



# PPC Dwaalboom Expansion Project

## “Batsweledi”

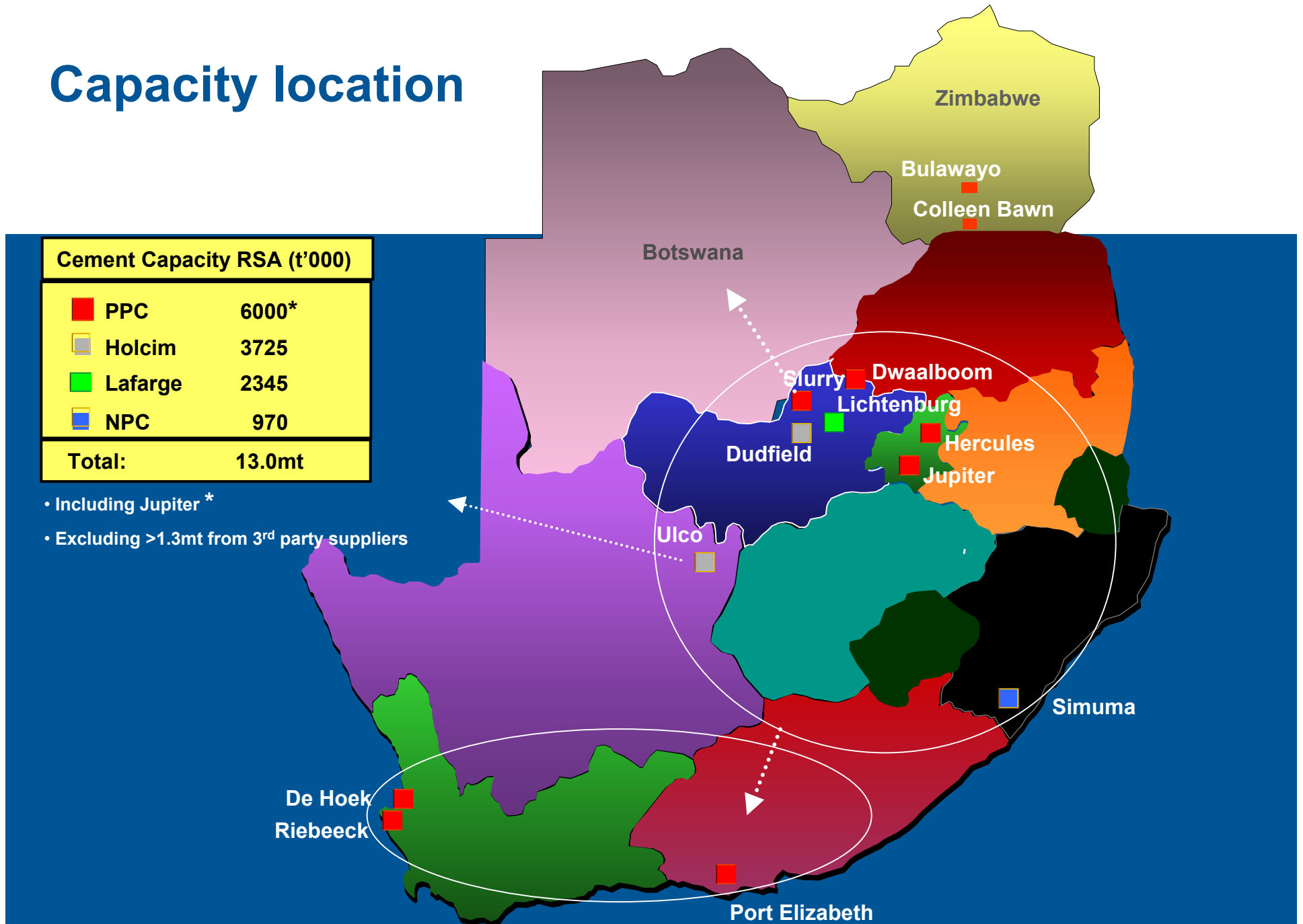
Analysts & Media Presentation: 1 September 2005

## Presentation outline

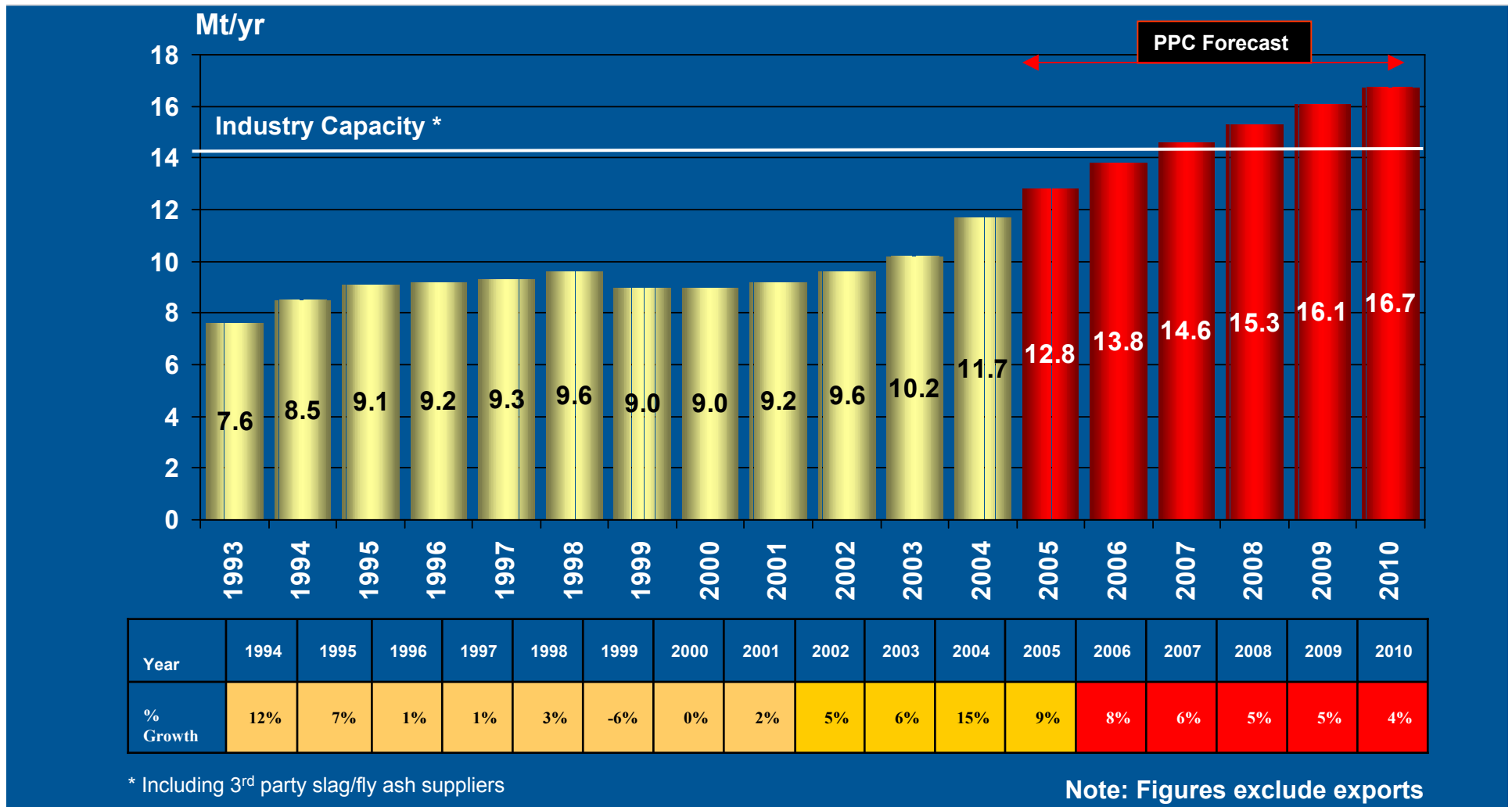
- Why the need to expand capacity
  - PPC demand forecast to 2010
- Cement manufacturing process overview
- Background on Dwaalboom
- Why Dwaalboom is the preferred location
- Indication of equipment & technology used
- What the new Dwaalboom will look like
- Questions & Answers



# Capacity location



## Demand forecast to exceed 16 million tons by 2010



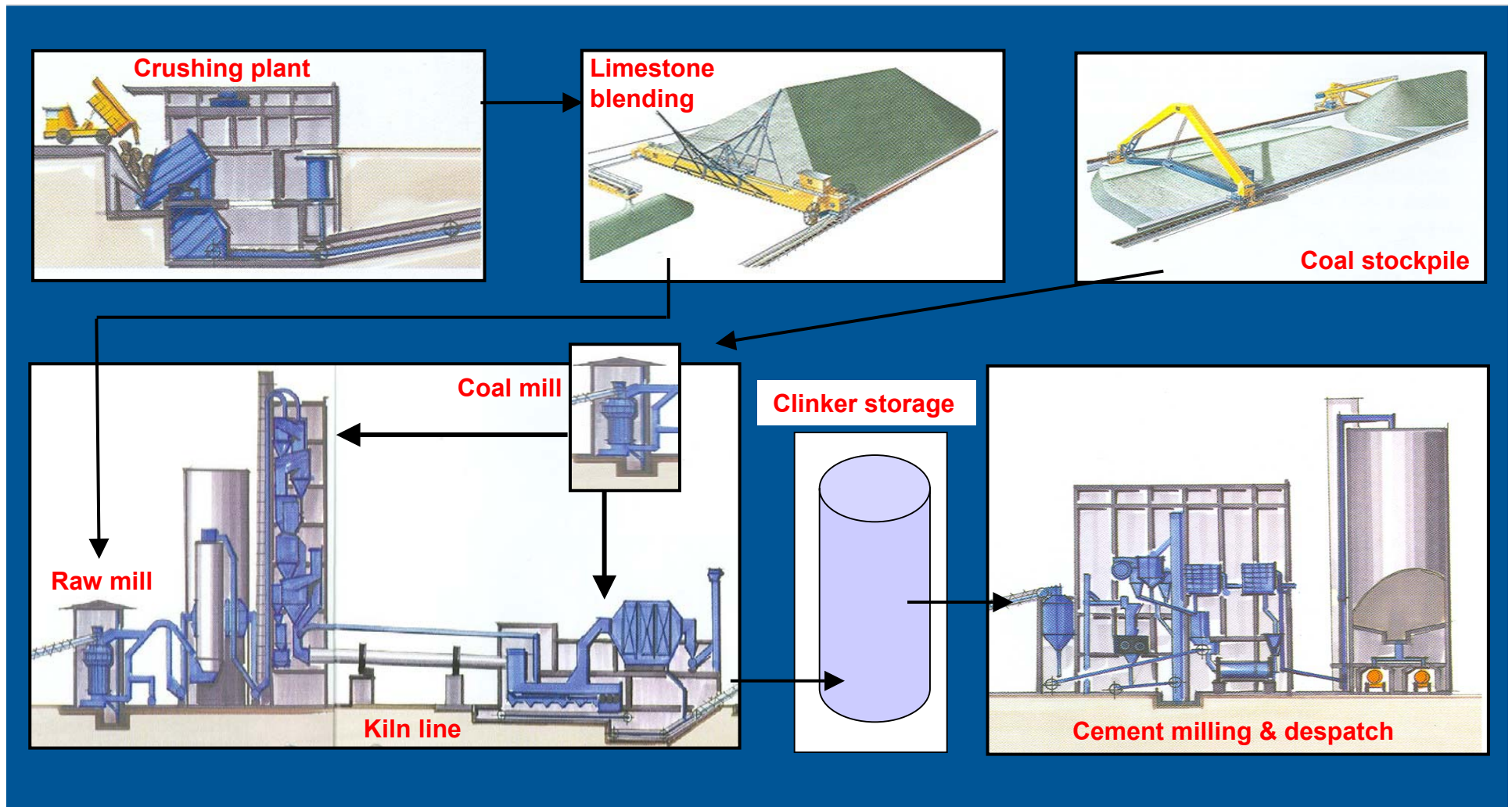
## Extra capacity required to meet country's demands

- Foresee strong period of growth to 2010
  - Country fundamentals strong
- Positive outlook on cement demand
- Timing of the expansion is right
  - Jupiter kiln will alleviate any short-term deficit
- Financial risk “relatively low”
  - Plant cost R1.36bn
  - Strong cash flows going forward
  - Will be funded by a combination of borrowings & cash generated
- State-of-the-art plant to be constructed
  - New kiln line v upgrade will reduce project risk
  - Jupiter milling option will enable product & logistics optimisation
- Commissioning in April 2008



# Cement Manufacturing Process

# Cement manufacturing process is capital intensive



# Background on Dwaalboom

## Dwaalboom was planned in the early 1980's

- Commissioned in 1986
  - Immediately mothballed due to market downturn
- Re-commissioned in 1996 as a clinker grinding plant
  - Supplied Jupiter before it was shut down
- Cement mill & despatch facilities added in 1998
- Cement capacity systematically increased to around 900kt/yr
- 30% of clinker produced transferred to Hercules factory Pretoria
- Serves the Limpopo Province (exports to Mozambique & Zambia)
  - Supplied around 550kt of cement in 2004
  - CEM 1 (42.5 & 52.5) & CEM 2 (32.5); 70% bags
- Employs 160 people
- ISO 9002 & ISO 14001 accredited
- NOSA 5 Star Platinum plant

Dwaalboom compares very favourably against global benchmarks



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## Dwaalboom identified as the preferred location

- Most financially attractive option
  - Independently verified during planning stage
- Lowest cost producer
- PPC's most modern plant (excluding Porthold)
  - Most advanced control systems
- Original plant design “space planned” for future expansion
  - Plant layout ideally suited for additional capacity
  - Use original geo-technical information for civil design
- Existing equipment sized to accommodate higher volumes
  - CFS silo & clinker transfer system can serve two kiln lines
  - Quarry crushing train adequate (one more CAT 777 required)
- Sufficient limestone reserves
  - Good quality limestone
  - Not a complex mining operation
- Dedicated rail line & ring fenced wagon fleet

# Dwaalboom plant layout facilitates expansion



## Dwaalboom expansion will utilise latest technology

- Based on latest & proven technology
- Ability to blend high & low grade coal
  - Will use < 20MJ/kg coal
- Vertical roller raw & coal mills
  - More efficient than ball mills
- High levels of automation
  - Neural network kiln control system
- Meet best practice environmental standards
  - Dust emissions <30mg/m<sup>3</sup>
  - Low water consumption
  - Low NOx & SOx emissions
- Kiln possesses several innovative features used for the first time in SA



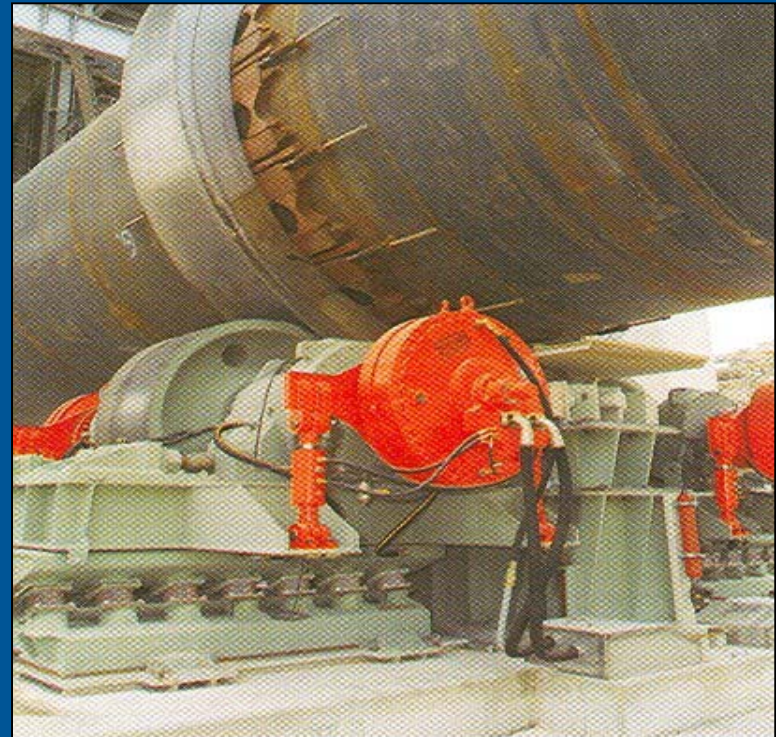


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## The new Dwaalboom kiln (DK2) is the latest design

- Six stage cyclone pre-heater with in-line calciner
  - 130m high (DK1 at 80m)
- Lowest thermal energy consumption
  - >10% better than any other PPC plant
- Kiln dimensions 4.55m x 54m (DK1 4.75m x 75m)
  - Capacity 3300tpd (v 2400tpd)
  - HK5 4.35m x 66m (1200tpd)
- Only two roller support stations
- Electric drive via support rollers
  - No girth gear to maintain
- Third generation grate cooler
  - Clinker on clinker (wear minimised)
- Kiln feed controlled by in-line x-ray spectrometer
  - Increases kiln stability & efficiency
- Operating staff will be trained on a kiln simulator
  - World class operating practice
- Ability to burn secondary fuels & lower grade coal



Focus on minimising energy consumption & maximising environmental benefits



## What the new Dwaalboom will look like

(Existing capacity +/- 0.9m tpa)



Existing Dwaalboom



Post-Batsweledi



**Thank You**