CONSERVATION POLICY - RELICS

for The State Rail Authority

by Don Godden & Associates

# CONSERVATION POLICY

# CONTENTS

1.0	SUMMARY	1
2.0	SIGNIFICANCE OF EVELEIGH LOCOMOTIVE WORKSHOPS	2
.1	Statement of Cultural Significance	2
.2	Significance Summary	2
3.0	CONSTRAINTS	3
.1	Physical Constraints	. 3
.2	Procedural Constraints	3
4.0	OPTIONS FOR REUSE OF THE RELICS	4
.1	Preamble	4
.2	Options for Reuse	4
.3	Preferred Option	4
5.0	CONSERVATION IMPLEMENTATION	6
.1	Buildings	6
.2	Relics	6
.3	Present Situation	. 6
. 4	Present Condition	6
6.0	CONSERVATION PROCEDURES	7
.1	Preamble	7
.2	Introduction	7
.3	Relics to be Conserved In-Situ - External Surfaces	7
. 4	Relics to be Conserved In-Situ -	•
	Steam Equipment	8
.5	The Hydraulic System	9
. 6	The Davy Press	9
.7	Bearings and Moving Parts	9
.8	Lathes, Drills and other Relocated Equipment	10
.9	Inspections	10
7.0	RELOCATED RELICS	11
8.0	COMPLETE LIST OF RELICS AT EVELEIGH	20
9.0	RECOMMENDATIONS	23
10.0	IDENTIFICATION OF RELOCATED RELICS	24

DON GODDEN & ASSOCIATES PTY LTD 34 TUNSTALL AVENUE KENSINGTON 2033 NOVEMBER 4, 1988

#### 1.0 SUMMARY

Eveleigh Railway Locomotive Workshops has almost completely ceased operation except for the Engine Shop and the foundry. Paddy's Markets is to be established in Bays 4A to 15 in the the main shop while Bays 1-4 retain all their equipment and act as a storehouse for heritage relics relocated from Bays 4A to 15.

This report outlines the significance of the relics, assemblages, collections and systems still extant at Eveleigh, discusses the constraints which arise from the statement of cultural significance and develops a plan for conservation implementation.

A number of weeks were spent on site cataloguing and tagging relics of potential significance and preparing and protecting relics to be relocated. The relics to be conserved are located in Bays 1-4, the pattern shop, the foundry and the coppersmith's shop. The precise treatment to preserve an item will depend entirely on its condition, mode of operation and materials from which it is manufactured.

It should be noted that the conservation or preservation procedures recommended are a guide only and detailed specifications will have to be produced when the work is to commence.

It is recommended that as all relics have now been relocated that conservation procedures be commenced immediately. All such work should be coordinated through the Mechanical Branch Laboratory, Eveleigh Carriage Workshops, Wilson Street, Redfern.

- 2.0 THE SIGNIFICANCE OF EVELEIGH RAILWAY LOCOMOTIVE WORKSHOPS
  - .1 Statement of Cultural Significance
  - .1.1 The Statement of Cultural Significance was enunciated in the Report on Eveleigh Railway Workshops (Godden et al 1986).
  - .2 Significance Summary
  - .2.1 Eveleigh Railway Locomotive Workshops has been confirmed as the finest and most complete historic railway engineering workshop in the world.
  - .2.2 Eveleigh Railway Locomotive Workshops has been confirmed as containing the finest collection of 19th Century and early twentieth century light and medium engineering relics in the world.
  - .2.3 Eveleigh Railway Locomotive Workshops have international significance and must be regarded as being among the finest of all Australian industrial heritage items. Eveleigh may be regarded as having equal or greater significance than Elizabeth Farm, Elizabeth Bay House, Juniper Hall and the Lands Department Building.
  - .2.4 The relics at Eveleigh have their significance increased in that they exist as assemblages, collections and systems rather than as individual items. They form part of an integrated whole that is still assembled in its working environment.

#### 3.0 CONSTRAINTS

- .1 Physical Constraints Arising from the Statement of Cultural Significance
- .1.1 Significant elements identified in this report should be conserved in accordance with the Burra Charter of Australia ICOMOS.
- .1.2 No significant element should be moved from its present position (at 14.10.88) without a complete report on its condition being made.
- .1.3 Any element proposed for movement must have a tag permanently affixed to it stating 'Property of N.S.W. State Rail Authority. Heritage Item. Fines may be incurred for damaging or destroying.'
- .1.4 All significant elements must be protected from moisture.
- .1.5 All significant elements must be inspected for corrosion every 6 months and, where necessary, conservation procedures must be undertaken.
- .1.6 No part of any assemblage should be removed from the parent relic. This includes all tools, stands and operating equipment.
- .2.0 Procedural Constraints Arising from the Statement of Cultural Significance
- .2.1 All significant fabric should be conserved principally by preservation and restoration and only where absolutely necessary by reconstruction or adaptation.
- .2.2 The least amount of intervention possible should occur to significant fabric.
- .2.3 Provision should be made for the security, maintenance and interpretation of items which are retained.
- .2.4 A conservation plan should be prepared for any relic which is to undergo restoration, reconstruction or adaptation.
- .2.5 The existing fabric of significant elements should be recorded before any alteration occurs.
- .2.6 All records found on site should be properly catalogued and annotated and lodged with an appropriate authority.

## 4.0 OPTIONS FOR REUSE OF THE EVELEIGH RELICS

# .1 Preamble

There are enormous differences of procedure and principle between finding compatible reuses for buildings and relics. These differences will not be enunciated here except to say that the significance of a relic is affected more by the process of reconstruction than is normally the case with a building.

## .2 Options for Reuse

There are several options available for the equipment still located at Eveleigh which may be summarised as follows:

- .2.1 Conserve all extant equipment identified as significant in this report and have that equipment reactivated and used by a branch of the State Rail Authority.
- .2.2 Lease the workshops, Bays 1-4 in the short term, to a third party from either the public or private sector who will use them as an operating unit and will conserve all scheduled relics.
- .2.3 Lease the workshops to the Museum of Applied Arts and Sciences or similar institution who will operate the shop as a working museum and conserve all scheduled relics.
- .2.4 All equipment in Bays 1-4 to be preserved using standard preservation procedures.

## .3 Preferred Option

It is impossible to recommend any of the first three options in the short term because of the measures taken by the Sydney Markets Authority to have Paddy's Markets at Eveleigh.

## .3.1 Short Term Option

Preserve each relic and tool by using standard preservation procedures. The elements are to be kept out of the workshops and the place is to be kept clean and free from debris. Inspections are to be carried out at regular specified intervals to ensure corrosion does not take place.

## .3.2 Long Term Option

Because of the size of the workshops and their proximity to both the city and the Museum of Applied Arts and Sciences they would make an ideal adjunct to the museum. The northernmost bays could become a working industrial museum along the lines of Ironbridge gorge and other buildings could be used as much needed storage space.

## 5.0 CONSERVATION IMPLEMENTATION

# .1 Buildings

The six buildings nominated for conservation in the locomotive workshops should have conservation policies prepared for them immediately. These policies will determine the way in which these buildings are to be used in future years.

#### .2 Relics

Some 123 relics remain in situ in the workshops bays 1-4, the coppersmith's, the foundry and the pattern shop and some 21 have been moved from other areas to bays 1-4. The concentration of relics in this area is necessary to protect them when the area is turned over to Paddy's Markets.

## .3 Present Situation

This section discusses the methods to be adopted when the policy is implemented. Basically the policy calls for the preservation in the short term and restoration or adaptation in the long term. As most relics are operational, or were until very recently, reconstruction may only be considered for few relics.

At the date of writing, 12.10.88, all relics of significance had been moved from Bays 4A-15 to Bays 1-4. Each relic to be moved had been tagged HERITAGE ITEM by Don Godden and Associates and the transport was done by the State Rail Authority personnel or by Johnstons Transport. Those items moved by Johnstons were insured for damage up to \$100,000 each. Wherever possible relics were relocated to Bays 3 and 4 as this allowed Bays 1 and 2 to remain relatively uncluttered.

## .4 Present Condition

When last inspected on 2.10.88 all machinery was in perfect condition and only two of the newly moved pieces showed signs of surface rust.

## 6.0 CONSERVATION PROCEDURES

#### .1 Preamble

The following conservation and preservation procedures are guidelines only. Before any work is commenced, specifications must be drawn up for each group of machines and the work should be supervised by a representative of the Mechanical Branch Laboratories of the State Rail Authority in Albion Street, Redfern.

This section of the report was compiled with the assistance of Mr. Nick Brusentsev and Mr. Stephen King who provided advice on all phases of work.

#### .2 Introduction

The relics fall into several categories, each of which requires a different method of preservation or restoration. In some cases a relic will have to undergo several distinct preservation measures.

In every case relics must be free of dust, oil and grease before surface treatment of any kind takes place. It is recommended that a medium pressure steam clean with a light detergent additive be used on all relics which show any sign of grease. This will include almost all machines, cranes and engines. It is recommended that steam cleaning immediately precedes subsequent surface finishing and that extensive time delays between any treatment and the next be avoided.

# .3 Relics to be Conserved In Situ - External Surfaces

## .3.1 Heavily rusted, unpainted relics

Many relics, such as forge tools, partly finished jobs, blacksmiths tongs and furnace tools have a complete layer of rust over them.

Where the rust is deep or flaking it is to be removed with a wire brush. The surface of all relics in this category is to be sprayed with a commercial phosphoric acid solution such as Ferropro. Before spraying it is essential to ensure that all surfaces are free from dust and completely dry.

# .3.2 Lightly rusted relics which have been painted

Phosphoric acid should not be used on painted surfaces if the paint is to be preserved. The rusted areas should be thoroughly wire brushed and all traces of rust removed. Any flaking or loose paint should also be removed by brushing. The whole surface is then wiped clean and sprayed with a preservative such as Valvoline TECTYL 506. This puts a seal over the surface which will last for two years without further attention.

In moist areas it is preferable to use a water dispersant 2 hours before spraying with the preservative.

- .3.3 Painted surfaces where flaking has occurred In some instances, such as the steam hammers, the present coat of paint should be partially or completely removed using flame and wire brushing. The exposed surface should then be coated, while still warm, with a zinc phosphate primer followed by two coats of high gloss enamel.
- .4 Relics to be Conserved In Situ Steam Equipment

#### .4.1 General

The boilers which are still in commission should be fired and the total system brought into operation. In this way all pipes, cylinders and pistons will be thoroughly heated.

## .4.2 Boilers

- .4.2.1 Fireside surface preservation. When cool the fireside system should be thoroughly cleaned with a sodium carbonate solution to neutralise any acidic residue. It should then be dried with a hot air blower and finally coated with CORTEC 307 (or equivalent) which is sprayed throughout as a powder.
- .4.2.2 Steam side surface preservation. still under fire the boiler should be severely blown down to reduce the dissolved and suspended solids to a minimum. An amine solution (a combination of a neutralising amine and a filming amine), should be pressure injected into the boiler. The engines and hammers connected to the steam system should all be operated. Further amine solution should be added to the boiler with the feedwater. The steam pressure should be lowered at the boiler. The steam line should be closed and the boiler drained. The condensate cocks on all engines and the steam hammers should be opened to release any condensate. condensate cocks on the steam lines should

be opened.

The boiler should be completely dried with a warm air fan if necessary. A tray of silica gel should be placed inside and the boiler completely sealed.

## .4.3 Steam engines and hammers

The steam cylinders of the engines and hammers and the pipes should be allowed to dry out. They should then be resealed. The whole internal surface should be completely coated with a film of the amine rust preventative and corrosion should be therefore greatly reduced.

## .5 The Hydraulic System

At present there are nine presses connected to the hydraulic system. These are in bays 1 and 4 and the coppersmiths. The water presently in the reservoir should be drained. The reservoir should be refilled with clean water and the hydraulic system activated by operating the electric pump. Each of the presses should be operated to ensure the whole system is flushed out. The water should be drained a second time and the reservoir filled with clean water. A water displacement additive such as Shell Ennis Fluid SDA should be thoroughly mixed with the water. Each press should be operated sufficiently to ensure the additive passes through the system.

The degree of diffusion of the displacement additive throughout the system will have to be tested on each machine.

The system should then be completely drained and resealed. The additive will protect the internal surfaces for up to two years.

## .6 The Davy Press

The Davy Press should be activated along with all other steam equipment. Any water in the reservoir or pressure tanks should be treated with a water displacement additive such as Shell Ennis fluid SDA. The water should then be drained.

## .7 Bearings and Moving Parts

When steam cleaning and surface protection measures have been completed, all bearings and moving parts such as gears, covers, handles should be regreased to ensure they do not seize.

# .8 Lathes, Drills and Other Relocated Machinery

There is only superficial rust on any of these pieces and many of them are completely free of rust. None of these relocated pieces should be steam cleaned. All should be wiped free of grease, oil and rust with turps soaked rags. The whole surface should then be coated with a preservative such as TECTYL 506.

If there is any moisture present on this equipment it must be sprayed initially with a water repellent such as TECTYL 401.

# .9 Inspections of Preserved Relics

It is essential that regular inspections take place to ensure that anti-corrosion measures are not allowed to break down. Each machine is to be inspected at 12 month intervals. The inspection is to follow guidelines for the protection of decommissioned machines. Where necessary corroded areas are to receive further treatment which will be specified at that time. It will be necessary to keep a diary of inspections and protective measures taken for each machines.

# 7.0 RELOCATED RELICS

The following equipment has been taken from its working location in Bays 4A to 15 and relocated in Bays 1-4 where it will be conserved.

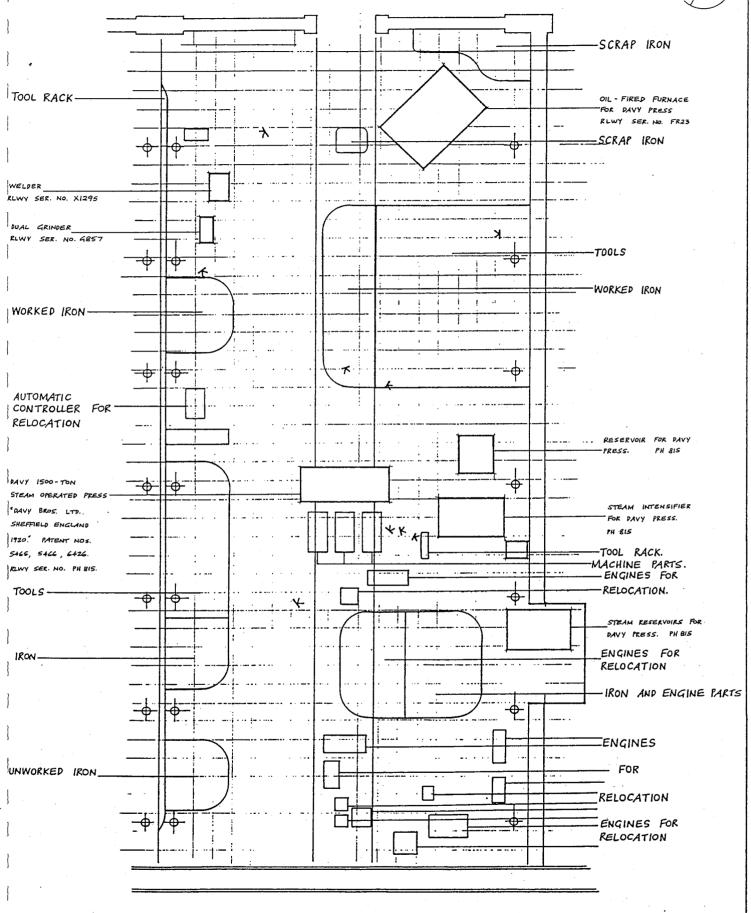
RELIC	WORKING LOCATION	NEW LOCATION
BOILER ROLLING SLING	BAY 4A NORTH	BAY 3 NORTH
TOOL GRINDER	BAY 4A SOUTH	BAY 3 NORTH
MACHINE BED	BAY 4A SOUTH	BAY 4 NORTH
CHURCHILL 72" X 27" GRINDER	BAY 8 SOUTH	
WEBSTER & BENNETT 60" SINGLE		
VERTICAL BORER	BAY 9 NORTH	BAY 3 NORTH
	BAY 9 NORTH	BAY 4 NORTH
RICHARDS VERTICAL BORER	BAY 9 NORTH	BAY 4 NORTH
WEBSTER & BENNETT VERTICAL DUPLES		
48" BORER	BAY 9 NORTH	BAY 3 NORTH
TANGYE 48" WHEEL LATHE	BAY 9 SOUTH	NOT RELOCATED
GRAHAM & NORMANTON 14" STROKE		
SHAPER	BAY 10 NORTH	BAY 3 NORTH
LANDIS LATHE	BAY 10 NORTH	BAY 3 NORTH
	BAY 10 SOUTH	BAY 3 NORTH
DENHAM 8 3/4" CENTRE LATHE	BAY 10 SOUTH	BAY 4 NORTH
STIRK PLANING MACHINE	BAY 10 SOUTH	BAY 4 NORTH
WARD TURRET LATHE	BAY 11 NORTH	BAY 3 NORTH
CINCINNATTI HORIZONTAL MILL		BAY 3 NORTH
BSA TOOLS CENTRELESS GRINDER	BAY 13 NORTH	BAY 3 NORTH
	BAY 13 NORTH	BAY 3 NORTH
BROWNE & SHARP UNIVERSAL GRINDER		BAY 3 NORTH
DEPARTMENTAL TOOL & CUTTER GRINDE		BAY 3 NORTH
GRAND RAPIDS PEDESTAL GRINDER		BAY 3 NORTH
HERBERT TOOL & CUTTER GRINDER		BAY 3 NORTH
DARLING & SELLERS RECEIVING LATHE	BAY 14 NORTH	BAY 3 NORTH
GENEVOISE PRECISION DRILLING AND		
BORING MACHINES	TOOL ROOM	BAY 3 NORTH

The precise position of each piece in its new location is given in the plans of Bays 1-4, Section 'Relocated Relics'.

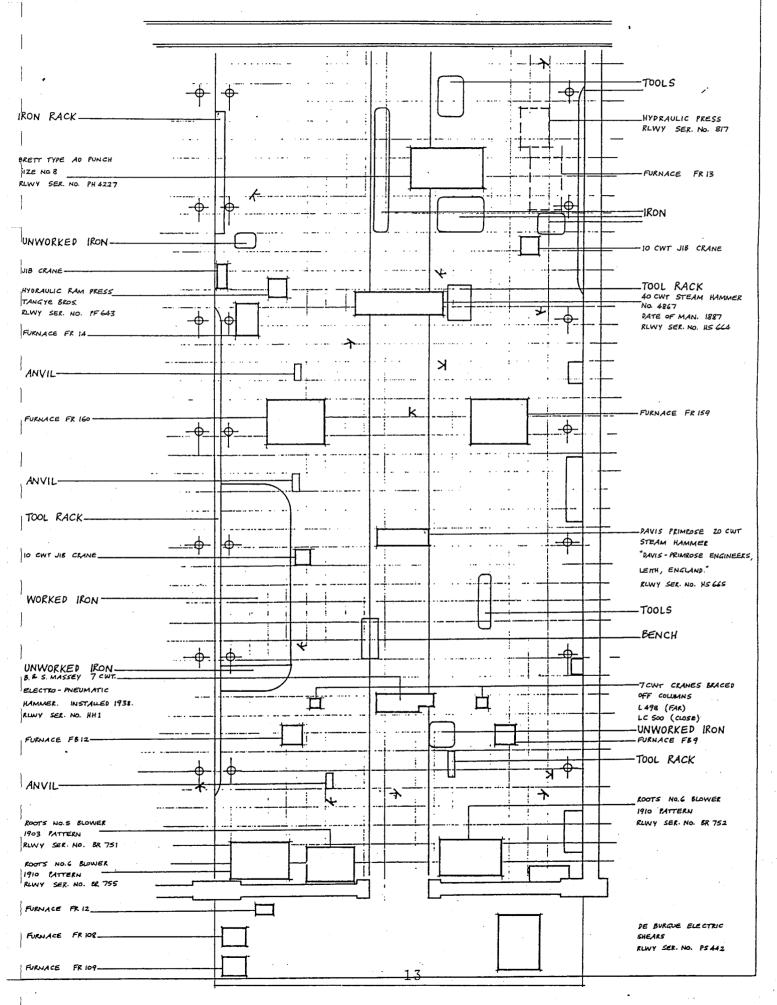
On the pages following Section 9.0 Recommendations, a photograph of each relocated relic is shown in order to assist with identification if the relics are moved for any reason. The relics' previous location and approximate new location is also given.

# BAY 1 NORTH.

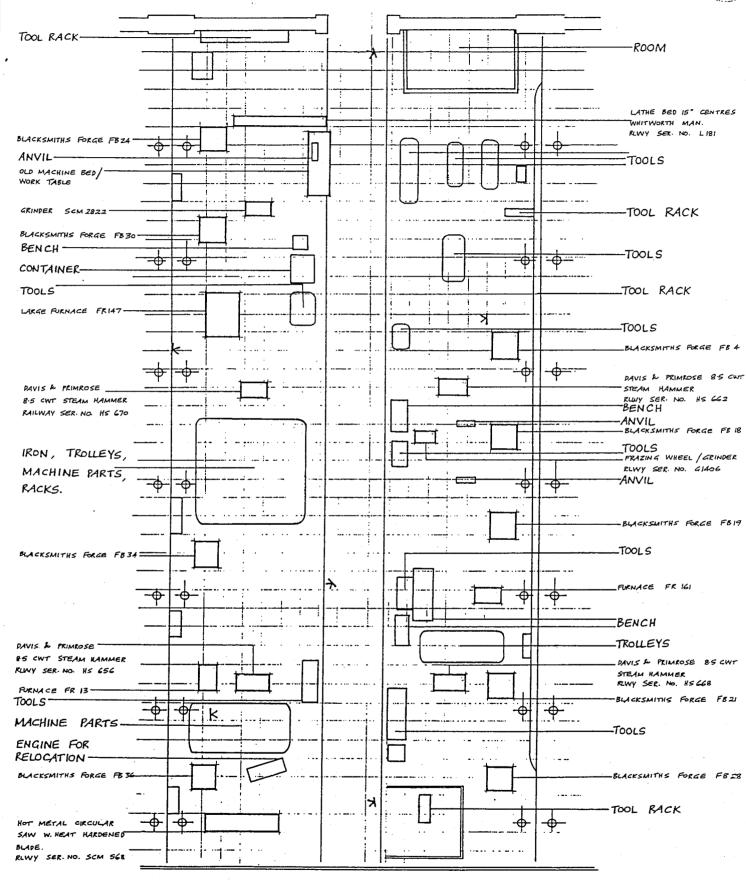






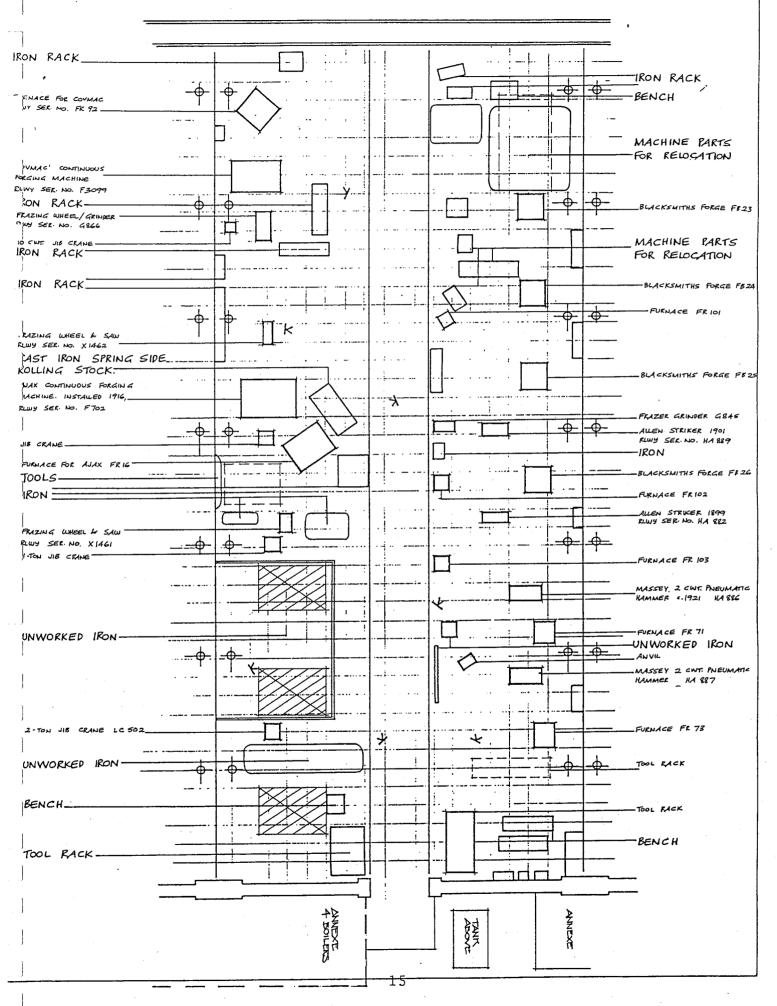






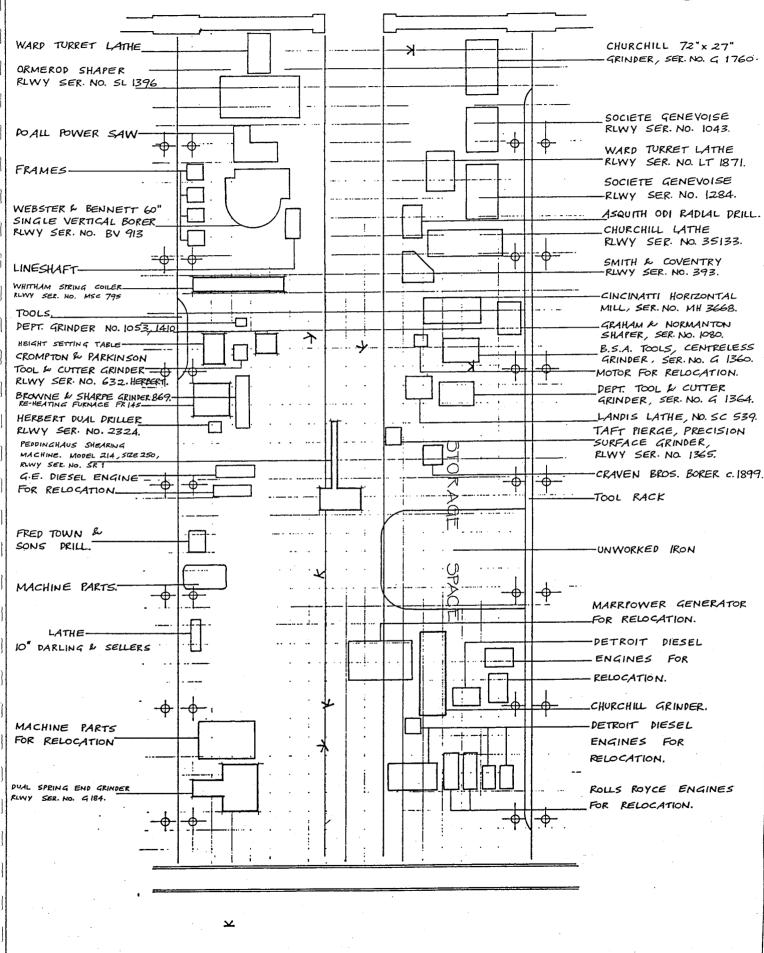
# BAY 2 SOUTH.



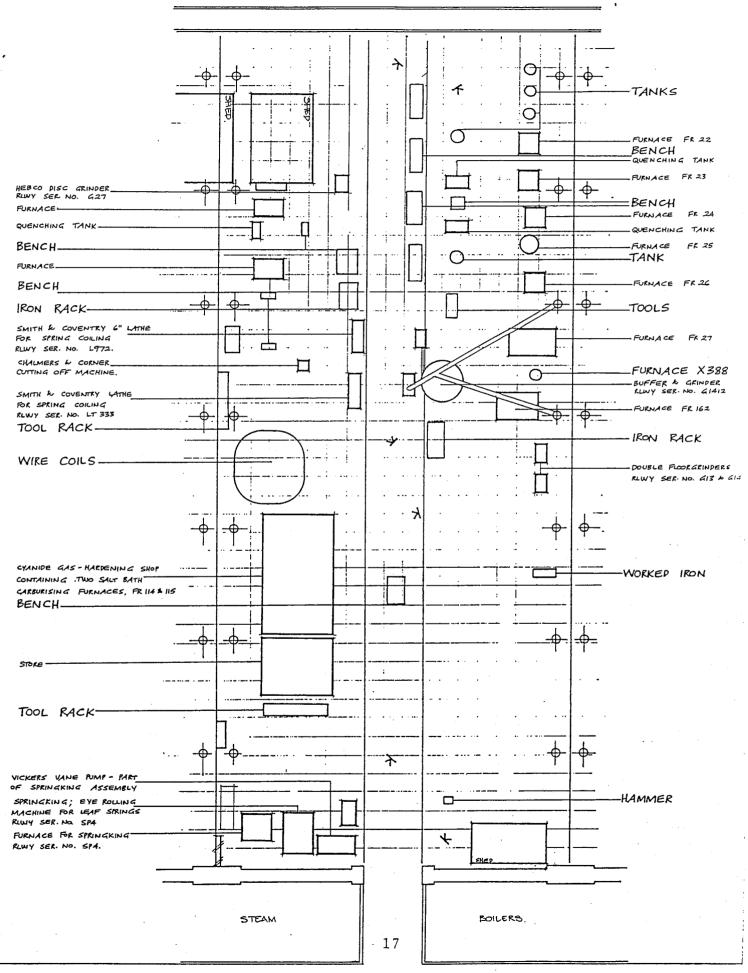


# BAY 3 NORTH.



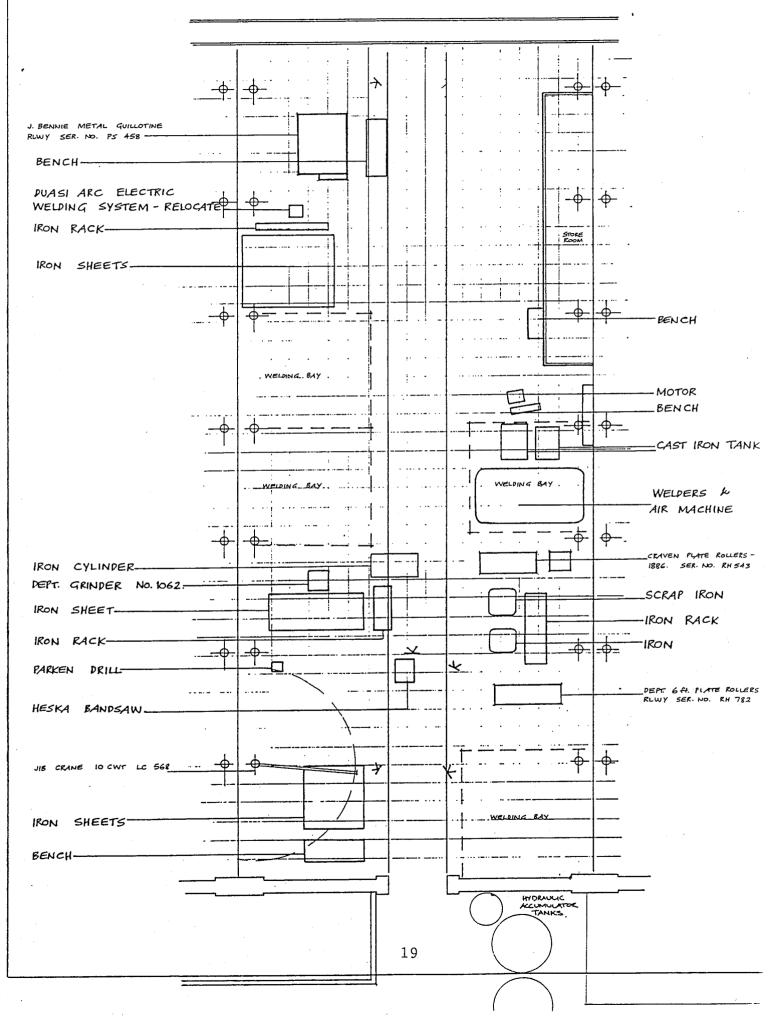






# BAY 4 NORTH. CRAVEN BROS. SPRING DISSASSEMBLER NO. SP 651. BENCH BENCH ENGINE FOR RELOCATION STIRK PLANING DENHAMS CENTRE MACHINE. P. 1735. LATHE. No. L 1509. RYERSON SPRING FORMING MACHINE 72" BED CRAVEN LATHE, AXLE SER. NO. LW 120. ASQUITH ODI RAPIAL FLWY SER. NO. 1028 (CLOSE) . GRINDER - 1034 (FAR) GRINDER - 1034 (FAR) ENGINES FOR RELOCATION ARM DRILL BENCHES BENCHES QUENCHING BATH\_ BENCH QUENCHING TANK DEPT. HYDRAULIC PRESS & SPRING TESTER TOOL RACK RLWY SER. No. 816 PH PEPT POUBLE FLOOR GRINDER RLWY SER. NO. G1054 TOOL RACK-IRON FURNACE-ANVIL-SPRING COILING MACHINE TWEDDLES SYSTEMS -10" LANG LATHE 1915 HYDRAULIC STRING . RLWY SER NO. MSC 2 BUCKLING PRESS RLWY SER. NO. 655 & 653 TOOL RACK RICE & CO. HYDRAULIC BENCH SPRING BUCKLING PRESS. FLWY SER. NO. 654 . 653 B.H.P. CUTTER HERBERT EDGWICK GRINDER SPRING COILING MACHINE TOOL RACK-10" LANG LATHE 1915 RUNY SER. NO. MSCI FURNACE-ENGINE FOR RELOCATION BROOKHIRST MACHINES IRON RACK-STIRK PLANER. BUTLER PLANER. MACHINE FOR RELOCATION BENCH ENGINE FOR RELOCATION RICHARDS VERTICAL BORER. NO. 3171.





# 8.0 COMPLETE LIST OF RELICS AT EVELEIGH LOCOMOTIVE WORKSHOPS WHICH ARE TO BE CONSERVED

	MACHINE	WO	RK		RELOCATED
		LOCA		N	POSITION
1.	1500-Ton Steam Press, Davy Bros.	Bay	1,	North	
2.	Reservoir for Davy Press	Bay	1,	North	
3.	Steam Intensifier for Davy Press, Davy Bros	Bay	1,	North	
4.	Steam Reservoirs for Davy Press	Bay	1,	North	
5.	Oil-Fired Furnace for Davy Press, Department	Bay	1,	North	
6.	Welder, Departmental	Bay	1,	North	
7.	Dual Grinder, Departmental	Bay	1,	North	
8.	Automatic Controller, Linc. Weld	Bay	1,	North	
9.	Tool Racks			North	
10.	Punch, Bretts	_		South	
11.	7 Cwt. Electropneumatic Hammer, B & S Massey			South	
12.	Rootes Blowers Nos. 6, 5 and 6, Thwaites Bros.			South	
13.	40 Cwt. Steam Hammer, Departmental	_		South	
14.	20 Cwt. Steam Hammer, Davis & Primrose	_		South	
15.	Hydraulic Press, Departmental	_		South	
16.	Furnaces (6)	_		South	
17.	Hydraulic Ram Press, Tangye Bros.	Bay	1,	South	
18.	Jib Cranes	Bay	1,	South	
19.	Tool Racks	Bay	1,	South	
20.	Electric Shears, De Burgue	Bay	1,	South	Annexe
21.	Furnaces (3)	Bay	1,	South	Annexe
22.	Tool Racks	Bay	2,	North	
23.	8.5 Cwt. Steam Hammers (4) Davis & Primrose	Bay	2,	North	
24.	Lathe Bed, Whitworth	Bay	2,	North	
25.	Grinder SCM 2822	Bay	2,	North	
26.	Large Furnace FR 147	Bay	2,	North	
27.	Blacksmiths Forges (7)	Bay	2,	North	
28.	Furnaces (2)	Bay	2,	North	
29.	Hot Metal Circular Saw, Departmental	Bay	2,	North	
30.	Frazing Wheel/Grinder, Departmental	Bay	2,	North	
31.	Horizontal Forging Machine, Coventry Machine Too	lBay	2,	South	
32.	Continuous Forging Machine, Ajax Manufacturing C	oBay	2,	South	
33.	Oliver Hammers (Allen Strikers) (2), Cardiff				
•	Junction D.D. 7 E. Co.	Bay	2,	South	
34.	2 Cwt. Pneumatic Hammers (2), B. & S. Massey	Bay	2,	South	
35.	Blacksmiths Forges (4)	Bay	2,	South	
36.	Furnaces (7)	Bay	2,	South	
37.	Tool Racks	Bay	2,	South	
38.	Anvils (5)	Bay	2,	South	
39.	Grinder, Frazer	Bay	2,	South	
40.	Frazing Wheel/Grinder, Departmental	Bay	2,	South	
41.	Frazing Wheel and Saw (2), Departmental	Bay	2,	South	
42.	C36 Class Boilers (4), Departmental	_			Annexe
43.	Overhead Crane L5	Bay	3,	North	
44.	Tool Racks			North	
45.	Spring Turner, E.E. Whitham Standard Tool Co.	_		North	
46.	Height Setting Table	_		North	
47.	Re-Heating Furnace	_		North	
48.	Shearing Machine, Peddinghaus	_		North	
49.	Dual Spring End Grinder, Departmental	_		North	
50.	Small Spring Coilers (2 Lathes), Smith Coventry			South	
51.	Furnaces (10)			South	
-	• •	_	•		

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52.
        Jib Crane
                                                         Bay 3, South
 53.
        Tool Racks
                                                         Bay 3, South
 54.
        Quenching Tanks (5)
                                                         Bay 3, South
 55.
        Double Floor Frinders (2), Departmental
                                                         Bay 3, South
 56.
        Cyanide Case - Hardening Shop with Furnaces
                                                         Bay 3, South
 57.
        Springking Eye Rolling Machine, Departmental
                                                         Bay 3, South
 58.
        Vane Pump, Vickers
                                                         Bay 3, South
 59.
        72" Spring Forming Machines (2), Ryerson
                                                         Bay 4, North
 60.
        Hydraulic Spring Buckling Press, Fielding &
          Platt (2)
                                                         Bay 4, North
        Hydraulic Spring Stripper, Craven Bros.
 61.
                                                         Bay 4, North
 62.
        Spring Coilers (2), John Lang & Sons
                                                         Bay 4, North
 63.
        Cast Iron Tanks and Racks
                                                         Bay 4, North
 64.
        Quenching Baths (2)
                                                         Bay 4, North
 65.
        Odi Radial Arm Drill, Asquith
                                                         Bay 4, North
 66.
        Double Floor Grinder, Departmental
                                                         Bay 4, North
 67.
        Hydraulic Press and Spring Tester, Departmental Bay 4, North
 68.
        Overhead Crane L6
                                                         Bay 4, South
 69.
        Metal Shears, J. Bennie & Sons
                                                         Bay 4, South
 70.
        Horizontal Plate Roller, Craven Bros.
                                                         Bay 4, South
 71.
        6-Foot Plate Roller, Departmental
                                                         Bay 4, South
 72.
        Plate Rollers, Craven
                                                         Bay 4, South
        Hydraulic Power System
 73.
                                                         Bay 4, South Annexe
 74.
        Steam Hydraulic Pressure Pump, Fielding & Platt Bay 4, South Annexe
 75.
        Electric Hydraulic Pressure Pump, Hat, Horn
          & Davey
                                                         Bay 4, South Annexe
 76.
        Overhead Crane L8
                                                         Bay 4A, North
 77.
        Boiler Rolling Sling
                                                         Bay 4A, North Bay 3, North
 78.
                                                         Bay 4A, South Bay 3, North
        Tool Grinder
 79.
        Machine Bed
                                                         Bay 4A, South Bay 4, North
 80.
        Overhead Crane L17
                                                         Bay 6, North
 81.
        Overhead Crane L21
                                                         Bay 8, North
 82.
        Grinder, Churchill (72" x 27")
                                                         Bay 8, South
                                                                        Bay 3, North
 83.
        Overhead Crane L7
                                                         Bay 9, NOrth
 84.
        60" Single Vertical Borer, Webster & Bennett
                                                         Bay 9, North
                                                                        Bay 3, North
 85.
        Single Bed Vertical Borer with Dual Heads,
          Richards
                                                         Bay 9, North
                                                                        Bay 4, North
 86.
        Dual Vertical Boring Machine, Webster & Bennett Bay 9, North
                                                                        Bay 3, North
 87.
        Lathe, Craven, Axle & Journal
                                                         Bay 9, North
                                                                        Bay 4, North
 88.
        48" Wheel Lathe, Tangye
                                                         Bay 9, South
 89.
        Overhead Crane L14
                                                         Bay 10, North
 90.
        Lathe, Landis
                                                         Bay 10, North Bay 3, North
        Metal Shaper, Graham & Normanton
 91.
                                                         Bay 10, North Bay 3, North
 92.
        Centre Lathe, Denham Engineering Co.
                                                         Bay 10, South Bay 4, North
 93.
        18" Stroke Slotter, Ormerod Shapers
                                                         Bay 10, South Bay 3, North
94.
        Planing Machine, Stirk
                                                         Bay 10, South Bay 4, North
 95.
        Overhead Crane L16
                                                         Bay 11, North
 96.
        Turret Lathe, Ward No. Lt 1871
                                                         Bay 11, North Bay 3, North
 97.
        Horizontal Milling Machine, Cincinnatti
                                                         Bay 11, South Bay 3, North
 98.
        Overhead Crane L18
                                                         Bay 12, North
        No. 12 Centreless Grinder, B.S.A. Tools Pty Ltd Bay 13, North Bay 3, North
 99.
 100.
        Gearcutter
                                                         Bay 13, North Bay 3, North
 101.
        Overhead Crane L15
                                                         Bay 15, North
 102.
        Universal Grinder, Browne & Sharpe
                                                         Bay 14, North Bay 3, North
 103.
        Universal Tool and Cutter Grinder, Herbert
                                                         Bay 14, North Bay 3, North
 104.
        10" Centre Relieving Lathe, Darling & Sellers
                                                         Bay 14, North Bay 3, North
 105.
        Departmental Tool and Cutter Grinder
                                                         Bay 14, North Bay 3, North
 106.
        Pedestal Grinder, Grand Rapids
                                                         Bay 14, North Bay 3, North
 107.
        Overhead Crane L15
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Bay 15, North

108.	Core Making Machine, Departmental	Foundry			
109.	Core Making Machine, Wadsworth	Foundry			
110.	Underdriven Pan Crusher, Departmental	Foundry			
111.	35-Ton Overhead Crane, Craven Bros.	New Loco Shop			
112.	Type-10 Air Compressor, Ingersoll Rand	Compressor House			
113.	1500 C.F.M. Air Compressor (2), Thompson				
	Castlemain	Compressor House			
114.	Jib/Pedestal Crane, Henry Berry & Co. (2)	Wheel Press Shop			
115.	Hydraulic Wheel Press, Fielding & Platt	Wheel Press Shop			
116.	Bandsaw, Wadkin	Pattern Shop			
117.	Bandsaw	Pattern Shop			
118.	Saw Sharpening Bench	Pattern Shop (Ground Floor)			
119.	Hydraulic Pipe Bending Machine	Copper Shop			
120.	Precision Drilling and Boring Machines (2),				
	Genevoise	Tool Room Bay 3, North			
121.	Traverser, Craven Bros.	External			
122.	35-Foot Turntable, Craven Bros.	Sand Depot			
123.	10-Foot Hand Operated Turntables (Various)	External			

#### 9.0 RECOMMENDATIONS

- 1. The conservation procedures are to be implemented as soon as possible.
- 2. Any open penetration in the walls of Bays 1 to 4 are to be made weatherproof as soon as possible.
- 3. No wet cleaning of walls or paths is to be permitted in Bays 1 to 4 or on the central roadway in Bays 1-4.
- 4. All access to the relics is to be prevented except to authorised personnel.
- 5. The relics are to be inspected every 12 months to determine the need for future conservation procedures.

# 10.0 IDENTIFICATION OF RELOCATED RELICS

Photographs of the relocated relics. These photographs are intended to allow identification if the relics are moved from their present location.

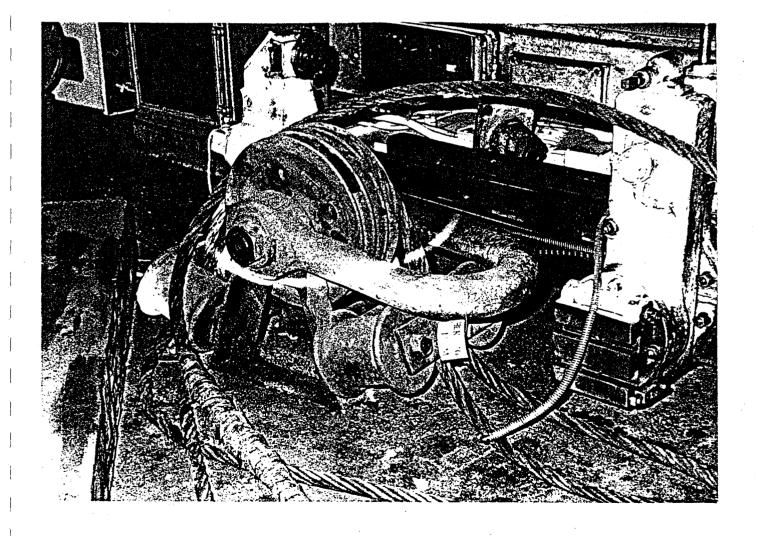
# RELOCATED RELICS CATALOGUE

# RELICS TO BE RELOCATED TO BAYS 1-4

RELIC : BOILER ROLLING SLING

MANUFACTURER

WORKING LOCATION : BAY 4A NORTH NEW LOCATION : BAY 3 NORTH



# RELOCATED RELICS CATALOGUE

## RELICS TO BE RELOCATED TO BAYS 1-4

RELIC

: RELIEVING LATHE

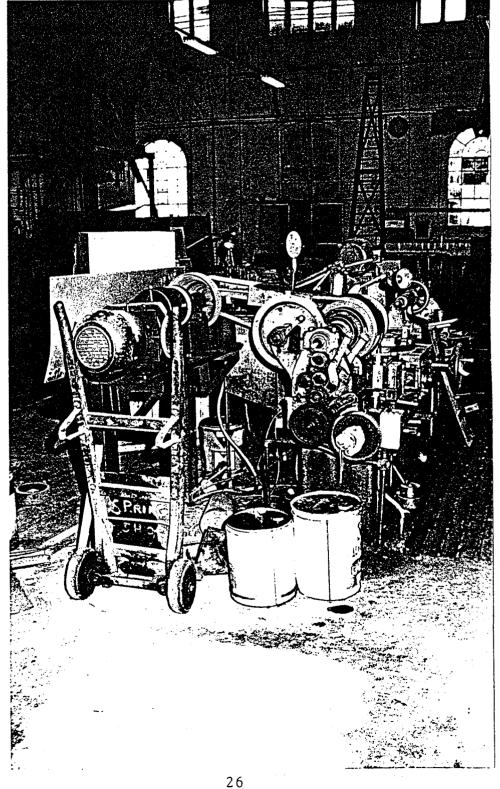
RLWY. SER. NO.

: LX 292

MANUFACTURER

: DARLING - SELLERS

WORKING LOCATION : BAY 14 NORTH
NEW LOCATION : BAY 3 NORTH



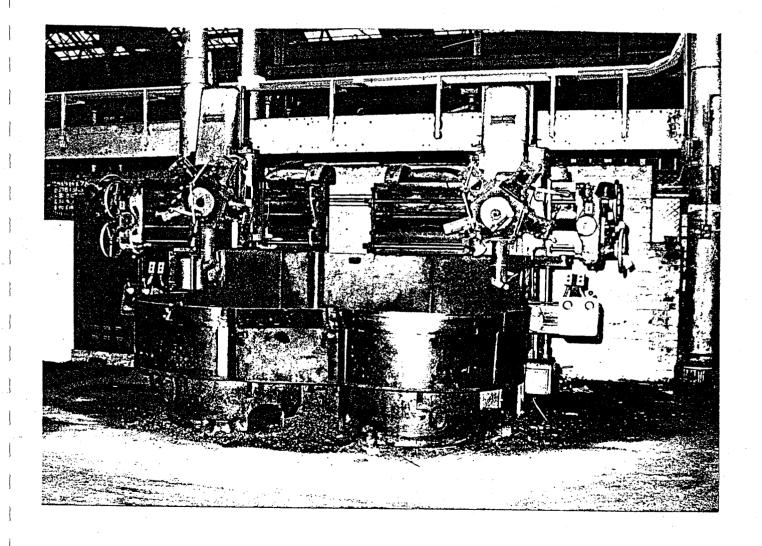
# RELOCATED RELICS CATALOGUE

# RELICS TO BE RELOCATED TO BAYS 1-4

RELIC : 48" VERTICAL DUPLEX BORER

MANUFACTURER : WEBSTON WORKING 1000

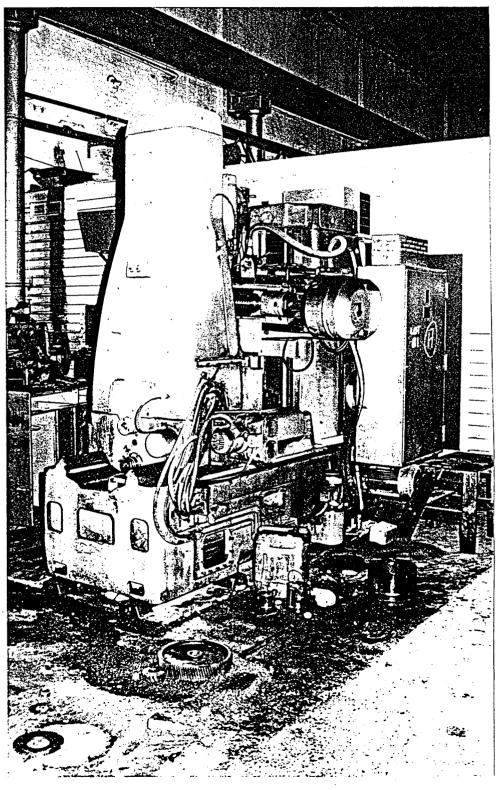
MANUFACTURER : WEBSTER & BENNETT WORKING LOCATION : BAY 9 NORTH NEW LOCATION : BAY 3 NORTH



## RELOCATED RELICS CATALOGUE

# RELICS TO BE RELOCATED TO BAYS 1-4

RELIC : GEARCUTTER
MANUFACTURER : PFAUTER
WORKING LOCATION : BAY 13 NORTH
NEW LOCATION : BAY 3 NORTH



# RELOCATED RELICS CATALOGUE

## RELICS TO BE RELOCATED TO BAYS 1-4

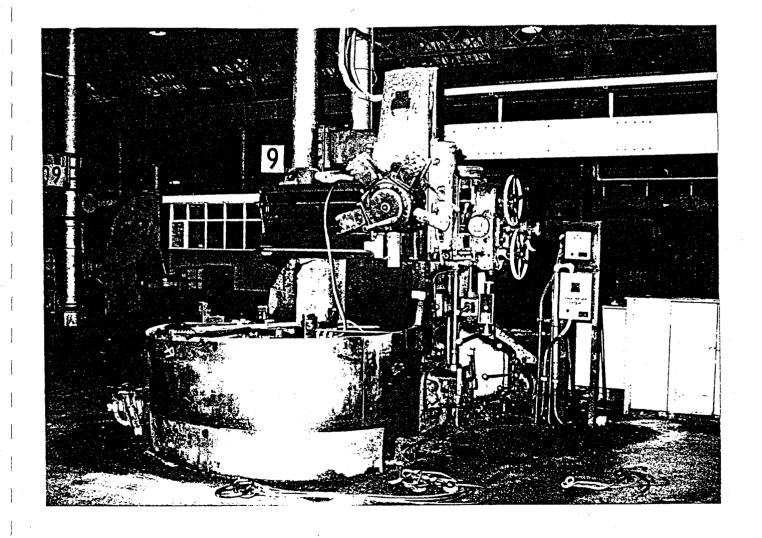
: 60" SINGLE VERTICAL BORER RELIC

RLWY. SER. NO. : BV 913

MANUFACTURER : WEBSTER & BENNETT

WORKING LOCATION : BAY 9 NORTH

NEW LOCATION : BAY 3 NORTH



# RELOCATED RELICS CATALOGUE

## RELICS TO BE RELOCATED TO BAYS 1-4

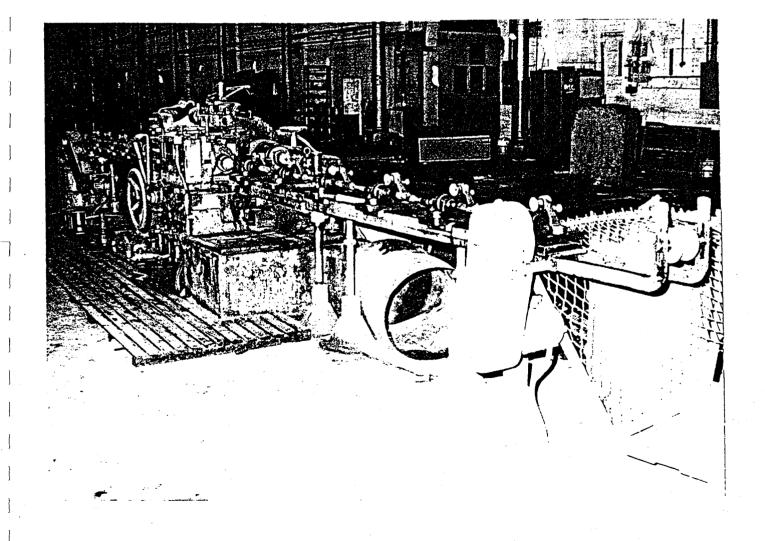
: CENTRELESS GRINDER RELIC

RLWY. SER. NO. : G 1360

MANUFACTURER : B.S.A. TOOLS LTD

WORKING LOCATION : BAY 13 NORTH

NEW LOCATION : BAY 3 NORTH



# RELOCATED RELICS CATALOGUE

## RELICS TO BE RELOCATED TO BAYS 1-4

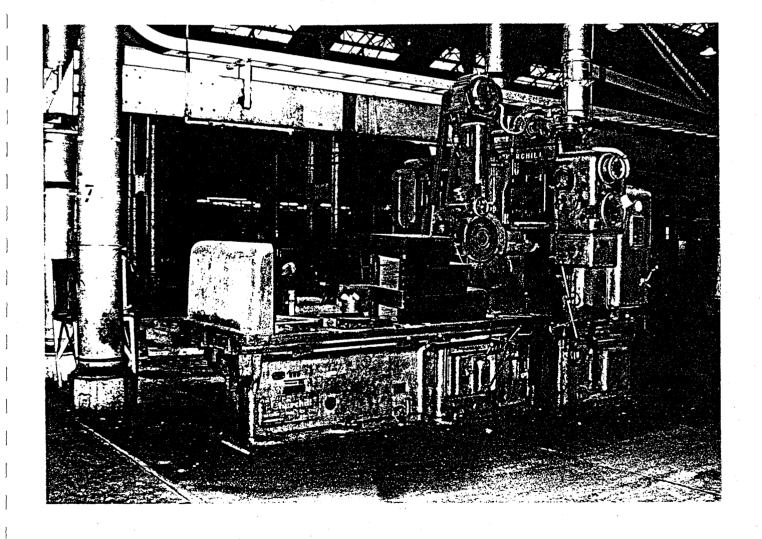
RELIC : 72" X 27" GRINDER

RLWY. SER. NO. : G 1760

MANUFACTURER : CHURCHILL

WORKING LOCATION : BAY 8 SOUTH

NEW LOCATION : BAY 3 NORTH

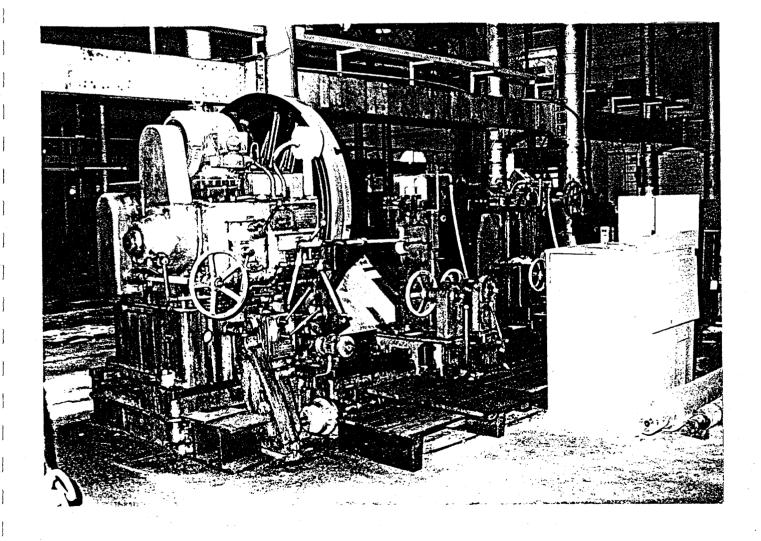


## RELOCATED RELICS CATALOGUE

# RELICS TO BE RELOCATED TO BAYS 1-4

RELIC : LATHE, JOURNAL RETURNING AND BURNISHING

WORKING LOCATION : BAY 9 NORTH NEW LOCATION : BAY 4 NORTH



# RELOCATED RELICS CATALOGUE

## RELICS TO BE RELOCATED TO BAYS 1-4

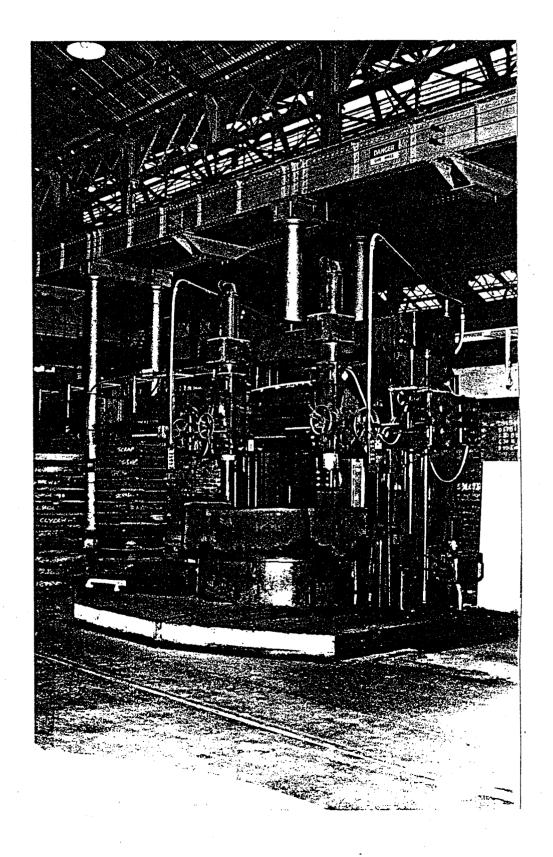
RELIC : VERTICAL BORER

RLWY. SER. NO. : BV 3171

MANUFACTURER : RICHARDS

WORKING LOCATION : BAY 9 NORTH

NEW LOCATION : BAY 4 NORTH



# RELOCATED RELICS CATALOGUE

## RELICS TO BE RELOCATED TO BAYS 1-4

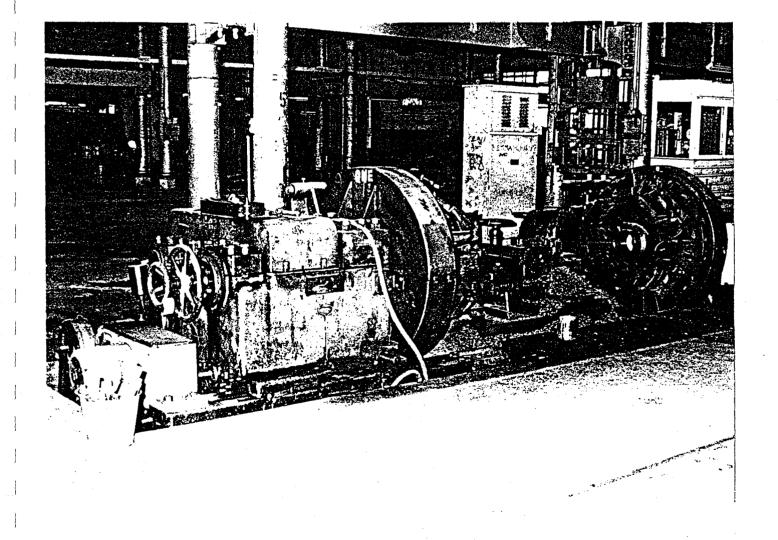
RELIC : 48" WHEEL LATHE

RLWY. SER. NO. : LW 119

MANUFACTURER : TANGYE LTD. ENGINES, CORNWALL WORKS, BIRMINGHAM

WORKING LOCATION : BAY 9 SOUTH

NEW LOCATION : BAY 9 SOUTH



## RELOCATED RELICS CATALOGUE

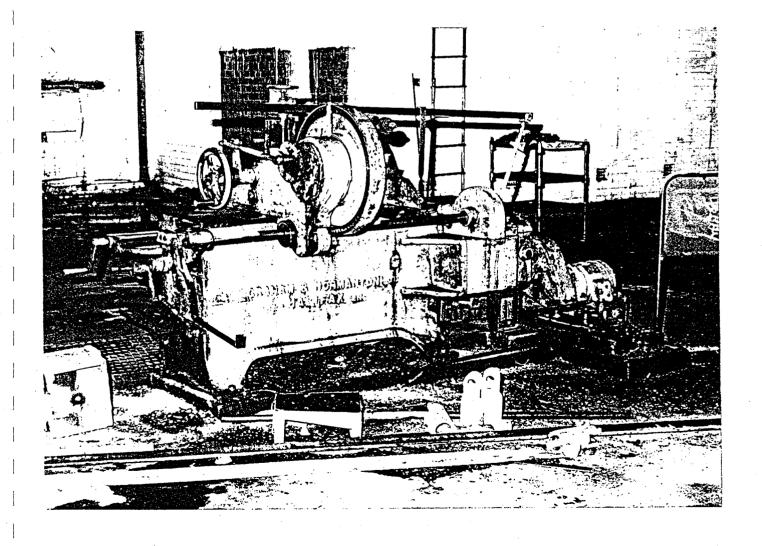
# RELICS TO BE RELOCATED TO BAYS 1-4

RELIC : 14" STROKE SHAPER

RLWY. SER. NO. : SH 1080

MANUFACTURER : GRAHAM & NORMANTON LTD. HALIFAX, ENGLAND WORKING LOCATION : BAY 10 NORTH

NEW LOCATION : BAY 3 NORTH



# RELOCATED RELICS CATALOGUE

# RELICS TO BE RELOCATED TO BAYS 1-4

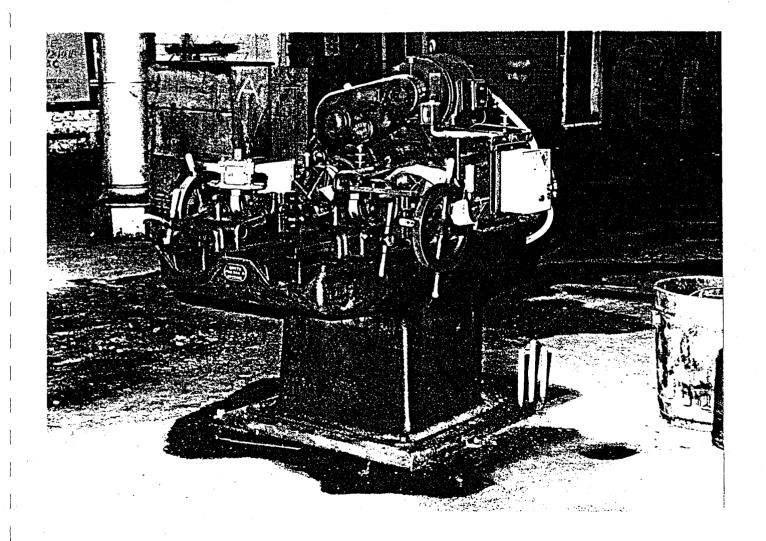
RELIC : LATHE : SC 539 RLWY. SER. NO.

RLWY. SER. NO. : SC 539

MANUFACTURER : LANDIS

WORKING LOCATION : BAY 10 NORTH

NEW LOCATION : BAY 3 NORTH

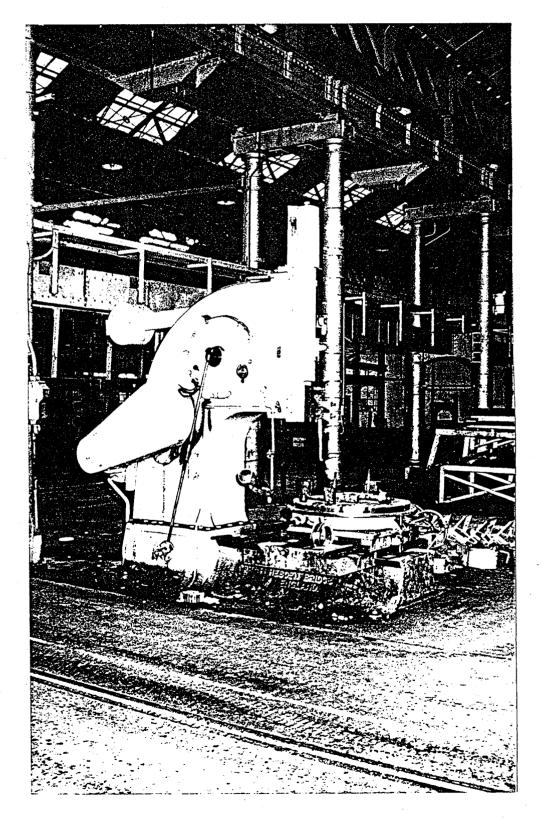


# RELOCATED RELICS CATALOGUE

## RELICS TO BE RELOCATED TO BAYS 1-4

: SHAPER RELIC RLWY. SER. NO. : SL 1396 MANUFACTURER : ORMEROD

MANUFACTURER : ORMEROD SHAPERS LTD. HEBDEN BRIDGE, LONDON WORKING LOCATION : BAY 10 SOUTH
NEW LOCATION : BAY 3 NORTH



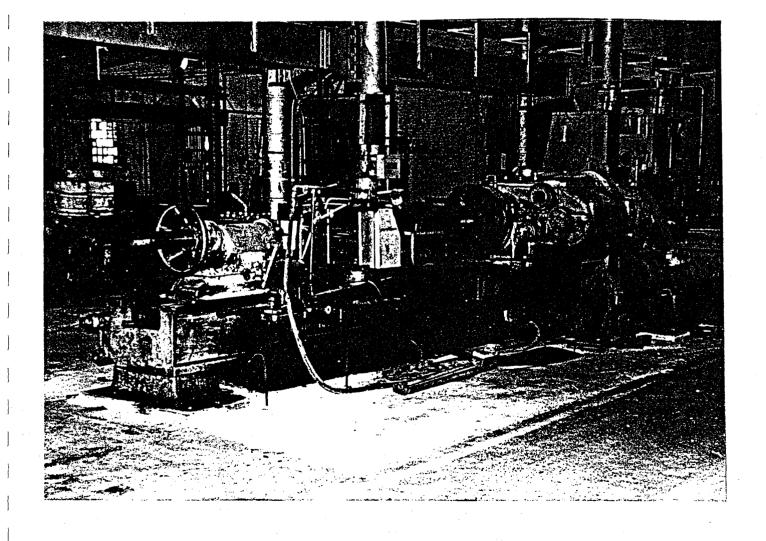
# RELOCATED RELICS CATALOGUE

# RELICS TO BE RELOCATED TO BAYS 1-4

RELIC : 8 3/4" CENTRE LATHE

RLWY. SER. NO. : L 1509 MANUFACTURER : DENHAM

WORKING LOCATION : BAY 10 SOUTH NEW LOCATION : BAY 4 NORTH



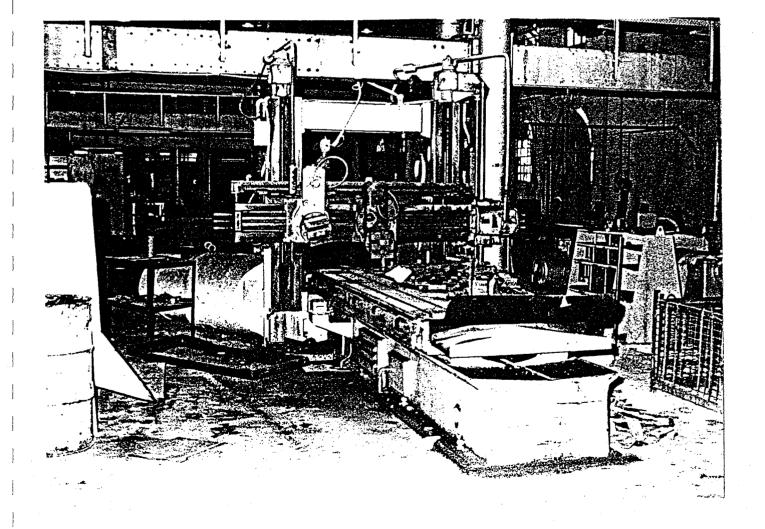
# RELOCATED RELICS CATALOGUE

## RELICS TO BE RELOCATED TO BAYS 1-4

RELIC : PLANING MACHINE

RLWY. SER. NO. : PL 1735 MANUFACTURER : STIRK

WORKING LOCATION : BAY 10 SOUTH NEW LOCATION : BAY 4 NORTH



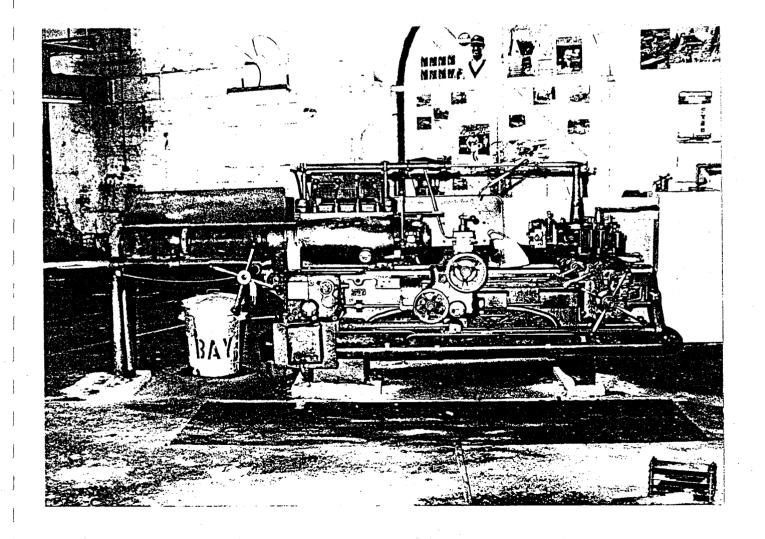
# RELOCATED RELICS CATALOGUE

# RELICS TO BE RELOCATED TO BAYS 1-4

RELIC : NO. 7B TURRET LATHE

RLWY. SER. NO. : LT 1871 MANUFACTURER : WARD

WORKING LOCATION : BAY 11 NORTH NEW LOCATION : BAY 3 NORTH



## RELOCATED RELICS CATALOGUE

# RELICS TO BE RELOCATED TO BAYS 1-4

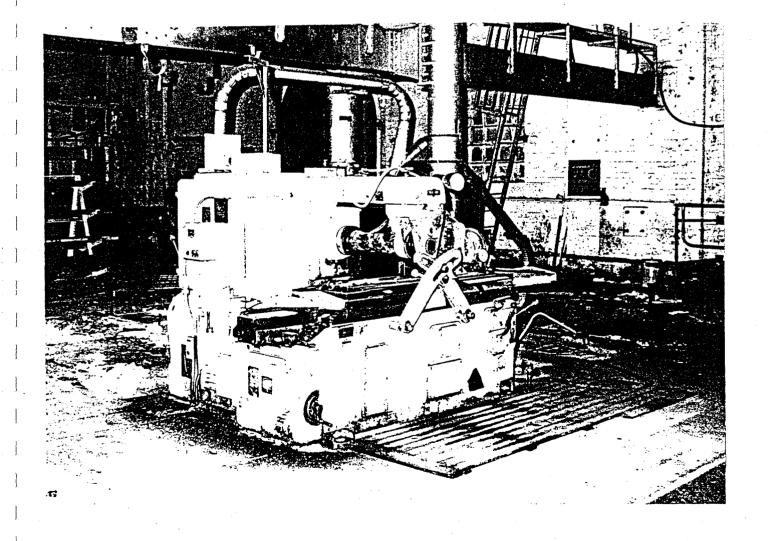
RELIC : HORIZONTAL MILL TYPE 4-36

RLWY. SER. NO. : MH 3668

MANUFACTURER : CINCINNATTI

WORKING LOCATION : BAY 11 SOUTH

NEW LOCATION : BAY 3 NORTH



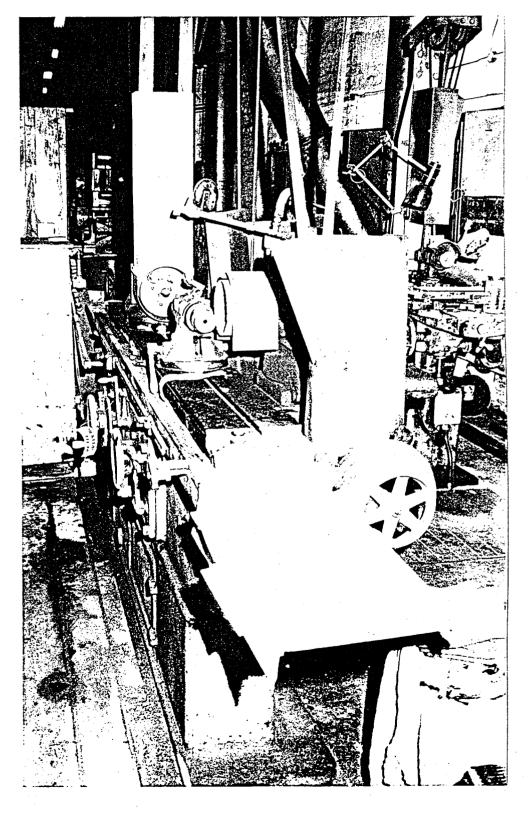
# RELOCATED RELICS CATALOGUE

# RELICS TO BE RELOCATED TO BAYS 1-4

RELIC : UNIVERSAL GRINDER

RLWY. SER. NO. : G 869

MANUFACTURER : BROWNE & SHARP WORKING LOCATION : BAY 14 NORTH NEW LOCATION : BAY 3 NORTH



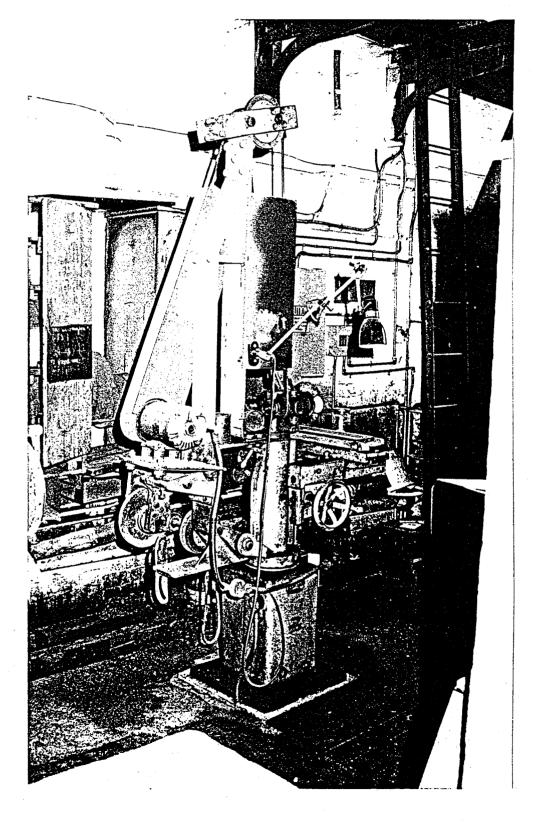
# RELOCATED RELICS CATALOGUE

# RELICS TO BE RELOCATED TO BAYS 1-4

RELIC : TOOL & CUTTER GRINDER

: G 1364 RLWY. SER. NO.

MANUFACTURER : DEPARTMENTAL WORKING LOCATION : BAY 14 NORTH NEW LOCATION : BAY 3 NORTH



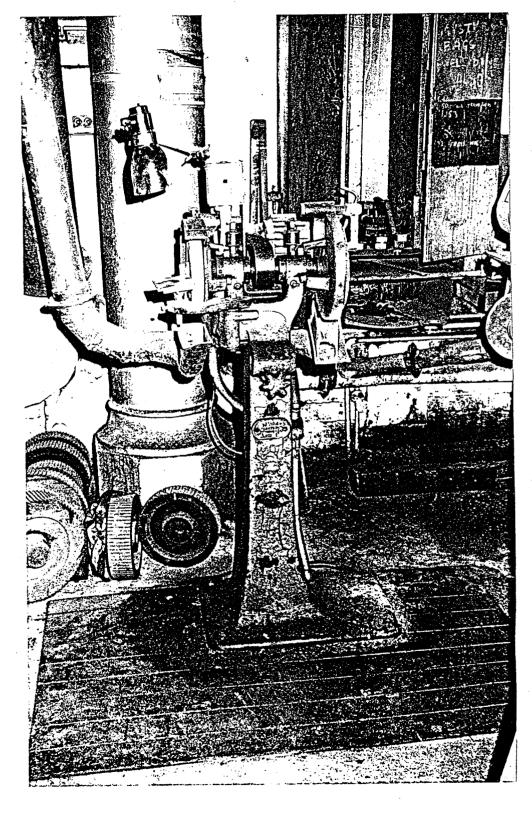
# RELOCATED RELICS CATALOGUE

# RELICS TO BE RELOCATED TO BAYS 1-4

RELIC : PEDESTAL GRINDER

RLWY. SER. NO. : G 1034

MANUFACTURER : GRAND RAPIDS WORKING LOCATION : BAY 14 NORTH NEW LOCATION : BAY 4 NORTH



# RELOCATED RELICS CATALOGUE

## RELICS TO BE RELOCATED TO BAYS 1-4

: TOOL & CUTTER GRINDER
RLWY. SER. NO. : G 632
MANUFACTURER : HEDD:
WORKING LOCATE

WORKING LOCATION : BAY 14 NORTH NEW LOCATION : BAY 3 NORTH

