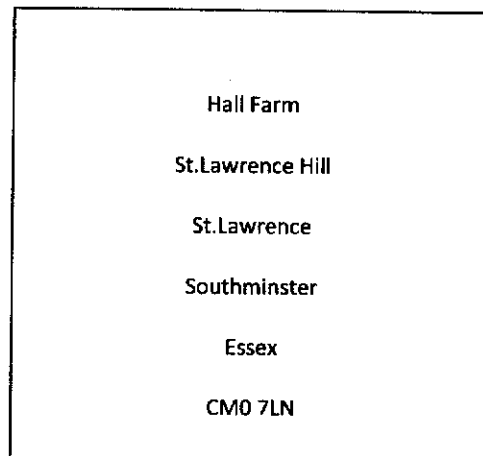


PRO-MIX

Application for an LAPPC Part B Permit



Document Reference Number: PRO/0001

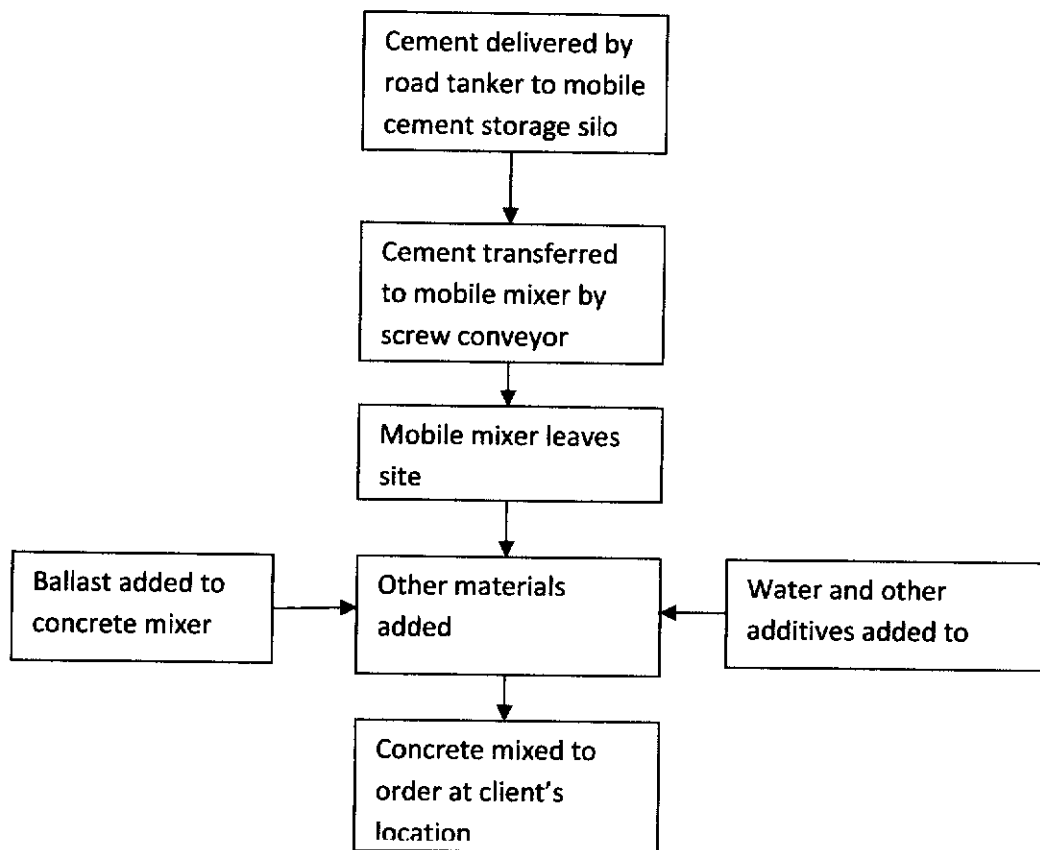
This document provides supplementary information to support an application for a Part B Permit under the Pollution Prevention and Control regulations 2000, and should be read in conjunction with the formal application form.

1.1 General Installation Details

Pro-Mix operates a cement mixing operation, delivering ready-mix concrete direct to the customer using a fleet of volumetric cement mixers.

The fleet of mixers carry their own raw materials (cement, water and sand/ballast) for the mixing of concrete at customer site. Dry cement is loaded into the mixes by our bulk storage silo.

The process may be divided into the following activities:



The bulk cement storage is a low level container (as opposed to a high level storage silo), which is designed to be potable (when lifted onto a low loading lorry). The silo is currently located at Hall Farm St.Lawrence

The current location of the silo is detailed on the attached site plan reference WK/200332786/1.

The silo is not permanently staffed, and is operated by the mixed drivers and/or the bulk cement tanker delivery driver, during mixer loading and silo filling operations.

An application for a Part B Permit under the Pollution Prevention and control Regulations 2000 is therefore being sought to permit the storage and use of cement in bulk for the purpose of producing ready-mix concrete.

1.2 Raw materials, plant, machinery and equipment

Raw materials

Raw materials in use at the installation are:

- Ordinary Portland cement
- Water

Sand and ballast are not normally stored by Pro-Mix, these aggregate products are purchased from external sources, and the amount required is added directly to the mobile mixing plant.

Plant, machinery and equipment

The installation will consist of equipment currently used at Hall Farm.

The plant, machinery and equipment in use at the installation are:

- 1 No. 60 tonne Mek Tek portable cement storage silo. The silo is fitted with:
 - Filter (MT Filtair reverse jet No. C0178-01)
 - Control box

1.3 Emission to Air

Foreseeable Emissions	Proposed technology / technique for reducing emissions to air	Proposed technology / technique for monitoring emissions to air
Cement emissions from delivery couplings	<ul style="list-style-type: none"> • Use of correct coupling procedure • Regular maintenance to ensure integrity of transfer couplings • Immediate removal of spillages of residual cement in couplings and houses • Training / instruction of staff / tanker drivers 	<ul style="list-style-type: none"> • Documented delivery procedures • Delivery records • Training records
Cement emissions from transfer system	<ul style="list-style-type: none"> • Use of totally enclosed pneumatic transfer system • Regular maintenance to ensure integrity of transfer pipes (cement has an abrasive effect on the inside of the transfer pipes) 	<ul style="list-style-type: none"> • Documented visual check for leaks during delivery • Regular documented preventative maintenance inspection
Cement emissions from silo filter	<ul style="list-style-type: none"> • Use of filter designed to achieve particulate emissions of less than 10mg/m³ • Monthly visual inspection of filters • Regular filter servicing and maintenance 	<ul style="list-style-type: none"> • Documented visual checks for leaks during delivery • Monthly documented preventative maintenance inspections • Documented service records
Cement emissions from pressure relief valve / silo access door	<ul style="list-style-type: none"> • Ensure silo not overloaded • Ensure that silo filter is not blinded with cement particles 	<ul style="list-style-type: none"> • Documented visual checks for leaks during delivery • Monthly documented preventative maintenance inspection
Cement emissions through silo overflow / over-pressurisation (silo rupture, or ejection of filter from the top of the silo)	<ul style="list-style-type: none"> • Correctly maintained pressure relief springs on silo access hatch • Use of silo high level warning device and alarm • Monitoring cement usage, delivery not to exceed capacity of silo 	<ul style="list-style-type: none"> • Monthly documented preventative maintenance inspection • Documented testing of high level alarm prior to each delivery

Process Stage	Foreseeable Emissions	Proposed technology / technique for reducing emissions to air	Proposed technology / technique for monitoring emissions to air	Process Stage
Transfer of cement from silo to mobile cement mixers	Cement emissions through flexible coupling at base of silo	<ul style="list-style-type: none"> Regular maintenance to ensure integrity of coupling and seals 	<ul style="list-style-type: none"> Monthly documented preventative maintenance inspections 	Delivery of cement / silo filling
Cement emission from transfer system	<ul style="list-style-type: none"> Use of enclose screw feeder system Use of a transfer sock between the cement transfer pipe and the cement mixer to minimize dust emissions from the front of the cement mixer 	<ul style="list-style-type: none"> Monthly documented preventative maintenance inspections 		
General activities	Creation of dust from site vehicle movements	<ul style="list-style-type: none"> Ensure immediate clearance of all potentially dusty spillages Site cleansing equipment on site (property yeoman aggregates) 	<ul style="list-style-type: none"> Regular documented inspections for general housekeeping 	

1.4 Unintentional Releases

The greatest hazard to the environment from the proposed installation would be the unintentional and accidental release of cement during silo filling operations, caused by failure of one or multiple silo/ delivery tanker components.

The second greatest hazard is the unintentional and accidental release of cement during the loading of the mobile mixers.

Whilst Pro Mix can only limit the impact of defects relating to delivery tankers and delivery hoses/ lines as they arise, the occurrence of unintentional release relating to Pro Mix's own plant, equipment and site operations will be minimised through the implementation of the Environmental System comprises and is enclosed as report reference WK/200332786/c.

Operational Procedures

The operational procedures detail every aspect of the operation of the installation that could have an effect on emissions to the environment. Where there is a foreseeable risk of an emission, a control measure has been implemented to minimise the likelihood of the emission occurring. The operation procedures also detail the action to be taken in case of a breakdown and/ or unintentional emission.

Staff Training Records

To demonstrate that all employees are trained, documented training records will be kept. Training will ensure that employees are aware of the requirements of the site operations procedures.

Staff members will retrain where recurring problems are identified by the regular site audits.

Bulk Cement Records

The greatest risk from unintentional releases of cement will occur during silo filling operations. A specific delivery record sheet documents checks made each at each stage of cement delivery. All of the required checks and actions to take in the event of a problem are detailed in the operational procedures.

Monthly Assessments and Records

The site assessments will help to demonstrate ongoing compliance with the requirements of PG3/1(04) and ensure that emissions are minimised wherever possible. The assessments will also help highlight areas where preventative maintenance is required, and help to minimise fugitive emissions. The assessments are detailed in the operational procedures.

Equipment Servicing Records

Records relating to equipment servicing will be kept, and a servicing schedule is detailed on the operational procedures. The formal monthly site assessments will also help to identify equipment requiring additional maintenance, and therefore will prevent / minimise air pollution as far as possible.

Incident Log

Records of equipment breakdown, any unintentional release will be kept, along with actions taken to rectify such problems or minimise the impact of such release. The incident log will be used to assist the prevention of future breakdowns of a similar type by amending the preventative maintenance schedule, and will also help identify areas where further employee instruction is required.

1.5 Impact on the Environment

There will be no impact on the environment or local conservation area , as this has been assessed and the conclusions are that the impact will be brought down to a minimum by ensuring and implementing the following:

Silo Filtration

The reverse jet silo filter has been designed to operate to an emission standard of 10mg/ m³ or less. A specification sheet confirming this emission standard is enclosed with this application.

Environmental Management System

Operating to the requirements of our own procedures will ensure that preventative measures help to minimise the likelihood of emissions to the environment caused by equipment failure and breakdown.

Emissions caused by operator error will also be minimised through staff training, and retraining where required.

Tanker Venting

From June 2007 it will be Pro Mix policy to only accept deliveries from tankers capable of meeting the requirements of PG3/1(04) with regard to on-board relief valve and filtration equipment.

1.6 Environmental Management

Please see the following attached documents, which form the environmental management system for Pro Mix:

- Operational Procedures
- Staff Training
- Bulk cement delivery record sheet
- Equipment servicing schedule

