a rigorous program of sampling and analysis of waste streams prior to being fed to the kiln has been developed by PPC. This is in line with international best practice, an example of which is provided below as adopted by international cement companies:  Procedures governing the transportation of hazardous waste will be compiled in accordance with the relevant SANS codes under the National Road Traffic Act (i.e. SANS 10232-1 to 3). These procedures, as well as the Sampling and Acceptance Procedure detailed in Section 13, shall be included in all audits recommended by this report.
		What assurances are there that the composition of waste streams will be of such a nature that the self imposed EC standards can be achieved and maintained.	<b>P Fabricius (West Coast District Municipality)</b>	
		In this instance special control methods will have to be implemented whereby the specific material could be easily identified and if necessary be removed from the waste stream.	<b>P Fabricius (West Coast District Municipality)</b>	
		A waste management plan taking cognisance of the cradle to grave principal should be put in place.	<b>P Fabricius (West Coast District Municipality)</b>	

ISSUES REGISTER - PPC DE HOEK				
	Aspect	Comment	I&AP Name	Response
2	Monitoring	Does continuous monitoring include soil and water in order to determine total impact. Communicate results to residents and affected parties as well as relevant authorities. This should be included in your recommendation with regards to conditions of approval. It is also important that an air quality management plan be drafted and communicated with interested and affected parties.	P Fabricius (West Coast District Municipality)	It is a recommendation of the Environmental Impact Report that no burning of secondary materials will occur post trial-burn until Opsis monitors are installed and calibrated. The Opsis monitor will measure the following parameters: NO, NO <sub>2</sub> , SO <sub>2</sub> , HCl, HF, CO and benzene. The Codel monitors currently installed at each stack will continue to monitor the particulates concentrations on-line.TCO, PCB's and PAH measurements, given their cost, will be performed only when required.
		Emissions should be monitored on a continuous basis and monitoring results should be communicated to the affected parties through environmental forums. The relevant authorities should also be kept abreast of all monitoring results and any non compliance should be reported immediately.		It is not a recommendation of the report that monitoring of water and soil be undertaken. It is assumed that PPC's adherence to their emissions profile (i.e EC and other applicable limits) will render the impacts to surface water and soil (resulting from dust deposition from stack emissions) to a negligible level.  PPC shall employ an independent environmental auditor to audit the operations against the conditions of the Record of Decision and legal requirements as described in Section 13.
6	Leaching	Address issues regarding possible leaching of metals in end product such as concrete pipes use for the transport of potable water. How will end user know that the cement is contaminated? Will a specific batch be labeled accordingly? Guarantees to be provided that contaminated end products will not be used in a manner that may cause adverse health affects.	P Fabricius (West Coast District Municipality)	Several concerns have been raised by I&AP's and our internal risk assessment process regarding the end-use of the final product. This includes the leaching of toxic components from the final cement (i.e. concrete) or when users of the cement (i.e. the public or workers in construction companies) are exposed to cement dust which has been made from secondary materials.  The reason for this concern is that the final product which is made from secondary materials may have higher concentrations of metals than the 'normal' cement made currently. While it is expected that higher metals concentrations will be present in secondary material cement, the impact of metals leaching into water cement water pipes and reservoirs (the 'worst

ISSUES REGISTER - PPC DE HOEK				
	Aspect	Comment	I&AP Name	Response
				<p>case scenario') has been dismissed by international literature as negligible, as long as the concentration of Chrome VI (hexavalent chromium) is limited. PPC will therefore limit the amount of chromium added to the kiln through waste streams to ensure that the chrome VI content in secondary materials cement is the same as for 'normal' cement.</p> <p>With regards to dust emissions during the use of secondary materials cement, it is always recommended, as with normal cement, that personal protective equipment (i.e. dust masks be worn) as normal cement also contains metals. The unprotected exposure to cement dust is always a health risk, whether or not the cement is made from secondary materials (although the health risk of secondary materials cement, due to its higher metals content, is believed to be higher).</p> <p>No information on product responsibility was available from PPC at the time of writing. PPC's product labelling does, however, does list the following information:</p> <p><b>HEALTH AND SAFETY WARNING</b> PPC HELPLINE, Toll free: 0 800 023 470 or visit us at <a href="http://www.ppc.co.za">http://www.ppc.co.za</a></p>  <ul style="list-style-type: none"> <li>■ CONTACT WITH WET CEMENT OR CEMENT POWDER MAY CAUSE IRRITATION OR SKIN DAMAGE.</li> <li>■ WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE PROTECTION.</li> <li>■ IN CASE OF CONTACT WITH EYES, WASH WITH WATER AND SEEK MEDICAL ADVICE IF NECESSARY.</li> <li>■ AFTER CONTACT WITH SKIN, WASH IMMEDIATELY WITH WATER.</li> <li>■ KEEP OUT OF REACH OF CHILDREN.</li> <li>■ MATERIAL SAFETY DATA SHEET AVAILABLE ON REQUEST.</li> </ul> <p>As indicated, use of a dust mask is recommended when using the final product.</p>
7	Trial Burns	Do trial tests on all identified waste streams and eliminate or treat those with high detrimental potential on air quality.	P Fabricius (West Coast District Municipality)	It is recommended by the Environmental Impact Assessment Report that trial burns are to be conducted prior to full-scale implementation of any new secondary material category per kiln and per waste stream.

ISSUES REGISTER - PPC DE HOEK				
	Aspect	Comment	I&AP Name	Response
				<p>The emissions from the trial burn shall be reported, and full-scale production will only commence once the emissions profile and the other conditions in this section are met.</p> <p>For the purposes of the trial burn, PPC may perform preparation of the waste streams in order to facilitate the safe feeding and metering of such to the kiln. Such preparation will be limited to physical preparation in such a manner as to avoid the generation of noxious or offensive gases and any chemical alteration of the waste streams.</p>
8	<b>Community Health Risk Assessment</b>	Include De Hoek community in health study. (Community risk assessment.) Do proper survey and also speak to general practitioners and local clinic staff.	<b>P Fabricius (West Coast District Municipality)</b>	<p>The Baseline Community Health Survey has been conducted to enable the identification of the potential health impacts of PPC's current operations. The Baseline Community Health Survey has been conducted for the PPC Slurry Plant where this plant can be regarded as the only polluter in that area. This study is regarded as an example.</p> <p>The purpose of the study was to investigate the effect of the current PPC operation on community health. This could be achieved though the investigation of one scenario MES decided to conduct this study at slurry due to the fact that baseline health data could be obtained at the local PPC Slurry Clinic (hihegest exposure sample) and the Victoria Hospital.</p>
9	<b>Dust Suppression / Re-use of water</b>	Investigate possible use of mine seepage and site run off water for dust suppression on dirt roads and raw material crushers.	<b>P Fabricius (West Coast District Municipality)</b>	Noted

NATIONAL COMMENTS				
	Aspect	Comment	I&AP Name	Response
4	Emissions	Emissions may compromise the quality of agricultural products (e.g. fruit at De Hoek), and cause economic losses.	groundWork	The ground level effects of emissions variations due to addition of secondary materials were calculated using sensitive human receptors (e.g. children) as the determining criteria largely because of the reliability of data for these receptors. As is indicated in section 10.4, this is within the SANS guidelines. Whether or not this results in economic losses has not been determined.
		Quality of waste stream and flow rate affect the emissions. European plants burn different waste streams than PPC's proposed waste streams, therefore European plants cannot be used as examples to predict emissions for PPC.	groundWork	PPC's commitment is to adhere to European Union emissions limits. If these limits are exceeded then the secondary materials project will be either modified or ceased. PPC have conducted their own trials and test burns at Jupiter (as per sections 10.8 – 10.12) and are confident in being able to achieve these emissions limits.
		Concerned that there is no proof to show that PPC can comply with European performance standards.	groundWork	PPC's commitment is to maintain current levels of dust and NO <sub>x</sub> emissions (according to APPA permits) and EU limits for the other parameters. It is true that the Jupiter trials results (table 10.6) show results for dioxin equivalents as being 1.4 ng/Nm <sup>3</sup> , as compared to that of 0.1 ng/Nm <sup>3</sup> (the EU limit), although they also confirm a destruction rate meeting USEPA standards. On the other hand, the EU limits for HF limits are met for SPL processing (which is a waste high in F content).
		States that the kiln conditions are different from the ones used in the literature surveys, and is concerned that PPC cannot attain 99.9999% combustion efficiency, especially considering the upset conditions.	groundWork	99.9999% destruction rate efficiency was met at Jupiter during test burns as discussed in section 10.10. Kilns 5 and 6 at De Hoek are different yet more modern kilns.
		Provides statistics showing that dioxins and furans in emissions and CKD are significantly higher in kilns burning hazardous wastes than those using conventional fuels.	groundWork	No change in the dust generation from the kiln stack should result from using secondary materials. With regards to dioxin generation, the USEPA (section 3.2.16) confirms that the principal cause of dioxin generation is Cl and carbon in the raw material feed and not the fuel. Figure 3.2 also shows evidence that dioxin generation with secondary materials is equal to or less

NATIONAL COMMENTS				
	Aspect	Comment	I&AP Name	Response
				than that without.
		A major reason for unacceptable elevated levels of emissions in cement plants is variance in temperature in the kiln. It has been stated that there are daily variances in temperatures and instabilities.	groundWork	Kiln stability and stoppages are discussed in section 3.11. The heat capacity of the kiln is such when there are kiln upsets and the feed is stopped, sufficient heat exists to completely burn any existing fuel and waste in the kiln. Furthermore, although minor variations in the temperature of the kiln may occur, the maximum kiln temperature will never drop below 1,350 °C while raw materials and fuel are being fed to the kiln. 1,100 °C is the minimum temperature at which Class 1 industrial incinerators operate (as per DEAT requirements).
		Concern regarding dust fallout into rivers (Crocodile and Orange River) since the local communities utilise untreated water from these rivers for drinking water supply.	groundWork	PPC is not clear which plant is referred to as no plant is situated adjacent to the Orange or Crocodile Rivers.
		Effect of dust on the natural vegetation as the area around the plant is covered with dust.	groundWork	Dust generation with secondary materials will not be greater than the current operations. It is recognised that dioxins and metals may be absorbed and transported with cement kiln dust, thus justifying this concern. It is therefore recommended that chemical analysis of the cement kiln dust be conducted as part of all standard monitoring programmes.
		States that PPC burn over 100,000 kg coal per year which contain trace amounts of toxic compounds, which accumulates in the air and environment.	groundWork	Comment noted. The use of secondary materials will reduce the coal consumption at PPC's plants.
		Mercury pollution in North America in 2003 represented nine percent of total mercury released in air emissions. There is a concern regarding mercury pollution from the kilns.	groundWork	The input of mercury into the process through secondary materials will be carefully controlled so as not to exceed the EU emissions limits. The sampling and analysis process for incoming waste streams has been discussed in section 4.1.

NATIONAL COMMENTS				
	Aspect	Comment	I&AP Name	Response
		Stating that the incineration of the waste in the kiln will reduce greenhouse gases is only true if the waste was incinerated somewhere else. If they were recycled, this would not be true.	groundWork	This statement is not true as the reduction of greenhouse gases is achieved in comparison to the replacement of coal by secondary materials. Neither incineration nor recycling use the calorific value of the waste to replace coal.
		PPC consultants paint a rosy picture of levels of dioxin emissions when waste fuel is burnt, but provides insufficient information to enable proper decision-making. For example the Power Point slide entitled "concentration of dioxin in emissions as a function of Fuel Type" fails to describe the chlorine content of the secondary fuel used in these studies. The chlorine content would have an impact on the level of dioxin emissions. It is therefore not possible to compare these studies with possible emissions from the proposed PPC cement waste fuel operations, as we do not know how the relative chlorine concentrations of these two processes compare.	Angela Andrews (Legal Resources Centre)	The slide concerned is figure 3.2 in this report. Figure 3.3. shows however that a relationship between Cl content and dioxins concentrations can exist. MES further conclude that "Materials high in chloride content should therefore only be used in preheater/calcliner kilns to ensure low PCDD/F emissions. A suitable limit for Cl into long dry kilns would be 310 mg total input (fuel and raw materials) per kg clinker produced, although the effect of this on dioxin/furan formation would need to be verified during the proposed trial burns. This figure will be adjusted depending on emissions results from trial burns and commissioning monitoring".
		The same applies to the slide entitled "Acer Environmental in their Review of the IPC Authorisation and Variations: Castle Cement Ltd". It is not entirely clear what waste was used in the study but it appears that only the Castle cement secondary fuel "Cemfuel" was used. The chemical composition of this fuel is presumably		Same response as above. The examples cited are, by definition, limited in their application, and no conclusions from such a reached in the report based solely on these examples.  For each waste stream introduced at PPC, a new series of trial burns and monitoring will be conducted prior to full-scale processing of the waste stream to ensure that the dioxin limits are not exceeded. Thus each waste stream will be accepted only so long as the emissions limits committed to by

NATIONAL COMMENTS				
	Aspect	Comment	I&AP Name	Response
		constant and determinable in advance. The information from this study cannot therefore be compared with possible emissions from the proposed PPC alternative fuels process as PPC proposes to incinerate a very diverse range of wastes which may have considerably more chlorine and metal content than Cemfuel. The study is therefore misleading.		PPC will not be exceeded. It is fully recognised by this report (see sections 10.1 and 10.2) that it is not possible to predict what the emissions profile will be as a result of adding a particular waste stream. The examples cited in this report are purely to provide an indication that the EU limits may be achievable for the envisaged waste streams. The ultimate test will be the monitoring to be conducted during the trial burns, and if acceptable, then monitoring during normal production.
		Question: Do consultants for PPC cement intend to present a balanced and representative information about the emissions from burning a diverse range of wastes to the public to enable informed decision-making?		Please refer to answer above.
5	Monitoring / Trial Burns	Concerned about heavy metals being emitted under current conditions, and that there is no monitoring equipment currently in place to measure these elements. Feels that if PPC isn't monitoring current heavy metal emissions, the public will not believe that PPC will burn hazardous waste responsibly.	groundWork	The reply from PPC management is that the comment is noted, and that PPC will monitor heavy metal emissions from cement kilns that burn secondary materials as part of this application. To date, this monitoring requirement has not been imposed upon PPC.
		Repeats concerns about lack of monitoring, and also raises concerns that PPC have never undertaken environmental or community sampling to determine the impacts of their operations.	groundWork	As above.
		PPC do internal monitoring but don't make it available. What proof is there of the	groundWork	In terms of occupation exposure monitoring, all PPC staff are tested internally on an annual basis. This information is confidential. Confirmation

NATIONAL COMMENTS				
	Aspect	Comment	I&AP Name	Response
		monitoring?		of the testing being done may be obtained from our independent medical contractors, whose details will be provided on request.
		Only dust monitoring takes place and not for dangerous chemicals.	groundWork	Blood tests are performed for staff currently exposed to SPL operations. With regards to the availability of this information, please refer to the answer above.
		PPC have never taken meaningful measurements of concentrations of irritant gases and toxic heavy metal around their plants. How can EO (Egmont Ottermann – PPC’s Secondary Materials Manager) then be confident of pollutants from the stacks.	groundWork	Although PPC has not taken detailed measurements of metal and other emissions in the past, PPC will implement an emissions measurement system as part of the secondary materials project.
6	<b>Lack of Regulatory Legislation</b>	South Africa does not currently have enforceable emission standards for cement kilns. Permits under the atmospheric pollution prevention act currently only regulate emissions of particulates. The incineration of waste as fuel is likely to generate emissions of dioxins and heavy metals which are some of the most toxic substances known to have been produced by humans. In this regulatory vacuum PPC cement proposes to incinerate a highly diverse mixture of waste which is not typical of cement kilns using waste in highly regulated jurisdictions like the USA. There are cement kilns in North America that burn one or two wastes as alternative fuels, such as tires or plastic but no kiln could be found that utilises as many different waste	Angela Andrews (Legal Resources Centre)	Noted. Please see response to question below.

NATIONAL COMMENTS				
	Aspect	Comment	I&AP Name	Response
		materials or as diverse and mixture of materials as is being proposed by the PPC cement plants. In addition no precedent has been cited of the cement kiln in North America burning municipal waste pellets.		
		Question: How does PPC cement proposed to protect the public health from unnecessary levels of emissions of toxic chemicals such as dioxins and heavy metals in a regulatory vacuum, while burning of far more diverse group of wastes than would be allowed in a highly regulated environment?		For each waste stream introduced at PPC, a new series of trial burns and monitoring will be conducted prior to full-scale processing of the waste stream to ensure that the EU limits are not exceeded. Thus each waste stream will be accepted only so long as the emissions limits committed to by PPC will not be exceeded. It is fully recognised by this report (see sections 10.1 and 10.2) that it is not possible to predict what the emissions profile will be as a result of adding a particular waste stream. The ultimate test will be the monitoring to be conducted during the trial burns, and if acceptable, then monitoring during normal production. If the monitoring shows non-adherence to the EU limits and current NO <sub>x</sub> and dust emissions, then the secondary materials programme will be either adjusted or terminated.
		Provides material from US EPA report which describes what cement companies must do to make sure the waste they incinerate does not contain excessive levels of heavy metals and contaminants that promote emissions of dioxin and other toxic substances. A waste analysis plan (WAP) for a fictional incinerator named Sparky Incineration, is also included.	Angela Andrews (Legal Resources Centre)	PPC appreciates the information provided. A comprehensive sampling and analysis programme has been proposed for this programme and accepted by PPC. Please refer to section 4.1 for a full description.
7	Health	Cement kilns are not meant to incinerate hazardous waste and pose a health risk to surrounding communities.	groundWork	The results of this report are that if the EU emissions limits are adhered to, then the community health risk at De Hoek is negligible as a result of using secondary materials.

NATIONAL COMMENTS				
	Aspect	Comment	I&AP Name	Response
		It is misleading to assume that conditions are consistent through the length of the kiln and there is no health risk associated with burning of wastes in the kiln.	groundWork	As above.
		The plant should monitor its emissions.	groundWork	A comprehensive sampling and analysis programme has been proposed for this programme and accepted by PPC. Please refer to section 4.1 for a full description.
		It was agreed that mercury is not being caught but emitted into the atmosphere. PPC indicated that they cannot capture mercury.	groundWork	Partly true. Mercury is a metal that is not captured completely in the cement process, but largely emitted. Mercury input into the kiln is therefore to be carefully controlled to ensure that the EU limits are adhered to.
		Some farmers were provided with a response at the meeting in Afrikaans and no translation was provided so that other people can understand.	groundWork	Translators of any responses into English, Tswana, and other languages were offered at the beginning of the meeting. MES encouraged all parties to make use of this service at any time.
		Concerned that dioxins and heavy metals entrained in the clinker may later be released when concrete is crushed or standard by abrasion. These environments become dusty posing a possible threat to public health. This issue should have been included in the Environmental Technical Review. Request assurance that this will be addressed in the specialist study.	Angela Andrews (Legal Resources Centre)	<p>The USEPA report (see section 3.2.16) states that the risk of dioxin formation is present in the preheater section due to Cl and organics introduced with the raw materials. Any dioxins so formed will not be incorporated into the final product, which is produced at a later stage in the production process. Metals, especially non-volatile metals, will however be incorporated into the final product. It is worth noting that coal and other current raw materials contain significant quantities of metals, which are incorporated into the "normal" cement currently available on the market. As a result of these measures, the health risk posed to end-users of the product require the use of PPE (i.e. dust masks) as using cement made from secondary materials.</p> <p>Furthermore, please see comment no. 14 below.</p>

NATIONAL COMMENTS				
	Aspect	Comment	I&AP Name	Response
		<p>Consultants for PPC cement fail to draw to the attention of the public relevant information about emissions from waste fuel burning in the cement kilns that could suggest that the process could pose a threat to health. Re-iterates several quotes from literature regarding stack pollutants and public health.</p> <p>Will the environmental impact assessment bring all relevant information to the attention of the decision maker concerning findings of different studies globally about the potential increase in emissions of heavy metals and dioxins from incineration of tyres and waste materials (such as are proposed by PPC) and the attendant risk created by this increase to public health.</p>	<p>Angela Andrews (Legal Resources Centre)</p>	<p>Large sections of this report are devoted to presenting the nature and risks of emissions resulting from secondary materials processing. Please refer to sections 3.2 and 10 of this report in particular. In particular, section 3.2 opens with the statement that “the emissions leaving the process are the largest potential source of environmental impact from the process” (section 3.2). Furthermore, much of the presentation at the public meetings focused on the research regarding emissions. Copies of these presentations are available on the MES website.</p>
		<p>Consultants for PPC cement failed to disclose the chlorine and metal concentrations of wastes burnt in previous experience with secondary materials at the Jupiter and Slurry plants. A comparison of emissions in these trial burns as compared to possible emissions from the proposed process of burning a diverse range of wastes at PPC cement is therefore not possible. The results of leaching studies referred to also do not set out the chlorine and heavy metal concentrations of the feedstock of waste material and therefore</p>	<p>Angela Andrews (Legal Resources Centre)</p>	<p>Table 9-9 specifically provides the waste composition for the Jupiter tests.</p> <p>The purpose of disclosing this previous work done at Jupiter and Slurry is not to provide definitive correlations to the emissions from burning the wastes proposed in this application. It’s inclusion is merely to provide a level of confidence with regards to attaining the EU emissions limits. It is purely for the reasons of resolving the unknown and unique relationship between inputs and emissions (and leachability of final product) that the trial burns have been recommended as a condition of any Record of Decision.</p>

NATIONAL COMMENTS				
	Aspect	Comment	I&AP Name	Response
		<p>comparisons to the proposed process of burning wasted PPC meant is not possible.</p> <p><b>Question:</b> Do consultants for PPC cement intend to present findings based on studies of emissions from waste burning using the same range of materials as is proposed to be burnt? (It is not suggested the trial burns be conducted here but experience globally be relied on.)</p>		<p>Yes, the trial burns will be conducted for exactly the same waste streams as that which will be burnt on a full-scale processing programme. These results will be made known on request as stated in Sections 4.6, 4.7 and 4.11.7.</p>
8	Noise	The plant is in the middle of a residential community. A local resident repeatedly raised concerns about the noise from the plant.	groundWork	No changes to the noise generated by the operations will be generated by the proposed project, with the exception of the occasional truck delivering waste.
9	Secondary Materials	More detailed information is required on the waste streams which will be burnt in the kilns (composition, flow rate, quality & consistency, etc.). MES cannot utilise European examples since the waste streams are not identical.	groundWork	Please refer to Section 4.11.4 for the methodology to determine the feed rates of secondary materials during the trial burn.
		This is a profit making venture.	groundWork	No comment.
		Proposed waste streams and flow rates into the kilns were not sufficiently explained at open days, no explanation of quality assurance for each waste stream.	groundWork	The sampling and analysis programme for waste streams prior to acceptance is described in detail in section 4.1.
		Many alternative re-use options exist for the proposed waste streams. Proposes that suitable life cycle assessments be undertaken to determine if incineration is the best option for the waste, before	groundWork	A recycling alternative for each of the five waste streams was considered as part of a Waste Disposal Study which included a Life Cycle Assessment which has been included as Appendix D4. It is our opinion that cement kiln co-processing of waste streams is considered as re-use rather than disposal since the mineral and energy value of the waste is recovered.

NATIONAL COMMENTS				
	Aspect	Comment	I&AP Name	Response
		incineration is considered.		
		Although burning wastes is accepted practice internationally, there is a long and well documented history of public opposition and protest against companies in America and Europe. (Suggests a Google search of "cement and hazardous waste and opposition")	groundWork	Noted.
		Concerned that the statement that secondary materials are incinerated at constant temperatures is misleading - there are different temperature zones in the kiln and continual upset operating conditions. In the context of burning chlorinated wastes, this will cause the formation of dioxins and furans.	groundWork	While there are different temperature profiles within the kiln, these temperatures for each zone do not vary significantly. Kiln stability and stoppages are discussed in section 3.11. The heat capacity of the kiln is such when there are kiln upsets and the feed is stopped, sufficient heat exists to completely burn any existing fuel and waste in the kiln. Furthermore, although minor variations in the temperature of the kiln may occur, the maximum kiln temperature will never drop below 1,350 °C while raw materials and fuel are being fed to the kiln. 1,100 °C is the minimum temperature at which industrial incinerators operate.

NATIONAL COMMENTS				
	Aspect	Comment	I&AP Name	Response
		<p>Sewage systems are also lawfully used for the discharge of certain chemicals by industries and may contain a variety of pollutants including heavy metals. Monitoring of compliance with permissible levels of chemical concentrations on the effluent, as set by DWAF, may be different in different areas, depending on the administrative capacity. The chemical composition of sewage pellets is unlikely to be uniform in all areas and is likely to reflect the amount of industrial effluent (Sewage pellets have been rejected by the Department of Agriculture Department of Agriculture for use as fertiliser due to high heavy metal concentrations). Burning of sewage pellets could result in high levels of emissions of heavy metals including mercury for which there is no possible air pollution abatement. In other words there is no way of preventing mercury emissions if these are burnt in cement kilns. Depending on the chemical form of mercury, it is damaging to the nervous system and kidneys. Other metals which may be emitted have harmful effect on the health which need to be investigated.</p>	<p>Angela Andrews (Legal Resources Centre)</p>	<p>Wastes sourced from different generators will be regarded by PPC as being separate or different waste streams, depending on type of waste as well as each location of source. Therefore each sewage plant will be regarded as being a unique generator of a unique waste stream. It is, however, assumed that the waste stream generated by a particular sewage plant is consistent over time within certain minor variations on a day-to-day basis. PPC have therefore designed a waste sampling programme which acknowledges such as this is discussed in more detail in section 4.1.8.</p>

NATIONAL COMMENTS				
	Aspect	Comment	I&AP Name	Response
		<p>Question 1: how does PPC cement proposed to measure the different concentrations of heavy metals and chlorine in all the different batches of sewage pellets in order to ensure that there are not excessive levels of emissions when this is used as a fuel in the cement making process?</p> <p>Question 2: it is understood that PPC cement is currently burning sewage sludge pellets. Has PPC cement undertaken a chemical analysis of the chlorine and heavy metal levels of the sewage pellets that it is currently burning?</p> <p>Has it undertaken a measurement of dioxin and heavy metal emissions from a variety of batches of the sludge? Does it propose to do so in order to inform the process of likely emissions from the burning of this type of waste?</p>		Please refer to answer above.
		<p>The Process Risk Assessment states that "German measurement at 16 cement clinker kilns during the past 10 years indicate that the average concentration amounts to 0.02 ngTEQ/m<sup>3</sup>". The assessment does not state what the chemical composition of the feedstock was and in particular the concentrations of chlorine and heavy metals during these measurements. It does not state what</p>	<p>Angela Andrews (Legal Resources Centre)</p>	<p>The purpose of disclosing this literature reference is not to provide definitive correlations to the emissions from burning the wastes proposed in this application. Its inclusion is merely to provide a level of confidence with regards to PPC attaining the EU emissions limits. It is purely for the reasons of resolving the unknown and unique relationship between inputs and emissions (and leachability of final product) that the trial burns have been recommended as a condition of any Record of Decision.</p>

NATIONAL COMMENTS				
	Aspect	Comment	I&AP Name	Response
		<p>types of waste were used.</p> <p>Question: Will the PPC cement kilns at all times be able to prove that the waste fuel feedstock that they propose to use does not have concentrations of chlorine and heavy metals which exceed those of the waste fuel feedstock used in the German cement kilns when these measurements were taken?</p>		
10	Cement/Concrete Quality	<p>There are tight constraints which require careful management to ensure that the cement products meet quality and legislative requirements in the SANS standards. These constraints will ensure that the implementation of the secondary materials co-processing programme will be implemented carefully such that there is no ill effects on the finished product. This should give I&amp;APs confidence that the process is consistent with international trends and will be carefully controlled to avoid adverse health effects.</p>	Graham Grieve (Cement and Concrete Institute)	Noted.
		<p>Will PPC measure the dioxin and metal content in the final cement product as a further quality control measure to protect public health? These can be released when cement/concrete is reduced to dust in construction processes, for example when buildings are demolished. PPC</p>	Angela Andrews (Legal Resources Centre)	According to PPC's Managers, the dioxin content will not be measured in the final product. The USEPA report (see section 3.2.16) states that the risk of dioxin formation is present in the preheater section due to Cl and organics introduced with the raw materials. Any dioxins so formed will not be incorporated into the final product, which is produced at a later stage in the production process. Metals, especially non-volatile metals, will however be incorporated into the final product. As discussed in section 3.10, the only

NATIONAL COMMENTS				
	Aspect	Comment	I&AP Name	Response
		mentioned that chromium 6 was present in some of its cement in the past, which can contaminate drinking water and is highly carcinogenic. It is therefore important that the chemical composition of the final products are tested as an additional safeguard against the release of dioxin and heavy metals. What assurance is PPC prepared to give in this regard?		<p>metal which presents a risk of leaching is Cr VI. PPC shall ensure that the Cr VI content in the cement made from the secondary materials in this proposal is no higher than that made as per current practices.</p> <p>For further details on the assurance programme, please refer to section 4.1 of the report, and the comment above (item 14 of this register).</p>
11	Traffic	PPC cement proposes to bring tons of hazardous waste to its site presumably by truck. This may result in an increase in collisions resulting in the release of hazardous chemicals. This issue is raised as a concern for scoping and it is suggested that the impacts of this increased risk be assessed.	Angela Andrews (Legal Resources Centre)	This issue has been identified (section 3.5). It is considered to be sufficiently mitigated through the contracting of the transport to a company providing emergency response services in the event of a spill or accident during transport. While it is noted that further distances may be involved than the alternatives of recycling, re-use, incineration or landfill disposal, the risks of transportation are essentially unavoidable.
12	EIA and Public Participation	Would like assurance that responses and answers were captured at the open days, and that these will be provided in writing for public record. If these cannot be produced, feels that public issues raised at the open day are not important to MES or PPC.	groundWork	<p>It was requested in the advertisements and at the public open day that all comments must be submitted in writing. All comments received at the meeting and via fax or emails are recorded in this comments and response register. To ensure that all the comment were received and correctly recorded, copies of the comments register were forwarded to all registered I&amp;APs for review and comment. Any comment, correction of additions will be recorded and included in the final Scoping Report.</p> <p>All registered interested and affected parties will receive this comments registers, even if the specific individuals are only registered and did not submit any comment.</p>

NATIONAL COMMENTS				
	Aspect	Comment	I&AP Name	Response
		Concerned that no provincial regulators attended the open days. Since these open days were not minuted, concerned that that decision making will not include these public comments.	groundWork	All comments received at the meeting and via fax or emails are recorded in this comments and response register. To ensure that all the comment were received and correctly recorded, copies of the comments register were forwarded to all registered I&APs for review and comment. Any comment, correction of additions will be recorded and included in the final Scoping Report. The draft and final scoping reports are available for viewing by the public to confirm that their comments were recorded.
		Concerned that there was insufficient advertising during PPP. Important I&APs that should have been invited were invited by groundWork, such as representatives of major agricultural organisations at De Hoek.	groundWork	<p><b>Newspaper Advertisement</b> One English and one Afrikaans advertisement were placed in both the Swartland and the Weskus Herald on the 2<sup>nd</sup> November 2006. The content of these advertisements is attached in Appendix C2.</p> <p><b>Site Notices</b> Site Notices were prepared according to the specifications set out in the EIA regulations, each notice was A2 in size, with half the notice reflecting the Afrikaans text and the other half reflecting the English text. The site notices included basic information regarding the proposed activity, and the date time and venue of the Open Day at De Hoek.</p> <p><b>Identified Interested and Affected Parties</b></p> <ul style="list-style-type: none"> <li>- <i>National Government Departments</i></li> <li>- <i>Non-Governmental Organisations</i></li> <li>- <i>Provincial Government Departments</i></li> <li>- <i>Local Authority</i></li> <li>- <i>Sensitive Receptors Adjacent Landowners and businesses</i></li> <li>- <i>Other Cement Companies and Institutes</i></li> </ul> <p>Forty-eight I&amp;APs registered at the Open Day, the majority of whom were Plant personnel. The presentations from the Open Day and attendance registers are included in Appendix C8.</p>
		Concerned that farmers in the area are too busy to attend open days during harvest.	groundWork	Three sessions were held during the open day in accordance with the following agenda:

NATIONAL COMMENTS				
	Aspect	Comment	I&AP Name	Response
				<p><b>Programme for the day</b></p> <p>9 am Registration opens, Tea and Coffee                      9.30 am Plant tour 1                      10 am Presentation 1                      11 am Public Discussion</p> <p>1.30 pm Plant tour 2                      2 pm Presentation 2</p> <p><i>Tea and Coffee</i></p> <p>3 pm Public Discussion 2                      5.30 pm Plant tour 3                      6 pm Presentation 3</p> <p><i>Tea and Coffee</i></p> <p>7 pm Public Discussion 3                      8 pm Registration closes</p> <p>Comment was also invited via fax, post, hand delivery or email. MES's contact details were included in the newspaper advertisements, site notices and BID's to ensure that all parties were able to contact MES. The advertisements also informed all parties that comment could be received at the plants. These comments boxes at the plant were locked to ensure confidentiality.</p>

NATIONAL COMMENTS				
	Aspect	Comment	I&AP Name	Response
		Feels that MES portrayed the international cement companies as burning hazardous waste with public consent, there is a long and well documented history of public opposition and protest against companies in America and Europe.	groundWork	Noted.
		Concerned that no proof was given to show that PPC can comply with European performance standards, and that this is without qualification and misleading to the public.	groundWork	PPC's commitment is to maintain current levels of dust and NO <sub>x</sub> emissions (according to APPA permits) and EU limits for the other parameters. It is true that the Jupiter trial results (table 9.7) show results for dioxin equivalents as being 1.4 ng/Nm <sup>3</sup> , as compared to that of 0.1 ng/Nm <sup>3</sup> (the EU limit), although they also confirm a destruction rate meeting USEPA standards. On the other hand, the EU limits for HF limits are met for SPL processing (which is a waste high in F content).
		Minutes were not taken for the open day which is a flaw in the process.	groundWork	It was requested in the advertisements and at the public open day that all comments must be submitted in writing. All comments received at the meeting and via fax or emails are recorded in this comments and response register. To ensure that all the comment were received and correctly recorded, copies of the comments register were forwarded to all registered I&APs for review and comment. Any comment, correction of additions will be recorded and included in the final Scoping Report.  All registered interested and affected parties will receive this comments register, even if the specific individuals are only registered and did not submit any comment.
		MES stated that people's comments could be made in writing. People may not want to record their concerns in writing, and therefore their comments may not be considered.	groundWork	MES made two staff members available at the open day to assist in recording any verbal comment should it be required.

NATIONAL COMMENTS				
	Aspect	Comment	I&AP Name	Response
		MES stated that the original public meeting was not to provide all information but to hear concerns and to register as I&APs. The open day should provide all information to absorb, understand and question.	groundWork	<p>Noted. A second public participation period and meeting has been scheduled for 7 November 2007. The Draft Scoping report, site specific specialist studies and other relevant information has been made available on the MES website and hard copies of such document has also been placed at the PPC De Hoek Plant.</p> <p>Advertising of this second meeting was not restricted to registered interested and affected parties and followed the same methodology as the first public involvement process.</p>
		There was no translation for the local community.	groundWork	Translation into English, Tswana, and other languages were offered at the meeting. MES encouraged all parties to make use of this service at any time.
		groundWork requested the I&AP list from Marsh and have not received it.	groundWork	This information is available on the MES website from 15 May 2007 for review and comment.
		PPC is not undertaking a full EIA but a Scoping Process. It is unclear how this came to be with the regulator.	groundWork	PPC, on request from the Provincial Authority is undertaking a full Environmental Impact Assessment Process.
		groundWork has requested copies of correspondence regarding PoSS between Marsh and the Provincial Authorities. These have however not been received.	groundWork	<p>The PoSS and the approval thereof has been available for review by the public since April 2006. General public and key stakeholder advertisements included the website address</p> <p>Mr. Peek contacted MES requesting this information and after informed of its availability of this information on the website agreed to obtain it there.</p>
		There was no public involvement in the terms of reference for specialists or sight of the specialist reports before the open day.	groundWork	<p>The Open Day held at the PPC De Hoek Plant was to further identify issues and concerns. The specialist studies as identified in the PoSS were not completed at the time of the meeting for the De Hoek Plant.</p> <p>Findings of the specialist studies conducted for the PPC Hercules Plant in Pretoria was however presented to explain the extent and potential impact of the proposed activity to enable the public to understand what impacts</p>

NATIONAL COMMENTS				
	Aspect	Comment	I&AP Name	Response
				could be expected and therefore to better formulate their concerns.
		The political councillors at the open day said that other forms of strategies for participation were required and that this type of participation was not enough.	groundWork	A list of all interested and affected parties invited to comment and to attend the meeting is attached as Appendix C6 to this document. These identified parties were informed in writing via fax, email or hand delivery.
		Meetings were poorly advertised, inferred by the poor attendance.	groundWork	<b>Newspaper Advertisement</b> One English and one Afrikaans advertisement were placed in both the Swartland and the Weskus Herald on the 2 <sup>nd</sup> November 2006. The content of these advertisements is attached in Appendix C2.
		No adverts were placed in local newspapers.	groundWork	<b>Site Notices</b> Site Notices were prepared according to the specifications set out in the EIA regulations, each notice was A2 in size, with half the notice reflecting the Afrikaans text and the other half reflecting the English text. The site notices included basic information regarding the proposed activity, and the date time and venue of the Open Day at De Hoek. <b>Identified Interested and Affected Parties</b> <ul style="list-style-type: none"> <li>- National Government Departments</li> <li>- Non-Governmental Organisations</li> <li>- Provincial Government Departments</li> <li>- Local Authority</li> <li>- Sensitive Receptors Adjacent Landowners and businesses</li> <li>- Other Cement Companies and Institutes</li> </ul> <p>Forty-eight I&amp;APs registered at the Open Day, the majority of whom were Plant personnel. The presentations from the Open Day and attendance registers are included in Appendix C8.</p>

NATIONAL COMMENTS				
	Aspect	Comment	I&AP Name	Response
		Most local authorities (Mayors and councillors) did not receive invitations. This is unfair because people will be affected at the end of the day.	groundWork	A list of all interested and affected parties invited to comment and to attend the meeting is attached as Appendix C6 to this document. These identified parties were informed in writing via fax, email or hand delivery. Please note the following extract for ease of reference:
		The regulators did not attend the meetings. How can they make a decision without hearing the comments.	groundWork	Noted.
		Some verbal comments were made without putting comments in the comments box whilst no minutes were provided for the meeting.	groundWork	It was requested in the advertisements and at the public open day that all comments must be submitted in writing. All comments received at the meeting and via fax or emails are recorded in this comments and response register. To ensure that all the comment were received and correctly recorded, copies of the comments register were forwarded to all registered I&APs for review and comment. Any comment, correction of additions will be recorded and included in the final Scoping Report.  All registered interested and affected parties will receive this comments registered, even if the specific individual are only registered and did not submit any comment.
		Concerned about the failure to record the proceedings of the Open Days. As such, the decision maker will not have access to a record of the issues raised and the responses given. By requesting that the participant place all questions in writing at the end of the process, the responsibility has been removed from the consultant and placed on the public, which is contrary to the spirit of the EIA regulatory scheme. It also deprives the public and decision makers of important information.	Angela Andrews (Legal Resources Centre)	
		Concerned that specialist reports were still not available at the end of 2006, and stated that this is unacceptable for the public participation process. LRC reserves the right to further ask questions and raise issues when the reports are available.	Angela Andrews (Legal Resources Centre)	Noted. Delays beyond the control of MES and PPC were incurred in this EIA process, and specialist studies were adjusted to take into consideration the comments of the I&AP's from the first round of public meetings in the August – November 2006. As a result, the public comment period was extended, and a second public meeting planned for May 2007.
		This study assumes that for risk	Angela	PPC's commitment, as stated in this report and as recommended to be

NATIONAL COMMENTS				
	Aspect	Comment	I&AP Name	Response
		assessment there will be compliance by PPC (when using waste fuels) with limits on emissions in terms of European Community limits on emissions. European Community limits were presumably chosen in order to ensure the protection of public health. A risk assessment which assumes compliance with European Community limits can only lead to the conclusion that the public health will be protected. The study therefore proves nothing about the impacts of the proposed operations at PPC plants, and does not provide an assurance that the plants will not constitute an unacceptable risk to public health, should EU emissions standards in practice if be exceeded.	Andrews (Legal Resources Centre)	included in any Record of Decision, is that PPC will only burn the proposed secondary materials when compliance with EU limits and APPA permits be demonstrated through independently audited and monitored trial burns for the exact waste streams for which application is being sought.
		The bold assertion by PPC cement that in the future when using waste fuel it will be able to comply with European Community limits at all times has not been demonstrated by it with any reliability. In order to prove that PPC cement will comply with European community limits it will have to demonstrate that any variability above a specific limit in the concentration of chlorine and metals in the proposed waste fuels feedstock will be eliminated, and only feedstock which one can reliably say has limited concentrations of these		Samples of the waste stream will be taken and analysed prior to it being transported to site. A further sample will be taken and analysed prior upon arrival at PPC De Hoek but prior to being accepted on site. The criteria under which waste will be rejected are discussed in section 4.1 of this report.

NATIONAL COMMENTS				
	Aspect	Comment	I&AP Name	Response
		chemicals will be used. In the USA for example (see Annexure A) each shipment of waste must be analyzed for conformance to predetermined specifications of what levels of substances the waste may contain. If any shipment of waste does not conform to the predetermined specifications, the operator of the incinerator <b>MAY NOT ACCEPT THAT SHIPMENT</b> and must instead return the shipment to the generator (or source) of the hazardous waste. As a practical matter, this means that every cement kiln (or other facility) that burns hazardous waste must have on its premises an analytical laboratory and trained laboratory technicians to sample and analyze each hazardous waste shipment.		
		<p>Question:                      How does PPC cement propose to ensure that only a limited concentration of chlorine and heavy metal will be present in the feedstock of waste fuels? In other words there will be no variability above a certain limit in the concentration of chlorine in heavy metals in different batches of this feedstock?</p> <p>PPC cement is requested to give a detailed exposition of its proposed plan to</p>		<p>Please refer to answer above.</p>

NATIONAL COMMENTS				
	Aspect	Comment	I&AP Name	Response
		"fingerprint" waste so that the public can comment on it. When will this be available?		
13	General Comments	Major cement companies have formed a group called "Major Group-Cement" under the World Business Council for Sustainable Development, and have reviewed the environmental impacts of the international cement industry, and the members have committed to targets relating to the sustainability of the cement industry in the future. PPC was a participant and has shown determination to manage their environmental impacts and sustainability of their operation. The secondary materials co-processing programme forms part of their commitment to such sustainability. This should give I&APs confidence that the process is consistent with international trends and will be carefully controlled to avoid adverse health effects.	Graham Grieve (Cement and Concrete Institute)	Noted.

NATIONAL COMMENTS				
	Aspect	Comment	I&AP Name	Response
		Requested that the latitude and longitude positions and physical addresses of all PPC manufacturing plants.	C Hudson	The latitude and longitude of each of the plants as well as physical addresses are included in the Section 1, Table 1.1.
		Secondary Materials Co-Processing Programme = Co-incineration of hazardous waste .	groundWork	True. This has been communicated clearly in all documentation and public meetings.
		Substantial portion of operating costs is from coal. Secondary material processing is a profit making venture.	groundWork	Noted.
		The impact of burning waste in cement kilns, impacts elsewhere and should be understood. Information on other kilns globally should be supplied as well as waste burnt and emission; air quality permits and health studies.	groundWork	The international experience with regards to burning waste is discussed in section 3.1.2.
		It is not necessarily true to state that burning waste will result in a reduction of waste going to landfills; and that energy is being conserved. Reduction and reuse should take priority in the waste disposal hierarchy.	groundWork	It is the opinion of MES that cement kiln co-processing of waste streams is to be considered as re-use rather than disposal since the mineral and energy value of the waste is recovered. Reduction should always take priority as per the waste hierarchy. It is, however, not PPC's responsibility to manage the behaviour of the waste generators. PPC is presenting another option to the market for the disposal of these waste streams until financial feasible alternatives exist.
		The transportation of waste over long distances results in risks with accidents, spillage. Kilns have not been designed for the combustion of such waste and cement factory staff are not trained for the transportation of such waste.	groundWork	Recommendations of this report include the availability of an emergency response service as part of the transportation contract, and a comprehensive training programme for PPC staff involved with this programme.

NATIONAL COMMENTS				
	Aspect	Comment	I&AP Name	Response
14	<b>Misrepresentation of information &amp; false information</b>	Marsh gave false information by stating that the burning of hazardous waste in cement kilns is standard practice globally and that the emissions at Slurry were elevated because of the 'variability of waste' whilst it was because burning of hazardous waste in cement kilns.	groundWork	Sufficient evidence exists from bodies such as the World Business Council on Sustainable Development to support the wide application of secondary materials co-processing.  The elevated VOC emissions reported at Slurry (section 10.11) were reported by PPC as apparently due to a change in raw material.
		MES has misrepresented information by stating that North America burn hazardous waste in cement kilns without public opposition.	groundWork	No such statement was made. It is true that public opposition exists to cement kiln burning waste, but it is not the scope of this report to comment on I&AP's beyond those registered in terms of this process.
		MES relies on the performance of plants in Europe and state that they comply with these standards without presenting proof.	groundWork	All references to the performance of other kilns internationally are presented with references.
		PPC's Secondary Materials Manager used language in his presentation that there are no alternatives for hazardous waste streams which they propose to burn. There are many alternatives and until a life cycle assessment is undertaken for all waste streams and can conclude that incineration is the best option for South Africa, incineration should not be considered.	groundWork	Comment noted
		The utilisation of using alternative substitutes means of reducing the use of coal in kilns is a standard, widespread and accepted practice. Most international cases of hazardous waste in cement kilns is met with widespread community opposition and due to the health risks of	groundWork	Noted. Section 3.1 of this report discuss how several governments have actively encouraged cement kiln co-processing of waste streams.

NATIONAL COMMENTS				
	Aspect	Comment	I&AP Name	Response
		this practise.		
		The energy value of the waste is recovered. The energy value of waste is only recovered if no other use for the waste exists and the principle of energy recovery is only valid if the energy reclaimed is greater than the energy used in manufacturing the waste.	groundWork	Noted.
		The statement that cement kilns operate at high temperatures consistently throughout the length of a cement kiln is misleading and that there is no potential whatsoever for dangerous public health consequences to occur in this practise.	groundWork	While there are different temperature profiles within the kiln, these temperatures for each zone do not vary significantly. Kiln stability and stoppages are discussed in section 3.11. The heat capacity of the kiln is such when there are kiln upsets and the feed is stopped, sufficient heat exists to completely burn any existing fuel and waste in the kiln. Furthermore, although minor variations in the temperature of the kiln may occur, the maximum material temperature will never drop below 1,350 °C while raw materials and fuel are being fed to the kiln. 1,100 °C is the minimum temperature at which industrial incinerators operate.
		If the De Hoek facility experiences upset operating conditions occur every day of every year in the kilns, it cannot then be stated that what goes into the kiln will come out. This scenario cannot therefore be presented to the public.	groundWork	The heat capacity of the kiln is such when there are kiln upsets and the feed is stopped, sufficient heat exists to completely burn any existing fuel and waste in the kiln. Furthermore, although minor variations in the temperature of the kiln may occur, the maximum kiln temperature will never drop below 1,350°C while raw materials and fuel are being fed to the kiln. According to a mass balance, all inputs into the kiln will leave as either clinker or emissions.
		A letter from groundWork states that Egmont Ottermann deliberately and falsely	groundWork	Noted

NATIONAL COMMENTS				
	Aspect	Comment	I&AP Name	Response
		misrepresented information in his presentation.		