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PO Box 3300, South Brisbane 4101, Qld Australia
Phone 61 7 3840 7555
Fax 61 7 3846 1226
www.qm.qld.gov.au

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'A different country' - the organisation of the Ipswich Railway Workshops

Thom BLAKE and David MEWES

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Railway Workshops such as those at Ipswich were distinctive as industrial complexes. They developed an ethos and character that set them apart from other enterprises such as engineering works, shipyards, foundries or factories. The Ipswich Workshops had the capacity to undertake a wide range of work. Indeed, for generations of employees it was a source of great pride that the Workshops were capable of making anything. 'If it could be made, it could be made in the Workshops' was a slogan often repeated and demonstrated by the range of items manufactured there.

□ *Railway, workshop, locomotive, union, manufacture, industrial, heritage, Ipswich.*

T. Blake
thom@thomblake.com.au

D. Mewes
david.mewes@qm.qld.gov.au



When a new apprentice or employee arrived at the Ipswich Railway Workshops (IRW), it surely must have been an overwhelming and unforgettable experience. He almost certainly would not have encountered anything like it before. The extent of the site, the size of the buildings, the number of employees, the tasks being undertaken, the extraordinary array of machinery and equipment, the cacophony of sounds emanating from the different shops, the strange and distinctive smells, the language and slang used by the workers, all combined to make a unique environment. The number of employees was more than the population of many towns in Queensland. The interior of the Boiler Shop, Erecting and Machine Shop, and Carriage Shop were of a gargantuan scale – larger than any cathedral or other building in the state.

The Workshops were rightly described as “a city within a city”, or a “different country”; the sense that it was like another country was reinforced by the strict rules regarding who could enter the site. Understanding how the Workshops functioned only came after spending a lengthy period on the site. This paper explores three aspects of the Workshops:

- how the Workshops were organised;
- who worked there and their tasks, hierarchy of staff; and
- trade unions

Through these three areas a clear picture emerges of a self-contained, hierarchical and parochial community that fostered a working camaraderie and a sense of identity that extended long past the end of employment at the Workshops (Figure 1).



FIG. 1. Ipswich Railway Workshops staff, c1910. Image courtesy NMA and Whitehead Studios.

PHYSICAL ORGANISATION OF THE WORKSHOPS

The Ipswich Railway Workshops evolved in three main stages. The first stage was the development of the first workshops (1864-1885) near the banks of the Bremer River and close to the original terminus of the Ipswich-Toowoomba rail line (Figures 2 and 3). The second stage was an expansion just over a kilometre to the north of the original site in an area known as “the Flats”. The third phase began with a major expansion and modernisation in the early 1900s until the significant reduction of operations in the 1990s.

By the early 1880s, the site of the original Ipswich Railway Workshops on the banks of the Bremer River had reached full capacity. Railway lines were being constructed at a hectic pace throughout Queensland. In southern Queensland, the western trunk line was progressing towards Charleville and the line south from Warwick to the border had reached Stanthorpe by 1881. Suburban lines

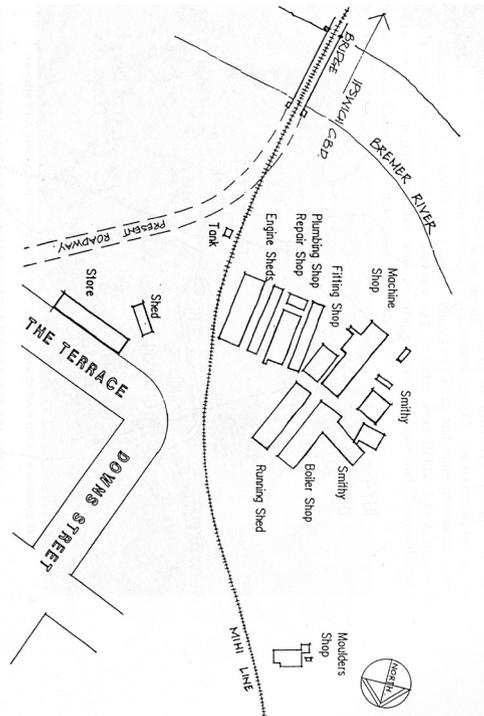


FIG. 2. Plan of first Workshops on the banks of the Bremer River at North Ipswich (Buchanan Architects et al, 1995:8).



FIG. 3. Ipswich Railway Workshops at original site, 1883. Image courtesy TWRM/QR.

were being built in Brisbane to Sandgate and Wynnum, and a line to the Logan district commenced construction in 1882 and extensions to the South Coast were approved in 1885.¹ The expansion of the rail network resulted in a dramatic increase in the amount of rolling stock to be built and assembled, and also repaired and maintained. More buildings were urgently needed at Ipswich but room for expansion was extremely limited. In 1884 the Queensland Government decided to expand the Workshops to a new site. The area chosen for the Workshops expansion was approximately a kilometre to the north of the original site. The area was known as 'Box Flat' or 'the Flats'. Plans for the layout of the Workshops were prepared by H.C. Stanley, the Chief Engineer of the Southern and Western Railway. Stanley's plan was intended to improve the efficiency of the Workshops compared with the original site. The principal feature of the plan was the arrangement of the main buildings in two rows separated by sufficient space to operate a 'traveller'. Tracks from each building converged at a common point to the west of the complex. Between 1884 and 1890, six buildings were constructed: the Carriage Shop, Wagon and Paint Shop, Blacksmith's Shop, Fitting Shop and Timber Shed (QSA A/8843).

The arrangement of the Workshops established in the 1880s and modified by Nisbet (appointed Chief Mechanical Engineer in 1899) in the early 1900s remained substantially unaltered for the main working life of the Workshops (Kerr 1990: 96). A fundamental principle of the 1900s layout was the need to provide for the most efficient movement of materials, machinery and rolling stock between the various shops. The operating organisation of the workshops was an important factor in this.

The Workshops (Table 1 and Table 2) were divided broadly into three main areas:

Table 1. Details of the main activities and occupations in the ancillary buildings.

Building	Activity / Occupation
Timber storage sheds	Stored a large supply of timber including hardwood, pine, silky oak, maple for the construction and repair of wagons and carriages and also for decorative purposes.
Supply/store	Centrally located for the convenient distribution of materials required in the various shops.
Power House	Provided three forms of power: electricity, hydraulic and pneumatic.
Canteen	Provided meals for staff
Chief Mechanical Engineer's office	Office of the Chief Mechanical Engineer and his staff ; Account's department (controlled accounts) – clerks and accountants.
Drawing office	Designs prepared for construction of rolling stock. More than 100 drawings were often required for a locomotive. Clerks, draughtsmen, tracers.
Timekeepers office	Located at the entrance where employees clocked on each day. Clerks.
General	Cleaning and oiling axle-boxes of carriages and wagons, carried out by Oiler.
General	Attending to the yards surrounding offices and workshops and keeping the place in order, carried out by Yard Orderly.

- The northern section focussed on the supply, manufacture and storage of components and included the Saw-mill, Upholstery Shop, Wheel Shop, Store, Blacksmiths, Pattern Shop and Foundry.
- The southern section focussed on the assembly, repair and maintenance of rolling stock and included the Boiler Shop, Erecting

Table 2. Details of the main activities and trades in the workshops.

Buildings	Activity	Main Trades/ Occupations
Tarpaulin Shop	Dresses tarpaulins and canvas with the various dressings.	Tarpaulin Dresser
Saw-mill/ K-mill	Cutting and dressing timber.	Sawyer, Carpenter, Wood Machinist
Trimmers/Upholstery Shop	All upholstery works were undertaken in this shop including: seats, beds, wall and floor linings for carriages. Leather goods were also made and repaired in this shop, such as the manufacture and repair of leather goods including door straps, handles and bellows.	Trimmer, Hair Teaser
Wheel Shop	All works associated with wheels including repairs and fixing new wheels to axles.	Machinist, Turner
Blacksmith	The Blacksmith shop comprised of more than 50 forges and equipment including drop hammers for the manufacture and repair of a wide range of iron components.	Blacksmith
Foundry/Moulding Shop	Metal goods were produced using patterns, sand boxes and molten metal. These goods included a wide variety of components for rolling stock and also metal goods used in railway construction.	Moulder, Boilermaker, Cupola Charger
Pattern Shop	Manufacture of wooden patterns used in the production of locomotive parts. Patterns were used to make a mould for casting metal objects.	Pattern Maker
Boiler Shop	Construction and repair of boilers. Also construction of tenders, water-tanks and steel ballast wagons.	Boilermaker, Welder
Erecting and Machine Shop	This shop was divided into two parts: the erecting shop where locomotives were assembled and repaired; and the machine shop where components were manufactured, modified or repaired.	Coppersmith, Tinsmith, Fitter, Brass-Fitter, Brake-Fitter
Wagon and Carriage Shop	Construction and repair of wagons and carriages.	Wood Machinist, Wood Turner, Cabinet Maker, Coach Builder, Wagon Builder
Paint Shop	New and old carriages were painted and decorated, plus signage.	Painter, Spray Painter, Sign-writer, Stenciller, Glass Cutter

and Machine Shop, Carriage and Wagon Shop, and Paint Shop.

- The third section comprised buildings providing ancillary and support services including the Power House, Chief Mechanical Engineer's Office, Drawing Office, Canteen, and Timekeeper's Office.

The demarcation between south and north workshops was not rigid as the manufacture of components and parts was also undertaken

in the southern group of shops. However, the ancillary buildings, particularly those associated with the Chief Engineer and the Drawing Office, built on the hill, were perceived as separate from everyday operations and fulfilled an overseeing role.

The organisation of operations into different workshops followed the approach used in Britain. This meant that specialised skills were built up in particular workshops. This was particularly important for workshops

such as the Boiler Shop, where quality was a critical factor in the construction of boilers. Well publicised problems with boiler explosions had already led to expansion and improvements in boiler making operations at the workshops (Buchanan, this volume). Other innovations such as the establishment of the Power House also affected the internal workings of workshops, providing energy on tap for operation of machinery.

Different components were manufactured in, and moved between different workshops; for example, wheels for locomotives were cast in the Foundry, moved to the Machine Shop where they were finished on a lathe, fitted with tyres and assembled, and the finished wheel sets were then moved to the Erecting Shop. The movement of components from one workshop to the next created the link between workshops and the traverser was a major conduit for this interaction. However, the workshops primarily worked as independent operations:

The Workshops were very strict in those days. There were some shops I didn't see in twenty years as we were not allowed to leave our posts. Greg Bell

The independence of workshops included their own management structure of foremen, leading hands etc., and specific trades were represented in each of the workshops. The physical location and distribution of workshops along the traverser track also contributed to their independence. Competition was a particular feature of the relationships between the various workshops through time, with informal cricket matches and even at one stage a garden competition (Buchanan, this volume).

WORKSHOP EMPLOYEES

When the Workshops commenced operations in 1864, the workforce was modest.

A few tradesmen were employed, mainly Boilermakers and Blacksmiths, to assemble locomotives and other rolling stock and undertake necessary repairs and maintenance. These tradesmen were assisted by a few labourers and apprentices. As the extent of work expanded, so did the number of employees, gradually increasing to 650 at the turn of the century and to more than 3300 in the late 1940s (Anon, 1985; QSA A/24204). While the increase in the number of employees was a major change in the workforce, more significant was the increase in specialised roles and tasks. The tradition of craft production where each task was a specialised or distinctive undertaking was firmly embedded in the Workshops (Figure 4).

The classification of the different trades and occupations operating at the Workshops was formalised in the 1917 Railways Regulations and Award (Queensland Railways, 1917). The regulations provided precise descriptions of every trade and occupation, regardless of how skilled or menial. No less than 107 jobs were described. Some were well known and needed little explanation, such as "Carpenter", "Painter" and "Blacksmith". A Blacksmith was described as an 'employee whose work consists of heating iron, steel, or other metal in an open fire or furnace and subsequently working same on an anvil or under a steam or other power hammer'.

...I remember times when the sparks from welding would go through my shirt...

When I went into the Blacksmiths Shop in 1947 I had to wear woollen clothes because of sparks. We wore a flannel shirt and serge trousers. Cotton clothes could catch on fire and start smouldering. The only protective clothing I wore was an apron, made from a piece of leather from the Trimmers Shop. But I remember times when the sparks from welding would go through my shirt, trickle down my tummy and I'd pull my belt aside. It'd



FIG. 4. Some of the trades represented at the Ipswich Railway Workshops, 1903-1904. Image courtesy TWRM/QR.

*go down my trousers and into my boot!
Then I was in trouble! From 1953 until
1993 I worked in the forging shop. In the
1950s there were 20 other men there –
forgers, drop hammer forgers, assistants
and furnacemen. We worked in gangs
of four. In the late 1950s we made our
own steel bars from recycled scrap iron.
We could make 32 bars a day. Later we
got steel in bars which the forgers had to
cut to size for the blacksmiths. Up to 70
blocks of steel would be cut each day. In
11 days we could make 200 large hooks.
Syd Qualischefski (Figure 5)*

Other positions were perhaps unexpected at the Workshops but the roles were self-



FIG. 5. Syd Qualischefski, Blacksmith Ipswich Railway Workshop, 1947-1993. Image courtesy Lyle Radford.

explanatory. For example, a belt-maker was a “leather worker making and repairing belts, and lacing same, for machines, making hose and tank pipes, and performing general leather work”. An “oiler” was an ‘employee engaged in the work of cleaning and oiling axle-boxes of carriages and wagons’. More obscure were positions such as a “hair teaser” (an employee engaged at the machine for teasing hair for upholstery work), “tarpaulin dresser” (an employee who dresses tarpaulins, canvas, etc with the various dressings), “cupola charger” (an employee engaged in the work of feeding coke and metal into the foundry cupola for smelting purposes) and “spring buckler” (an employee engaged in the work of pressing the buckles on springs by mechanical or other appliances). Underlying the work of tradesmen in all the workshops were semi-skilled labourers known as tradesmen’s assistants and general labourers. Even the most menial tasks were given a title. Probably the lowliest of tasks, apart from the labourer, was that of the “yard orderly” who was

“engaged in attending to yards surrounding offices and workshops, and keeping such places in order”.

Table 3 provides a breakdown of employees in respective occupations in 1934. The main occupations were Fitters, Turners, Boilermakers, Blacksmiths, Coachbuilders, Moulders, Wagonbuilders and Painters who, along with their assistants and apprentices, comprised 50 percent of the workforce. By contrast, there were a range of occupations undertaken by single employees including rope splicer, rack sawyer and glazier.

Whilst there was an enormous variety of work across the Workshops and the number of people involved in any one shop was large, somewhat counter to intuition there was long term occupation of roles, with people staying in jobs and in particular workshops for much of their working lives (Figures 6 and 7).

This meant that concepts of craftsmanship and specialised roles within a trade were highly developed:

Table 3. Trades and Occupations – Ipswich Railway Workshops, 1934.

Role	#	Role	#	Role	#
Air Compressor Attendant	1	Exchange Attendant	1	Sandstone Grinder	1
Anglesmith	2	Fire Watchman	2	Sanitary Attendant	2
Apprentice Boilermaker	7	Fireman	1	Saw Doctor	1
Apprentice Blacksmith	4	Fireman Power House	1	Saw Sharpener	1
Apprentice Brassfinisher	1	Fitter	185	Sawyer Auto, Crosscut	1
Apprentice Coachbuilder	4	Flanger’s Assistant	2	Sawyer, Crosscut	1
Apprentice Coach Painter	3	Foreman	10	Sawyer (general joiners)	1
Apprentice Coppersmith	2	Ganger	2	Sawyer (No. 1)	2
Apprentice Electric Fitter	2	Gatekeeper	1	Sawyer (No. 2)	3
Apprentice Fitter	8	Glazier	1	Sawyer, Log Band	1
Apprentice Moulder	8	Grinder and Polisher	1	Screw and Tapper	5
Apprentice Pattern Maker	1	Horizontal Sawyer	1	Senior Boiler Inspector	1
Apprentice Tinsmith	2	Junior Journeyman	5	Shedman	1
Apprentice Trimmer	1	Labourer	163	Shift Electrician	2
Apprentice Turner	3	Leading Hand Bricklayer	1	Shop Storeman	1
Apprentice Wood machinist	1	Leading Hand Carpenter	1	Shunter	1
Ass’t Engineer Power House	1	Leading Hand Spring Maker	1	Slingsman	1
Ass’t Mechanical Engineer	4	Lifter	21	Slotter	1
Beltmaker	3	Locomotive checker	2	Spray painter	3

A different country – the organisation of Ipswich Railway Workshops

Role	#	Role	#	Role	#
Blacksmith	37	Locomotive Painter	7	Spring Buckler	1
Boiler Attendant	1	Locomotive Shunter	2	Springmaker	4
Boilermaker	61	Machine Grinder	4	Staff Clerk	1
Boilermaker's Assistant	52	Maintenance Labourer	1	Station Carpenter's Lab.	
Boltmaker	1	Marker-out	5	Staymaker	2
Bosh-hand	2	Marker-out, Wagon	1	Stores Distributor	1
Blue Printer	1	Machine Shop Foreman	1	Striker	40
Brassfinisher	30	Messenger	5	Sub-foreman	30
Brass Turner	1	Metal Polisher	3	Sug. & Inven Board Officer	1
Bricklayer	1	Metal Turner	1	Tailor-out	10
Bricklayer's Labourer	2	Metaller	2	Tapper	1
Cabinet-maker	4	Mill Foreman	1	Tarpaulin Foreman	1
Canvas Worker	14	Miller	6	Tarrer	2
Canvas Worker's Assistant	3	Motor Oiler	1	Timekeeper	4
Carpenter	7	Moulder	25	Tinsmith	6
Carriage Foreman	7	Moulder's Furnaceman	4	Tool Foreman	1
Case Hardener	2	Number Taker	1	Toolmaker	5
Carpenter	7	Nutmaker	1	Tool Storeman	1
Carriage Foreman	7	OIC, Wood section	1	Tractor Driver	1
Case Hardener	2	Officer in charge, scheduling	1	Traverser Driver	1
Casting Dresser	2	Officer in charge Metal, Sec.		Trimmer	17
Chief Clerk	1	Oiler	4	Tube Brazier	1
Chief Mechanical Engineer	1	Order Clerk	1	Tube Turner	2
Clerk	23	Orderman	1	Tube Tester	4
Coach Fitter leading hand	1	Oxywelder	7	Turner	59
Coachbuilder	72	Painter	14	Tyre Borer	1
Coach painter	24	Painter's Assistant	1	Tyre Retaining R.R.M. Optr	1
Coalman	1	Painter's Labourer	8	Wagonbuilder	73
Contract Clerk	1	Pattermaker	7	Wagon Foreman	1
Coppersmith	9	Pattern Storeman	1	Wagon Tarrer	1
Crane Driver	20	Pipe Mounter	1	Watchman	3
Crane Slingsman	7	Planer	5	Westinghouse brake Inspec- tor	1
Cupola Charger	7	Plate Furnaceman	1	Westinghouse brake instructor	1
Draftsman	6	Plumber	8	Wheel Foreman	1
Driller	14	Pneumatic driller and tap- per	21	Wheel Furnaceman	1
Driller & Tapper	4	Puncher & Shearer	1	Wheelgrinder	1
Electric Mechanic	4	Rack Sawyer	1	White Metal Worker	2
Electric Welder	4	Rail Motor Inspector	1	Wood machinist	12
Electrical Fitter	21	Record Clerk	1	Woodturner	1
Electroplater	2	Rolling-stock Clerk	1	Workshops Driver	1
Engine-driver and oiler	2	Rope Splicer	1		



FIG. 6. Staff of the Trimmers shop, Ipswich Railway Workshops, Christmas 1903. Image courtesy TWRM/QR.



FIG. 7. Trimmers at Ipswich Railway Workshops, c.1911. Image courtesy NMA and Whitehead Studios.

...Even though the work was dirty, dusty and hot I lasted 49 years and 3 months...

I joined the railways in 1942 when part of the Moulding Shop had been moved to Barbetts' old foundry to cope with the wartime demand. The Workshops made the big 20 to 30 ton castings. It was so busy the moulders had to work a 6 day week. In about 1943 we all moved back to the Workshops which made the moulding shop really overcrowded. We had 60 to 80 tradesmen in the shop as well as apprentices and labourers. When I started I promised my father I would last my three month probation. Even though the work was dirty, dusty and hot I lasted 49 years and 3 months! In the early days we had so much work you could pick your job. The pattern storeman would bring over the order, pattern and core box and line them up. Shops trying to jump the queue dealt with the foreman. After 15 years in brasswork I could turn my hand to anything brass. "Tom" Vic Kay

...I was twelve when I became an apprentice...

I was twelve when I became an apprentice carriage painter in the paint shop. I worked there until 1962. Each day was different. Each day I changed into my paint clothes that were stored in a cupboard and retrieved my tools from another and waited for the foreman to assign each of us the day's task. If a carriage had come in for a complete overhaul several of us would have to burn off the old paint and prepare it for the Carriage Shop. When the carriage was repaired it would be shunted back to the Paint Shop where one of us would prime the carriage and fill any holes with stopping putty and rub it back. A painter would add one coat of red oxide primer and the next day two men would apply two coats of grey brushing surfacer. The

following day the carriage was rubbed back and two coats of gloss enamel were applied over the next two days. The trades assistants painted the roof, bogies, battery boxes and underframe. The shop was hot in summer and extremely cold in winter as it was the closest to the river. Fires had to be lit to allow the paint to dry – not to keep the painters warm! At any one time in the 1950s there could up to 12 carriages in the shop and another 12 in the burning off shed. Carriage painters painted new and old carriages, both inside and out. French polishers would assist with the interiors. Keith McDonald

Working conditions were variable between shops. The heat and dust of the Blacksmith and Moulders shops were a great contrast to the coolness and cleanliness of the Pattern Shop (Figures 8 and 9). The Pattern Shop was an essential part of the Foundry. Here, skilled carpenters produced the wooden patterns for use in making the moulds in the Foundry in preparation for casting.

...The senior tradesmen in the shop passed on this skill to each generation...

Depending on the job we [Pattern Makers] worked on our own or in teams of two. We worked with timber and our tools of trade were planing machines, saws, chisels and carving tools. We produced patterns for every part of the locomotive. An order would come to the shop with the drawings from the draftsman office. A pattern maker then "marked out" the object on a wooden board giving extra allowance needed for the machine blades and the amount of shrinkage in the metal when it cooled. He then cut out the pattern. It was a precise science knowing the different amounts that iron, steel, brass and aluminium would shrink and what allowance to include. The senior tradesmen in

the shop passed on this skill to each generation. The Pattern Shop was a good shop to work in. Big doors at the end of the shop and windows along the side kept it cool. It was a clean shop to work in, with a wooden floor. Some of the older men came to work in a coat and vest but worked with a white apron over their shirts. These aprons stayed remarkably

...work was highly skilled but could be dangerous...

clean. Colin Ford

I worked in the Moulders Shop from 1943 until 1966. When I started there were 76 other moulders as well as apprentices, labourers, crane drivers, furnacemen and casting dressers. I remember that moulding was a very hard and heavy job. We worked two men to a machine and made 1000 brake boxes each day. Other moulders made engine cylinders and engine components. Molten metal was taken from the furnace by cranes and poured into hand pulled ladles at each machine. Iron casting was done each day between 1pm and 3.45pm. At times the furnaces would "freeze up" causing delays. Sometimes molten metal would spill and cause large fireworks displays as it hit the ground, concrete or steel plates. Our work was highly skilled but could be dangerous. Jim Penman

The variety of trades, positions and working conditions in individual workshops across the site as a whole meant that the organisational structure of the Ipswich Railway Workshops was complex.

ORGANISATIONAL STRUCTURE

Within the Railways Department, the Workshops was the responsibility of the position that was variously known



FIG. 8. Interior of Blacksmiths' Shop, Ipswich Railway Workshops, 1910. Image courtesy NMA and Whitehead Studios.



FIG. 9. Interior of Pattern Shop, Ipswich Railway Workshops, 1910. Image courtesy NMA and Whitehead Studios.

as Locomotive and Rollingstock Superintendent, Locomotive Engineer, Chief Mechanical Engineer and Workshops Superintendent, and Chief Mechanical Engineer (Table 4). This position was a senior position within the Railways Department and answered directly either to the Deputy Commissioner or Commissioner of Railways. The Chief Mechanical Engineer had an active role in the administration of the Ipswich Workshops and for an extended period, his

office was based on site.

From the 1860s to the 1980s, the organisational structure of the Workshops remained

substantially unchanged (Figures 10-12). In the infancy of the Workshops, the Locomotive Superintendent was directly responsible for the management of workshops. As

Table 4. Chief Engineers

Chief Engineers		
30/9/1863 – 1864	A. C. FITZGIBBON	Southern & Western Railway
1902	N. BELL	
1902 – 1911	W. PAGAN	
Locomotive Engineers		
1867 – 1869	J. F. L. JETTER	Superintendent (1865-1869)
1869 – 1874	H. DAVIES	Superintendent (1869-1871)
1874 – 1883	J. W. BEDFORD	Superintendent (1871-1876)
1883 – 1899	H. HORNIBLOW	Superintendent (1876-1883) Locomotive Engineer (1883-1899)
1899 – 1901	W. H. NISBETT	Chief Mechanical Engineer
1901 – 1904	G. W. NUTT	Chief Mechanical Engineer
1904 – 1910	H. HORNIBLOW	Locomotive Engineer
1910	R. T. DARKER	Locomotive Engineer
1910 – 1911	C. F. PEMBERTON	Locomotive Engineer
1911 – 1915	C. F. PEMBERTON	Chief Mechanical Engineer
1915 – 1916	J. E. ROBERTSON	Chief Mechanical Engineer
1916 – 1918	J. E. ROBERTSON	Divisional Mechanical Engineer and Workshops Manager
1918 – 1921	C. F. PEMBERTON	Chief Mechanical Engineer
1921 – 1925	J. E. ROBERTSON	Divisional Mechanical Engineer and Workshops Manager
1925 – 1940	R. J. CHALMERS	Chief Mechanical Engineer
1940 – 1943	A. S. DEACON	Divisional Mechanical Engineer and Workshops Manager
1943 – 1953	V. J. HALL	Divisional Mechanical Engineer and Workshops Manager
1953 – 1970	W. A. CASTLEY	Chief Mechanical Engineer and Workshops Superintendent
1970 – 1974	C. A. TURNER	Chief Mechanical Engineer & Workshops Superintendent
1974 – 1986	J. E. JEFFCOAT	Chief Mechanical Engineer
1986 – 1989	W. J. ADAMSON	Assistant Commissioner Workshops, Maintenance Facilities
1986 – 1989	K. W. WOOD	Chief Mechanical Engineer
Workshops – Group General Managers		
1992 – 1999	T. C. FISHER	Group General Manager of Workshops
1999 – 2003	B. BOCK	Group General Manager of Workshops
2003 – 2005	A. TAYLOR	Group General Manager of Workshops
2005 – 2010	T. GASSMAN	Acting Group General Manager RACS* * RACS, Rolling Stock and Component Services

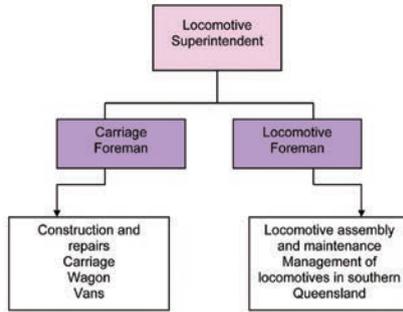


FIG. 10. Ipswich Railway Workshops Organisational Structure 1879.

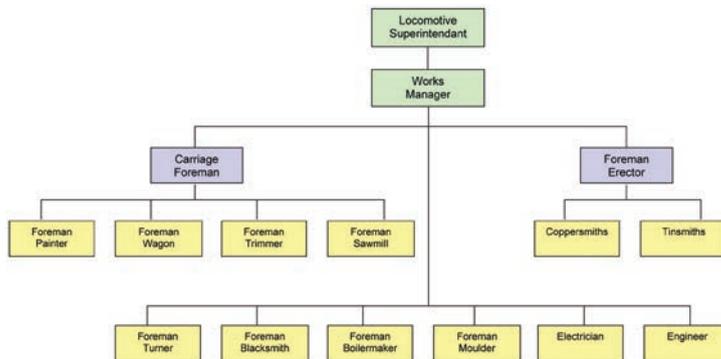


FIG. 11. Ipswich Railway Workshops Organisational Structure 1910.

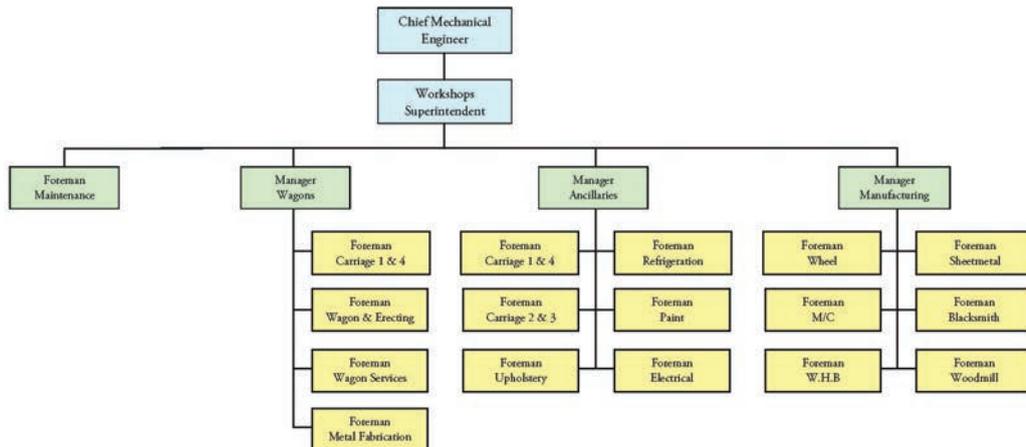


FIG. 12. Ipswich Railway Workshops Organisational Structure 1988.

the number of staff and output increased, the day to day management became the responsibility of a Works Manager who later became known as the Workshops Superintendent. Foremen had oversight of the individual workshops in their entirety and sections within the Workshops. Senior Foremen who were later known as Managers were responsible for groups of workshops or sections.

The grouping of workshops under managers changed over time however the focus of individual workshops remained static over much of the working life of the site. As this account by Bill Scriven shows however, there

*...Through persistence I worked my way
up the ranks....*

was the opportunity for promotion from within the ranks of tradesmen:

When I finished junior in 1947 the railway was a large source of employment so I sat for the railway exam. Depending on your pass you were given a choice of trade. When my turn came I was offered carriage building or fitting. I wasn't interested in timber work and I like fixing bikes and things so I thought there was more scope in fitting. During my five year apprenticeship as a fitter I spent six months in the different shops learning all aspects of the trade. The sub-foreman in each shop would allocate you to a tradesman who would give you your practical training. Some were excellent tradesmen and teachers. But they were hard task masters. I had to aim for perfection and keep working until the fit was good enough. Some tradesman would give us the hardest tasks to do and call it good training. I enjoyed my apprenticeship and it gave me an excellent grounding in the trade. In those days most things were hand fitted. The Machine Shop would make the bearings

to rough stage but we would have to use hammers and chisels to cut it to size and then rough and smooth files to get a smooth finish and close fit. It was hard work. After years of studying at night I earned my diploma in engineering and in 1957 I joined the drawing office as an Acting Assistant Draftsman. Through persistence I worked my way up the ranks until my retirement as a Senior Designing Mechanical Engineer in 1995. Bill Scriven

Tradesmen, together with their apprentices, made up the bulk of the workforce across various workshops. It is not surprising then that apprenticeships are often vividly recalled by employees.

APPRENTICES

From the outset of the Workshops, apprentices or "lads" were an integral part of the workforce. While they often were initially given the most menial tasks, the need to train and develop local tradesmen was a high priority. The practice was to take apprentices on trial to see which trade they

*...After 4 months I changed to pattern
making...*

were best suited, whether it be a Blacksmith, Carpenter or Fitter (QVP 1879: 555).

I joined the railway as an apprentice trimmer on 1 April 1940. After 4 months I changed to pattern making which remained my trade for 45 years. As an apprentice I was put with a tradesman – John Ross – who then taught me my trade for the next five years. I was given a work bench with an ordinary wooden vice. As an apprentice I got my tools together. The Department gave me tools that I gradually paid off and I bought the rest from other patternmakers. When I finished my apprenticeship I was given

my own bench with a really good metal vice. Colin Ford

Apprentices were given an exam before being taken on to see whether they could read and write. At the 1879 Select Committee on the Railway Workshops, the Locomotive Superintendent Henry Horniblow was somewhat critical of the apprentices at the Workshops as he felt the “boys here do not keep as steady to it as they do in the old country”. He thought that some of the apprentices were too interested in cricket and other sports and had it too easy. He told the Committee that when he was a boy he “had to get up at half-past 5 o’clock in the darkest mornings to go to work at six o’clock but these boys do not go until eight” (QVP 1879: 555). The foreman of the Blacksmith’s department, James Suettt also complained about the apprentices, declaring that:

you cannot get boys here to do as they do at home. It is only dint of persuasion and yielding to their little hobbies sometimes, and by talking and explaining to them, that you can get them on (QVP 1879: 610).

Similar sentiments were no doubt expressed again and again as each generation of workers felt that they worked harder in more difficult circumstances than the “new” generation.

In the nineteenth century boys were assigned to the different shops and learnt their trade through practical experience. The process became more formal in 1916 when railway apprentices began to be required to attend theory classes at the Ipswich Technical College. The entry requirements were also formalised in the 1917 Railway regulations. Trade apprentices had to be of a “sound constitution and be able to read and write with facility, and have a knowledge of arithmetic as far as the compound rules”. The requirements for mechanical engineering

apprentices were more onerous:

They shall not be under sixteen nor over eighteen years of age, and shall be of sound constitution. They shall produce satisfactory certificates as to conduct and ability from the masters of the schools in which they have studied, and shall pass a preliminary examination in the following subjects English grammar and composition, mensuration of surfaces and solids, algebra, plane trigonometry, the elements of mechanics, and geometrical drawing (Queensland Railways 1917:64).

Later, the Railways Department introduced an apprenticeship system to select potential apprentices. The top students would be interviewed in order of their results by the senior staff and offered an apprenticeship. There was a hierarchy. The top student almost always chose the electrician’s apprenticeship. The next favourite was pattern making.

This close training was more intense than outside the Workshops...

Boiler making was the least popular because it was a noisy and difficult trade.

I always had an inkling that I wanted to do a trade – or at least my parents did. I applied for an apprenticeship electrician’s position at the Ipswich Workshops in 1952. I was interviewed by Jim Hogan and Harry Francis. Graham Kruger started with me and there was an intake of 17 others later that year. We started off spending two years working in the Power House getting an intensive training in the tools of trade and general electrical work. We worked with hand tools, lathes and drills. I trained with 27 guys in the Power House. Don McKenzie was our boss. In third year we moved to the main shop where James Laurenson

was the foreman. One or two apprentices were assigned to each tradesman and ...we learnt by watching the older tradesmen...

by helping him we learned our trade. This close training was more intense than outside the Workshops. Brian McNamara

I joined the Workshops in April 1952 and completed my apprenticeship as a Boilermaker in 1957. ... The Boiler Shop was a dirty, hot, and hard place to work. But there were also fun times as the



FIG. 13. Greg Bell, Blacksmith, Ipswich Railway Workshops, 1952-2002. Image courtesy Lyle Radford.

...there were also fun times...

older fellows were very good to the new boilermakers and taught us the trade. In those years we mainly worked with steam locomotives and occasionally built steel wagons. Grahame Stokes

On my first day as an apprentice blacksmith in summer 1952, I remember standing beside the fires and thinking "I'll only last one day". It was unbelievably

hot. But I retired from the same shop 50 years later! The striker was my offside and it was his job each morning to light the fires and to keep up my supply of steel. When I was an apprentice I was given new work to learn the trade. We learnt by watching the older tradesmen. The qualified blacksmiths got the repair work. The foreman handed out the tasks each day on a written order form. ... with the drop hammers going all day, this shop was a noisy place to work. Greg Bell (Figure 13).

The experiences of new apprentices at



FIG. 14. Barry Bruce, Plumber, Ipswich Railway Workshops. Image courtesy Lyle Radford.

...It was a great place to learn anything and I mean anything...

the Workshops were variable; some were overwhelmed by the size of the Workshops and the numbers of people and jobs. Most quickly found their niche and enjoyed their experiences and the sense of camaraderie.

After working as an apprentice moulder at Scotts foundry for 4 months I was offered a job as an apprentice plumber at the Workshops in 1972. I was 15 ½. The Workshops were enormous. The

place was huge, there were 3000 people and the scope of work was incredible. The Workshops was a complete community. I spent 6 months in the Sheet Metal Shop, then I moved around all the shops to get a good training in all parts of the trade. We did drainage, maintenance and worked on old carriages. The Sunlanders were only 7 or 8 years old then and I worked on their reconditioning. We pulled everything out – all the pipes and tanks – and completely refurbished it. Fantastic experience. I started off terrified but soon realised it was good fun because of the people I worked with. It was a great place to learn anything and I mean anything.
Barry Bruce (Figure 14)

The Workshops was a major centre for apprentice training, not only for boys from Ipswich but from throughout Queensland.

...the training we got was second to none...

By the 1950s the number of apprentices had grown to the extent that theory classes were held on site. Initially classes were conducted in a room in the Dining Room and later a purpose built apprenticeship training centre was constructed.

The electricians in the main shop were excellent tradesmen and they took great pride in their work. I believe the training we got was second to none. In third and fourth year I had classes at the Ipswich Technical College two nights a week and one afternoon for practical work. The night classes were 3 hours long. I lived at Walloon and had to catch a goods train back to Rosewood after 10pm. It could be after midnight when I got home and

...I made lifelong friends...

I had to start work again at 7.30am. It was better in my fourth year because my father bought a car and he could collect

me. I stayed at the Workshops until 1965. My training was an excellent grounding for the rest of my career.
Brian McNamara

Working with the tradesmen taught young people to be on an equal footing with 40 to 50 year olds. I learnt to deal with an enormous number of people, up to 200 in one day. It was a wonderful grounding I'll never forget. I did my college theory classes for one day a week during my first three years. My year was the first to have a 4 year apprenticeship and we had to do the theory at night classes in fourth year. I was plumbing apprentice of the year in Queensland in my first year which gave me a 5 percent pay rise. A big part was the social life. Although the drinking age was 21 the

...There had only been one other female apprentice before us...

tradesmen would take us to the pub. There was also parties for Christmas, retirements and birthdays. I made lifelong friends. Barry Bruce

Until the 1980s, all apprentices were male. Anita Branch was one of the female apprentices at the Workshops.

I started my apprenticeship as an electrical fitter/ mechanic in 1987. I went through with one other female, Danielle Brown, but she was a sheetmetal worker. There had only been one other female apprentice before us. I saw an advertisement in the paper for railway apprentices and sat the exam. I was then called for an interview in front of 4 or 5 men and asked why I wanted to join the railways. There were 11 electrical apprentices in my year and most of us were only 17. We all started in the training centre at the Workshops and over the next 4 years we did some turning, fitting and a little bit of boilermaking. We covered the basics in nearly all



FIG. 15. Apprentices at the Ipswich Railway Workshops, 1983. Image courtesy TWRM/QR.

trades, specialising in electrical. I worked with the older, experienced tradesmen. They were very intelligent, with a lot of knowledge to pass on. I have the utmost respect for them. We did theory at the TAFE College, either Bremer or Yeronga, in three courses of 7 weeks over the 4 years. If I had done year 12 like some of the others it would have helped a bit. The railway was unprepared for female apprentices and we had to wear the men's clothes. Danielle made her own. Like the men I was given a grey shirt and trousers. They were huge around my waist but I just had to hold them up with my belt. Anita Branch

The presence of apprentices was an important feature in the working organisation of the Workshops site and tradesmen who undertook apprenticeships at the Ipswich Railway Workshops spread wide across the Queensland Rail network and even further afield (Figure 15). One other area had an

important part to play in the organisational functioning of the Workshops and this was the presence and activities of Trade Unions.

TRADE UNIONS AND THE WORKSHOPS

Trade Unions have played a major role within the Workshops since the early twentieth century. Union membership became compulsory for all employees and the unions were active in improving conditions and wages.

The situation was rather different in the nineteenth century. Unions or member associations were often treated by the government and administration with suspicion and at times even contempt. In the 1879 Select Committee on Railway Workshops, Ipswich employees were questioned on a number of occasions about the involvement of trade unions. The locomotive foreman, Richard Darker was quizzed as to whether he had any problems

in dealing with men in consequence of 'trade combinations' (QVP 1879: 603). James Suett, Blacksmith Foreman, was interrogated at length about his involvement with the Amalgamated Society of Engineers. He went into detail to explain that the object of the Society was simply to benefit members:

It is a benefit society for the purpose of assisting each other in case of accident, such as blindness by chippings, or loss of sight or any other accident, or sickness, or to keep a family with a loaf of bread in the house when there is a depression of trade (QVP 1879: 610).

When questioned whether society members were willing to strike, Suett explained that strikes were "entirely against all the desires and principles of the society" (QVP 1879: 610). Clearly the Select Committee was attempting to ascertain whether the Amalgamated Society of Engineers was likely to encourage strike action at the Workshops. Indeed, an article in *The Week* newspaper five years later suggested that the reason the Select Committee had been established was a desire to address the alleged "industrial and political abuses" in the Workshops – or in other words, the growing influence of trade unions (Anon, 1884). The Select Committee had been formed shortly after the McIlwraith government had come to power and was keen to curtail union influence. A number of dismissals occurred in the Workshops ostensibly because of a decline in work. *The Week*, however, was emphatic that employees were dismissed for political reasons.

The attempt by the government to curtail the union movement had little impact at the Workshops. During the 1880s employees joined existing societies as well as newly created unions such as the Queensland Railway Employees' Association (QREA) which was formed in 1886.

The union movement generally suffered a setback after the shearers and maritime strikes of the early 1890s. Political action rather than militant industrial action was regarded as the means of achieving the goals of the union movement. With the growing electoral support for the Australian Labor Party and its political influence in the early twentieth century, unions became more acceptable. Their role in industrial affairs was well and truly cemented when the Labor Party attained office in its own right in 1915. The 1917 regulations relating to railway staff contained provisions that recognised the role of "union representatives" in the Workshops. The regulations stated:

Employees who are the chosen representatives of their fellow employees shall in the mutual interests of the Commissioner and the employees, be allowed reasonable time to investigate any matter likely to lead to dispute between the Commissioner and his employees relative to working conditions. (Queensland Railways, 1917: 28)

The acceptance of unions in the Workshops was reflected in the 1918 Royal Commission on the administration of Railways in Queensland. A number of employees from the Ipswich Workshops referred to the role of unions in giving evidence to the Commission. Unlike the 1879 Select Committee, none were challenged or questioned about union membership and the activity of unions (QPP 1918: 163, 447, 472, 501, 505, 641).

Workshop employees were represented by a wide range of unions and reflected the diversity in trades and skills. Unions with representation included:

Moulders' Union
Boilermaker's Society
Coachmakers' Federation

Blacksmiths' Society
Australian Railway Union
Federated Ironworkers of Australia
Queensland Railway Union
Amalgamated Metal Workers' Union
Building Workers Industrial Union
Vehicle Builders' Federation
Electrical Trades Union
Australian Workers' Union

Over time, some unions merged with others or altered their names. By 1918, a combined unions committee was formed to negotiate with management, in order to enhance the effectiveness of the unions (QPP, 1918: 505). Unions were consulted on a wide range of matters. For example, when the Chief Mechanical Engineer proposed to introduce a new timekeeping system in 1925, he consulted with all unions represented at the Workshops, demonstrating the growing power of the union movement, compared with attitudes in the 1880s (QSA A/24514).

Strikes were not uncommon. Some concerned local matters and were confined to issues relating to conditions in the Workshops. Other strike action was part of wider industrial action throughout. Two of the more notable strikes were in 1912 and 1948 (QSA RSI4219-1-223, RSI4219-1-224, RSI4219-1-225; QT, January to March 1912).

The 1912 general strike began over the right of a Brisbane tramways employee to wear a union badge on his uniform. The manager of the tramways was an anti-union American, ironically named Joseph Badger. His objection to the badges resulted in a strike which soon spread to other industries. In Ipswich, the miners went on strike, but railway employees were initially reluctant to become involved, although they refused to transport coal for the Tramways. Mass meetings were held at lunchtime outside the gates of the Workshops, and in the evening at

the city's favourite rallying point, the Blackall Fountain at the intersection of Brisbane and Nicholas Streets.

On 2 February 1912, "Black Friday", there was street violence in Brisbane and a number of people were injured as strikers battled police and specially-sworn-in constables. In Ipswich that same day, the protests were peaceful. Miners, headed by the Blackstone Band, formed a procession and marched through the city streets to the Workshops in time for the lunch break.

The Workshops employees were said to have largely ignored their presence and either went home as usual for lunch or went to the Dining Hall (QSA RSI4219-1-223, RSI4219-1-224, RSI4219-1-225). The exception was the staff of the Westinghouse Brake Company who were at the Workshops to facilitate the change-over to the new brake system. Led by Frank Cooper, they immediately stopped work and joined the miners outside the gates. After work, however, 500 railway men joined another street parade and within days, all railway employees had been ordered by their unions to strike. At the Workshops, 1251 men went on strike. Another 204, the "loyalists", refused to strike and were paid for turning up to work, even if they were unable to perform any useful tasks. Commissioner Evans visited the site and enrolled some of the loyalists as special constables. Picketing then began at the gates and soon a "posse of mounted constables" was needed to protect the loyalists. The State Governor issued a proclamation, ordering a return to order. The following day, nearly all Workshops employees returned to work and were met at the entrance by the Commissioner Charles Evans.

In contrast, the miners remained on strike. Within a few weeks, the railways were short of coal and a steam train fueled with wood was run on the Brisbane Valley line as a trial.

The miners finally resumed work after a stoppage of five weeks (QRAR, 1911-12; QT, 19 February 1912, 21 February 1912). The strike had a lingering effect. A newspaper report commented that there was “not the same friendly spirit” among employees at the Workshops and a few weeks later, a Power House employee was sacked when he called another man a scab (QT, 20 February 1912). Frank Cooper had continued to take a prominent role in the dispute. He was dismissed from his job with Westinghouse at the Workshops but remained in Ipswich. Within three years, he had been elected to Parliament and eventually became Premier of Queensland (Cross, 2006).

There were many other smaller strikes at the Workshops including a Moulders’ Strike in 1941 which attracted criticism because it occurred during World War II. One of the bitterest disputes however was the state-wide Railway Strike of 1948 which lasted from 3 February to 6 April. The nine week strike initially grew out of dissatisfaction at the Queensland government’s unwillingness to grant wage increases for boilermakers, blacksmiths and other metal workers. The railway workers were protesting at the Industrial Court’s delays in processing a log of claims, and within days, 23,000 railway workers were reported to be on strike (QT, 1 June 1941, 5 February 1948).

Some of the bitterness arose because the Premier, Ned Hanlon, was a Labor politician and a former railway man himself. Hanlon refused to negotiate directly with railway workers, insisting they keep within the arbitration system (Murphy and Joyce, 1978). Mass meetings were held outside the Railway Workshops and at the Wintergarden Theatre in Ipswich. Every train in Queensland stopped running and buses struggled to provide a commuter service. In Ipswich, the rail strike led to many coal miners being

stood down, throwing an extra 1800 men out of work. As the state ground to a halt, Hanlon declared a State of Emergency and police were given extra-ordinary powers. The railway men were ordered back to work, but most refused to do so (QT, 9 February 1948, 13 February 1948, 27 February 1948). Much of the comment about the strike blamed Communist agitators. There was violence in Brisbane when a railway unionist and a waterside worker were injured by police during a protest and solicitor Fred Paterson was cudgelled by a detective and sustained concussion. There were no major disturbances at the Workshops, although police had to patrol the railway Roundhouse after some workers obeyed the order to return to work. There was also some picketing, and claims that local businesses were “black banned” if they refused to donate to the strike fund (Fitzgerald 1984; QT, 28 February 1948, 1 March 1948, 25 March 1948). The strike ground on for two months and ended with little or no gain for either side (QT Feb-April 1948).

After the strike, the workers ultimately obtained the wage increase they had sought. This strike, which had its origins in the Ipswich Workshops, became a landmark in the history of industrial relations in Queensland as one of the ‘most viciously contested conflicts’ in the immediate post World War II period (QT, Feb-April 1948).

CONCLUSION

Throughout its existence, the Ipswich Railway Workshops have continued to provide employment and training. The structure and organisation of the workplace, while changing with new technology and altering functions and names, remained substantially the same (Figure 16). The emphasis on various workshops and the realities of the different working conditions

...everything had changed...

perpetuated the traditions of the separate workshops. Despite working conditions changing over the last hundred years, the Ipswich Railway Workshops have continued operating as an entity. The most profound effect on the workshops was externally imposed with the change from steam to diesel locomotives.

When I returned to the Boiler Shop in 1984 everything had changed. There were no longer steam locomotives to work on. We mainly repaired metal wagons. The trade had largely changed from traditional boilermakers to sheet metal fabricators. Occasionally I worked on the heritage fleet as I was one of the few men who could repair a tube in a firebox or fix a boiler. I retired from the Workshops in November 1997.
Grahame Stokes

When diesel locomotives were built in the 1960s fewer moulders were needed. Plastic replaced metal engine components. "Tom" Vic Kay

These changes brought the Ipswich Railway Workshops to a new phase of operation. The construction and maintenance of diesel locomotives was centred at Redbank while a much scaled down operation within specific workshops has continued, focused on heritage operations (Mewes, this volume).

The character of the workshops, established through the organisational structure has nevertheless continued with working teams in the Blacksmith, Steam shop, Paint shop and Carriage shop, a shadow reflecting the spirit and presence of all those before.

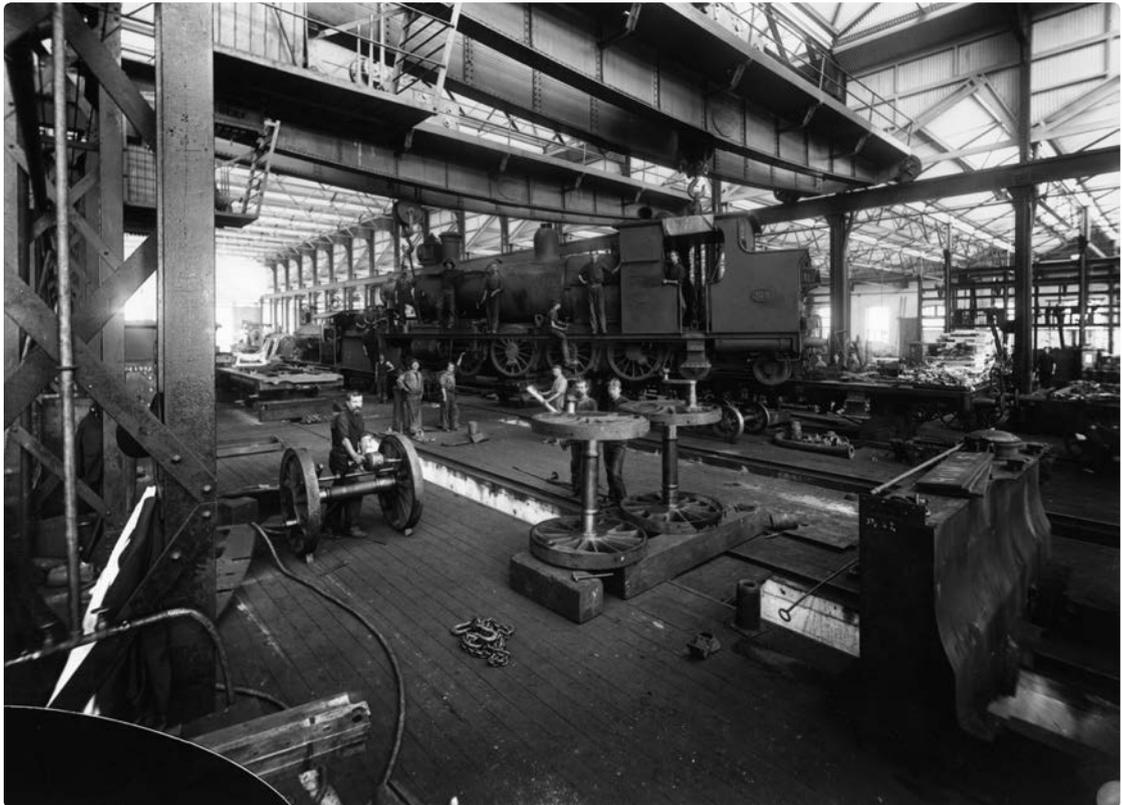


FIG. 16. Interior of Erecting shop, Ipswich Railway Workshops, 1910. Image courtesy NMA and Whitehead Studios.

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□ ENDNOTES

1. The rail network in Queensland expanded from 1287km in 1881 to 3533km in 1891 – a threefold increase