

VARIOUS INVESTMENTS AT THE ARABIAN CEMENT COMPANY

NON-TECHNICAL SUMMARY

MARCH 2017

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[EBRD]

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1 THE PROJECT

The Arabian Cement Company (ACC) was founded in 1997. ACC has a head office in Cairo, with the Plant and Quarry located approximately 100 km East of Cairo on the outskirts of Ain Sokhna.

ACC produces high quality cement for the local and international markets; selling their products both bagged (70%) and in bulk (30%).

ACC is seeking a loan from the European Bank for Reconstruction and Development (EBRD) and have identified three energy saving projects:

1. An Additional Coal Mill; and
2. Changes to The Raw Meal (Blended Raw Materials) Lift System; and
3. Changes to The Bypass Dosing Equipment on The Cement Mills.

This Non-Technical Summary (NTS) provides a description of the planned upgrade and describes the potential benefits and impacts associated with them. It also describes how these will be mitigated and managed through all phases of the project and provides a summary of the public consultation activities and the approach to future stakeholder engagement.

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1.1 WHERE IS THE CEMENT PLANT LOCATED?

The ACC Cement Plant is located approximately 100 km to the East of Cairo, to the West of the Suez Canal. The surrounding land use is predominantly industrial, with 4 other cement plants located within the vicinity.

Figure 1-1 Site Location

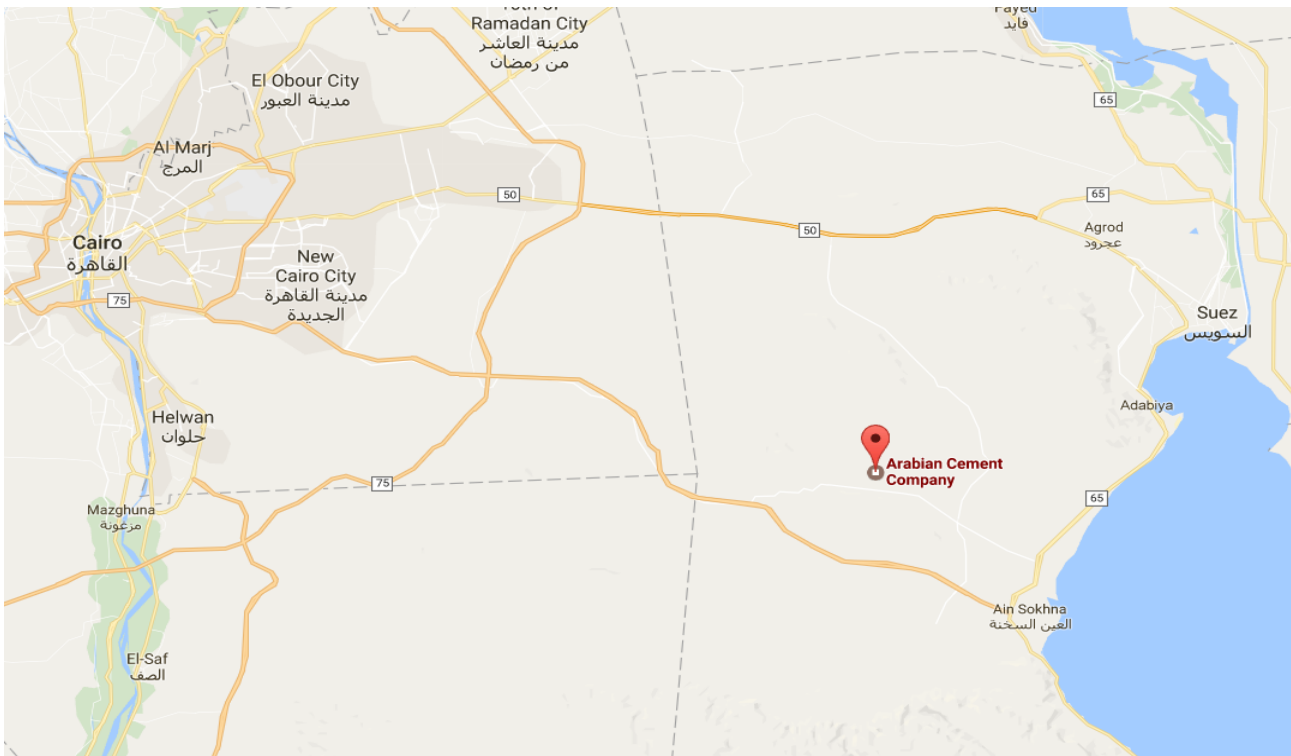
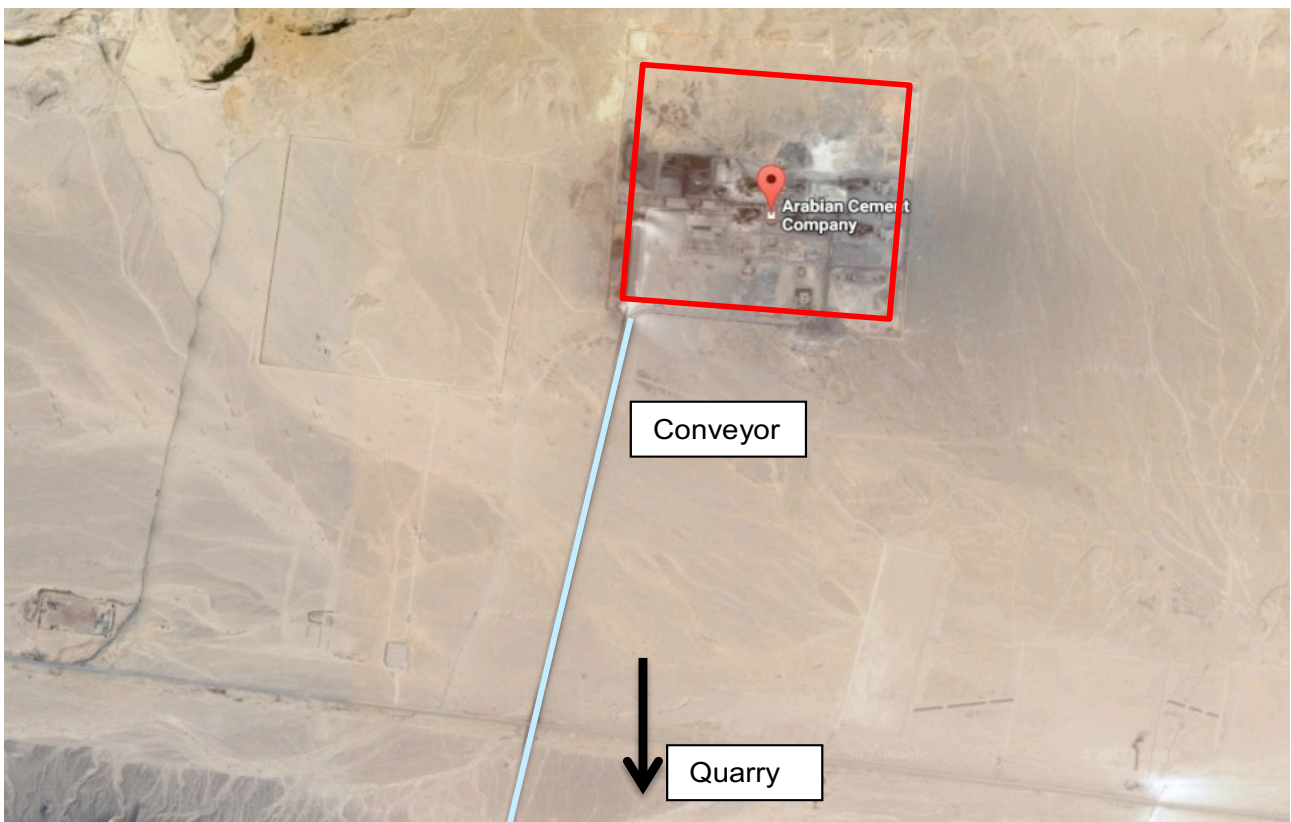


Figure 1-2 Aerial view of the site



The closest main settlement to the site is Stella Di Mare Golf and Country Club, which is 24 km from the site. However, the Bedouin community do utilise the land in the area closer to the plant periodically.

1.2 WHAT ARE THE OPERATIONS AT THE CEMENT PLANT IN AIN SOKHNA?

ACC operates a cement plant with two 'pre-heater' dry production lines, accepted to be a very modern production technology for cement. The limestone raw material is supplied to the site via an overhead conveyor from an open-cast quarry to the south of the plant. Although ACC has overall responsibility for the management of the plant and quarry and the output product, the cement plant is operated and maintained by contractors FLSmidth and the quarry is operated by contractors RHI.

The aim at the commencement of the plant was to produce clinker in 4 kilns and export to Spain, where they would then grind and prepare the cement. However, following the start of production in 2008 a law was passed banning the export of clinker. Therefore, a cement grinding facility was soon added. A second line was then constructed along with a cement mill in 2010. By 2011 there were two lines, one complete with cement mill and line 1 being serviced by the cement mill from line 2.

ACC currently operates two lines with a production capacity of 4.7 million tonnes per year, producing high quality cement for the local and international markets: selling their products both bagged (70%) and in bulk (30%). Each line has one Raw Meal Mill, one Clinker Silo and two Cement Mills. A single Coal Mill currently serves both lines. A Hot Disc is now in operation to allow the feeding of alternative fuels in the process of line 1, while a typical shredding system is applied in line 2. The current fuel mix is largely coal but also includes diesel and alternative fuels (refuse derived fuels, agricultural waste and industrial waste).

2 WHAT ENERGY EFFICIENCY PROJECTS ARE PROPOSED WITHIN THE PLANT?

The European Bank for Reconstruction and Development ("EBRD" or the "Bank") is considering providing finance to ACC for various energy and resource efficiency investments. These investments include:

1. An Additional Coal Mill to Ensure Increased and Reserve Milling Capacity; and
2. Changes to The Raw Meal (Blended Raw Materials) Lift System; and
3. Changes to The Bypass Dosing Equipment on The Cement Mills, To Enable an Increase in The Use of Bypass Dust as A Cement Additive and Reduce Bypass Dust Disposal to Landfill.

The three projects aim at increasing operational efficiency at the site, through the upgrade of plant equipment and use of additional additives in the final product, therefore minimising the use of resources. The Coal Mill will allow the ACC to replace the use of diesel in the plant fuel mix with coal and increase the use of alternative fuels. The energy efficiency plant upgrades are all confined within the boundaries of the cement plant and impacts will be addressed through appropriate mitigation measures and should result in reduced emissions and an overall environmental improvement. The increased use of alternative fuels will result in a net decrease in CO₂ emissions.

In parallel to the three investments ACC will also be making various investments to improve environmental performance of the plant and reduce emissions.

3 WHAT ARE THE ENVIRONMENTAL, HEALTH, SAFETY AND SOCIAL ASPECTS OF THE PROJECT?

3.1 OVERVIEW OF EHSS REVIEW

In February and March 2017 an Environmental and Social Due Diligence audit was undertaken at the ACC Ain Sokhna Cement plant with particular focus on the company's resource and energy efficiency upgrade plans. An evaluation of both the impacts and benefits of the upgrades has been undertaken. Where the audit has identified the need for further mitigation measures to address impacts or improvements in EHSS performance, an action has been proposed and incorporated into an Environmental and Social Action Plan (ESAP). This ESAP ensures full compliance with relevant EU standards and the EBRD environmental and social requirements (the Performance Requirements).

3.2 WHAT IS THE PERMITTING STATUS OF THE PROJECT

An Environmental Impact Assessment (EIA) has been completed for the construction of the original cement plant in 1997. The Egyptian Environmental Affairs Agency (EEAA) issued its environmental approval for the project on 2/11/1997.

Additional EIAs have been completed for the following projects:

Figure 3-1 Summary of EIAs

Project	EIA Date	Date of Official Environmental Approval
Construction of Line 2	July 2009	12/10/2010
Use of Refuse Derived Fuel (RDF)	March 2012	22/05/2012
Use of additional alternative fuel sources	March 2014	05/10/2015
Use of coal and Petcoke	June 2015	May 2014 (Temporary Approval) 30/08/2015 (Two-Year Validity)
Bypass	September 2015	27/10/2015

An EIA will be completed for the new Coal Mill. The assessment will identify the positive and negative impacts of the project as well as predicting the significance of the impact, evaluation and mitigation measures. The assessment will be reviewed by the EEAA and will ensure that all decision makers consider the environmental impacts when deciding whether to process with the project.

3.3 WHAT ARE THE KEY IMPACTS AND BENEFITS OF THE PROJECT?

The following table summarises the main potential positive and negative impacts related to the project, as well as a summary of the key mitigation measures to ensure that no significant impacts will be realised:

<u>POTENTIAL IMPACT</u>	<u>KEY MITIGATION MEASURES</u>
<u>Coal Mill</u>	
Air emissions for the burning of coal.	Managing the combustion within the kiln Use of specific type of coal Monitoring gas emissions Emission abatement equipment
Dust emissions for the storage, handling and use of coal	Continuous monitoring of dust emissions Use of filters to minimise dust emissions Equipment choice with good performance characteristics
Increased carbon dioxide emissions	Switching to solid fuels allows an increase the use of alternative fuels (i.e. refuse derived fuels) to reduce net carbon dioxide emissions.
Increased efficiency of the plant due to additional milling capacity	Project benefit – no mitigation required
<u>Upgrade To The Raw Meal Lift System</u>	
Reduction in heat and power consumption	Project benefit – no mitigation required
Reduction in the carbon footprint of the cement	Project benefit – no mitigation required
<u>Installation Of A New System For Receiving, Storing, Dosing The Kilns By-Pass Dust (Waste).</u>	
Reduction in waste materials	Project benefit – no mitigation required
Produce more cement with less raw material – resource savings	Project benefit – no mitigation required
Reduction in the carbon footprint of the cement	Project benefit – no mitigation required

The proposed plant upgrades are part of a resource efficiency programme at the ACC plant and therefore the associated positive impacts of the projects relate to energy and resource savings. ACC also has an internal commitment in place to reduce the carbon footprint of the project through the increased use of alternative fuels and through the blending of bypass waste into the product.

The investments and increase in the use of alternative fuels is expected to result in a 4% decrease in kg CO₂ produced per ton cement.

3.4 ENVIRONMENTAL AND SOCIAL ACTION PLAN (ESAP)

Following the audit, the ESAP was prepared to align ACC's operations with European equivalent standards and the EBRD's Performance Requirements. The proposed action areas will result in improved EHSS performance and risk management. A summary of the key themes that are incorporated into the ESAP from the findings of the audit are provided below.

Review Areas	Action Areas
Institutional Capacity Management EHS and	<ul style="list-style-type: none"> ■ ACC has a dedicated HSE management department, responsible for the management of EHS issues. There are clear lines of roles and responsibilities, as well as regular communications and reporting with contractors, ensuring effective management and control of EHS risks. ■ ACC is certified to internationally recognised environmental and health and safety management system and these will be extended to cover the operations of the new projects and developed further to meet the requirements of new legislation around process safety (Seveso II). ■ The operation and maintenance of the site is contracted out, and therefore ACC needs to ensure that EHSS aims and objectives are extended to contractors and that EHSS controls are formally documented to ensure consistent and effective EHSS performance.
Environmental Performance	<ul style="list-style-type: none"> ■ The following specific areas will be reviewed in line with a commitment for continual improvement in Environmental and Health and Safety matters: <ul style="list-style-type: none"> ● Specific focus on the control of air emissions from the plant; specifically, dust, nitrogen oxides, sulphur oxides and metals to ensure alignment with EU Best Available Technique (BAT) levels. ● A review of the current fuel and hazardous chemicals storage areas on site. ● Ongoing review on the energy performance on the plant to ensure continual improvement on performance.
Health and Safety Performance	<ul style="list-style-type: none"> ■ Considerable importance is given to occupational health and safety and working conditions, specifically heat stress, dust exposure, noise exposure. ■ Alignment with the EU SEVESO III Directive on managing and minimising the risk of major accidents. ■ Review and demonstration of the controls in place to manage the risk of explosive atmospheres in the current and plant Coal Mills.
Social and Employment	<ul style="list-style-type: none"> ■ Maintaining a Stakeholder Engagement Plan (SEP). ■ Review key social policies to ensure they meet international standards. ■ Review onsite worker accommodation to ensure alignment with EBRD standards. ■ Considerations of E&S performance and issues when selecting suppliers.

4 HOW WILL STAKEHOLDERS BE ENGAGED IN THE PROJECT?

4.1 OVERVIEW OF THE SEP

A Stakeholder Engagement Plan has been developed for ACC with the objective of identifying key stakeholders and ensuring that, where relevant, they are informed in a timely manner of the potential impacts of projects. The plan will also identify a formal grievance mechanism to be used by stakeholders for dealing with complaints, concerns queries etc. It will be reviewed and updated on a regular basis. If activities change or new activities relating to stakeholder engagement commence, the SEP will be brought up to date. The SEP will also be reviewed periodically during project implementation and updated as necessary.

The SEP includes the following:

- Project description, location of the site and key environmental and social issues, and
- Public consultations and information disclosure requirements, and
- Identification of stakeholders and other affected parties, and
- Overview of previous ACC stakeholder engagement activities, and
- Stakeholder engagement programme and methods of engagement and resources, and
- Grievance mechanism.

Stakeholders could be individuals and organisations that may be directly or indirectly affected by the project either in a positive or negative way, who wish to express their views. The definition applied to identify key stakeholders is:

‘Any Stakeholders with Significant Influence on Or Significantly Impacted By, The Work and Where These Interests and Influence Must Be Recognised If the Work Is to Be Successful’

Key stakeholders have been identified from the following categories: international; governmental (relevant Ministries, Municipalities and other relevant local authorities); advisory non-government; services / suppliers; clients; institutions (universities, think tanks, etc.); the industrial sector (trade bodies, other refineries), internal stakeholders (employees); general communities (locally affected people); public groups (nearby hospital, local schools); and the media.

The SEP outlines the methods that ACC will adopt to ensure effective stakeholder engagement is undertaken, providing details of the programme of future public consultation and information disclosure that will be recorded for major projects. ACC will record the following information on an ongoing basis:

- Type of information disclosed, in what forms (e.g. oral, brochure, reports, posters, radio, etc.), and how it was released or distributed.
- The locations and dates of any meetings undertaken to date.
- Individuals, groups, and / or organisations that have been consulted.
- Key issues discussed and key concerns raised.
- Company response to issues raised, including any commitments or follow-up actions.
- Process undertaken for documenting these activities and reporting back to stakeholders.

If there are questions, queries, complaints or grievances regarding future projects, a grievance mechanism has been developed to address these issues and a grievance form will be used to record this information. The grievance form and the outline on how to use the grievance form is provided below.

4.2 WHAT WILL BE THE PROCEDURE FOR GRIEVANCES?

A grievance mechanism will be adopted in which the grievance form presented below will be used as required to handle grievances from non-employees. The mechanism will be as follows:

- Grievance received
- Grievance recorded in a register
- For an immediate action to satisfy the complaint, the complainant will be informed of corrective action
- Implement corrective action, record the date and close case
- For a long corrective action, the complainant will be informed of proposed action
- Implement corrective action, record the date and close case

A grievance should be recorded by the complainant using the grievance form below, ensuring that contact details are provided with the preferred method and language of communication. A clear description should be provided of the incident or grievance. ACC will respond to grievances within one month of receiving the form.

Public Grievance Form

Reference No:		
Full Name		
Contact Information	<input type="checkbox"/> By Post: Please Provide Mailing Address:	
Please Mark How You Wish To Be Contacted (Mail, Telephone, E-Mail).	<input type="checkbox"/> By Telephone:	
	<input type="checkbox"/> By E-mail	
Preferred Language For Communication	<input type="checkbox"/> English	
	<input type="checkbox"/> Arabic	
	<input type="checkbox"/> Other - specify	
Description Of Incident Or Grievance:	What Happened? Where Did It Happen? Who Did It Happen To? What Is The Result Of The Problem?	
Date Of Incident/Grievance	<input type="checkbox"/> One-Time Incident/Grievance (Date Of Incident)	
	<input type="checkbox"/> Happened More Than Once (How Many Times?)	
	<input type="checkbox"/> On-Going (Currently Experiencing Problem)	
What Would You Like To See Happen To Resolve The Problem?		

Signature: _____

Date: _____

Please Return This Form To:

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