(A)

ARC Central

Anglia Premix
Area Office
Meadow Lane
St. Ives
Cambridgeshire
PE17 4WJ
Tel: St. Ives (0480) 62141
Fax: 0480 494835

Our Ref: RR/DMJ

5th March 1992

Huntingdon District Council,
Environmental Health Department,
Pathfinder House,
St. Marys Street,
Huntingdon.
PE18 6TN.

Dear Sirs,

Authorisation for the Batching of Readymixed Concrete

Please find enclosed three copies of our application and supporting documentation for registration of our Plant at Meadow Lane, St. Ives under the Environmental Protection Act 1990 Pt. 1, Environmental Protection Regulations 1991, section 3.1 Cement & Lime Manufacture and Associated Processes Pt B.

ARC Limited is a producer of a wide range of construction materials in the United Kingdom and manufactures readymixed concrete under the trade name "Premix".

The Company's activities are conducted through operating Regions and the site to which this application relates falls within the company's Central Region, Anglia Area address as above.

The company has employed P.A. Consulting Group as its Environmental Consultants.

Yours faithfully,
ARC Central,

R. Richards
Area Premix Manager

7 When was the plant first installed? 1988

Please also give the details and dates of any major modifications or improvements which have been carried out.

1991 - INSTALLATION OF A WASTE RE-CYCLING UNIT.

---

8 List the prescribed substances (and any other substances which might cause harm) used in connection with or which might be released into the air resulting from the prescribed process.(4)

1. BULK PORTLAND CEMENT.
2. BULK GROUND GRANULATED BLASTFURNACE SLAG.

HEALTH AND SAFTEY DATA SHEETS ARE ATTACHED FOR BOTH THE ABOVE MATERIALS.

---

9 Describe the techniques to be used for preventing releases into the air of substances listed above, for reducing such substances to a minimum and for rendering harmless any such substances that are released.(5) *(use a continuation sheet if necessary and attach drawings of plant and equipment, where appropriate)*

DELIVERIES OF CEMENTITIOUS POWDERS ARE PLANNED TO BE ACCOMODATED BY THE SILO CAPACITY. ACCIDENTAL OVERFILLING IS AVOIDED BY A)A LOCK-OFF SYSTEM ON THE FILLER PIPES PREVENTING CONNECTION TO THE WRONG SILO AND B)HIGH LEVEL INDICATORS.

THE SILOS ARE FITTED WITH REVERSE AIR-JET FILTERS TO CONTAIN THE CEMENT WHILE RELEASING THE AIR USED TO TRANSPORT IT.

---

10 Give details of the source, nature and amount of current and/or anticipated emissions to air from the process. *(use a continuation sheet if necessary)*

A SMALL AMOUNT OF DUST OCCURS WHEN LOADING THE MIXER LORRIES. THIS IS INTERMITTENT AND AT GROUND LEVEL, REMAINING INSIDE THE PLANT. THE ENVIRONMENTAL IMPACT IS SLIGHT.

THERE ARE NO PLANNED EMISSIONS FROM THE PLANT OTHER THAN THIS.

---

11 Give the assessment of the likely environmental consequences of the emissions to air. *(use a continuation sheet if necessary)*

THE EFFECT OF ANY AIRBOURNE EMISSION IS OF NUISANCE VALUE RATHER THAN ANY OTHER HAZARD TO HEALTH. IT IS NOT NECESSARY FOR OUR OPERATOR TO WEAR A FACE MASK IN THE COURSE OF HIS NORMAL DUTIES. ANY 'NUISANCE' DUST IS READILY REMOVABLE BY CONVENTIONAL CLEANING METHODS.

---

12 What monitoring is or will be carried out of emissions to air?

OUR OPERATING PROCEDURES REQUIRE EMISSIONS TO AIR TO BE COLOURLESS. VISUAL CHECKS ARE MADE WHEN RECEIVING DELIVERIES OF CEMENTITIOUS POWDERS.

SEE THE ATTACHED 'INSTRUCTION FOR DUST CONTROL PROCEDURES' AND MAINTENANCE CHECK LIST.

I enclose the fee of £ 800 (8).
Cheques should be made payable to: HUNTINGDON DISTRICT COUNCIL.

I HEREBY CERTIFY that all the information contained in this application is correct to the best of my knowledge and belief [and that I am authorised to sign on behalf of the Company].

Signature .....

Official title R.D.RICHARDS - AREA PREMIX MANAGER.....

Date 5-3-92

Please complete and return this form together with FOUR copies of each of the plans listed in the reply to question 5 and the required fee to:

Tel.No.

NOTES

1 This is the local authority in whose area the prescribed process will be carried on, or in the case of mobile plant, the local authority in whose area the applicant has his principal place of business.

2 Please state the person/Company who is operating or will operate the process, **not** an agent who may be completing the application on the operator's behalf.

3 A list of prescribed processes for local authority control is given in **Appendix A**, which accompanies this form. Further advice can be obtained if necessary from the local authority.

4 A list of prescribed substances for release into the air is given in **Appendix B**, which accompanies this form. "Harm" includes offence to the senses or harm to property.

5 Please list fully all pollution control measures for all stages of the process, from the receipt of raw materials to the despatch of wastes and finished products, including, for example, the height and location of any stacks or vents; the abatement technology; process control and operational data; arrangements for maintenance; the extent of supervision; the relevant qualifications and experience of the workforce; staff training; and contingency plans for breakdowns and emergencies.

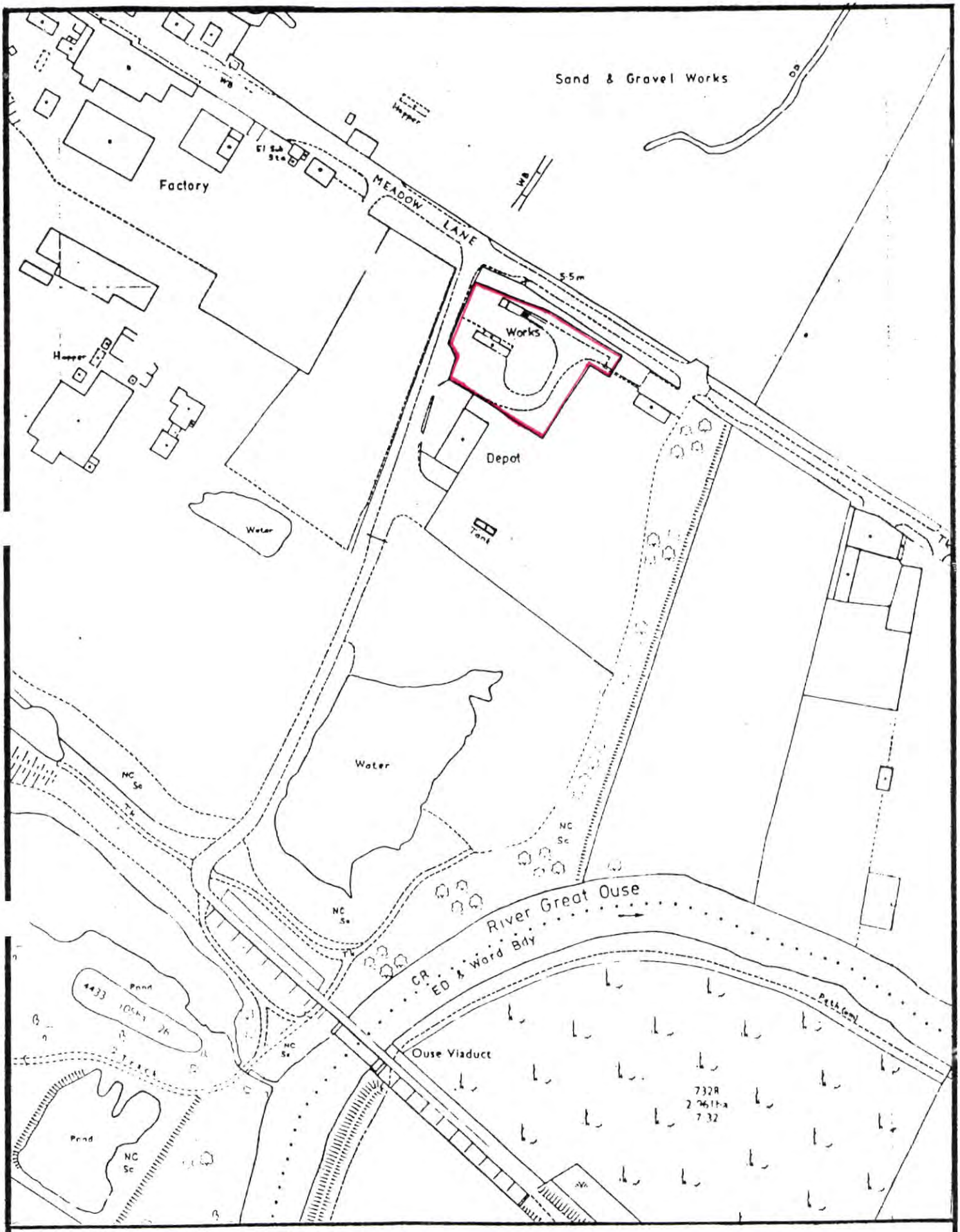
All calculations should be shown, particularly for the chimney height(s). Justification for the selection of a particular abatement option should be given.

6 Section 7(2) and 7(4) of the Environmental Protection Act 1990 requires every operator of a prescribed process to use the best available techniques not entailing excessive cost for -

(i) preventing the release of prescribed substances, or where that is not practicable, for reducing the release of such substances to a minimum and rendering them harmless; and
(ii) rendering harmless any other substances which might be released.

7 Much of the information contained in the application form will be included in a register which the local authority is required to keep for public examination in accordance with section 20 of the Environmental Protection Act 1990 and the Environmental Protection (Applications, Appeals and Registers) Regulations 1991. Sections 21 and 22 provide for certain information (affecting national security, or commercial confidentiality) to be excluded from the register. Such information should be clearly identified in this application form.

8 £800 in the case of initial applications.
£530 in the case of applications for a substantial change.
£530 in the case of processes transferred from previous HMIP control.
£100 for small waste oil burners.



ST. IVES

Scale 1:2500

ARC Central

Mav

CI/SfB 1976 reference ov SfB Age

Yq2

Blue Circle Cement

Product Health and Safety Information
Portland Cement

APPEARANCE

White to grey amorphous powder.

ODOUR

Odourless.

PHYSICAL DATA

Relative density 3.1
Mean particle size 15-20 micron

INGREDIENTS

Predominantly compounds of calcium silicate and calcium aluminate with a small proportion of gypsum.

SPILLAGE

Collect and remove for re-use. Suitable respiratory protection equipment should be worn to protect against airborne dust.

Care should be taken to avoid contamination of cement recovered after spillage.

FIRE RISK

Portland cement is not flammable and will not support the combustion of other materials.

EXPOSURE LIMITS

10mg/m³ total inhalable dust and 5mg/m³ respirable dust on a time-weighted average exposure of 8 hours.

LEGISLATION

Health and Safety at Work etc., Act 1974.
Control of Substances Hazardous to Health Regulations 1988.

REFERENCES

HSE Guidance Note EH26
HSE Guidance Note EH40
HSE leaflet MS(B)9 Save Your Skin: Advice to Employers 1987.
Construction Industry Advisory Committee. Hazard Information Sheet 1.

HEALTH HAZARD

Dry cement powders in normal use have no harmful effect on the dry skin. As with any dust material, there may be ill effects from the inhalation or ingestion of cement dust and suitable precautions should be taken.

When cement is mixed with water, alkali is released. Precautions should therefore be taken prevent dry cement entering the eyes, mouth nose and to avoid skin contact with wet concre and mortar.

Repeated skin contact with wet cement over a period may cause irritant contact dermatitis. T abrasiveness of the mortar or concrete constituents can aggravate the effect. Some sk are sensitive to the small amounts of chromate which may be present in cements and can dev allergic contact dermatitis, but this is rare.

Continued contact with the skin can result in 'cement burns' with ulceration.

HANDLING PRECAUTIONS

Protection for the eyes, mouth and nose should worn in circumstances when dry cement may become airborne.

When working with wet concrete or mortar, suitable protective clothing should be worn su as long sleeved shirts, full length trousers, waterproof gloves with cotton liners and wellington boots.

Clothing contaminated with wet cement, mor or concrete should be removed and washed before further use. Should concrete or mortar into wellington boots, remove them IMMEDIATELY and thoroughly wash the skin and the inside of the boots before proceeding the job.

If cement enters the eye it should be washed immediately and thoroughly with clean water medical advice sought.

Concrete or mortar elsewhere on the skin sho also be washed off immediately.

Whenever there is persistent or severe irritat or pain a doctor should be consulted.

FIRST AID

Skin contact – wash with soap and water immediately. If there is irritation or pain seek medical advice.

Eye contact – wash with plenty of clean wate seek medical advice.

Civil and Marine Ltd.

London Road
West Thurrock
Grays, Essex
RM16 1NL

Telephone: Purfleet (0708) 864813
Telex: 896020
Fax: (0708) 865907

HEALTH & SAFETY PRODUCT INFORMATION

PRODUCT NAME:	MANUFACTURER:
Ground granulated blastfurnace slag (GGBS) (to British Standard 6699)	Civil and Marine Limited., London Road, West Thurrock, Grays, Essex. RM16 1NL

DESCRIPTION AND USE.

GGBS is a finely ground off-white powder used as an ingredient of concretes, mortars and grouts; it is stored on site in bulk silos and bags.

PHYSICAL AND CHEMICAL PROPERTIES.

Fineness	400m2/kg approximately.
Bulk Density	1000 - 1300 kg/m3 approximately.
Melting Point	1350°C approximately (ggbs is non-combustible)

Composition - a glass consisting principally of the oxides of calcium, silicon, aluminium and magnesium with low solubility in water giving a weak alkaline solution.

HAZARD	PROTECTIVE MEASURES
GGBS is a fine powder of nuisance dust classification. However direct contact may irritate skin, eyes, and respiratory system.	Take the normal precautions necessary with fine powders. Use gloves overalls face masks and respiratory protection as appropriate to working enviroment.
When mixed with water the resultant liquid will be alkaline of pH about 12.0 Alkaline materials can defat the skin and are likely to make it more vulnerable to contact dermatitis in susceptible individuals.	Avoid contact with concretes, mortars and grouts containing GGBS or any mixtures of GGBS and water; wear adequate impervious protective clothing when contact is unavoidable.
GGBS may be hot when delivered in bulk.	Avoid contact with powder, pipes, tankers and silos.

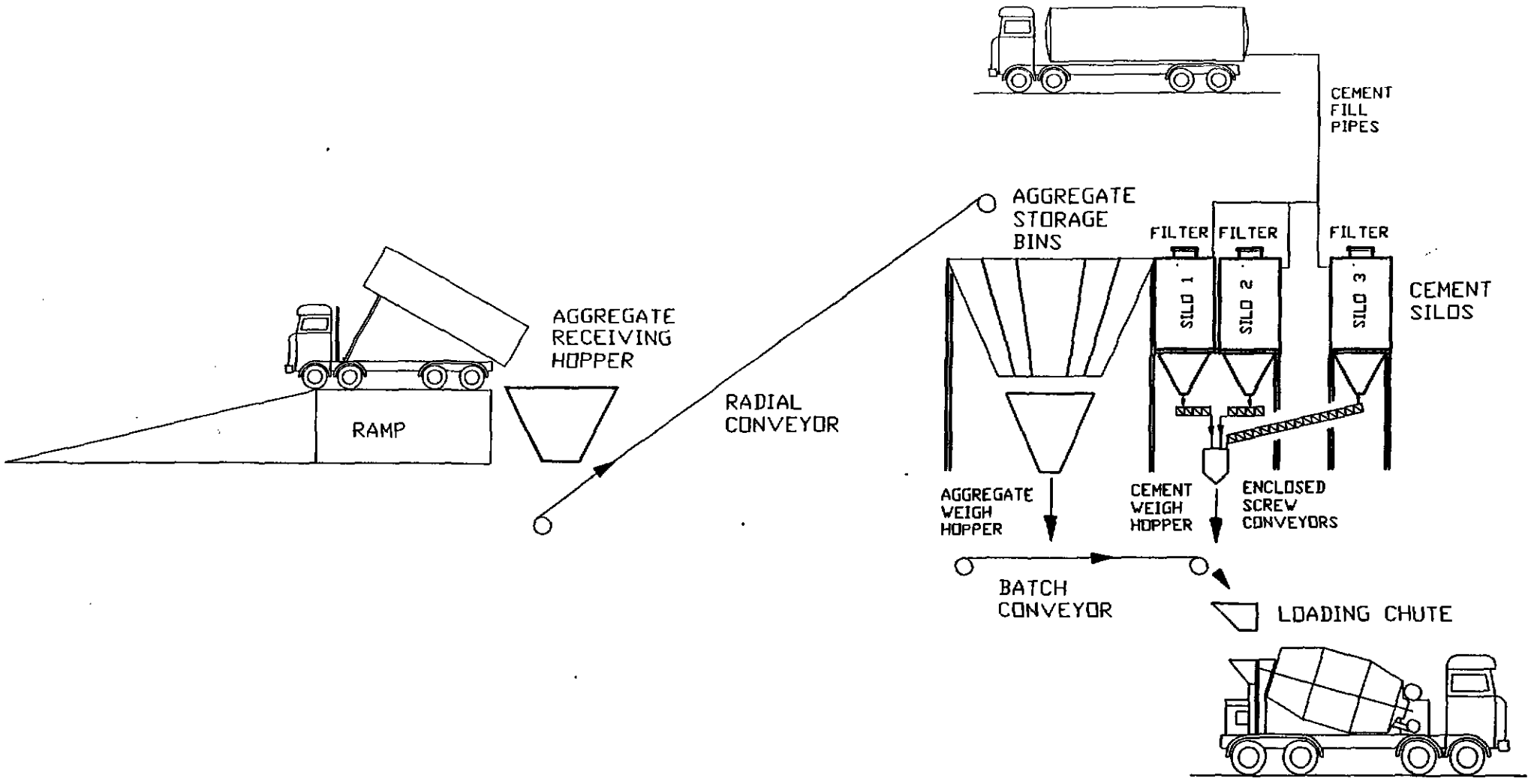
EMERGENCY FIRST AID

Ingestion - Wash out mouth with water- obtain medical advice if symptoms or discomfort occur.

Eyes - Irrigate with water immediately and obtain medical advice if symptoms or discomfort occur.

Skin - Wash off with water immediately if in contact with GGBS concretes mortars and grouts, and with minimum delay if in contact with GGBS powders.

For further advice contact Civil & Marine Ltd in writing at the above address or Telephone: (0708 864813)



ARC Central

LOCATION HEADDV LANE PREMIX

TITLE

FLOW DIAGRAM

SCALE NTS

DRAWN D. A. MILLS.

DATE 21-2-92

DRG NO C358_11

REVISION

DESCRIPTION	NAME

ARC CENTRAL

INSTRUCTION FOR DUST CONTROL PROCEDURES.

1.0 POLICY	The Policy of the Company is to comply with all Enviromental Legislation which includes reduction of the enviromental impact of our activities.
2.0 EMISSIONS	When receiving a delivery of cement or cement replacement, any emission to atmosphere must be colourless.
3.0 CHECKS	Regular checks for possible emmissions will be made when deliveries of cementitious powders are being carried out.
3.1	Signs will be displayed detailing correct air pressures for tanker discharge. Foreman will make random checks to ensure the correct pressure is not exceeded.
3.2	In the event of a malfunction causing a visible emission, unloading will be stopped and an investigation carried out. Unloading will not re-commence until the circumstances causing the emission have been corrected.
4.0 RECORDS	A log of any incident will be made in the Plant Diary recording details of the incident, the investigation and remedial measures.
4.1	The Area Operations Manager will retain the Plant Dairies for 4 years.
4.2	The aforementioned records are to be made accessible to any Environmental Health Officer provided proof of indentity has been established.
5.0 REPORTING	Plant Foremen will report any emissions to the Operations Manager as soon as practicable, and confirm on a Plant Defect Report.
5.1	In the event of adverse effect upon the Community, the Operations Manager will inform the Local Authority and promptly initiate such action as may be appropriate to minimise that effect.

ARC CENTRAL

INSTRUCTION FOR DUST CONTROL PROCEDURES - Cont'd

6.0 HOUSEKEEPING Any spillage should be cleaned up without delay.

6.1 Silo tops, filters, relief valves etc should be kept clean and in good order.

6.2 Yards should be kept clean and damped as appropriate.

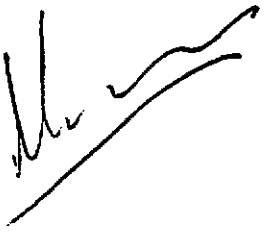
7.0 MAINTENANCE Silo Filters will be regularly checked and maintained in accordance with the Plant Maintenance Planner

7.1 Visual and audible silo high level alarms must be kept in good working order.(Where fitted)

7.2 A defect report must be made immediately an alarm fault is discovered.

7.3 Spares should be held as determined by the Operations Manager either at the Plant, or the Area Office in the case of items common to more than one plant.

Area Premix Manager, 30.1.92



MAINTENANCE

PLANNER

January to December

Premix Area ..... Plant .....

Plant Foreman (Print) ..... Signature .....

ARC Premix

ACTION	BY WHEN	BY WHOM	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Week commencing Monday			1 2 3 4	1 2 3 4	1 2 3 4 5	1 2 3 4	1 2 3 4	1 2 3 4 5	1 2 3 4	1 2 3 4	1 2 3 4 5	1 2 3 4	1 2 3 4	1 2 3 4 5
1 Report Defective Equipment (Defect Reports)		Plant Foreman												
2 Adjust Tare Weights and Clean Weighing Dials	Daily	Plant Foreman												
3 Ensure Weigh Hoppers Empty Properly	Daily	Plant Foreman												
4 Shake out Cement Socks and Check	Daily	Plant Foreman												
5 Drain Water Traps on Airlines/Compressors	Daily	Plant Foreman												
6 Wash out Plant Mixer Drum or Pan	Daily	Plant Foreman												
7 Clear Spillage Under Loading Area	Daily	Plant Foreman												
8 Clear Spillage Under Conveyors Etc	Weekly	Plant Foreman												
9 Ensure All Drains/Traps Are Clear	Weekly	Plant Foreman												
10 Ensure Settlement Pits Are Efficient	Weekly	Plant Foreman												
11 Ensure All Silo/Bin Doors Are Efficient	Weekly	Plant Foreman												
12 Check And Adjust Conveyors	Weekly	Plant Foreman												
13 Check Plant Mixer for Wear	Weekly	Plant Foreman												
14 Remove Build up in Plant Mixer	Weekly	Plant Foreman												
15 Check Dust Seals on Silos/Weigh Hopper	Weekly	Plant Foreman												
16 Check Knife Edges on Weighgear	Weekly	Plant Foreman												
17 Check Oil Levels on Airline Lubricators	Weekly	Plant Foreman												
18 Check Airlines/Rams/Valves for Leaks	Weekly	Plant Foreman												
19 Check Water Pipework for Leaks and Wear	Weekly	Plant Foreman												
20 Check Electrical Apparatus/Emergency Stops	Weekly	Plant Foreman												
21 Check Safety Signs/Guards/Catwalks	Weekly	Plant Foreman												
22 Check Stocks of All Materials	Weekly	Plant Foreman												
23 Routine Check of Loading Shovel	Weekly	Plant Foreman												
24 Routine Lubrication of Bearings/Gears	Monthly	Plant Foreman												
25 Clean Sight Glasses on Admix Dispensers	Monthly	Plant Foreman												
26 Check Admix Labels for Clarity	Monthly	Plant Foreman												
27 Inspect Silo/Storage Bins/Weigh Hoppers	Monthly	Plant Foreman												
28 Check Calibration of Moisture Meter	Monthly	Technical												
29 Verification of Weighscales	Monthly	Specialist												
30 Inspect/Test Weigh Scales Over Full Range	Quarterly	Specialist												
31 Verification of Water Meter	Quarterly	Specialist												
32 Verification of Admixture Dispensers	Quarterly	Specialist												
	Asset No	Registration No												
PLANT FOREMANS MONTHLY CHECK OF TRUCKMIXER BUILD-UP AND BLADEWEAR														
Reportable Dust Emissions: YES(Y)/NO(N)	Daily	Plant Foreman												

KEY:-

Satisfactory V

Defect reported *

MANAGERS INITIALS

DATE

ARC

100392 20001724 MISC CHQ 5639 01 001 PAID 800.00

MISC

ARC CENTRAL RE PROMIX PLANT ST. IVES

ENVIRONMENTAL PROTECTION ACT 1990 PART 1
THE ENVIRONMENTAL PROTECTION (PRESCRIBED PROCESSES AND SUBSTANCES) REGULATIONS 1991, S1 472
THE ENVIRONMENTAL PROTECTION (APPLICATIONS, APPEALS AND REGISTERS) REGULATIONS 1991, S1 507

APPLICATION FOR AUTHORISATION UNDER SECTION 6 OF THE ENVIRONMENTAL PROTECTION ACT 1990

1.00 **OPERATOR AND PROCESS DETAILS**

a) **Process for which authorisation is sought**

Blending, packing, loading and use of bulk cement

b) **Name, address and telephone number of applicant**

ARC Conbloc
P.O. Box 14
Appleford Road
Sutton Courtenay
Abingdon
Oxon, OX14 4UB
Tel. 0235 848877

c) **Name, number and registered office of applicants company**

ARC Concrete Limited Registration Number 537430
The Ridge
Chipping Sodbury
Bristol, BS17 6AY
Tel. 0454 316000

d) **Address for correspondence**

As b) above

e) **Name and address of premises where process is or will be carried on**

ARC Conbloc
Meadow Lane
St. Ives
Cambs
PE17 4BU
Tel. 0480 495490

f) **Name of local authority in whose area the progress will be operated**

Huntingdonshire District Council
Pathfinder House
St. Mary's Street
Huntingdon
Cambs
PE18 6TN
Tel. 0480 456161

suitably washed to eliminate the presence of dust which would be detrimental to the maintenance of the product.

In addition to the Dense aggregate used, Leca (lightweight expanded clay aggregate) and Ash (furnace bottom ash) is used for the manufacture of lightweight concrete blocks. Both the Leca and the Ash is brought in by road transport and is stockpiled at ground level in a similar manor as described in Dense aggregates.

From the ground feed hopper the aggregate is fed via an incline conveyor to an enclosed, vertical five compartment aggregate storage bin. Each compartment has a normal capacity of 50-60 tonnes. The incline conveyor is fitted with protective covers to prevent wind blown dust leaving the conveyor. The aggregate is directed to each of the compartments by a rotary chute mounted within the apex of the storage bins. Position and levels are controlled by proximity and level switches to safeguard against overfilling.

From the aggregate storage bins, aggregate is fed in measured quantities via feeder conveyors mounted directly to the bin outlets into a suspended weigh hopper directly underneath the storage bin outlets. The type of material called for and quantity is dependant on the type of product selected for production and is micro processor controlled through the Batching Plant computer. The batched aggregate is then fed via a incline conveyor to a holding hopper within the mixer housing. The incline conveyor is fitted with protection covers to prevent wind blown dust leaving the conveyor. The batched aggregate is then fed directly by gravity into the $3m^3$ output totally enclosed mixer, via an enclosed chute. At this stage, dependant on the mix design water and cement together with an additive is added.

Water is supplied from a nearby (man-made) lake, which is pumped through pipework into a water tank situated approx 5 metres above ground level, then pumped through pipework and a series of control valves into a distribution system fitted within the mixer housing.

Cement is stored in bulk in two totally enclosed vertical free standing silos located next to the mixer housing. One silo has a nominal capacity of 80 tonnes and the other is a split silo each with a capacity of 40 tonnes and each silo/compartment is fitted with counter weight pressure relief valves. Visual high level alarms are fitted to prevent overfilling of the silos and to protect the filter elements. Cement is delivered via road tanker in

20/26 tonne deliveries and is discharged via enclosed pipework at either 10-14 PSI at 450 CFM air volume or 24-28 PSI at 330 CFM dependent on tanker type, into storage silos. On occasions PFA (pulverised fly ash) is used in the product mix which is delivered and stored in the same manner. Dust arrestment plant in the form of one reverse air jet bag filter is fitted to the top of each silo, details of which are as follows:-

The filter is designed to allow dust free air to pass to the atmosphere while the cement/PFA particles being trapped by the air filter medium fall directly into the storage silo. Regular maintenance of the silos and correct filling techniques minimises emission to air. Inspection, maintenance and filling instructions are enclosed.

During normal production of the plant no cement/PFA dust emissions occur. A potential source of emission would be during tanker filling of the silos, however, the filling procedure instructions to the tanker driver and visual monitoring by ARC staff through delivery will reduce the risks to a minimum. A daily log is to be introduced to record all incidents. All spillage in the event of malfunction would be cleaned up as soon as practical using vacuum equipment and specialist contractor in the case of large spillages. Cement and PFA are fed from the storage silos by means of totally enclosed screw conveyors to a weigh hopper inside the mixer housing, mounted above the mixer where it is weighed and held prior to discharging via a valve into the mixer.

Additive (cement replacement chemical) is stored in portable tanks of a nominal capacity of 1000 litres, which the tanks are brought in by road transport. The portable tank is connected up to existing pipework and pumping equipment for direct distribution into the mixer via a liquid measuring dispenser.

The weighed aggregate cement/PFA, additive and water are mixed by rotating arms and paddles within the enclosed mixer casing and on completion of mixing cycle (approx 2 mins) discharges the homogenised semi dry concrete into a hopper mounted directly under the mixer discharge door. From the holding hopper the semi dry concrete is discharged directly onto a belt conveyor which feeds the material into the block machine holding hopper, located inside the production building, the maximum rated output of the Rapid 3000 mixer is 150,000 kgs/hr.

From the holding hopper the material is fed by mechanical means into the blockmachine feed draw, which in turn moves the material to the mould box. The Schlosser SV30 blockmachine by electro/mechanical vibration and hydraulic pressure compacts the material into the mould box to form concrete blocks, the size being dependant on the mould box fitted and the overall strength of the product dependant on the mix design. The Schlosser SV30 has a maximum rated throughput (based on 100mm blocks) of approx 5400 blocks per hour, equivalent to 108000 kgs/hr of raw material.

The concrete product (block) is formed onto a wooden pallet. In the case of 100mm blocks, in two rows of twelve, the newly made product (termed green product) is transported by mechanical conveyor to an elevator (vertical storage system) from the elevator the green product is transferred to the curing chambers by means of automatic finger and transfer car. The green product is left in the well insulated curing chambers to naturally cure, normally 24 hrs, until sufficient product strength is gained for further handling. This capacity therefore limits maximum plant output for 100mm blocks to 54,400 blocks, equivalent to 1090 tonnes per 24 hours production.

The cured product is removed from the chambers and transferred to a lowerator (vertical storage system) from here the product, still formed on wooden pallets is transported by mechanical conveyor to the depalleting station, where it is removed from the pallet and transferred to the cubing station.

Between the lowerator and the depalleting station the product is inspected. Damaged product is removed manually and transported to a stockpile of broken blocks (hardcore) for either re-cycling by crushing and reusing as Dense aggregate or for customer distribution as hardcore.

From the depalleting station the wooden pallets are returned by mechanical conveyors to the rear of the Schlosser SV30 block machine where the process is repeated. The crumbs of concrete and dust generated during depalleting are removed by mechanical means and dust extraction system.

At the curing station the depalleted concrete blocks are arranged in cube format generally 900mm long by 900mm wide x 4/5 layers high, by mechanical means. The cube format is transferred by mechanical conveyor to a horizontal strapping machine which forms a plastic strap horizontally around any one of all layers of the cube, which provides stability during transportation.

Cubes of strapped product are removed from the production building by mechanical conveyor to a pick up point outside of the building. Mobile mechanical lifting grabs, operator driven, remove the cubes for storage in the yard area. The stored products are removed from the stocking area again by mechanical grab and placed onto vehicular transport for customer distribution.

Some products are required to be delivered on wooden pallets for fork truck handling on customers premises. This requires the cubed product to be banded by steel strap to the wooden pallet, a manual operation undertaken in the yard area.

3.00 A LIST OF THE SUBSTANCES USED IN THE PROCESS

Apart from the particulate matter associated with the aggregate and cementitious materials no other prescribed substances as listed in Regulation 6 (1) Schedule 4 of the Regulations exist within the prescribed process.

Aggregate

a) Special Sand to BS882
Washed Builder Sand to BS882
Combined usage - 400 tonne/day - Dense Product
170 tonne/day - Lightweight Product
Supplier ARC Central

b) 10.5mm Gravel to BS882
6mm Gravel to BS882
Combined usage - 400 tonne/day - Dense Product
70 tonne/day - Lightweight Product
Supplier ARC Central

c) FBA (Power Station Furnace Bottom Ash) to BS3797
Usage 220 tonne/day - Lightweight product only
Supplier ARC Southern

d) Leca Medium (Lightweight Expanded Clay Aggregate) to BS3797
Usage 150m^3/60 tonne/day
Supplier ARC Ongar

Cementitious Materials

a) Ordinary Portland Cement PC N/L 42.5N to BS12
Usage 42 tonne/day - Dense product,
44 tonne/day - Lightweight product
Supplier Castle Cement

b) PFA -(Ungraded Pulverised Fly Ash to BS3892)
Usage - None currently

Others

a) ARDA Additive
Usage 84 ltrs/day - Dense product
66 ltrs/day - Lightweight product
Supplier Grace Chemicals

b) Derv - Company Transport
Usage 8000 ltrs/week
Supplier - Phillips

c) Gas Oil - Fork Trucks
Usage 10,000 ltrs/week
Supplier - Mobil

d) Lubricating Oils
Small quantities
Supplier - Century Oils

e) Plastic Strapping
Usage 10,000m per week
Supplier - Signode

f) Wooden Pallets
Usage 1000/1500 per week
Suppliers - Cannons/Cotswold/East Brothers

Note: Above usage figures vary dependant on production volumes.

4.00 Details of the source nature and amount of air emissions from the process.

The above information is contained within the general process description.

5.00 Proposals for monitoring, sampling and measurement of air emissions.

At this stage is is proposed to visually monitor the performance of the PFA and cement silo filtration system and bulk tanker discharge procedures during filling. In addition visual checks of the whole process will be made to ensure that in our opinion no nuisance from particulate fall out occurs. This monitoring will be undertaken at least daily, all observation will be recorded in a log book.

Any further requirements for emission monitoring would be considered at the time the upgrading programme is negotiated.

6.00 Assessment to the likely effect of emissions to air on the environment.

We believe the minimal emissions to atmosphere of aggregate and cementitious particulate matter resulting from the prescribed process will have a negligible impact on the environment.

7.00 Name of the newspaper in which it is proposed to advertise the application.

Town Crier Limited
11 Bridge Street
St. Ives
PE17 2QA

8.00 Fee enclosed (cheques to be made payable to Huntingdon District Council)

£800.00

I hereby certify that all the information contained in this application is, to the best of my knowledge, correct.

.....
(Signature)

R.A. SHARP - ENGINEERING MANAGER
.....
(Name in block capitals and capacity in which signing)

20 March '92.
.....
(Date)

DEPOT SAFETY RULES

SAFE SYSTEM OF WORK

DEPOT .....

TANKER DRIVER INSTRUCTIONS - SILO FILLING

The following instructions are to be displayed on a permanent notice board, fixed adjacent to the silo fill pipe connectors.

TANKER DRIVER INSTRUCTIONS - SILO FILLING

Silo ..... Maximum Capacity ..... tonnes

Silo ..... Working Capacity ..... tonnes

Discharge pressure and blower rates to be set at a level which ensures no emission from silo installation of particulate matter throughout delivery.

Tanker driver to remain adjacent to tanker controls throughout delivery.

In the event of high level alarm condition or particulate matter emission from filters/relief valve - tanker driver to cease delivery immediately.

Tanker driver to ensure no pressurisation of silo by excessive volumes of air above the normal fill rate.

February 1992

MANAGERS' RULES

SAFE SYSTEM OF WORK

DEPOT .....

Procedure for Filling Silo

Silo ..... has a maximum capacity of .....

Silo ..... has a working capacity of .....

The high level alarm has a combined siren and flashing orange light.

The silo fillpipe blanking cap is to be padlocked at all times until a delivery is to be made and only unlocked by an authorized company employee when the following conditions have been complied with.

Prior to Connecting Fillpipe from Tanker to Silo

Operator to confirm there is sufficient capacity to receive the volume of cement to be delivered.

Filter cleaning system to be operational to ensure free passage of exhaust air (as suitable for filter type).

During Cement Transfer from Tanker to Silo

Delivery driver to remain adjacent to tanker controls.

Operator to observe from the ground level the emission control equipment and instruct tanker driver to cease delivery immediately should cement be observed leaving the filter exhaust duct.

If high level alarm is activated, operator is to instruct tanker driver to cease delivery immediately. Supervisor to be made aware and tanker driver to return part load to supplier.

At the completion of cement transfer, as the tanker pressure gauge begins to drop, tanker driver to immediately cease delivery. The tanker pressure is to be vented through the tanker venting system to prevent over-pressurisation of the silo.

contd ...

On Completion of Cement Delivery

Operator to complete silo register/log book recording cement delivered and the results of visual observation of emission control equipment.

Silo fill pipe blanking cap to be replaced and padlocked.

Any spillages to be cleaned up using vacuum equipment or other suitable method to prevent cement becoming airborne.

Note:- In the event of over filling, filters, high level alarm and pressure relief system to be throughly inspected for damage and repaired/replaced where necessary prior to the next delivery.

DEPOT SAFETY RULES

SAFE SYSTEM OF WORK
SILO AND BIN CLEANING AND MAINTENANCE

The following rules apply to all persons needing to work on any silo or aggregate storage bin for cleaning, repair or maintenance.

1) No persons not specifically authorised by the Responsible Manager may carry out any work on a silo or aggregate bin.

2) When working above head height, there must always be two persons present, within clear verbal contact at all times.

3) Before any work on silo or aggregate bin is carried out, the item must have its electrical supply locked out using either the integral key interlock system if fitted, or a personal safety shackle and lock fitted to the isolator. The padlock key must be retained by the responsible person fitting the shackle, who is responsible for ensuring that all safety conditions are met, before reinstating the power.

4) On no account is anyone ever to enter a partly filled enclosed cement silo.

5) A safety harness securely anchored must be worn by all persons entering a silo or bin.

6) When anyone enters a silo or bin, a second person must be in visual contact and in a no risk position.

7) Anyone working in an enclosed dust environment, even though empty, must wear forced air breathing equipment.

8) Protective clothing - gloves, overalls and goggles, must be worn when entering a silo or bin.

9) Extreme care must be taken if welding inside an enclosed vessel - forced air extraction must be used at the welding point and breathing apparatus worn by the operative/welder.

Remember the 'flash' risk to persons outside the area.

SILO FILTER / PRESSURE RELIEF

MAINTENANCE RECORD

DEPOT..... SILO IDENT.....

DATE	WORK COMPLETED	COMMENTS	RECEIVED

DEPOT SAFETY RULES

SAFE SYSTEM OF WORK

EXTERNAL SILO INSPECTION AND MAINTENANCE

1) Ensure that the sprung safety gate is firmly closed when entering the high level platform.

2) No maintenance may be carried out when cement is being discharged into the silo.

3) Ensure the electrical supply to the silo is turned off before maintenance begins.

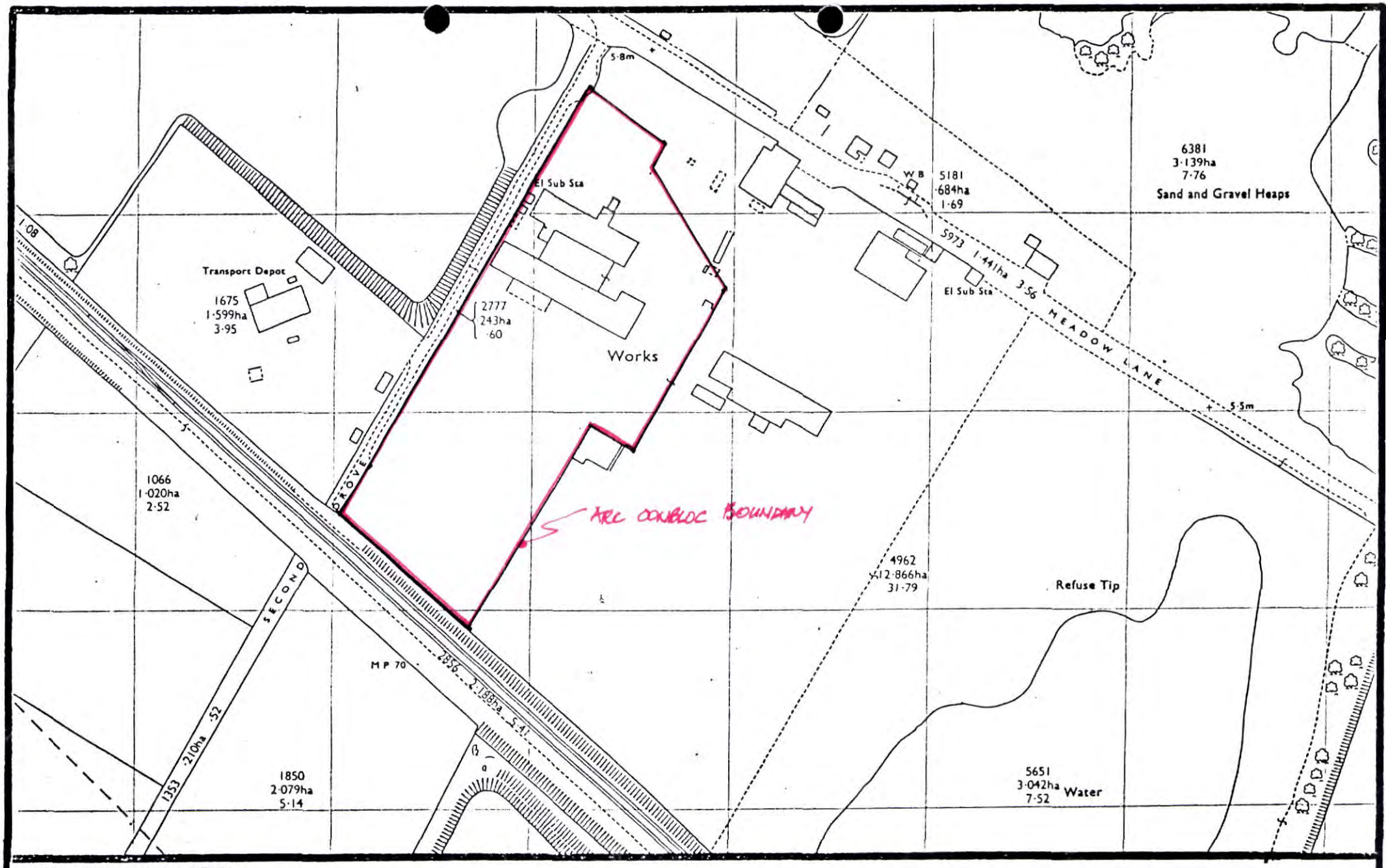
4) An external inspection of all the air lines and filters is to be carried out monthly and the record of the inspection entered on the appropriate record card.
Particular care must be made regarding the condition of the socks and the filter in general. It must be clean. Any replacement socks are to be recorded on the record card.

5) A monthly check of the pressure relief system is to be made and a record of the inspection kept.

6) Any defects or problems must be positively reported to the Production Supervisor and a record made on the record card.

7) Before any cleaning work is undertaken on the top of the silo, the area surrounding the silo must be roped off and danger signs set up to keep people away.
Paper coveralls, air mask filter and gloves must be worn when cleaning dry cement.

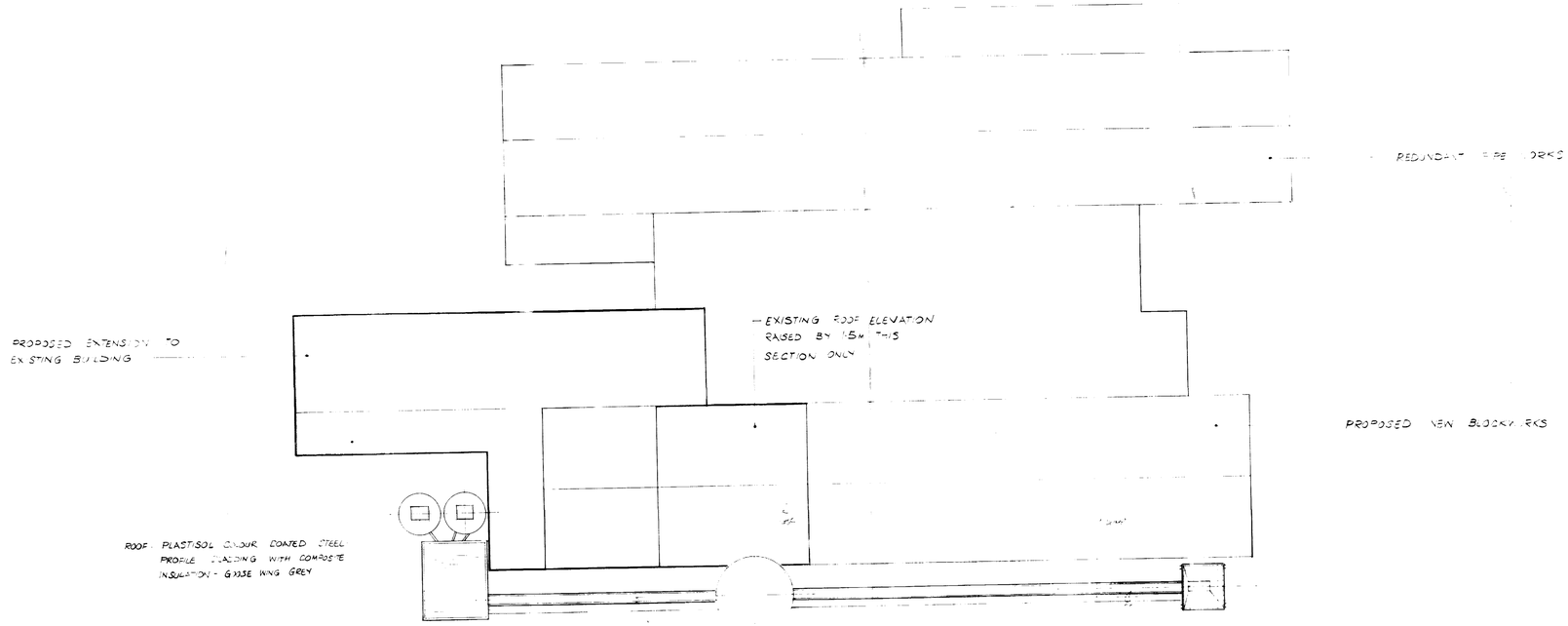
8) No entry inside any silo is permitted under any circumstances unless the specific rules for this work are observed.



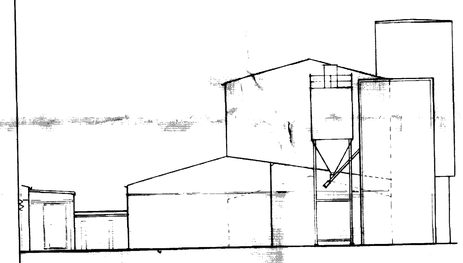
ARC CONCRETE LTD
LAND HOLDING
Scale 1:2500

St IVES

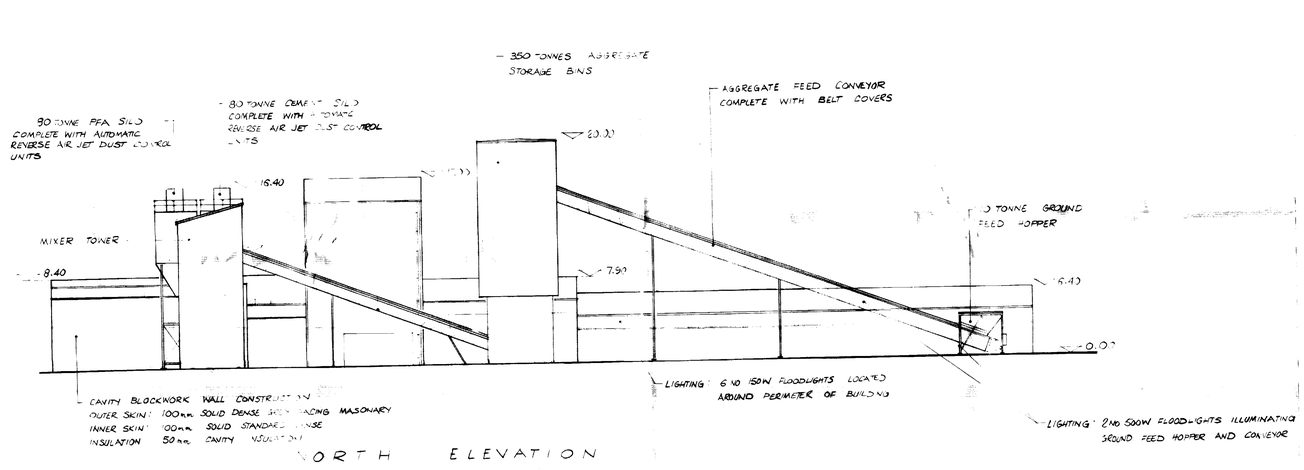
S2



PLAN



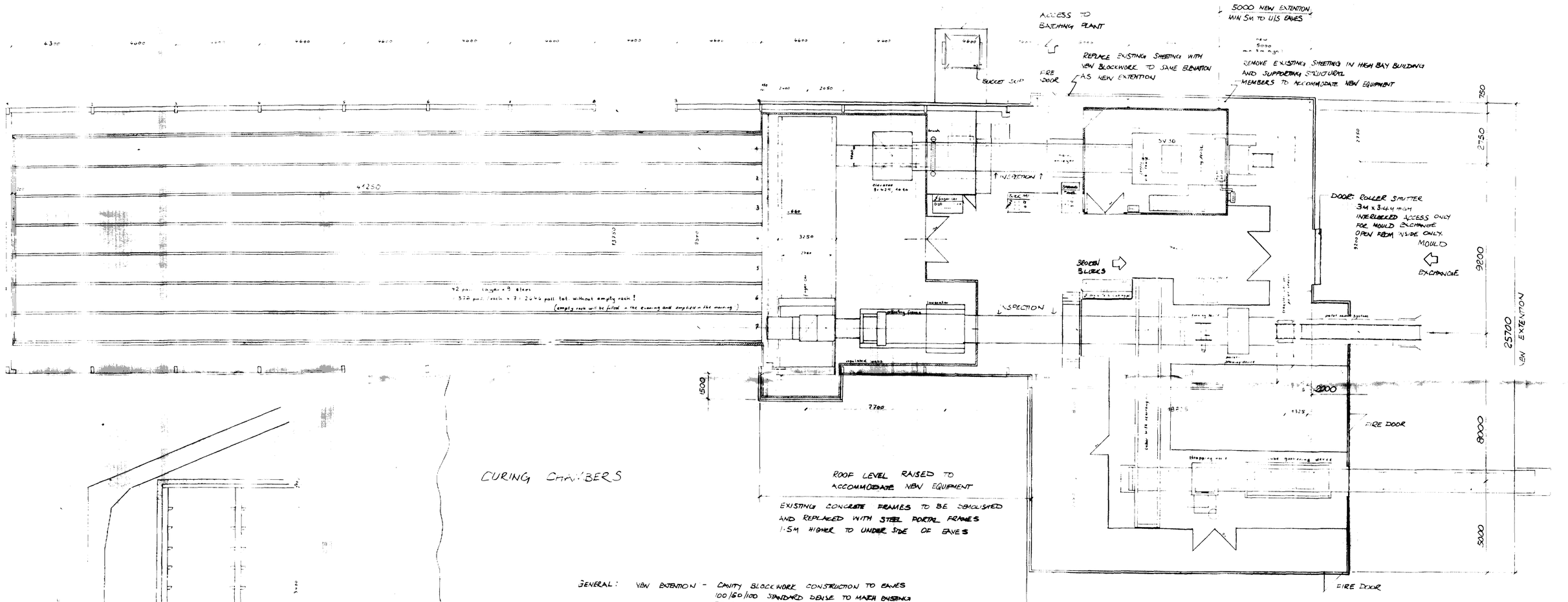
EAST ELEVATION

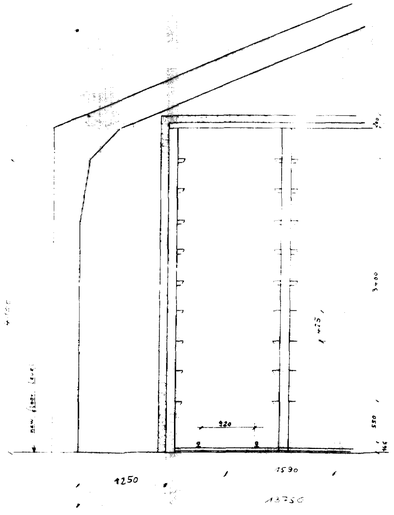


NORTH ELEVATION

Scale 1:200	Date AUGUST 88	Issue	Revision	Date	By	PLANNING DRAWINGS - PROPOSED BLOCKWORKS ST IVES
Drawing number	Drawn AS					

ARC Concrete
A member of the Gold Fields Group
Amey Roadstone Corporation Limited





CURING CHAMBERS

ROOF LEVEL RAISED TO ACCOMMODATE NEW EQUIPMENT

EXISTING CONCRETE FRAMES TO BE DEMOLISHED AND REPLACED WITH STEEL PORTAL FRAMES 1.5M HIGHER TO UNDER SIDE OF EAVES

GENERAL: NEW EXTENTION - CAVITY BLOCKWORK CONSTRUCTION TO EAVES 100/50/100 STANDARD DENSE TO MATCH EXISTING SOUABLITE INSULATION OR SIMILAR. BLOCK SUPPLIED BY REC.

ROOF AND GABLE END CLADDING PVC COLOUR CLAD STEEL PROFILE SHEETING (GOOSE WING GREY) COMPLETE WITH POLYURETHANE INSULATION AND BACKING SHEET TO INCLUDE FOR 10% TRANSLUCENT

NOTE: ALL DIMENSION AND DETAILS TO BE CONFIRMED

STRIPPING SHED

pallet size 1400 x 350 x 40

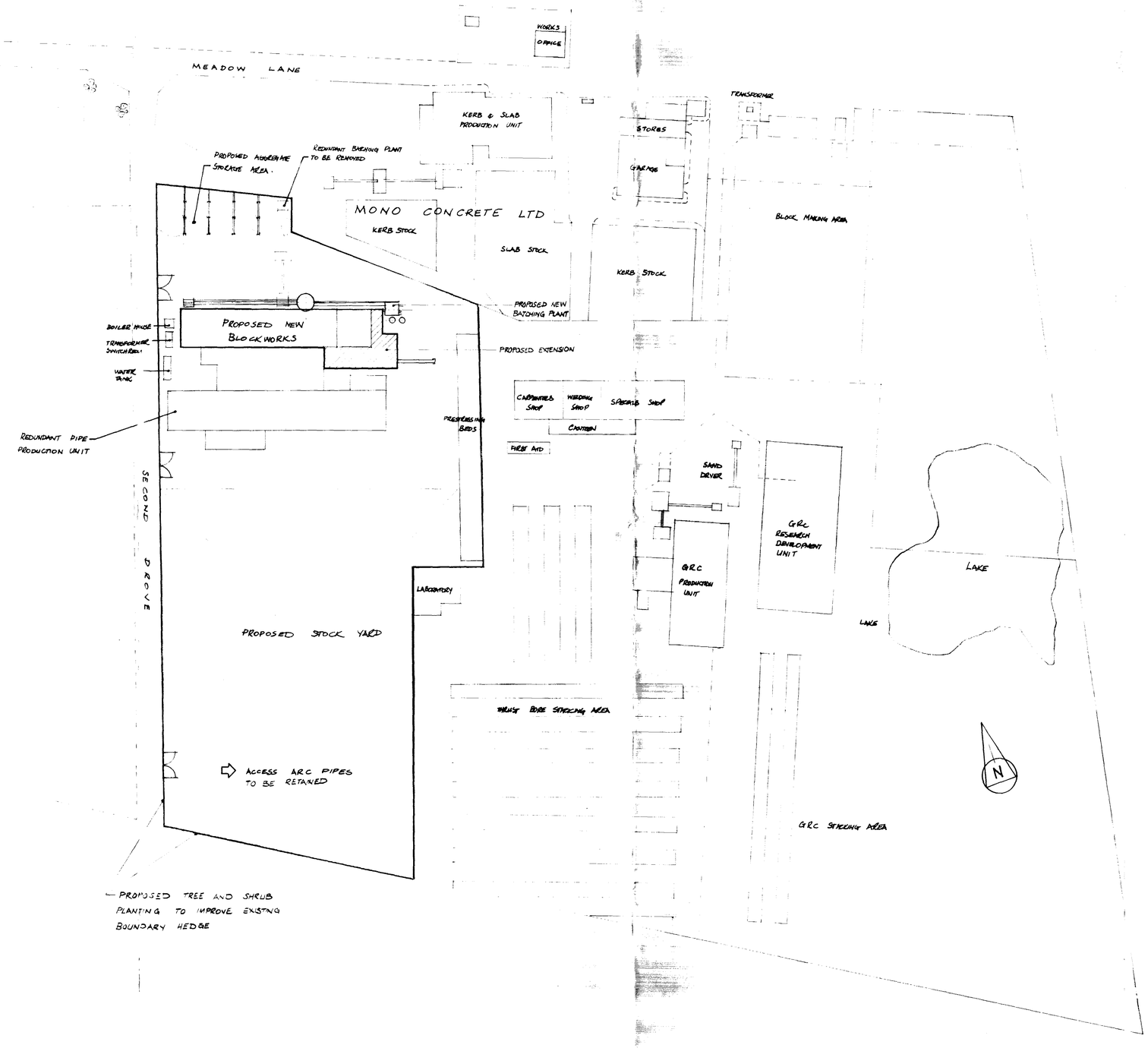
A.R.C. Oxford Bicester Cambridge

ISSUE 'A' 10/NOV/88

CDO 1640

1:50

PRELIMINARY DETAILS UNIT BLOCKWORK



Scale 1" = 60'	Date FEB '88	Issue	Revision	Date	By
Drawing number LDO 1629	Drawn RS				
	Checked				
	Approved				

SITE PLAN PROPOSED BLOCKWORKS ST IVES.

ARC Concrete
A member of the Gold Fields Group
Amey Roadstone Corporation Limited

PLANPRINTS 3660/83

ROAD TRANSPORT
BULK TANKER 20/26 TONNE
DELIVERIES.

TWIN CEMENT SILO 80 TONNE CAPACITY

CEMENT SILO 80 TONNE CAPACITY

GROUND HOPPER

AGGREGATE STORAGE BINS
5 COMPARTMENTS 50/60 TONNE
CAPACITY.

42 TONNE/DAY - DENSE
44 " - LIGHTWEIGHT.

MIXER

MAX OUTPUT
150 TONNE/HR

ADDITIVE 'ARDA'

WATER.

MAX PRODUCTION RATE
5400 BLOCKS/HR (100MM) DENSE
108 TONNE/HR

BLOCK MACHINE.

MAX CAPACITY 54,000 (100MM)
BLOCKS PER 24 HRS
1090 TONNES AGGREGATE

CURING CHAMBERS

WASTE PRODUCT.

PALLET RETURN LINE

CONTRACT HIRE — MOBILE CRUSHER

CRUSHED BLOCKS USE
FOR SUBSTITUTE DENS.
AGGREGATE. ALSO
SOLD AS HARDCORE

PRODUCT STOCKYARD AREA.

PRODUCT DESPATCH
TO CUSTOMER
VIA ROAD TRANSPORT.

STRAPPING MACHINE.

CUBING STATION

YARD BANDING
PRODUCT TO PALLET.

YOLVO L90
LOADING SHOVEL

BAY 5	BAY 5.		BAY 1	BAY 2	BAY 3	BAY 4
120 TONNE/DAY.	150 M^3/DAY.		400 TONNE/DAY - DENSE 170 " - LIGHTWEIGHT.		400 TONNE/DAY - DENSE 70 " - LIGHTWEIGHT.	
FBA 520 M^3 OR	LECA MEDIUM 520 M^3		SAND 700 TONNE	10MM GRAVEL 580 TONNE	SAND 600 TONNE	6MM GRAVEL 500 TONNE

ROAD TRANSPORT
DELIVERIES 40/60 M^3

ROAD TRANSPORT
DELIVERIES 20/26 TONNE.

NOTE:- USAGE FIGURES ARE
CURRENT AND WILL VARY
DEPENDANT ON PRODUCTION
RATES.

SCHEMATIC FLOW DIAGRAM - STNES.

ISSUE A FEB'92.