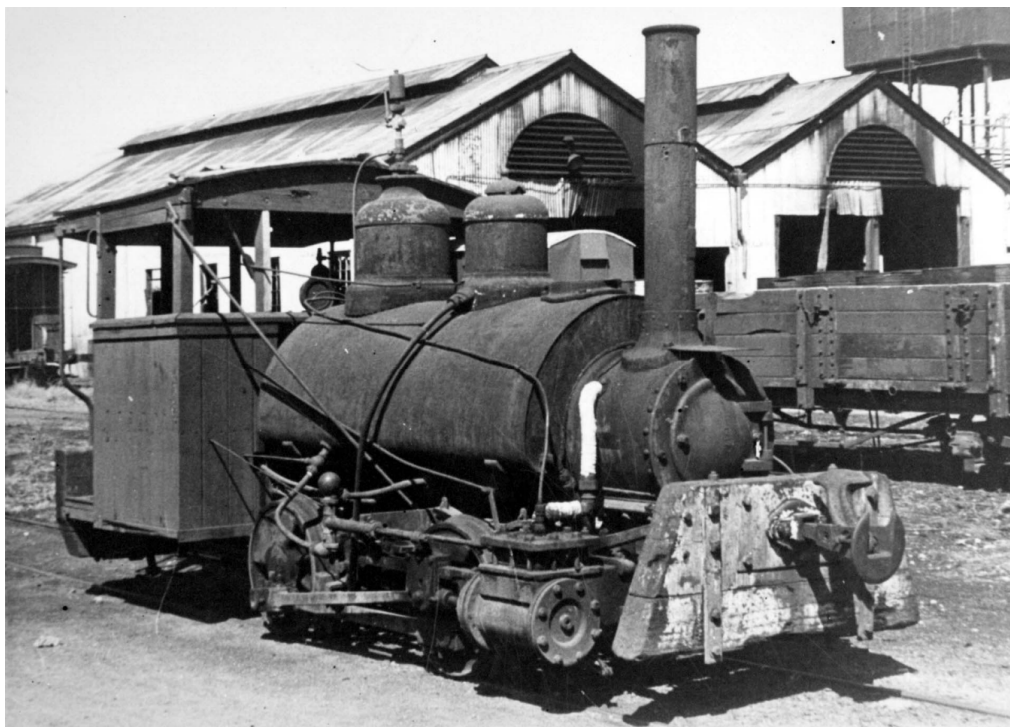


The *Sandfly* NA1 Steam Locomotive

Background Historical Information



Prepared by the Heritage Branch, December 2009

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Disclaimer:

The material presented in this report is believed to be correct at the time of writing and is provided for information purposes only.

Cover Photo: The Sandfly in front of the Parap Workshop Railway sheds c1930s.

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1.0 Introduction

This background historical information was compiled in May 2007 as part of a heritage assessment report prepared on the steam locomotive known as the 'Sandfly' for the Heritage Advisory Council, as per the requirements under the Heritage Conservation Act.

The Sandfly is owned by the Northern Territory Government since it was gifted back to the Territory in 2005 by Great Southern Railways to commemorate the completion of the Alice Springs to Darwin Railway.

2.0 Location

The Sandfly is currently situated in Darwin within Lot 7557 Town of Darwin which is owned and managed by the Darwin Port Corporation. It is currently on public display on the Stokes Hill Wharf and the current location is shown in **Figure 1**.



Figure 1: Current location of the Sandfly steam locomotive on the Stokes Hill Wharf.

3.0 History of steam along the North Australia Railway

Nine classes of steam locomotives, totalling 60 individual engines worked on the North Australia Railway during the period of steam operation between 1887 and 1958 (Harvey 1987:244). The history of the NAR can be split into four periods based on the operator of the railway with the steam era ending in 1958.

Dates	Railway operator / period	Period code	Assigned Locomotive codes
1888 – 1910	South Australian Railway period	SAR	SAR
1911 – 1939	Commonwealth Railway period 1	CR	NA, NF, NG
1940 – 1950	Defence period	-	NA, NF
1951 - 1976	Commonwealth Railways period 2	CR	NA, NF

The Sandfly was the first locomotive to operate on the Palmerston (Darwin) to Pine Creek Railway (North Australia Railway or *NAR*) in 1887 and was also the longest serving locomotive operating on the NAR with a career spanning 63 years. This engine was the only one of its class to work on the NAR.

3.1 History of the ‘Sandfly’ locomotive

The ‘Sandfly’ was one of eight (Class 4-10½) industrial locomotives supplied by the Baldwin Locomotive Works of Philadelphia, USA to Newell & Co of Melbourne, Australia between 1884 and 1891. One of these Baldwin shunters was purchased by C & E Millar who had been contracted by the South Australia to build the Palmerston to Pine Creek Railway.

The Baldwin shunter was delivered to Palmerston in various pieces on 4th December 1886 and assembled by May 1887 ready to begin its working life in the north. It was soon dubbed the “Sandfly” because, like it’s diminutive namesake, the engine flittered to and fro the port area near the mangroves shunting wagons of railway construction materials between the jetty and yards. The Sandfly’s shrill whistle could apparently be heard all over town, as it puffed and fussed around the yard shunting wagons to and fro.

The primary role of the Sandfly was to provide motive power and haul track components from the Stokes Hill wharf to the railway yards and beyond as line construction progressed. The locomotive “Silverton” (SAR 106) arrived in Palmerston in September 1887 to also assist with the construction efforts. The Silverton was the first of many more powerful engines that would operate along the NAR. The arrival of more powerful locomotives also ensured that the Sandfly remained on shunting duties between the wharf, railway yards and the Parap workshops for most of its working life.



Figure 2: The Sandfly on shunting duties at Stokes Hill Wharf. Circa early 1900s.

Following completion of the railway in December 1889 the Sandfly, along with other locomotives, was sold to South Australian Railways who classified the Baldwin shunter #107. The Sandfly officially became the property of Commonwealth Railways on 1/1/1911 following the handover of Northern Territory lands from South Australia to the Commonwealth. The Sandfly, along with all other rolling stock was officially reclassified NA1 in 1917. It appears the Sandfly never actually physically wore the classification badge of NA1. The Sandfly remained on shunting duties between the Stokes Hill wharf, the railway yards and the Parap workshops until the Second World

War and the bombing of Darwin in 1942. The damage sustained to Darwin railway infrastructure lead to the relocation of railway workshops and the Sandfly to Katherine. The Sandfly spent the rest of the war in Katherine, shunting supplies for the military build up that dominated the Top End between 1942 and 1945. The Sandfly was eventually decommissioned in 1950 after 63 years of faithful service on the NAR.

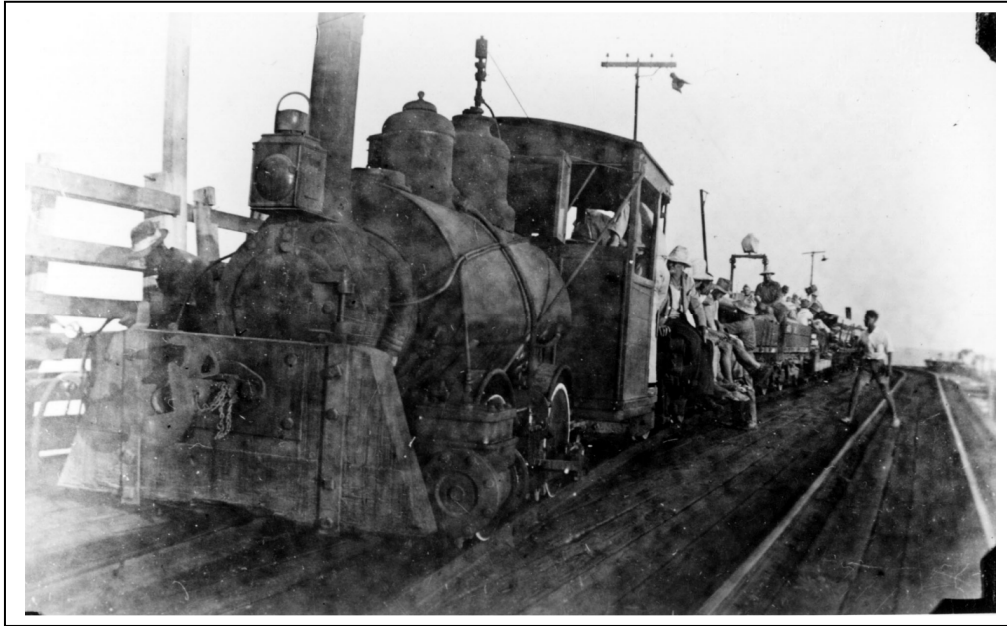


Figure 3: The Sandfly shunting wharf workers from the Stokes Hill Wharf. Circa 1930s.



Figure 4: The Sandfly at work at the 2 1/2 Mile workshops, Darwin 1939.

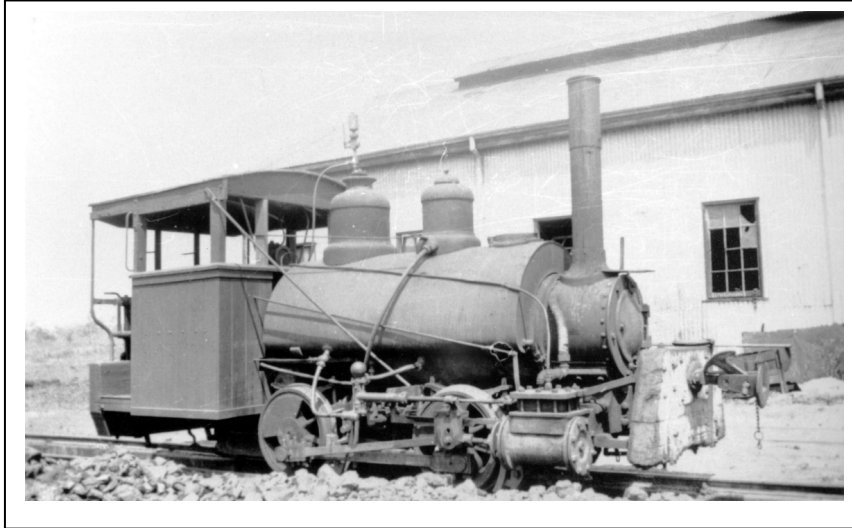


Figure 5 (left):
The Sandfly at the
Darwin locomotive
shed Circa 1940s.

Figure 6 (right):
The Sandfly at
Parap workshops
looking decidedly
mothballed 1947.



In 1951 a young engineer with Commonwealth Railways, Keith A. Smith took a shine to the Sandfly and set about ensuring its preservation. In 1960 Keith Smith became Commissioner of Commonwealth Railways. The Sandfly was relocated to Port Augusta, South Australia in 1959 for restoration and displayed at the Port Augusta railway station from 1960 onwards. In 1983 the Sandfly was relocated to the new Keswick interstate railway station in Adelaide (Buckland 1979: 16, Harvey 1987:244-246, Kent 2005:2-4).

Great Southern Railways formally gifted the Sandfly back to the Northern Territory in 2005 to commemorate the completion of the Alice Springs to Darwin railway. The Sandfly is currently displayed at the Stokes Hill wharf. The plaque commemorating the event reads:

THE SANDFLY – NA1

This plaque was unveiled by the
Hon. Clare Martin MLA
Chief Minister of the Northern Territory
on Wednesday 2 March 2005 on the
occasion of the gifting of The Sandfly
to the Northern Territory by Serco plc
owners of Great Southern Railways
and operators of The Ghan.

4.0 Physical evidence

The Sandfly is a small steam locomotive relative to other locomotive that operated on the North Australia Railway. From early photos it appears that very little about the engine's physical appearance has changed. One notable change is the presence of the chimney funnel on the restored engine on display compared with the straight chimney shown in the majority of earlier photos. It appears the funnel was present in early photos of the Sandfly (prior to 1900) and later changed to a straight chimney.



Figure 7: The Sandfly derailed c1890. Note the different chimney funnel from post 1900 photos above.

Harvey (1987: 246) also records major repairs: (1) March 1892: centreline of buffer/coupler lifted 3 1/2 inches; (2) October 1893: new saddle tank fabricated in Adelaide and fitted at Palmerston; (3) 1901: new boiler fitted; (4) 1917: completely rebuilt and fitted with new boiler made by Robison Bros & Co, Melbourne; (5) 1943: overhauled. New driver's cabin built. Technical specifications for the Sandfly are provided below (after Harvey 1987:245, Kent 2005:4).

Sandfly Technical Specifications

Class:	NA
Builder:	Baldwin Locomotive Works, Philadelphia, USA
Introduced:	1886
Number in Class on NAR:	1
Wheel Arrangement:	0-4-0
Driving Wheel Diameter:	(70cm) 2 ft. 4 in.
Cylinders:	
Number:	2
Position on frame:	Outside
Diameter x stroke:	20cm x 30cm (8 in x 12 in)
Valve Gear:	Stephenson
Boiler Pressure:	63kgs (140 lbs)
Tractive Effort:	1483kg (3,270 lbs)
Coal Capacity:	448 kg (4 cwt)
Water Capacity:	1250 Litres (330 gallons)
Weight in Working Order:	9144kg (9 tons 10 cwt)
Maximum Axle Load:	4064kg (4 tons 10 cwt)
Overall Length	5.63m (18 ft 6 in)

5.0 Bibliography

Buckland, J.L. 1979 The Saga of the Sandfly and the Lost Tribe. The Light Railway Research Society of the Northern Territory.

Harvey, J.Y. 1987 The Never-Never Line. The Story of the North Australia Railway. Hyland House, Melbourne.

Kent, M. 2005 Remnants of the North Australia Railway. Volume 4. Unpublished report held by Heritage Conservation Services.

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Figure 8: The Sandfly on outdoor display at the Stokes Hill Wharf