

# **SOUTH AFRICAN HERITAGE RESOURCES AGENCY**

## **CONSERVATION MANAGEMENT PLAN FOR “BLACKIE” A SPECIFICALLY DECLARED STEAM RAILWAY LOCOMOTIVE**

**SAHRA/HO/07/2014**



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**31 July 2015**

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A SPECIFICALLY DECLARED STEAM RAILWAY LOCOMOTIVE**

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## CONSERVATION MANAGEMENT PLAN FOR “BLACKIE”

### 1. INTRODUCTION

- 1.1. The South African Heritage Resources Agency (SAHRA) requires a Conservation Management Plan (CMP) for the preserved steam locomotive “Blackie”, built in England in 1859.
- 1.2. This locomotive was the first railway locomotive to be imported and run in South Africa.
- 1.3. “Blackie” was declared a National Monument in 1936.
- 1.4. “Blackie” was previously mounted on a plinth in the concourse of Cape Town railway station but was removed prior to the 2010 FIFA Soccer World cup renovations of the station, and was put in storage in Firgrove.
- 1.5. PRASA’s intention is to display this locomotive in a glass enclosure on Station Square in front of Cape Town Station, facing Adderley Street.
- 1.6. B4 Architects have been appointed by SAHRA to investigate the proposals put forward by PRASA for the preservation and display of this locomotive and to prepare a Conservation Management Plan to cover all aspects of the restoration, relocation, display, future maintenance, management and monitoring of the locomotive.

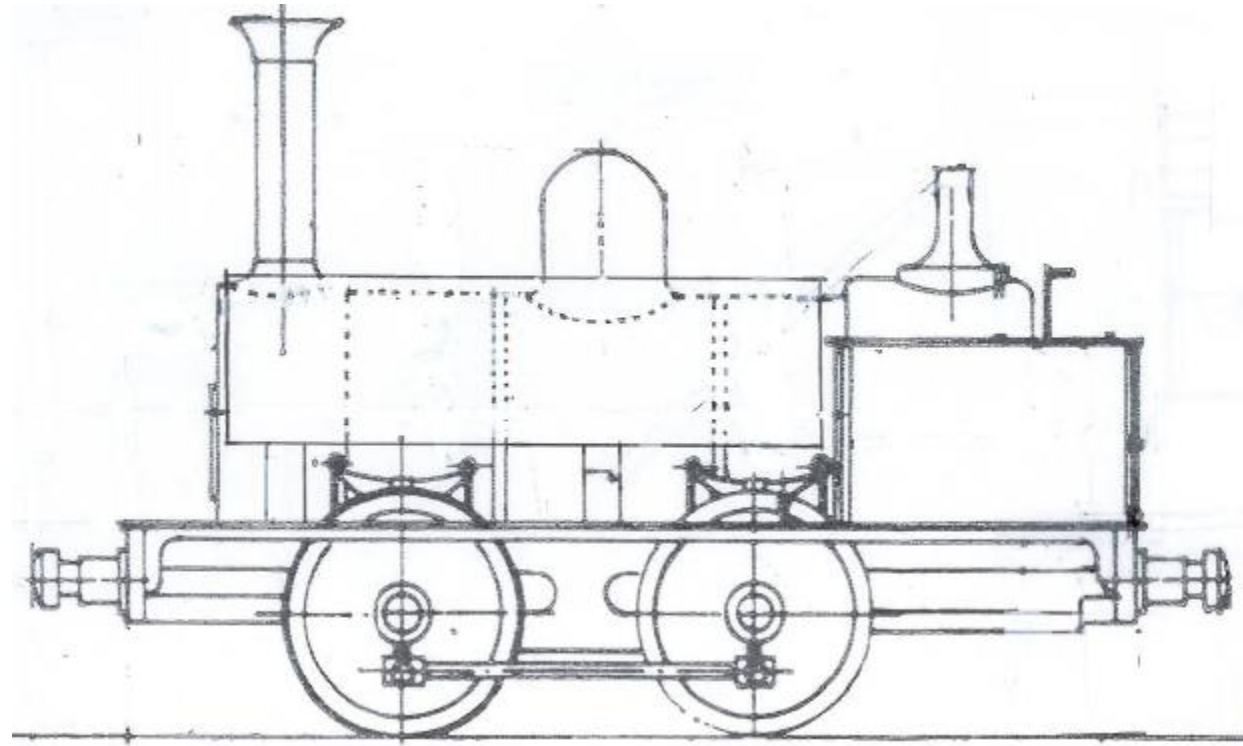


## CONSERVATION MANAGEMENT PLAN FOR "BLACKIE"

### 2. BACKGROUND

#### 2.1. THE LOCOMOTIVE

- 2.1.1. The locomotive was built by Hawthorns & Co. at their Leith works as a 0-4-0T (side tank) locomotive to the standard British rail gauge of 4' 8½" (1465 mm) with two cylinders mounted between the frames and to the order of Messrs E & J Pickering & Co., contractors at the Cape of Good Hope, who were engaged in the building of the first railway in the Cape.
- 2.1.2. The Makers Number was No. 162.
- 2.1.3. The locomotive was built in 1859.



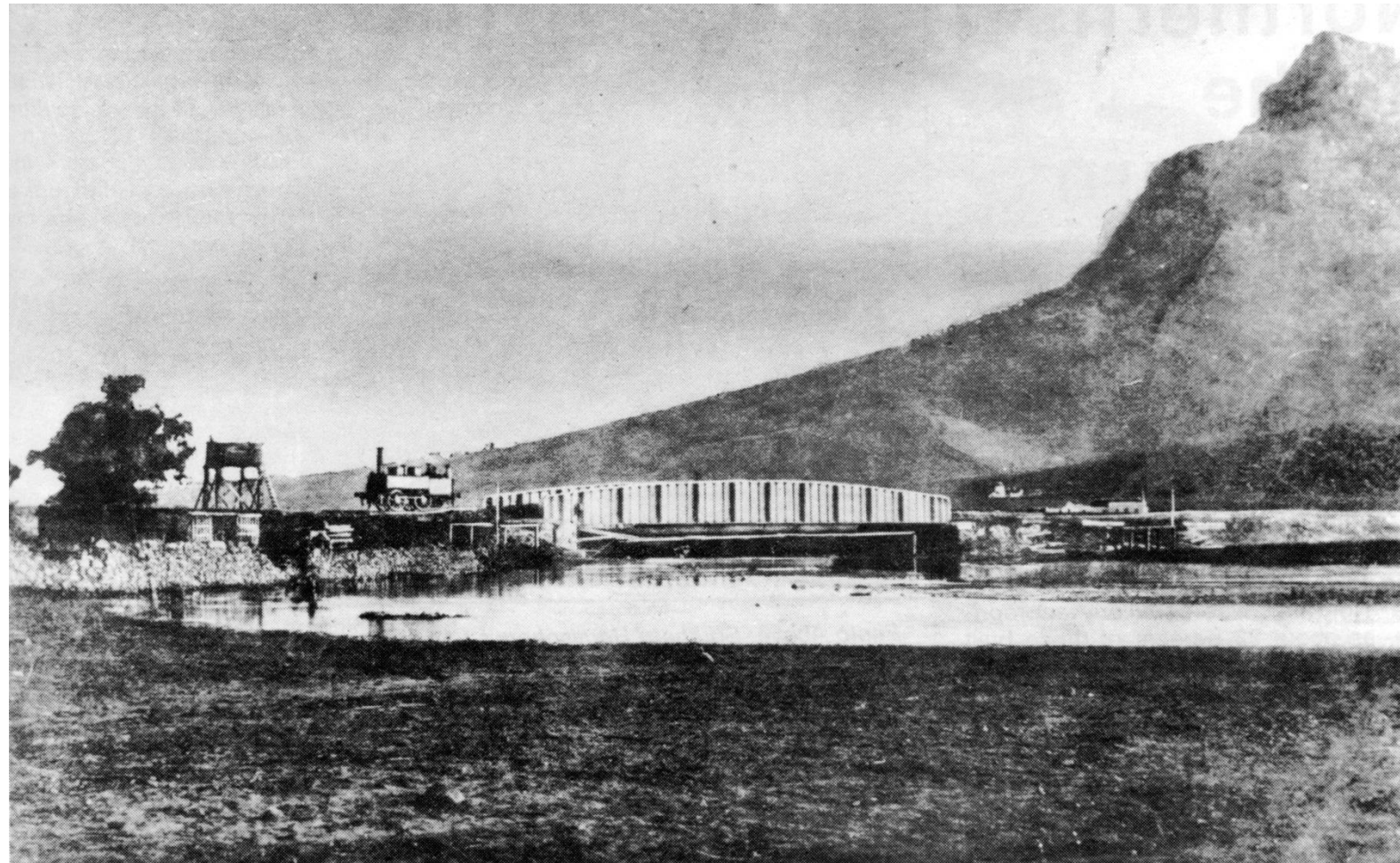
PROVISIONAL DIAGRAM OF BLACKIE IN ORIGINAL CONDITION AS A 0-4-0 WITH SIDE TANKS

#### 2.2. ARRIVAL IN SOUTH AFRICA

- 2.2.1. Shipped by its manufacturers in Scotland to South Africa the locomotive was off-loaded from the brig *Charles* on 8<sup>th</sup> September 1859, making it the first railway locomotive to arrive in the country.
- 2.2.2. The landing of the engine involved "dismantling" it – although it was almost certainly dismantled prior to its loading in Scotland – and being landed by lighters before being manhandled to a site at Alfred's Square, part of what is now the Grand Parade, where a shed was erected around it and where it was assembled by William Dabbs, a Scottish artisan who had accompanied the loco to the Cape.
- 2.2.3. Once the engine was in working order Dabbs became its driver and is recorded as having been so for its entire service life in Cape Town.

#### 2.3. OWNERSHIP, IDENTITY AND OPERATIONAL HISTORY

- 2.3.1. *Blackie* was ordered and paid for by the company contracted to build the railway line from, what at the time was known as Papendorp (today's Woodstock), to Wellington.
- 2.3.2. The contractors were E & J Pickering & Co. and the contracting company was the Cape Town Wellington Dock & Railway Co. (CTWDRC), usually referred to as either the Cape Town Wellington Railway or the Cape Town Railway & Dock Co.
- 2.3.3. The first sod for the line at the Cape had been turned on 31 March 1859 by the Governor, Sir George Grey, amidst scenes of great rejoicing, but the first section of track between Fort Knokke and Salt River was only opened on 8 February 1861 - Twenty-three months to open one and a half miles of track!
- 2.3.4. Due to extremely poor performance in carrying out their contract, the Pickering company was dismissed in October 1861 and the works and all machinery, including the then unnamed and unnumbered engine, were taken over directly by the CTWDRC but the take-over did not go down well with Pickering's and the contractor incited their workers to riot.
- 2.3.5. Prior to this the CTWDRC had ordered and received the first 8 locomotives for operating its services.
- 2.3.6. These engines were quite similar in appearance to *Blackie* but were fitted with outside cylinders, 4-wheel tenders and splashers over the driving wheels.
- 2.3.7. With these engines already numbered and in service the contractor's engine was allocated the next available number and joined the roster as No.9.



BLACKIE CROSSING THE SALT RIVER

- 2.3.8. Some histories incorrectly report that No.9 (*Blackie*) was badly damaged by the rioting Pickering workers and then repaired and modified. This is not correct - the locomotive attacked in this incident was one of the railway company's own tender engines, No.4 named *Wellington*.
- 2.3.9. On the 1<sup>st</sup> of January 1873 the newly-formed Cape Government Railways (CGR) took over the assets and liabilities of the CTWDRC and also leased the Wynberg Railway.
- 2.3.10. Shortly after the takeover, and after a number of discussions and submissions to the Cape Parliament, a decision was taken to convert the rail gauge for future expansion into the interior from the British standard gauge of 4' 8½" (1465 mm) to the cheaper to construct 3' 6" (1067mm) gauge (known as the Cape Gauge).
- 2.3.11. At the same time the existing railway line from Cape Town to Wellington via Stellenbosch and Paarl was to be converted to the new Cape gauge.
- 2.3.12. This conversion was completed in and, thus the existing locos would have no further use.
- 2.3.13. Engine no. 9 remained on the Wellington line until late in 1873.
- 2.3.14. However, in October 1873, the need for a small locomotive to assist in the construction work at the newly proclaimed harbour on the Kowie River at Port Alfred, resulted in the Chief Inspector of Public Works requesting a locomotive for use at Port Alfred, and on 24 December 1873 authority was granted for alterations to be made to the locomotive and for it to be shipped to Port Alfred.
- 2.3.15. In 1873/4 No.9 was taken into the works at Salt River and the locomotive was rebuilt and modified by the removal of the side tanks, the provision of a cab roof supported on four posts, the addition of a pair of carrying (non-powered) wheels under the cab. Thus the locomotive was converted into a 0-4-2.
- 2.3.16. Photographic evidence would suggest that either at that time or later a new boiler was fitted to the engine – this has been impossible to verify.
- 2.3.17. With this work completed the locomotive was dismantled and shipped to Port Alfred in 1874 to work on construction being undertaken on the West bank of the Kowie River.
- 2.3.18. The provision of the additional wheel set created a problem when the locomotive was put to work in Port Alfred as the longer wheel-base caused fouling on the curves and to alleviate this the middle set of wheels had their flanges removed and a 3 kph (2 mph) speed limit enforced.
- 2.3.19. *Blackie* served at Port Alfred until 1883 by which time it was considered to be life-expired.
- 2.3.20. The nameless No.9 had become known colloquially as *Blackie* during its life in and around Cape Town but gained the official name **Frontier** on delivery to the Kowie.

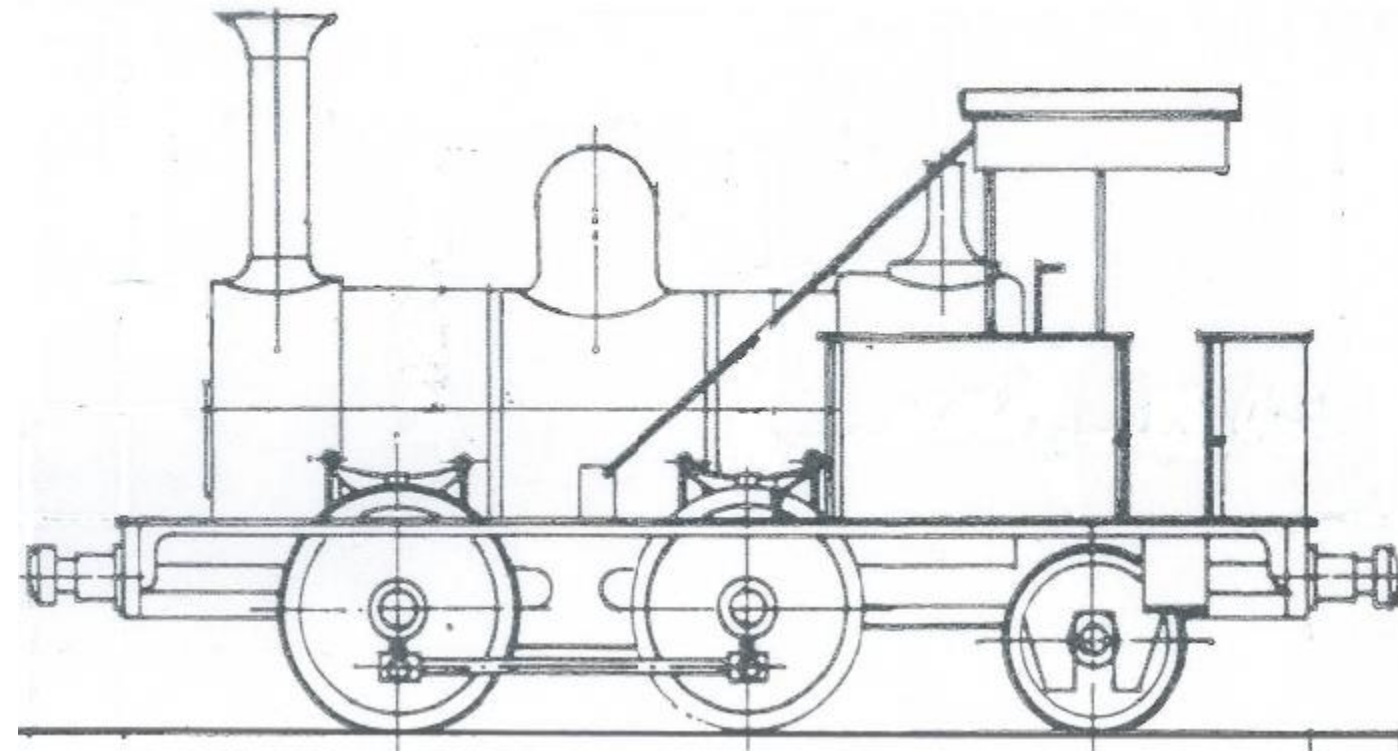
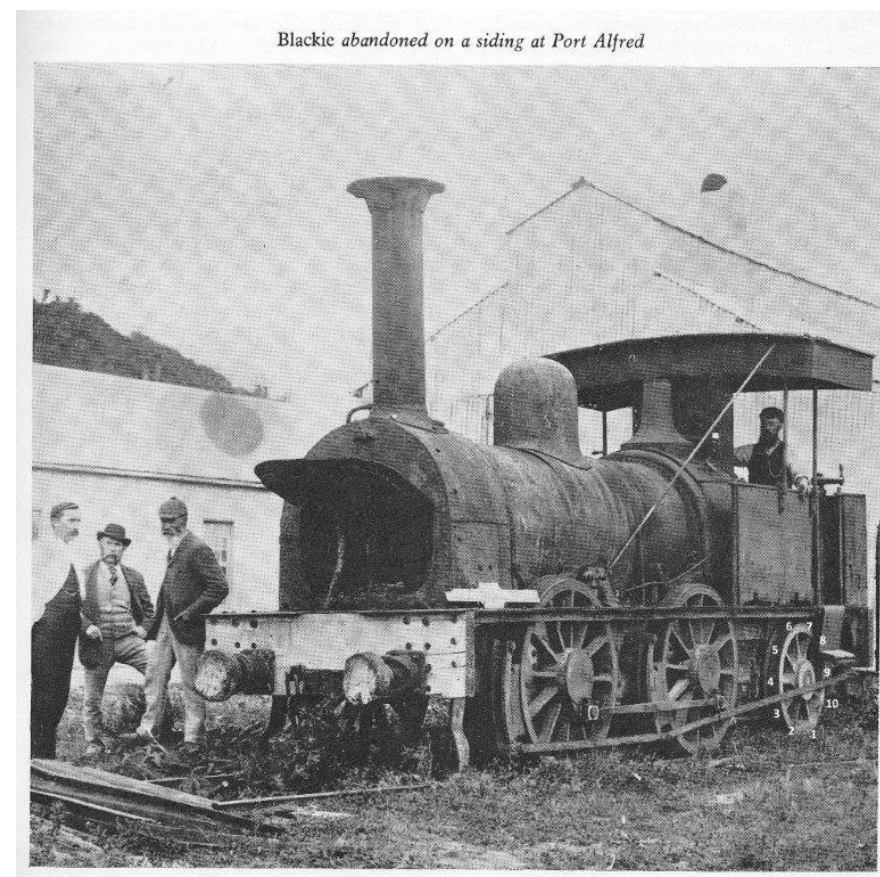
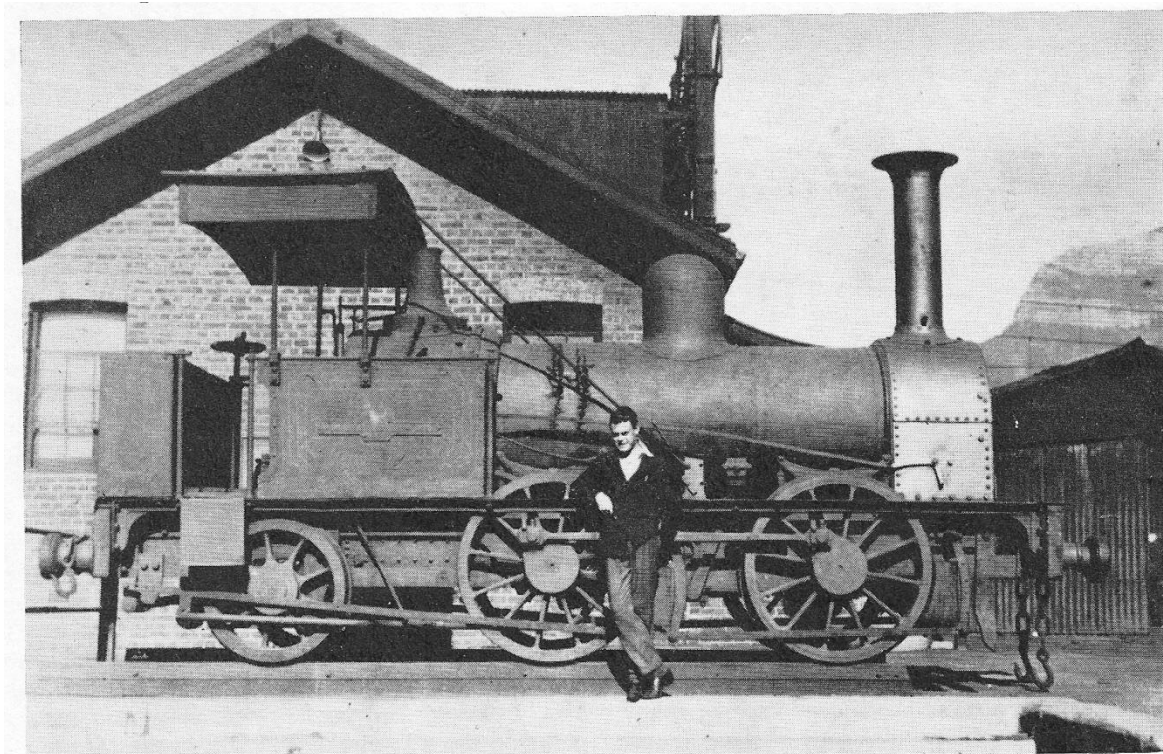


DIAGRAM OF BLACKIE IN MODIFIED CONDITION AS A 0-4-2 AS USED AT PORT ALFRED



#### 2.4. **PRESERVATION**

- 2.4.1. After 1883 the engine was left to its fate, dumped in a siding, where it remained until 1897 when it was decided to move it to Grahamstown, give it a cosmetic overhaul and put it on display as one of the attractions at the large South African Exhibition which was to be held in Grahamstown where it was to remain on display until 1898 where-after it was put into local storage.
- 2.4.2. In 1913, after Union and the formation of the South African Railways, *Blackie* was brought back to Cape Town and again cosmetically restored – this time in Cape Government Railway colours – and put on a display on a plinth on the station concourse between platforms C and D.
- 2.4.3. During the electrification of the suburban lines at Cape Town in 1927-28 it was found the locomotive was in the way of the overhead equipment and the engineer in charge had the old locomotive removed by road to Salt River Workshops to be scrapped.
- 2.4.4. Fortunately Mr A W Westley, the mechanical engineer at Salt River Workshops at that time, realised the historic importance of No.9 and put it on a plinth near the main gate to the workshops.
- 2.4.5. In 1935 the Historical Monuments Commission put in place the process to proclaim it to be a National Monument (Government Notice 529 of 1936) and it was once again moved back to Cape Town station.
- 2.4.6. In due course it was again moved when the new Cape Town station was built in the early 1960's and placed in the main concourse.
- 2.4.7. The locomotive was removed from the concourse by PRASA and placed in storage during the 2009-10 revamp of the station ahead of the soccer World Cup.
- 2.4.8. The locomotive remains in storage at the present time, pending the completion of the arrangements for a new display position at the Cape Town station.



*Old No 9 standing in the traverser yard at Salt River works in 1928 with the author, then an improver fitter, standing in front*

#### **PICTURE OF BLACKIE WITH FRANK HOLLAND AT SALT RIVER WORKSHOPS 1928**

The locomotive is in the same condition that it is now in and is standing on the same type of rails



## CONSERVATION MANAGEMENT PLAN FOR "BLACKIE"

### **3. DEVELOPMENT OF THE RAILWAYS IN SOUTH AFRICA AND THEIR SOCIAL IMPACT**

#### **3.1. SOCIO-ECONOMIC IMPACTS – AN OVERVIEW**

- 3.1.1. The introduction and development of the railway system that covers much of the Republic of South Africa today had its beginnings in two short sections of line at Cape Town and Durban built in the late 1890's.
- 3.1.2. The early developments of the huge rail network of today were marked by numerous stops and starts, political arguments, expediency and, initially, very slow progress.
- 3.1.3. Whilst there were those who were pushing for these short lines – used mainly as passenger and postal services – to be expanded, little happened until the desire to get people and material to the diamond fields and, shortly thereafter, the Witwatersrand gold fields gave sufficient impetus to get things moving.
- 3.1.4. Once they did the progress was rapid and enormous.
- 3.1.5. What the development of railways did for the country can be summarised thus;
  - 3.1.5.1. Opened up the country for commercial benefit, initially to the benefit of the farming sector that was now able to move their produce to local towns and villages and to ports for export to overseas markets.
  - 3.1.5.2. Farming in areas previously considered uneconomic became viable and the sector was able to more readily access plant and equipment needed for expansion and efficiency.
  - 3.1.5.3. Enabled the vast influx of people to reach the newly found sources of riches in the country's interior and made the movement of machinery and consumables for that industry practicable.
  - 3.1.5.4. Afforded all sectors of the population the chance to travel long distances in relative comfort, relatively quickly, at reasonable rates.
  - 3.1.5.5. Created a massive labour-intensive industry in its own right, employing thousands of people from engineers and financial managers through engine and train staff to a large labour contingent mainly employed on track building and maintenance.
  - 3.1.5.6. Large railway workshops were established where carriages and wagons were manufactured from scratch while locomotives were erected, having been imported in pieces, and overhauled.
  - 3.1.5.7. Saw the founding of many 'railway towns' along the routes as these were pushed ever further into the interior.
    - 3.1.5.7.1. The establishment of these towns were largely the result of the use of steam locomotives to haul trains, locomotives that required frequent refuelling (coal and water) and servicing and so it was necessary to have points where facilities for such attention was possible at regular intervals.
    - 3.1.5.7.2. Some of these places became quite substantial towns, offering both extensive local employment on the railway and becoming trading points in their own right.
  - 3.1.5.8. Saw the development of a net-work of branch lines to serve many smaller towns, generally farming or forestry centres, often with grain elevators at points along their length.
  - 3.1.5.9. Went a long way towards enabling the British forces to defeat the forces of the Boer Republics in the two Anglo-Boer wars of the 1880's and early 1900's by providing a fast means of moving troops and equipment around.
  - 3.1.5.10. In the early part of the 20<sup>th</sup> century suburban rail routes around the main cities were developed that made the mass transport of workers from the burgeoning township system to their places of employment possible.
  - 3.1.5.11. Enabled the mass transport of the country's mineral and agricultural wealth efficiently and safely.
- 3.1.6. However, by the 1970's various factors came into play that had substantive negative effects on the railways, its employees and the country in general:
  - 3.1.6.1. International political pressures were having a negative effect on the export trade.
  - 3.1.6.2. The introduction of diesel and electric motive power meant that many of the 'railway towns' lost the main reason for their original establishment, the servicing and re-fuelling of steam locomotives. This, in turn led to a severe down-turn in the economies of most of those towns as substantial joblessness ensued.

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3.1.6.3. The relaxation of road transport legislation which had, until then, restricted the use of heavy transport on the country's roads meaning that much of the goods transported was rapidly moved from rail to road, being generally faster and – thanks to government road subsidies – cheaper than rail.

3.1.6.4. Diminishing rail traffic and increasing automation of many functions has meant even more job losses in the sector.

3.1.7. The following pages detail the important events, decisions and development of the South African rail transport system as we know it today.

### 3.2. HISTORICAL BACKGROUND

3.2.1. The development of railways is essentially the story of development of the country, for the purpose of railways is to open up, to develop, to link a country together so that the entire land may prosper.

3.2.2. In South Africa this accounts for the early switch from private to public railways, for only the State had a long-term approach, the ability to look beyond the immediate short-term profit and the funds to carry out major extensions.

3.2.3. The development of railways in South Africa is linked to the development and expansion of the British Colonies in South Africa in the nineteenth century and the subsequent discovery of minerals in the interior of Southern Africa.

3.2.4. Had South Africa been a land of navigable rivers the story might have been quite different; the early sailors would probably have followed such rivers inland to contact the inhabitants for barter, and goods could have been transported to the coast via such routes.

3.2.5. As it was, the Dutch had no interest in anything other than the setting up of a refreshment station when they first landed at Table Bay.

3.2.6. The pace of the development of South Africa depended on the ease with which the colonists penetrated the mountains and established routes over them, and this of necessity was the pace of the ox.

3.2.7. The Dutch East India Company did not assist in any way, and for as long as that company ruled, there were no proper mountain passes, and only a few very sketchy roads.

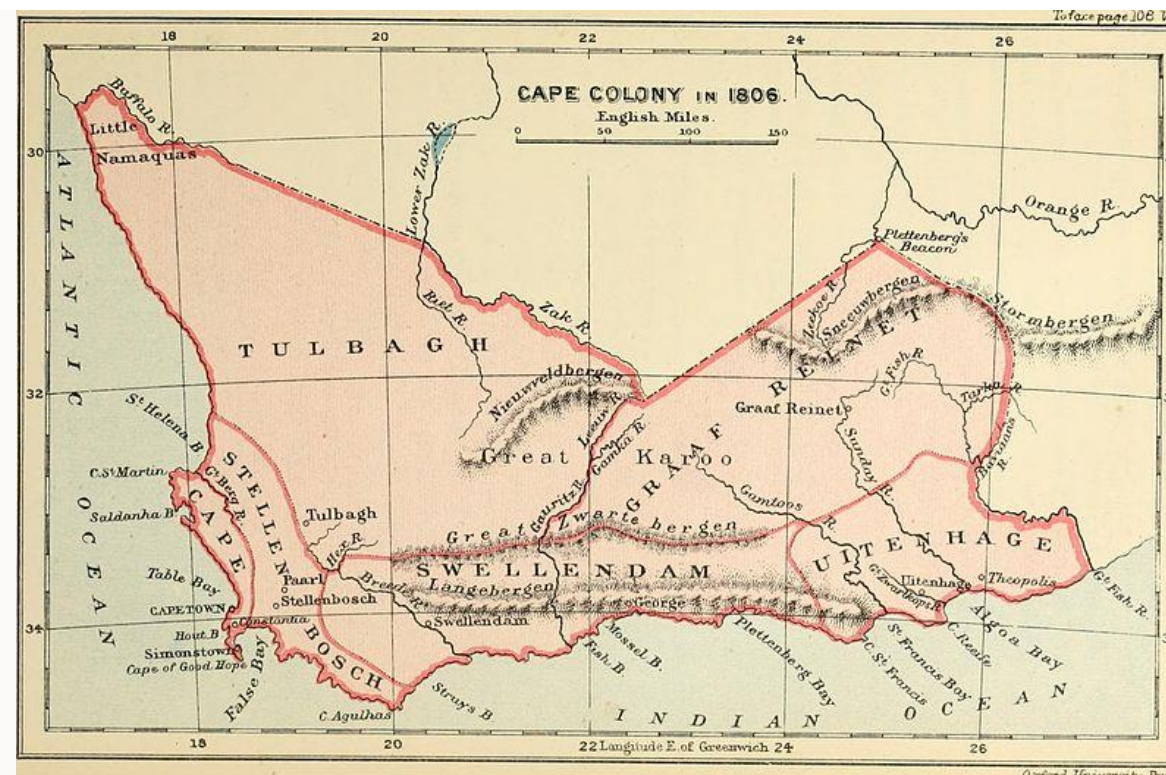
3.2.8. The result was stagnation - Why should a farmer in the Overberg risk his wagon, his precious oxen and even his life, to carry produce over the mountains to Table Bay? So the farmer grew just enough crops for subsistence, and such farm produce remained scarce at Table Bay.

3.2.9. The first change came when the British conquered the Cape. The British were basically a sea power, but they had already built an empire and they knew the value of communications.

3.2.10. On 20th September 1806, within months of the second conquest of the Cape, the British established postal transportation throughout the colony. For the most part the post was carried on horseback, but that same year a post wagon was introduced between Cape Town and Stellenbosch, and this service was gradually expanded, until it reached George.

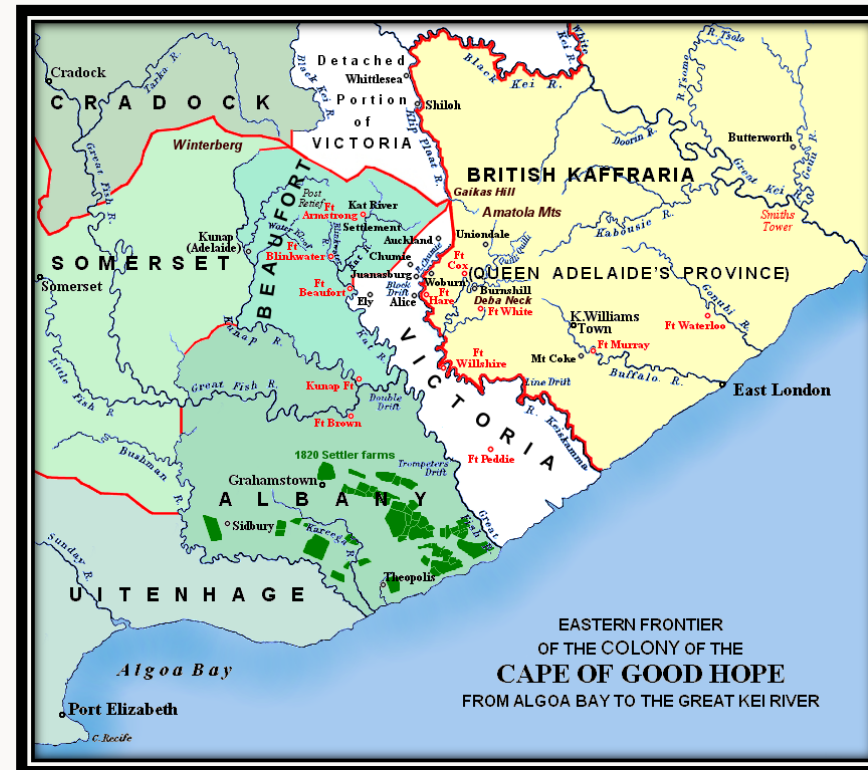
### 3.3. THE POLITICAL & SOCIAL DEVELOPMENT OF SOUTH AFRICA PRIOR TO THE INTRODUCTION OF RAILWAYS

3.3.1. Prior to the second British occupation of the Cape in 1806 the Colony had developed from its original inception as a supply station for the Dutch East India Company into a farming and trading community centred around the Western Cape but ever increasingly expanding eastwards and northwards.



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- 3.3.2. Following the British occupation of the Cape in 1806 all property of the Batavian Government was surrendered to the British and the formal cession of the Cape Colony to the Britain took place in 1814.
- 3.3.3. The Eastward expansion of the Cape Colony continued apace and in 1819 the Cape government declared that the Keiskamma River was to be the Eastern border of the Cape Colony.
- 3.3.4. In 1820 approximately 5 000 British settlers from economically depressed regions of Britain arrived in Algoa Bay in the Eastern Cape to increase the size of the settler population and Port Elizabeth was founded.



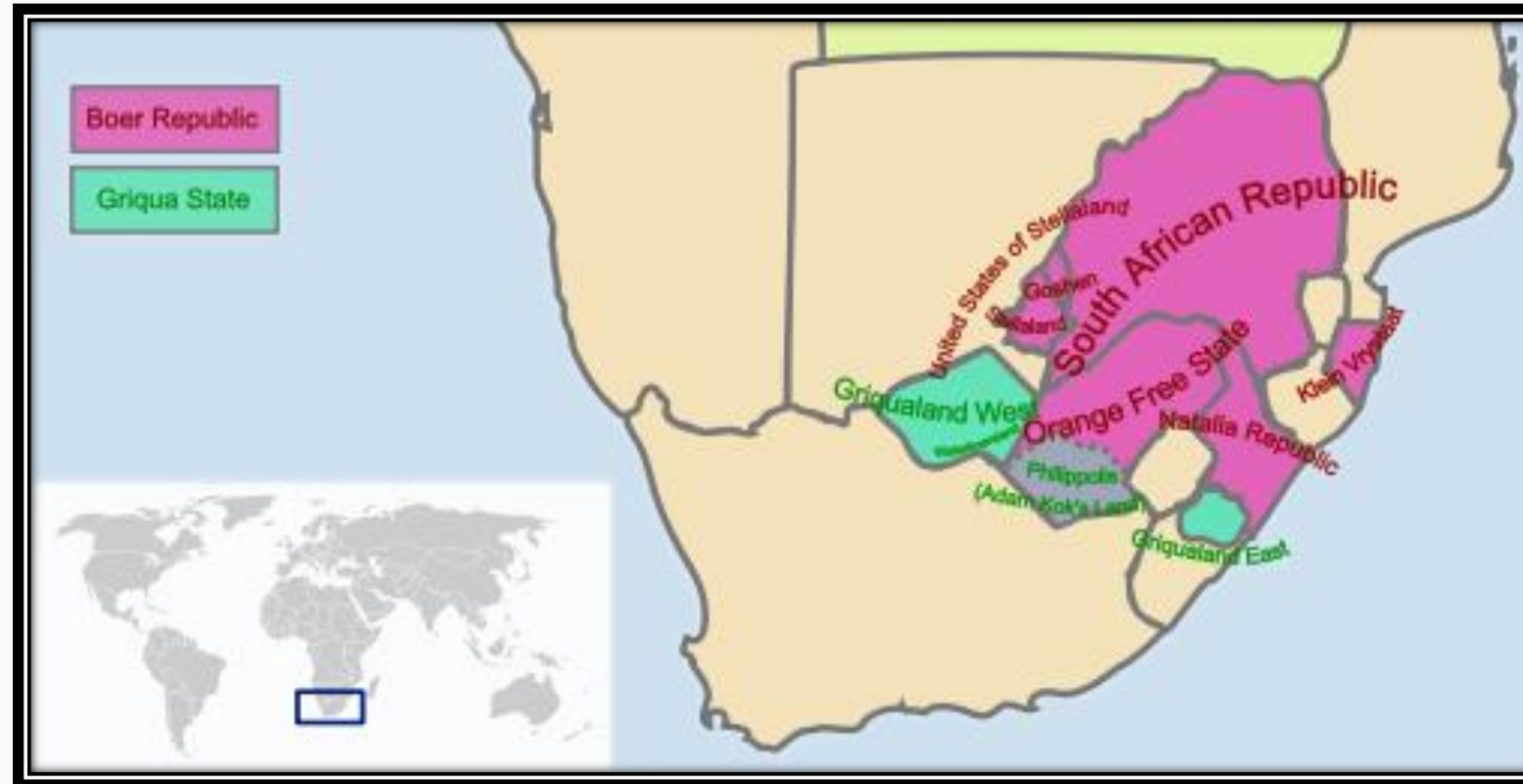
- 3.3.5. Ongoing dissatisfaction with British rule in the Cape Colony resulted in The Great Trek between 1835 and 1846 which was a movement of mainly Dutch-speaking colonists from the Cape Colony into the interior of southern Africa in search of land where they could establish their own homeland, independent of British rule and causing a tremendous upheaval in the interior for at least half a century as these Voortrekkers moved ever further north and east.



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3.3.6. In 1837 the Voortrekker Republic of Natalia was established and but became a British Colony, Natal, in 1843.

3.3.7. Following the signing of the Sand River convention the South African Republic was established as an independent country in 1852 as the Voortrekker's desired homeland.



3.3.8. In 1854 the Republic of the Orange Free State was established.

3.3.9. Also in 1854 the British government grants the Cape Colony representative government.

3.3.10. By 1860 the sub-continent comprised two British colonies, the Cape and Natal and further inland, the Boer republics, Transvaal (South African Republic) and Orange Free State.

3.3.11. To the north, Portugal had settled previously proclaimed colonies in East Africa and Angola.

3.3.12. Thus, when the first railway came into being, there was as yet no Kimberley or Johannesburg - South Africa was largely an undeveloped agricultural country with the population of the vast hinterland of the Cape Colony, Natal and British Kaffraria sparsely distributed over wide areas and the villages of South Africa were few and far between.

3.3.13. The main activities were agriculture and stock farming and production was mainly for own consumption due to poor transport conditions and the vast distances between centres.



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- 3.3.14. Exports, in the form of provisions sold to passing ships, initially consisted mainly of wine, fruit, vegetables and meat, but, with the development of the interior, the export of wool, skins and hides, and ostrich feathers, became more important.
- 3.3.15. As far as the geographical distribution of economic activity was concerned the largest concentration of the agricultural industry was in the Western Cape.
- 3.3.16. In the Transvaal and the Orange Free State, the Burghers were living lives of complete isolation - Their governmental institutions were so fundamental that they were little more than gatherings of elders to discuss problems of mutual interest and the great wide world beyond might not have existed, for all the impact it made upon their pastoral bliss.
- 3.3.17. The mineral wealth of South Africa had not yet been discovered by the Colonists or Burghers.

### 3.4. TRANSPORT & TRAVEL IN SOUTH AFRICA PRIOR TO THE INTRODUCTION OF RAILWAYS

- 3.4.1. Travel into the interior of South Africa was a bleak and hazardous experience indeed - There were no established roads except in the vicinity of villages and wagon tracks criss-crossed the wide open veld, taking the path of least resistance, more often than not these routes following trails established by game herd movements.
- 3.4.2. The Cape of Good Hope, the only part of the sub-continent known to the outside world had only just begun to extend a few tentative tentacles into a hinterland that was fraught with mystery and danger.
- 3.4.3. The only towns of any consequence were Cape Town, Port Elizabeth, East London and Durban - From these, transport wagons, post-carts and stage-coaches penetrated into the interior.
- 3.4.4. The routes taken were erratic and their time-tables often non-existent.
- 3.4.5. Most cargo was transported by ox-wagon which travelled at no more than 3Km per hour.



- 3.4.6. Passengers travelled either in post-carts, stage-coaches or by horseback at a maximum speed of about 12 Km per hour.



## CONSERVATION MANAGEMENT PLAN FOR "BLACKIE"

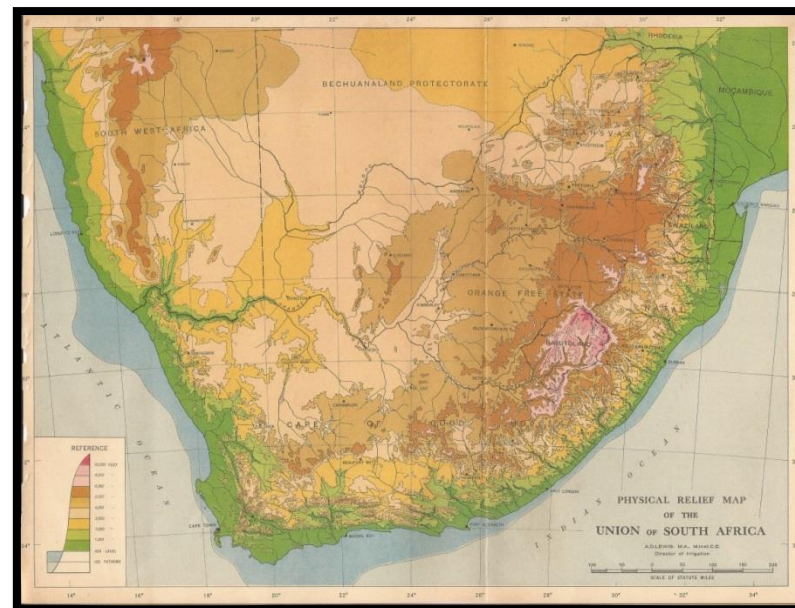
- 3.4.7. The need to change horses brought about the development of staging posts along the main routes and these evolved into Inns and Hostelries as well as many eventually becoming villages or towns.
- 3.4.8. Travellers, who braved the unknown, prayed not that they might arrive on time, but that they might arrive at all.
- 3.4.9. The dangers to be faced were ever-present and real - In the Eastern districts, there were warring local tribes, looking upon every traveller as an intruder and a potential enemy.
- 3.4.10. All over the land, there were wild animals roaming the veldt.
- 3.4.11. The natural hazards were even more formidable – mountains had to be climbed, swollen rivers had to be crossed and dense bush often made an almost impenetrable barrier.
- 3.4.12. Various sicknesses assailed both man and beast, while on the arid plains of the great Karoo, death from thirst and starvation awaited the unwary traveller.
- 3.4.13. The post cart and the travelling cart were for country travel; in the town the new conveyance introduced in the 1830s was the "omnibus".
- 3.4.14. As usual the Cape followed the English fashion, and by 1836 there was an omnibus running regularly between Cape Town and Wynberg.
- 3.4.14.1. This vehicle was drawn by three horses, and had a single box seat in the front, there was a guard's step as well as an open step at the rear for passengers to enter the omnibus.
- 3.4.14.2. The omnibus carried eighteen passengers, each of whom paid 2/- fare. The destination was painted on the vehicle in ornate lettering, and the driver and guard wore coachman's livery.
- 3.4.15. There were no regulations dealing with omnibuses at the Cape, and soon rival companies were competing with one another for custom. By 1859 there were four 'bus lines operating from Adderley Street - run by Messrs. W. Cutting, W. Glynn, F. Cruywagen and Boyce.
- 3.4.16. The vehicles were patronised mostly by the less wealthy classes who could not afford their own coaches – travel in these omnibuses was not comfortable due to the poor state of the roads.
- 3.4.17. Change and improvements came with the arrival in 1843 of John Montagu as Colonial Secretary.
- 3.4.18. At that time the entire Colony's progress was hamstrung by a crippling colonial debt owed by the Cape to Britain, on which the Colony struggled to pay annual interest - As long as this debt remained, Britain vetoed any attempt to improve transportation at the Cape.
- 3.4.19. Montagu immediately set about reducing the colonial debt. In two short years, by selling land, collecting arrear taxes, and selling guano from the offshore islands, he succeeded in wiping the debt out.
- 3.4.20. The way to improvement was then clear and Montagu concentrated on road-building - He set up a Roads Board and instituted a new era amongst convicts at the Cape, improving their lot by providing adequate clothing and better rations and then set them to road-building, giving them the incentive of remission for good conduct.
- 3.4.21. With the help of men such as Charles Mitchell, Andrew Geddes Bain and the latter's son, Thomas Bain, a hard road was built across the sandy Cape Flats, and a series of mountain passes opened up new and easy routes into the country's interior. These were needed to break the isolation caused by the mountain ranges that imprison the Cape between their bulk and the sea.
- 3.4.22. However all these improvements only speeded up transportation from the pace of the ox to the pace of the horse.
- 3.4.23. This expansion of the road network also saw the growth of a transport industry with many transport riders and transporters making a living from the conveyance of goods and travellers – as development expanded into the interior of South Africa so this industry grew.
- 3.4.24. A quickening interest now became evident in the revolutionary idea of railways at the Cape.
- 3.4.25. The Great Railway boom, which had started in England at the beginning of the nineteenth century, only began to gain momentum in South Africa towards the middle of the century and was brought about by schemes to improve the movement of goods between the farming areas in the Western Cape and Table Bay harbour in Cape Town.
- 3.4.26. The first reference to the possible construction of a railway line was probably an article that appeared in the South African Commercial Advertiser on 10 October 1838, while the Great Trek was in full swing. This was followed on 25 October 1845 by the Pictorial Times carrying an article on the benefits of a railway to the Cape Colony, but seemingly few people agreed with the concept, and little progress was made at that time.
- 3.4.27. But by 1859 the time was ripe for the horse to be replaced by the "iron horse" - the railway age had arrived.

### 3.5. IMPACT DUE TO THE CONSTRUCTION OF THE RAILWAYS

- 3.5.1. The commencement of the construction of the railways can be seen as the arrival of the industrial revolution in South Africa.
- 3.5.2. Considerable opposition to the proposed railway had been experienced in the Cape Colony as conservative settlers and politicians agitated against the project – it was claimed that a railway line would be detrimental to the livelihoods of the transport riders as well as affect the horse breeders and would entail the introduction of additional taxes and encroach on the property rights of individuals.
- 3.5.3. Initially there was a period of frustrating delays, for everything needed for construction had to be imported into the country.
- 3.5.4. The first requirement was labour, as experienced labour with the requisite skills was non-existent locally, it was decided to bring in some 300 workmen from Europe. These "navvies" (an abbreviation for the word "navigators") were specialists in excavations and earthworks for canals, railways, roads and similar works.

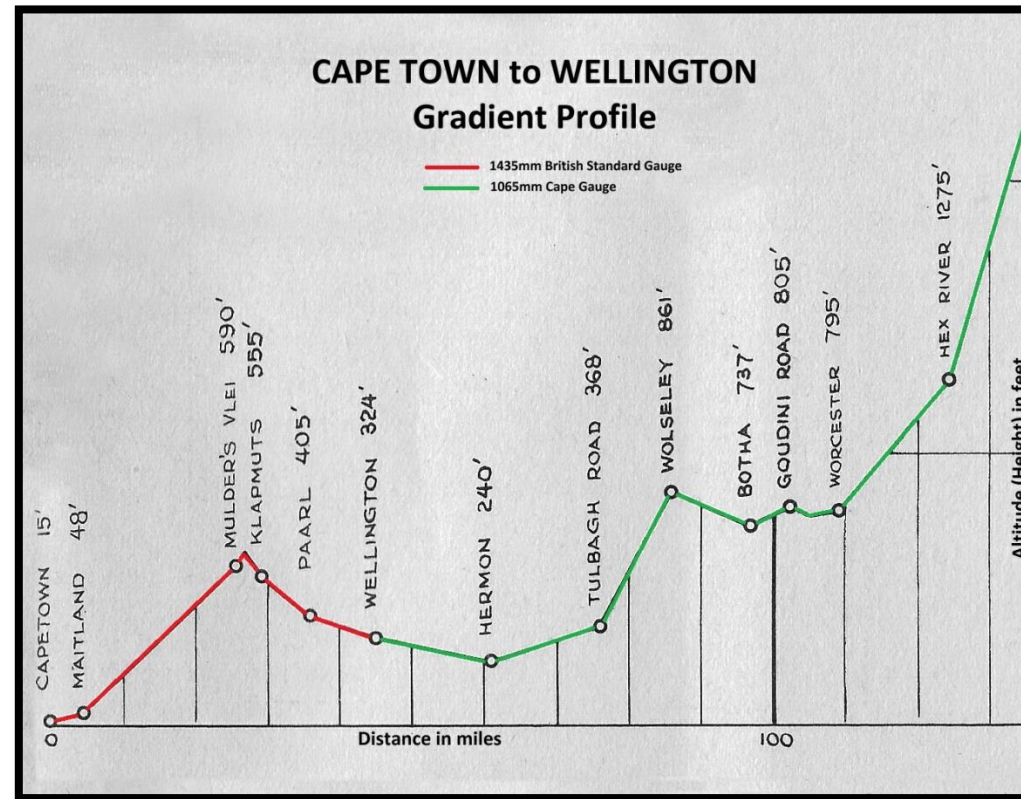
## CONSERVATION MANAGEMENT PLAN FOR "BLACKIE"

- 3.5.5. The importing of these labourers was not without problems and social impact as, unfortunately, when they began arriving it was found that only a proportion of them were genuine "navvies", of whom some had served with the British army in the Crimea, amongst the others who came out in this category, however, were ex-convicts, drunkards and other social failures, all looking for a new life in South Africa.
- 3.5.6. The first navvies arrived at the Cape on 20th September 1859, and started work for the contractor appointed by the Cape Town Railway & Dock Company, Pickering, on 4th October 1859.
- 3.5.7. The navvies were notoriously rowdy and often caused mayhem after visits to the local pubs.
- 3.5.8. The most noticeable feature of the navvy was his boots - thick soles, capped with metal and decorated with long leather fringes. He wore stockings which reached to his knees, and his trousers were usually moleskin, with bottoms turned up to show the fringes of his boots. On Sundays those boots would be well greased or polished.
- 3.5.9. In winter the fashionable navvy wore a waistcoat covered by a kind of pea jacket. In summer his working garb was boots and trousers - or even less. If he wore trousers they would be strapped tight around his leg below the knee with a leather strap (called a "London Yawk") to allow his knees free room.
- 3.5.10. However they and the other skilled people brought in to maintain and operate the railways were the forerunners of the huge technical workshops set up by the railway administrations in later years.
- 3.5.11. As it was necessary to deliver the land along the route into the possession of the company, work had begun on the necessary expropriations, and it was in this connection that Charles Bell came into the orbit of the railway, when he attended at Papendorp on 2nd November 1859 to arrange compensation for those whose land was being expropriated.
- 3.5.12. Some land owners were not in favour of the railway passing over their land as they felt that the steam trains would disturb their cattle and poultry.
- 3.5.13. The quiet rural areas were also upset by the insurgence of Navvies and other persons related to the development of the railway.
- 3.5.14. Some Church Ministers also warned their congregations about this outlandish and ungodly invention.
- 3.5.15. Transport riders and farmers were unhappy about the expansion of the railway as they saw this threatening their livelihoods, especially if there was a reduction in the demand for horses and oxen.
- 3.5.16. As the time for the final completion approached, tension began to build up between the contractor and the company and, in September Pickering, endeavouring to milk as much as possible out of the contract, tried to obtain advances of cash over and above those authorised against work done. The company refused to give such advances, and Pickering stopped work and discharged the navvies.
- 3.5.17. This faced the company and the Colony with the major problem of a large number of discontented and out-of-work men.
- 3.5.18. The Government stepped in and offered temporary employment to 200 men on the breakwater and agreed that the remainder of destitute men could stay in the emigration depot. The company agreed to provide rations for the men whilst they were in the depot.
- 3.5.19. A settlement reached with Pickering and the company took over the plant and continued building the railway itself.
- 3.5.20. It was, however, not yet over its labour troubles, for the navvies, thoroughly stirred up by recent events, struck on 2nd November for increased wages. This is probably the first reported labour strike in South Africa, and tantalisingly we have no idea of how it was settled.
- 3.6. THE 4' 8½" GAUGE RAILWAYS IN SOUTH AFRICA 1859 - 1872
- 3.6.1. Initially, "Stephenson's gauge", the British standard gauge of four feet eight-and-a-half inches (1435 mm), was adopted for the first railways in South Africa.
- 3.6.2. The line from the Point to the Market Square in Durban was laid over level, sandy ground, while the line from Cape Town to Wellington similarly did not require any major civil engineering works of any kind.



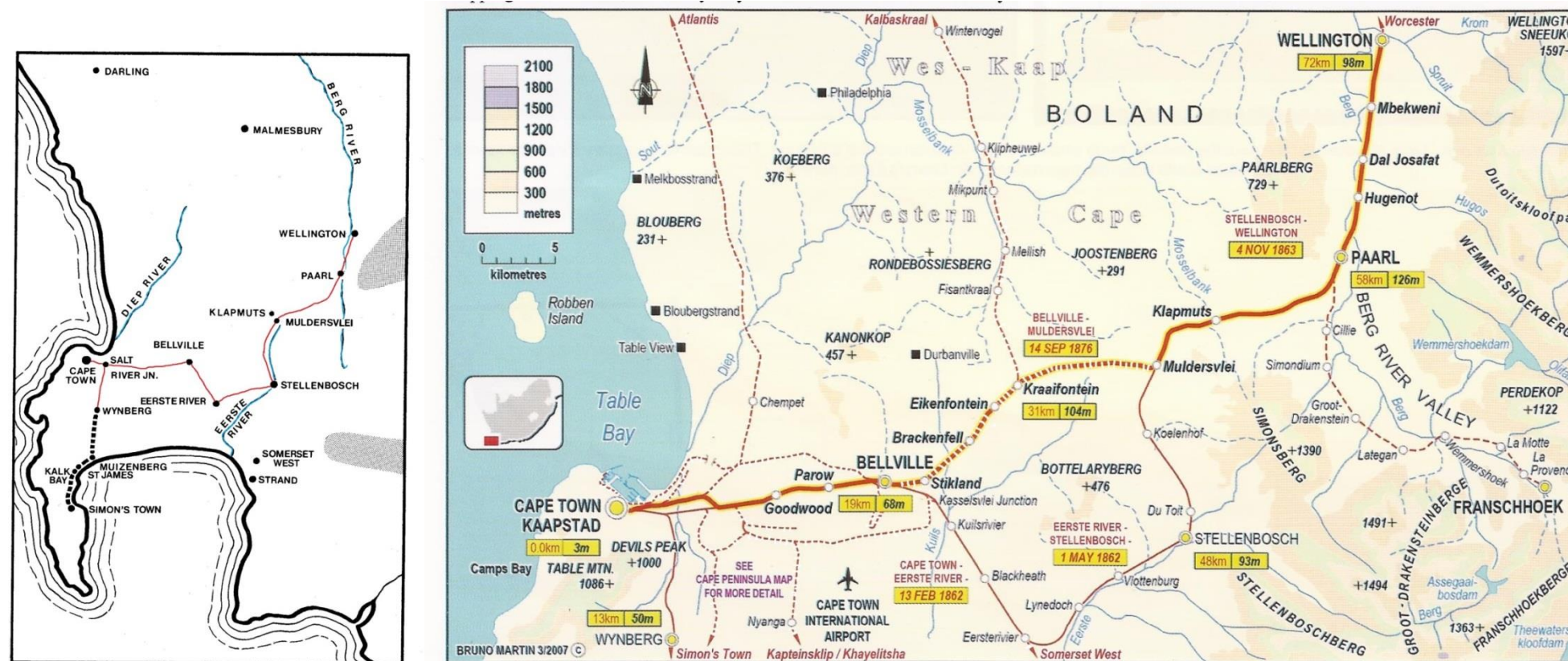
## CONSERVATION MANAGEMENT PLAN FOR "BLACKIE"

3.6.3. Consequently, there was no reason to depart from the traditional standard gauge, but this changed when it became necessary to traverse the chain of mountains between the coastal plains and the inland plateau.



3.6.3.1. It then became obvious that a railway constructed to a narrower gauge would be less costly and quicker to build.

3.6.4. The extent of the 4' 8½" (1435mm) gauge railways in the Western Cape is shown in the map below.





## CONSERVATION MANAGEMENT PLAN FOR "BLACKIE"

- 3.6.5. There was no further extension of the 4' 8½" (1435mm) gauge after the line reached Wellington.
- 3.6.6. All future development would be to the narrower Cape gauge of 3' 6" (1065mm) in deference to the difficult terrain to be conquered.
- 3.6.7. With the takeover of the existing lines by the Cape Government in 1873 the conversion of the existing lines to the narrower gauge commenced from Wellington towards Muldersvlei.

### 3.7. COMMENT ON THE CHANGES BROUGHT ABOUT FOLLOWING THE INTRODUCTION OF THE RAILWAYS

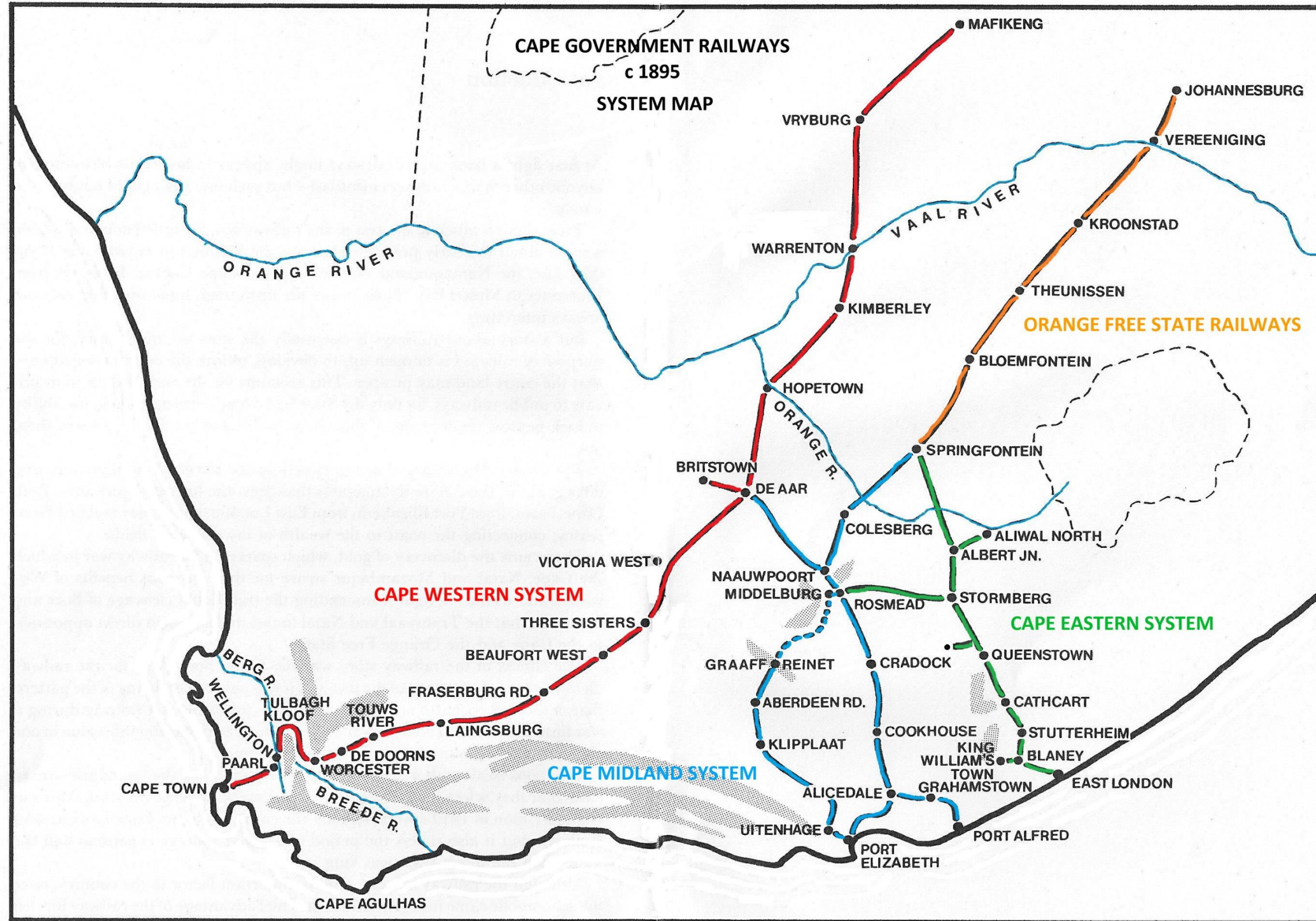
- 3.7.1. The introduction of the railway brought about an immediate change in the mobility of the inhabitants of the Western part of the Cape Colony, not only for personal travel but for the conveyance of produce to the markets in Cape Town while also facilitating easy access to machinery and consumables required by these producers.
- 3.7.2. The timetable issued initially by the Company showed four trains daily but carried the warning that "arrival time denotes when the train *may be* expected".
- 3.7.3. Hardly was the first section of line to Eerste River open before complaints began to be received about Sunday travel. Petitions against Sunday trains were received from the Evangelical Society, from Wellington, Stellenbosch and Paarl.
- 3.7.4. The petitions had precisely no effect on the running of Sunday trains. The company piously informed the objectors that the sole purpose of Sunday trains (one each way) was to allow people to reach their churches more easily, and that these trains would continue. The trains, in fact, ran for a year, after which they were dropped - not because of objections but because they were poorly supported.
- 3.7.5. The Stellenbosch merchants were also having second thoughts about the railway. They claimed that the now defunct omnibus had been a gold mine for Stellenbosch since two-thirds of the omnibus money was spent in the town and passengers remained there for 36 hours. The railway, instead, deposited passengers at 10:00 and took them away at 12:00, leaving only a short while for the locals to fleece them.
- 3.7.6. No doubt as a peace-offering the railway company on 14th October agreed to issue excursion tickets for a bazaar at Stellenbosch, a return trip costing the price of a single.
- 3.7.7. The standard of accommodation on the trains was based on the British system having three classes:
  - 3.7.7.1. First class – having soft padded seats and a restricted number of passengers in a compartment or coach – the most expensive fares.
  - 3.7.7.2. Second class – having padded seats and a greater number of passengers in a compartment or coach – the intermediate fares.
  - 3.7.7.3. Third class – hard bench seats and a large number of passengers in a compartment or coach – the cheapest fares.
- 3.7.8. There was no segregation by colour or race, merely by the cost of the ticket and level of comfort.
- 3.7.9. The completion of the construction of the line to Wellington and a hiatus in the construction of further lines meant that there was no work for the Navvies and they were discharged by the company. However a steadily mounting depression now had the Colony in its grip and unemployment was becoming a serious problem; particularly as the navvies who had the knowledge and experience of railway-building would be forced to leave the Cape if there was no work for them.
- 3.7.10. The Government therefore decided to employ the navvies on the railroad extension by way of relief works.
- 3.7.11. As it was generally agreed that any extension of the line, whether from Wellington or Malmesbury, would go through Tulbagh Kloof, work was begun there with the preliminary ballasting work with excavations, bridges and culverts through the Kloof and beyond. The work attracted not only navvies, but for the first time a number of Khoisan from the mission stations took employment on the railways.
- 3.7.12. When work was stopped on these extensions in October 1865, some 26 kilometres of works had been executed from Bushman's Rock at the entrance of Tulbagh Kloof to the foot of Mitchell's Pass. This included 12 kilometres of road ballasted, retaining walls, earthworks, 6 bridges and 29 culverts, at a cost of nearly £50 000.
- 3.7.13. The loss of business to the transport riders was not as great as initially feared as they now transported goods and produce to and from the nearest station in shorter but more frequent trips.
- 3.7.14. The discovery of diamonds and the opening up of the diamond diggings at Kimberley brought about a new urgency for the extension of the railway into the interior.
- 3.7.15. The parliamentary select committee of June 1868 set out the need for railway construction, but the chief motivating factor was not made clear - the discovery of diamonds at Kimberley. This had led to a rush of immigrants from overseas, all clamouring to reach the diamond fields.
- 3.7.16. To the owners of stage-coaches, omnibuses and wagons this represented a golden shower, since the only other way fortune-hunters could reach Kimberley was by walking or riding.
- 3.7.17. The short length of railway between Cape Town and Wellington was practically useless to travellers' intent on reaching the Diamond fields and the transport coaches met the ships at Cape Town and carried their passengers all the way to Kimberley by-passing the railway.
- 3.7.18. However in 1871 the Kimberley Transport company arranged a contract with the railway company to carry their coaches and passengers from Cape Town as far as Wellington, but this only emphasised the necessity for extending the railway.
- 3.7.19. Furthermore, if railway construction had to be tackled urgently, experience had shown that the Cape Town Railway and Dock Company was not the organisation to handle it - the Government would have to step in and take over the railways. An added incentive was that railways promised to be a lucrative source of revenue.
- 3.7.20. Thus in 1872 the company was bought out and the Cape Government Railways came into being.

## CONSERVATION MANAGEMENT PLAN FOR "BLACKIE"

### 3.8. THE CAPE GOVERNMENT RAILWAYS AND THE DEVELOPMENT OF THE 3' 6" GAUGE RAILWAYS IN SOUTH AFRICA 1872 – 1884

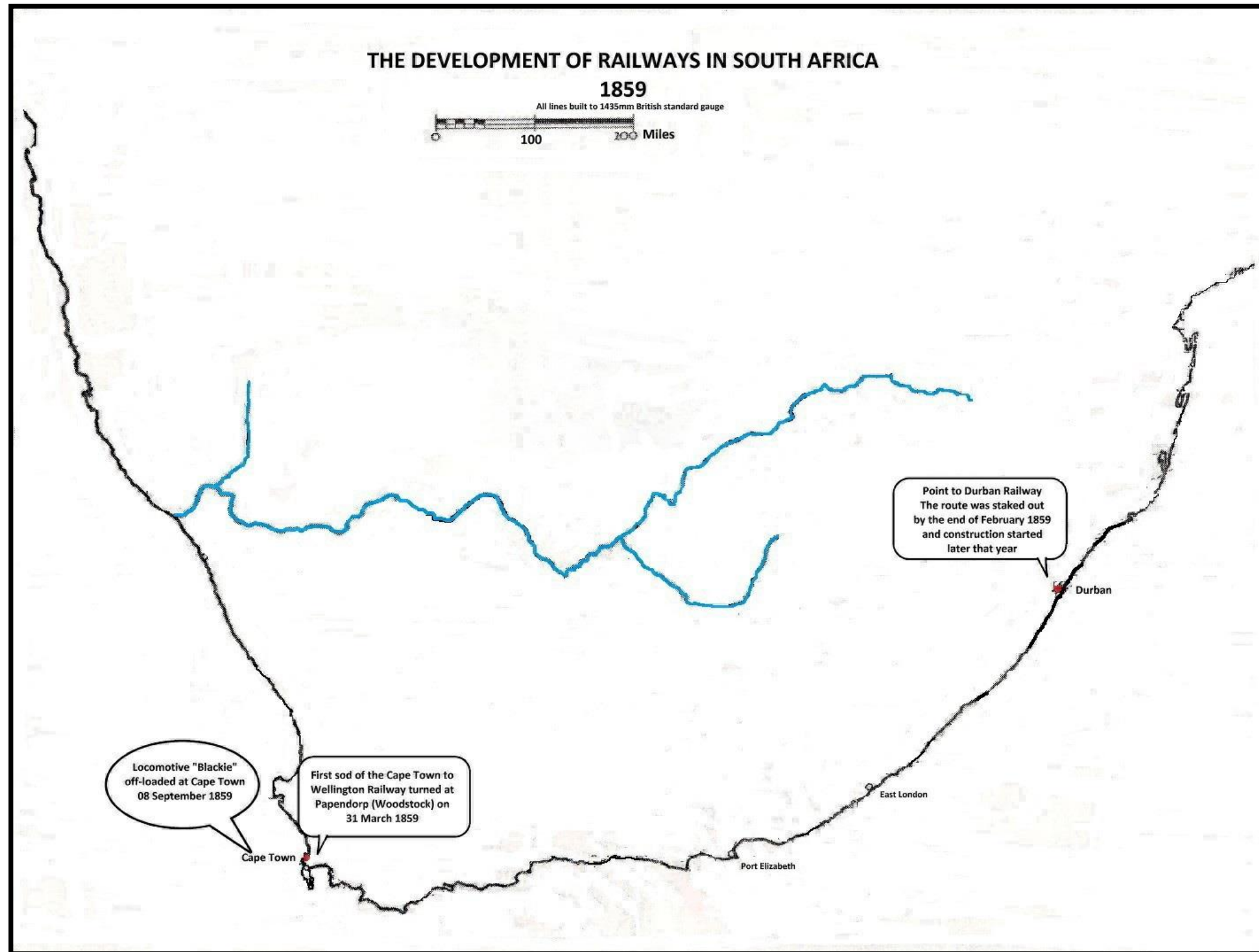
- 3.8.1. On the formation of the Cape Government Railways there were a number of important decisions to be taken, decisions which would have far-reaching and long-lasting effects on the country.
- 3.8.1.1. The first decision that had to be made concerned the type and gauge of the line that would be used in the extension from Wellington into the interior. Both the Wellington and Wynberg railways had been constructed on the English gauge of 4' 8½", but even at the time many voices had been raised in protest.
- 3.8.1.2. As long ago as 1862 a select committee had considered evidence on speed and type of line most practicable for South Africa.
- 3.8.2. By 1871, however, much evidence had accumulated to show that the Wellington-type line was far too cumbersome and costly to construct and that in Norway, Canada, Queensland, Tasmania and many other places a gauge of 42 inches had proved successful.
- 3.8.3. Thus in 1871 the Cape Parliament adopted a compromise measure that the gauge of new lines should *not be less than* 3 feet 6 inches.
- 3.8.3.1. This left the final decision to the railway authorities.
- 3.8.3.2. However this left them with the problem of the lines already in use built to the broader gauge.
- 3.8.4. The answer was to build the next new section of track, a cut-off line from Eerste River to Muldersvlei, to the narrower gauge, rendering the laying of a third line over the rest of the route to Wellington in one direction and Cape Town in the other, far less costly.
- 3.8.5. In July 1873 a Government Railway Department was formed and immediately set about obtaining the necessary skilled staff for the expansion of the railway.
- 3.8.6. Keen young engineers were brought out from England, and another 200 artisans and 300 navvies were encouraged to immigrate.
- 3.8.6.1. The wage for labourers at that time was 2/6 (25 cents) per day without rations.
- 3.8.6.2. Unskilled local labour was also engaged, their pay being 1/6 (15 cents) per day plus rations of meat, bread and beans.
- 3.8.7. Another problem that had to be resolved was whether to continue the previous policy of having the line built by contract, or to have it built by the railway department, and although tenders were actually called for, no overseas firm was prepared to undertake a survey in South Africa and submit a tender.
- 3.8.7.1. Therefore the construction was by the railway department itself.
- 3.8.8. The choice of routes into the interior was between Wellington (using the existing line) and Malmesbury, which would have involved building an entirely new main line.
- 3.8.8.1. Wellington was chosen, and the line to the north would continue from there.
- 3.8.9. Malmesbury, however, was not forgotten, and simultaneously with the building of the main line, a branch line to Malmesbury was constructed reaching that town on 12th November 1877. Eighteen years later that line was to be extended past Moorreesburg and Piquetberg, embracing the Swartland and bringing prosperity to its wheat fields.
- 3.8.10. As far as the main line was concerned, the plans of the Cape Government were far more ambitious than a mere linking of Cape Town to Kimberley: it was intended to link Cape Town, Port Elizabeth and East London separately to the diamond fields, and work went on independently on all three lines simultaneously.
- 3.8.11. Three divisions, called the Western, Midland and Eastern divisions, were created based on Cape Town, Port Elizabeth and East London.
- 3.8.12. The lines from Cape Town and Port Elizabeth met up at Brounger Junction (subsequently renamed De Aar) on the 31<sup>st</sup> of March 1884 and the line reached Kimberley and the Diamond Fields in November 1884.
- 3.8.13. As the railway extended into the interior stations were created at regular intervals and some of these developed into villages and towns.
- 3.8.14. Important railway centres developed at Touwsrivier, Beaufort West and Uitenhage as well as at De Aar.
- 3.8.15. Refer to the map on the next page for the the extent of the different divisions and their extensions into the interior.

CONSERVATION MANAGEMENT PLAN FOR "BLACKIE"

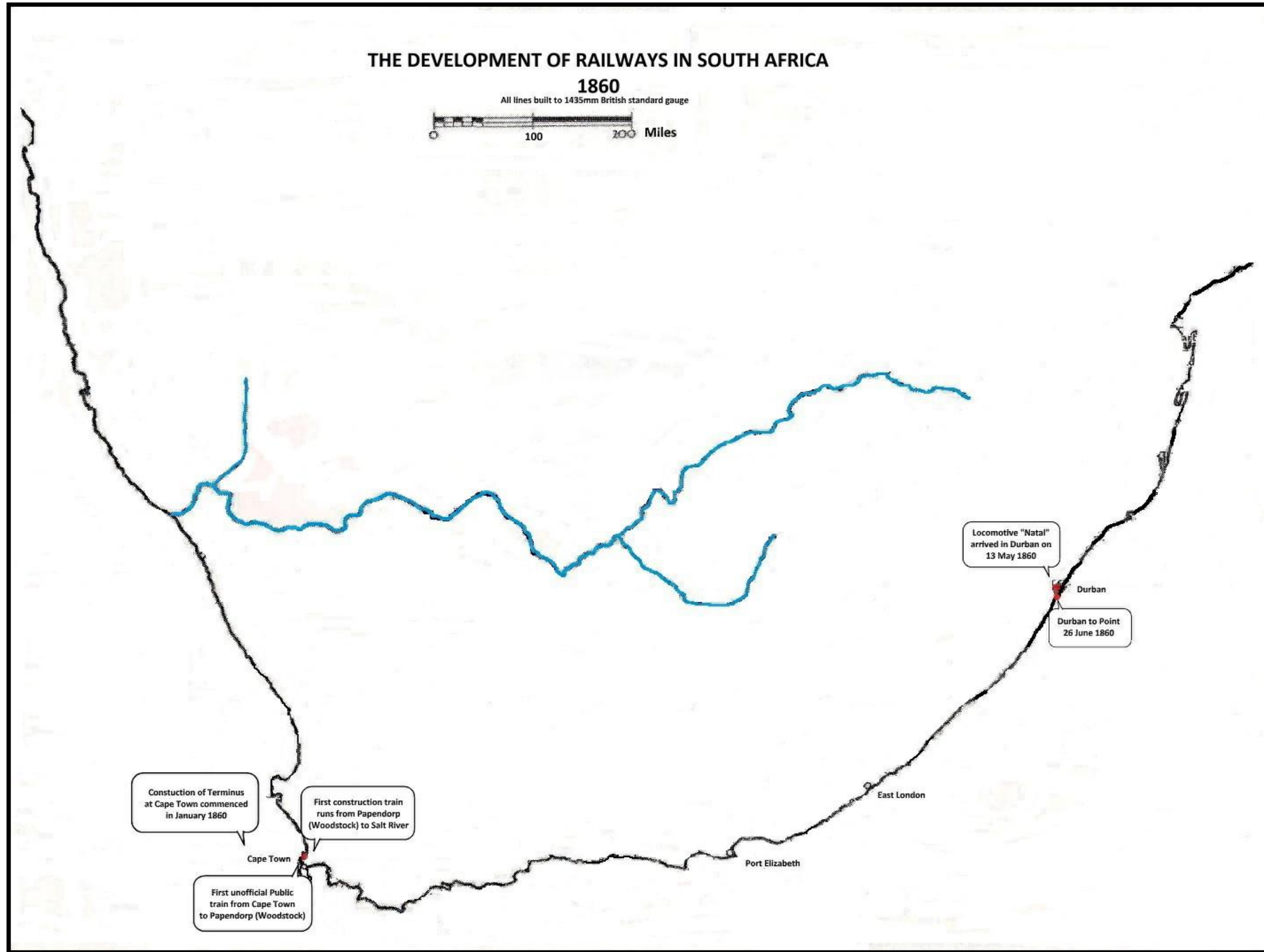


## CONSERVATION MANAGEMENT PLAN FOR "BLACKIE"

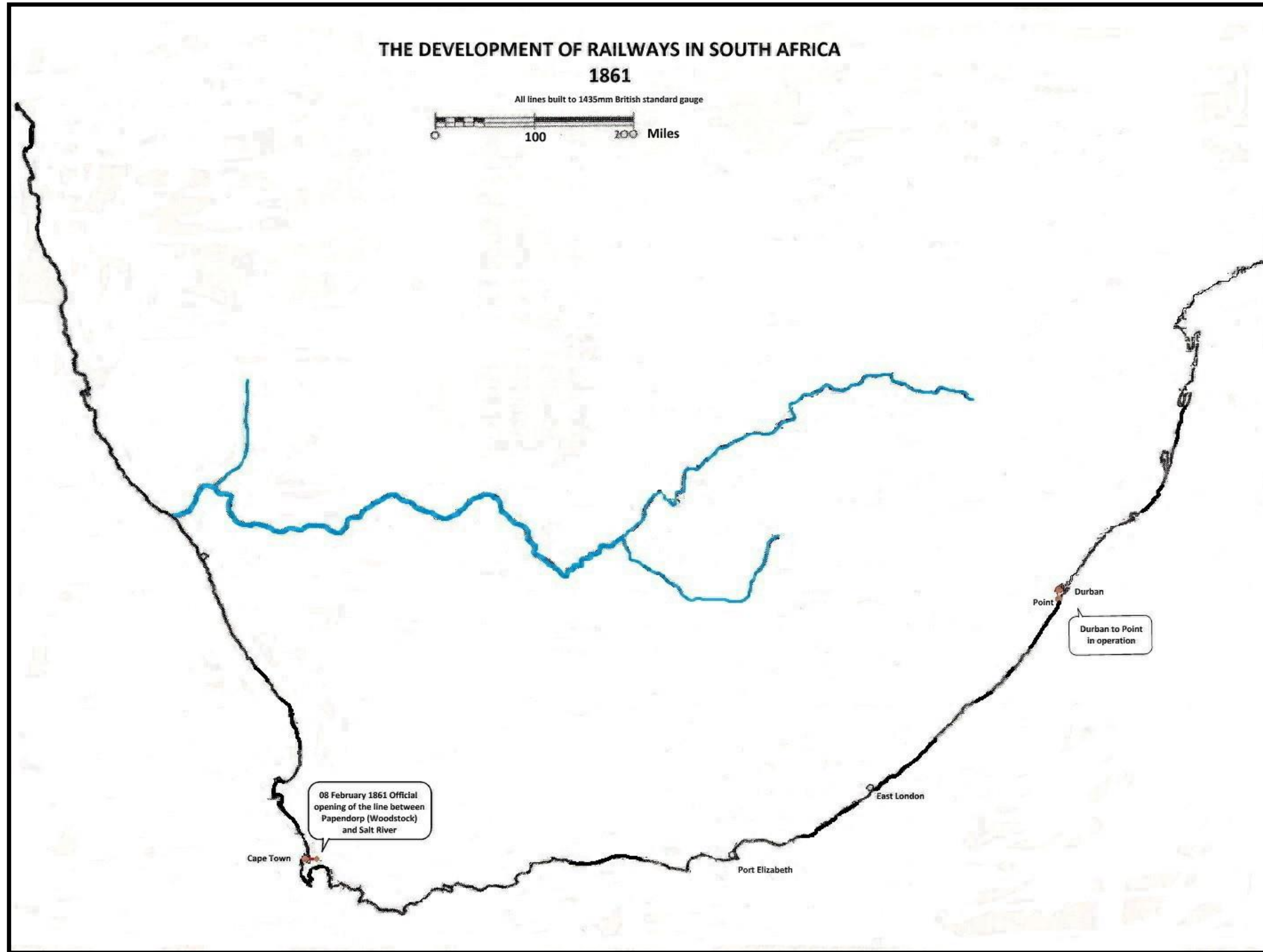
### 3.9. THE DEVELOPMENT OF THE RAILWAYS IN SOUTH AFRICA – 1859 TO 1872



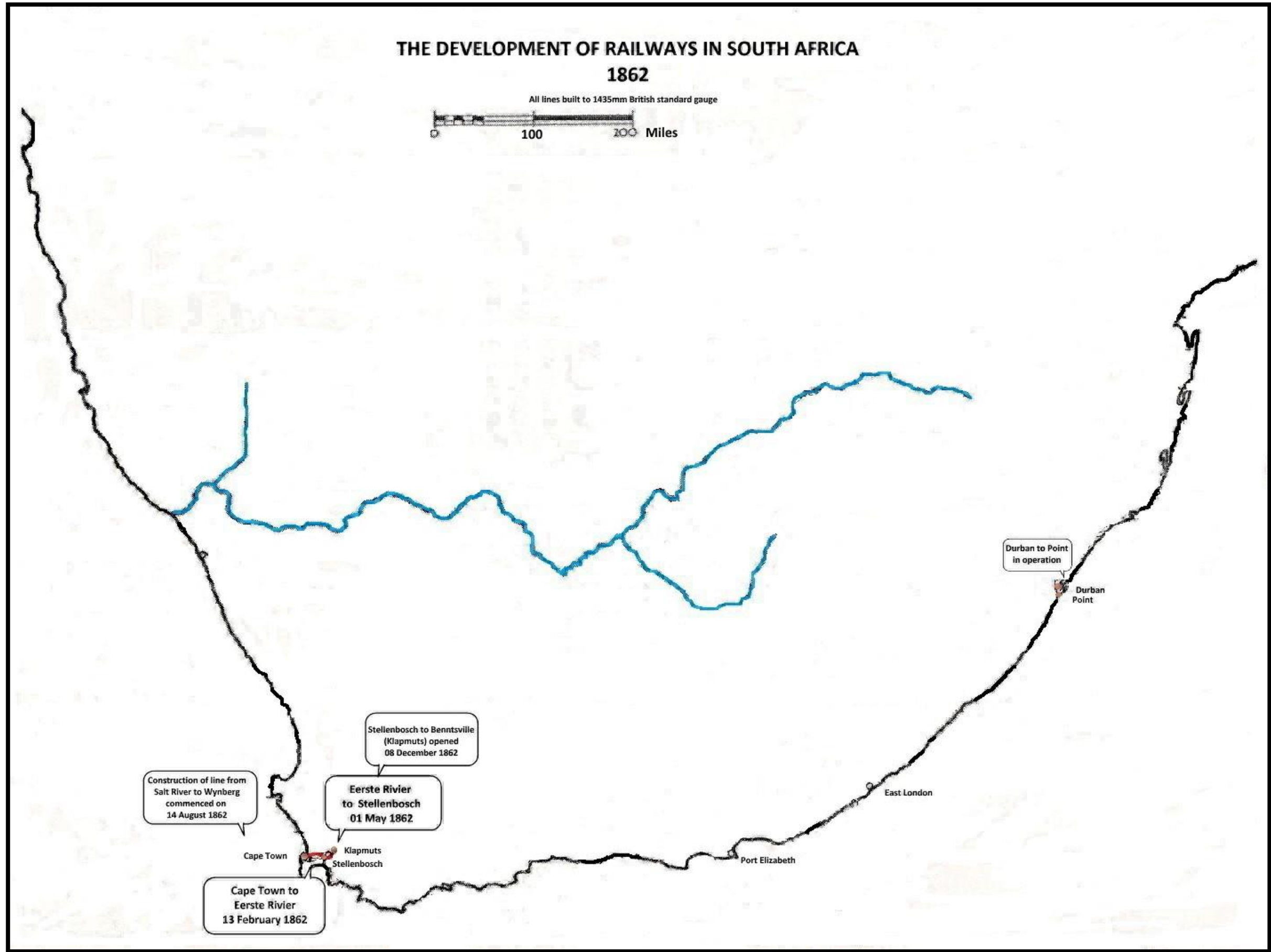
**CONSERVATION MANAGEMENT PLAN FOR "BLACKIE"**



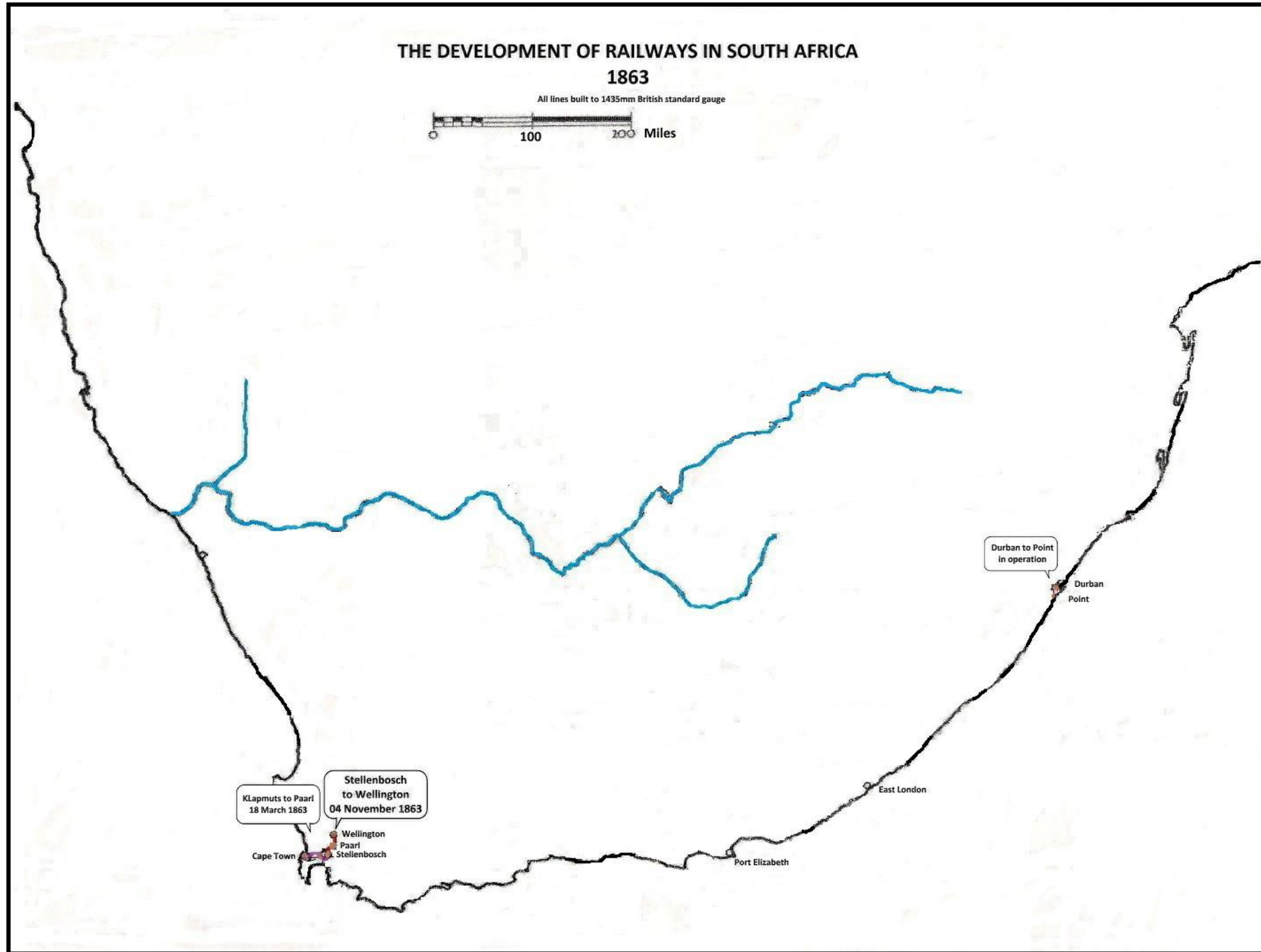
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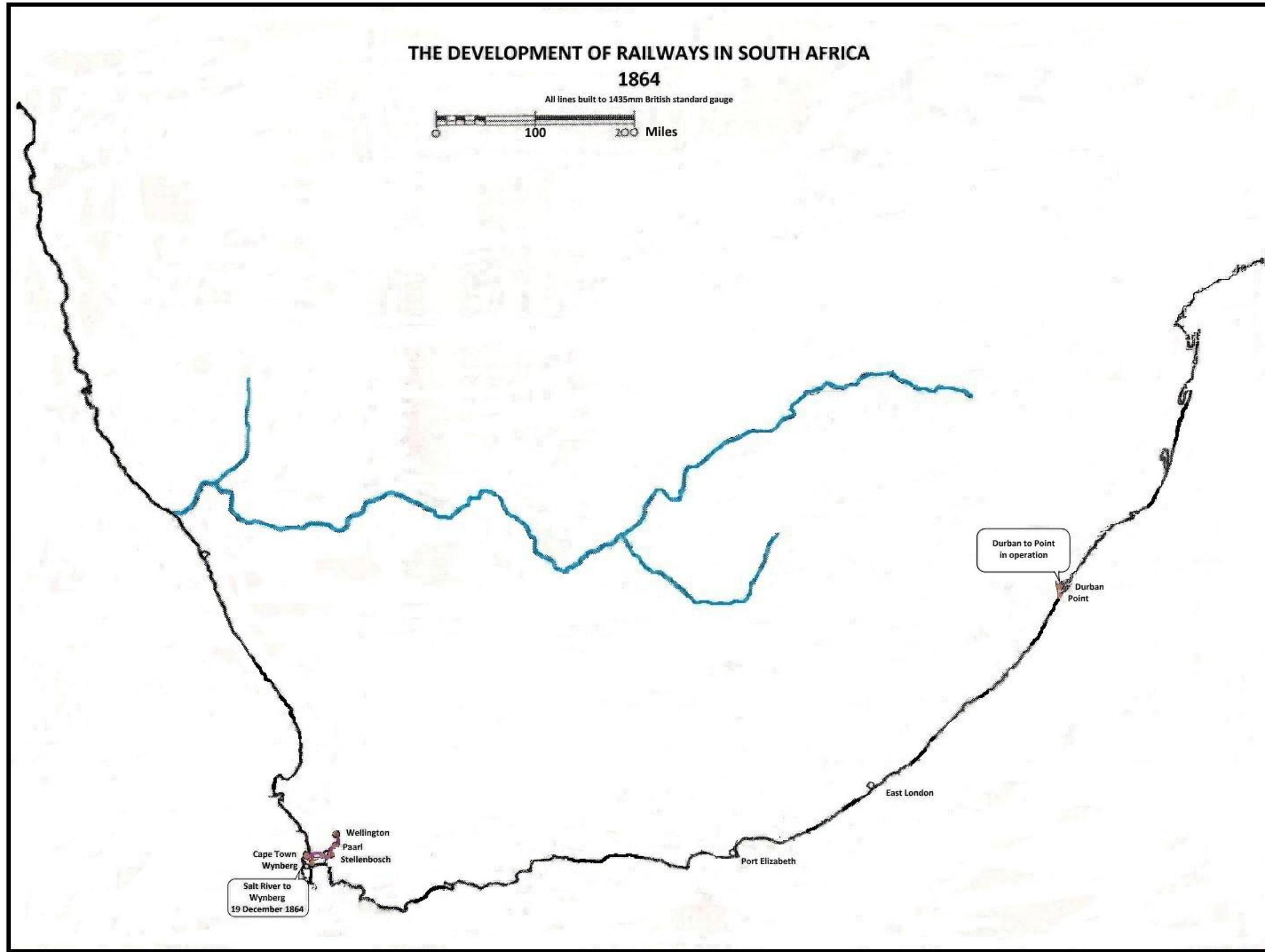


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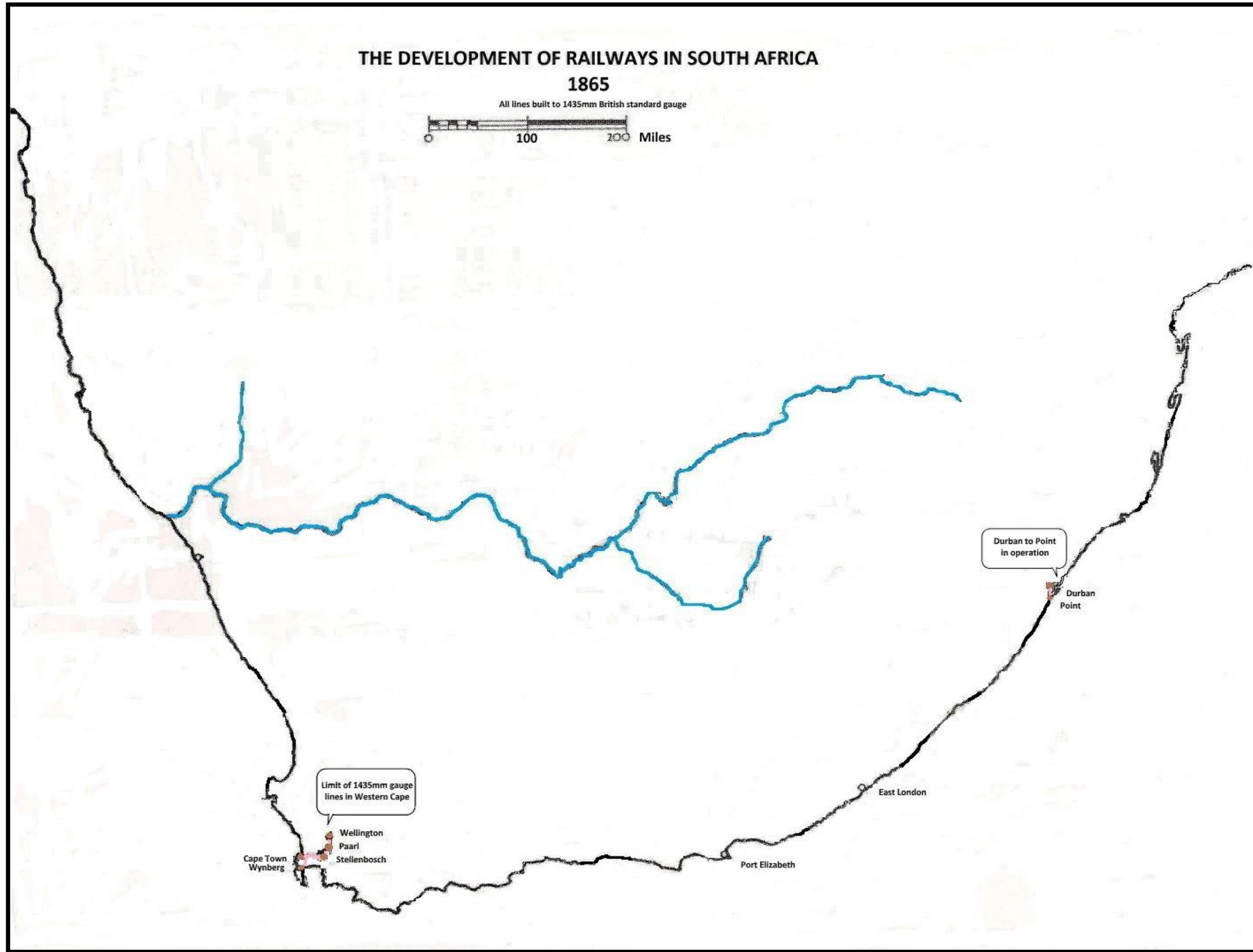




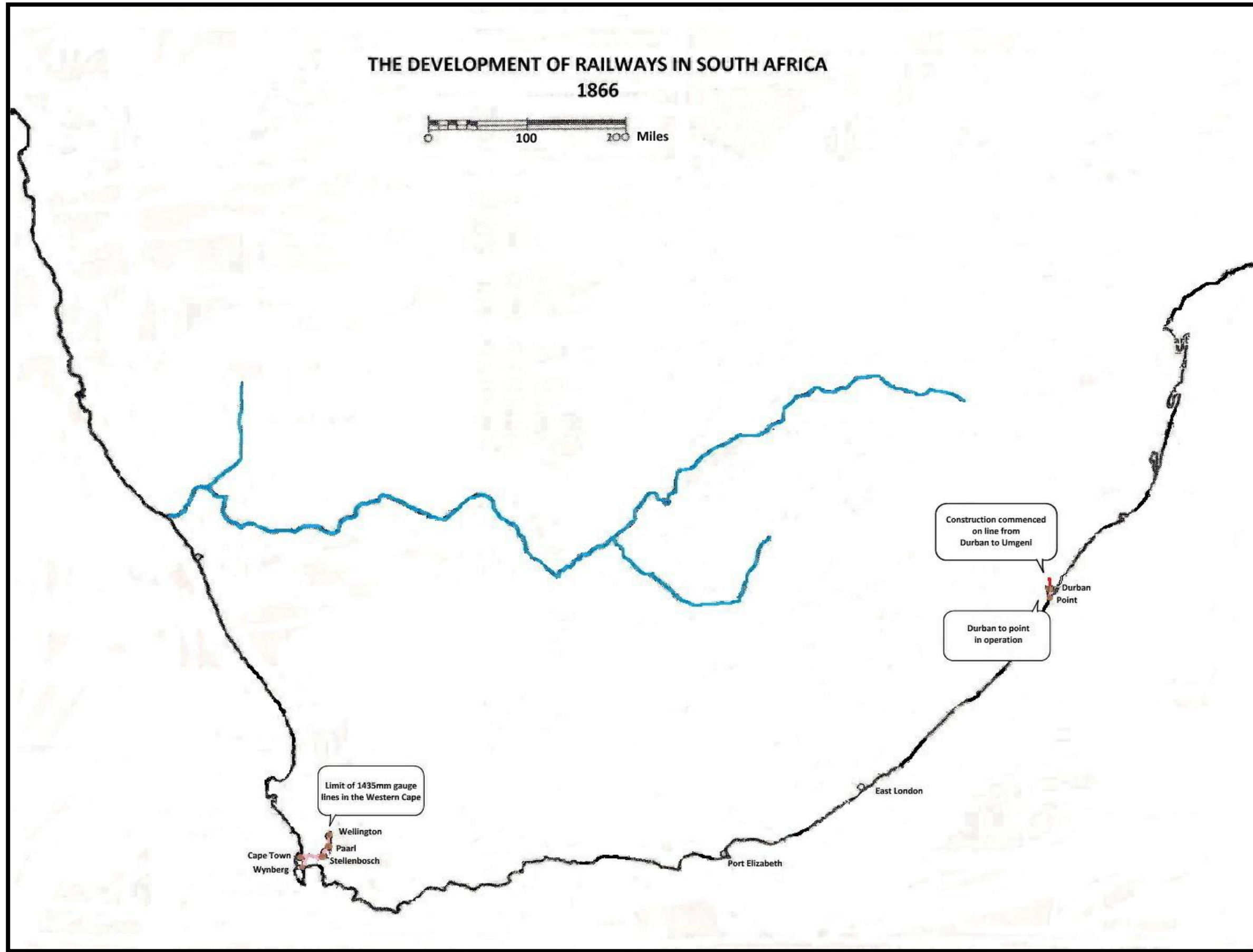
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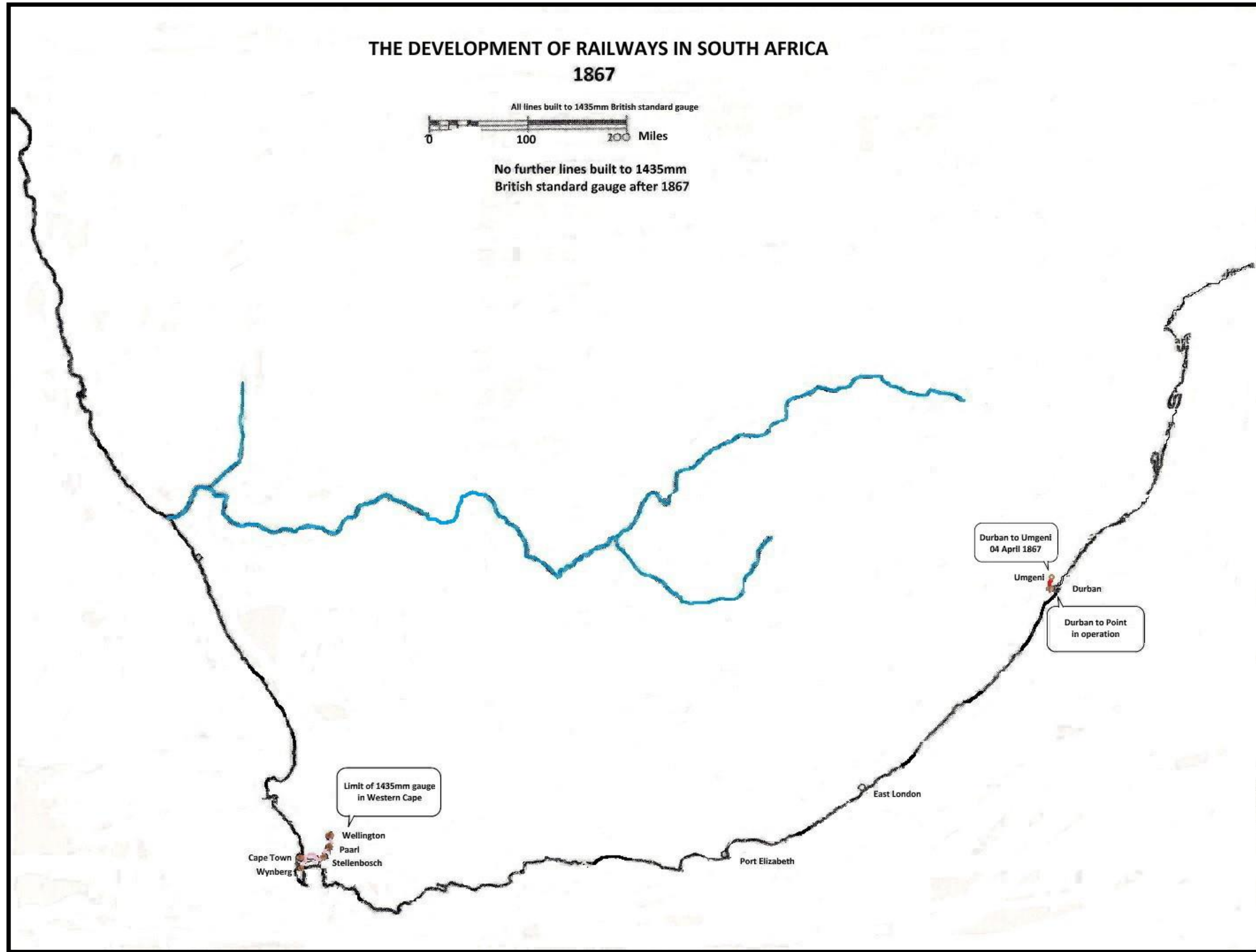
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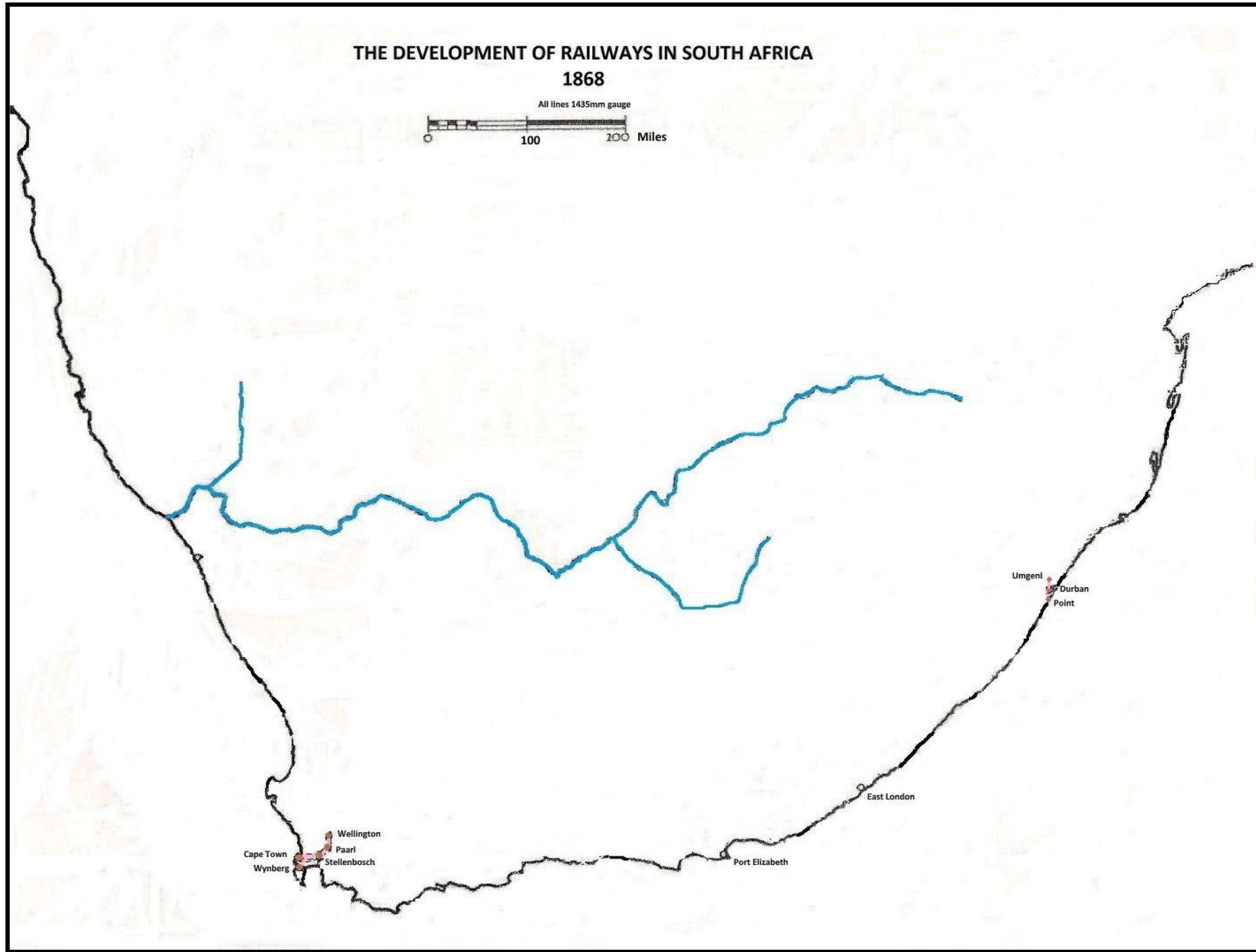
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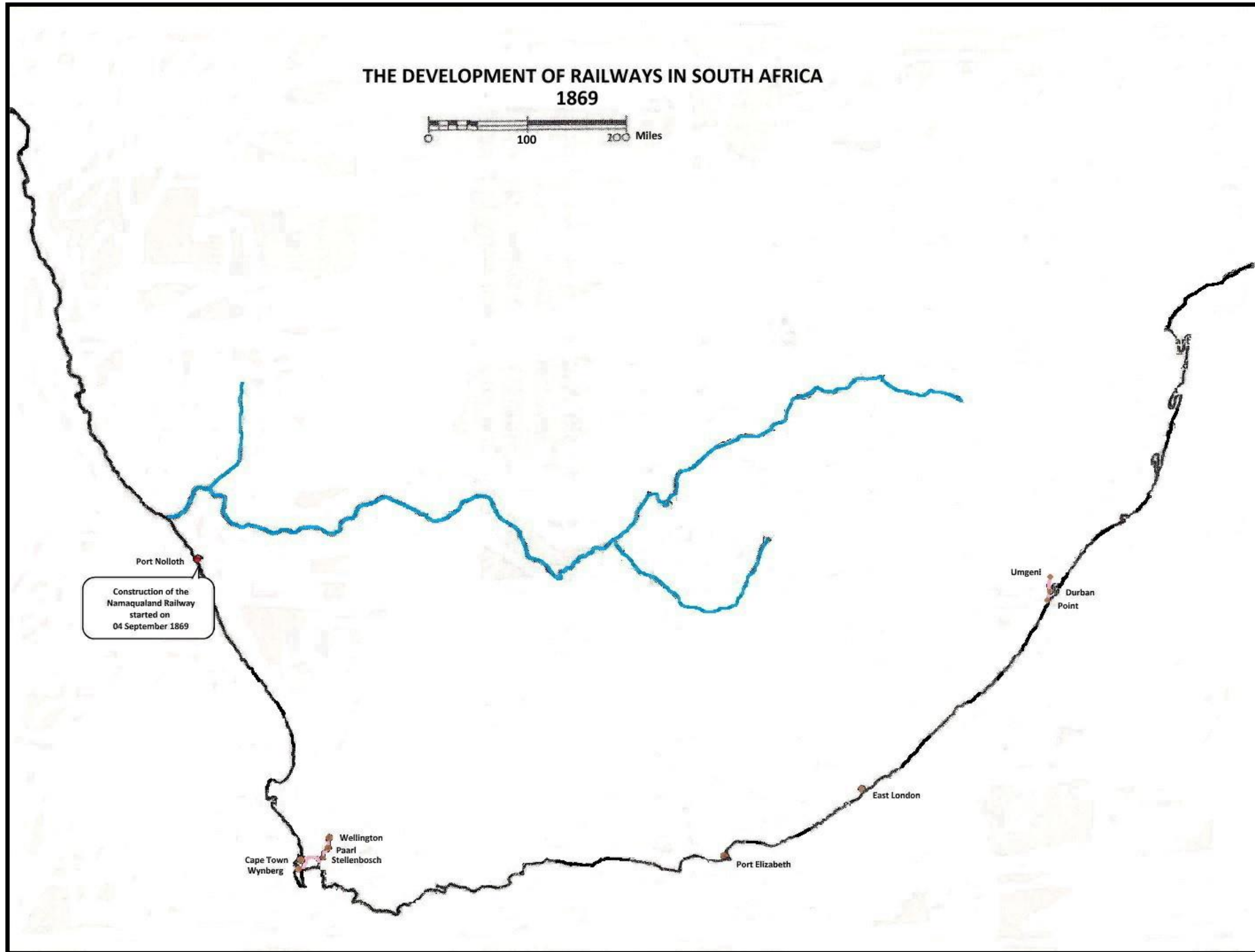
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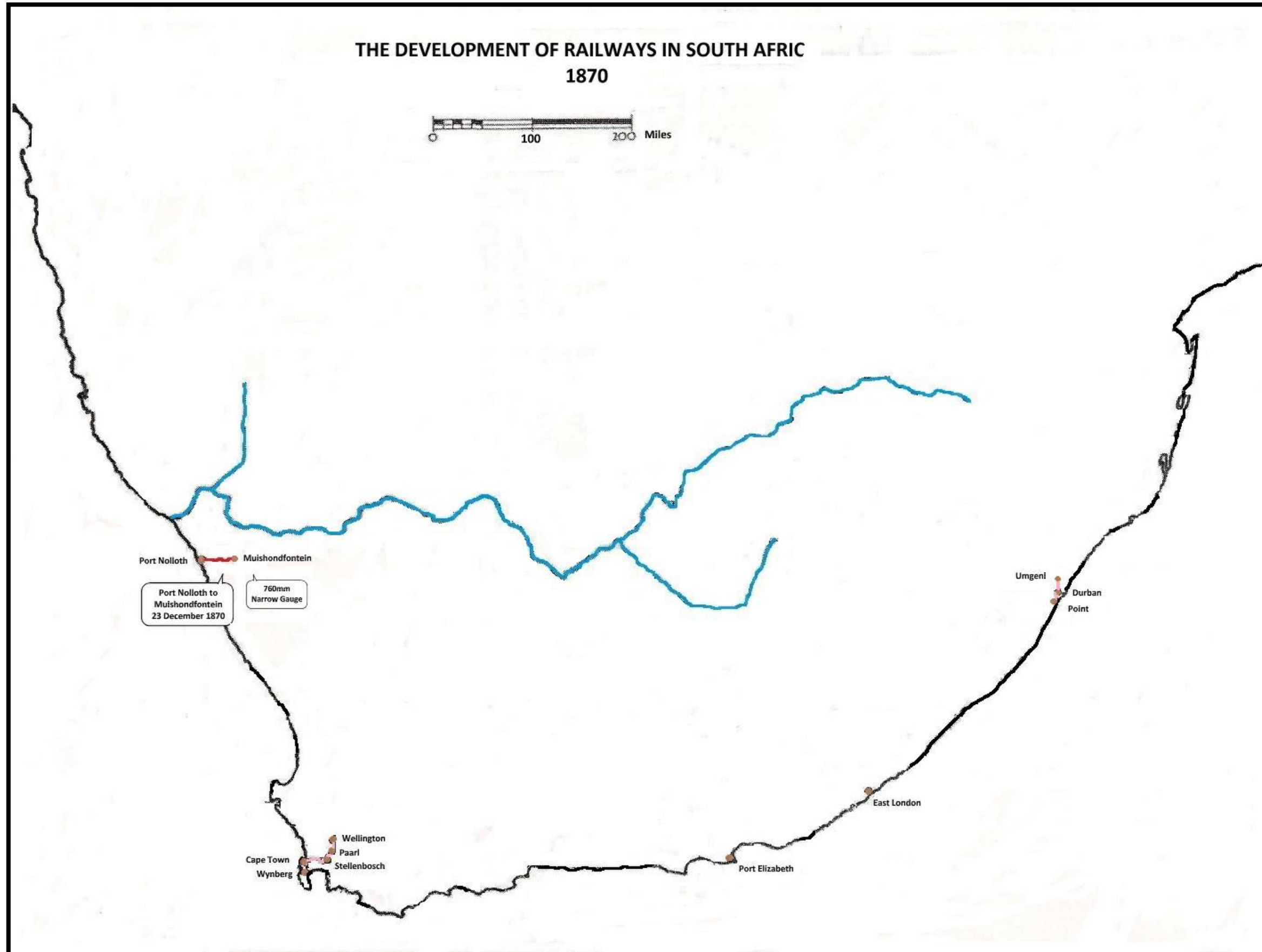
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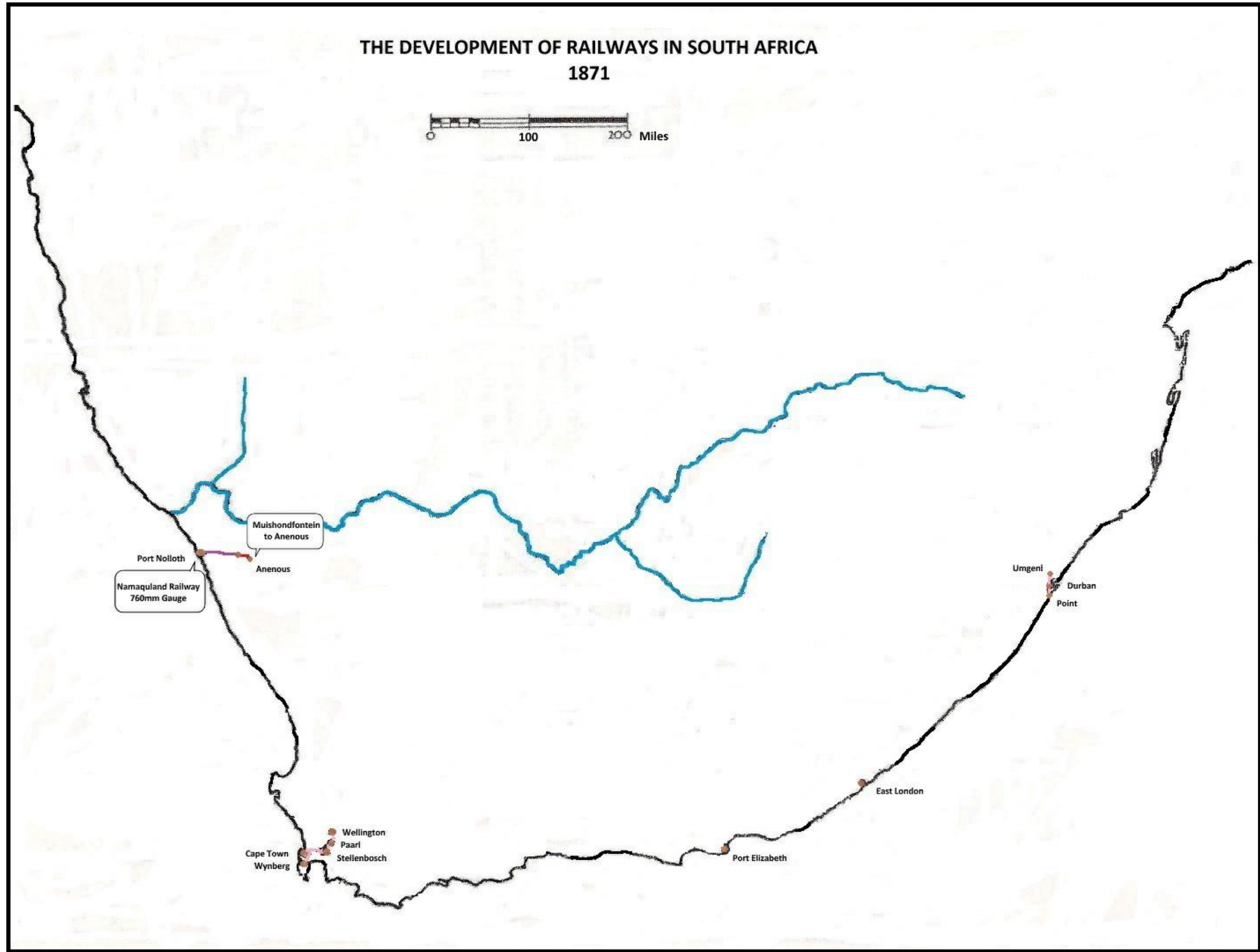
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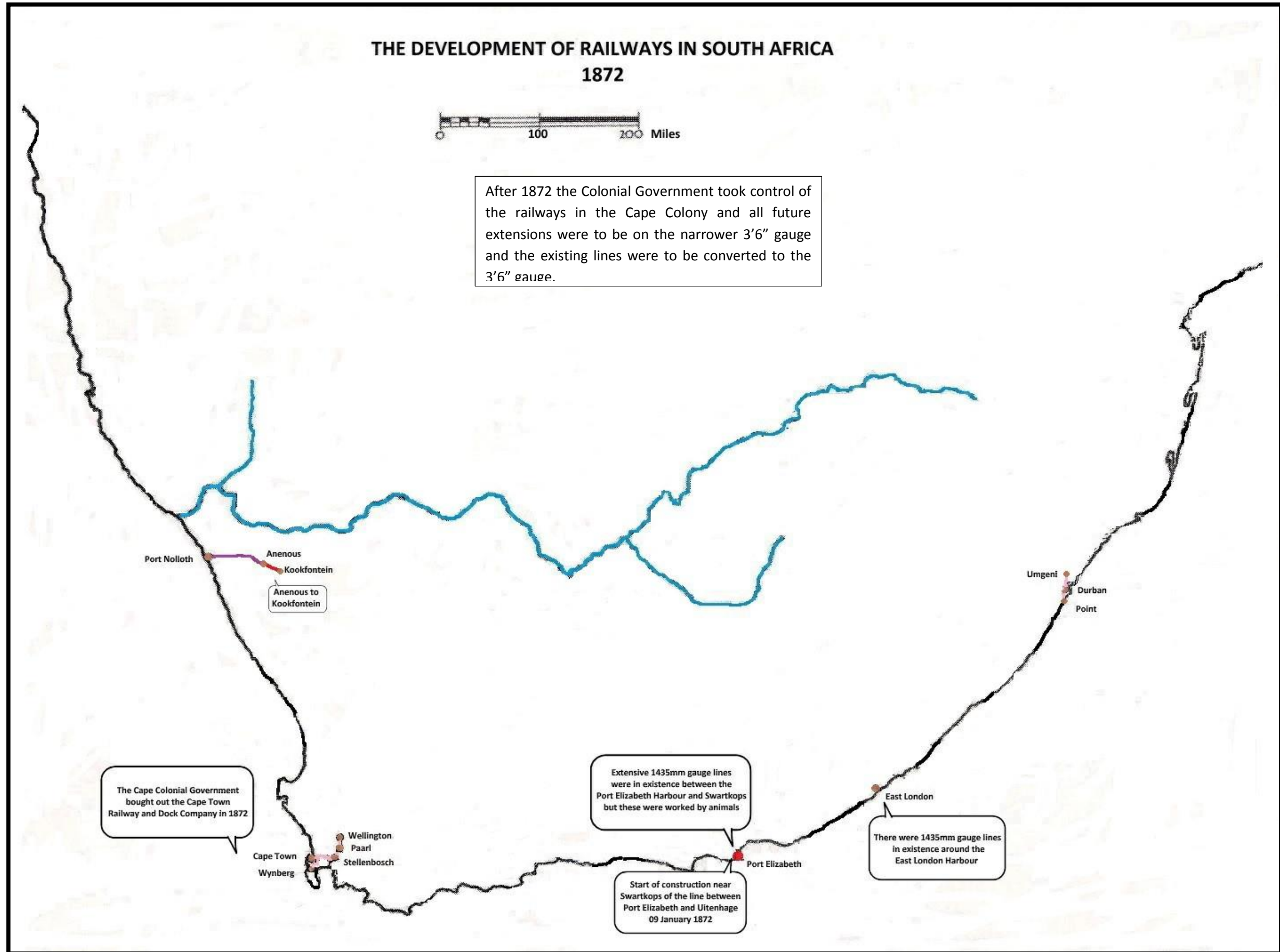


**CONSERVATION MANAGEMENT PLAN FOR "BLACKIE"**





**CONSERVATION MANAGEMENT PLAN FOR "BLACKIE"**



## CONSERVATION MANAGEMENT PLAN FOR “BLACKIE”

### 3.10. THE DEVELOPMENT OF THE RAILWAYS IN SOUTH AFRICA – 1873 TO 1910

3.10.1. No further progress was made with the construction of railways until the discovery of diamonds in 1867.

3.10.1.1. It was then that a new era dawned in South Africa, and within the next few years mineral lords, politicians and thousands of fortune-hunters would have a profound effect on the way of life of the entire population, in the process changing the boundaries of the individual colonies and territories.

3.10.1.2. Further boosted by the discovery of gold in the Transvaal Republic in 18 the effect on industrial development, with the railways as the major factor, was sudden and dramatic.

3.10.2. Within the next fifty years a unified South Africa would emerge, linked together by the railway lines that were being built during the previous half century.

3.10.3. In 1871 parliament of the Cape Colony had resolved to build future railways at the public expense and at the end of 1872 had taken over the Cape Town Railway and Dock Company.

3.10.4. In 1873 the Cape Government established the Cape Government Railways (CGR) and the assets of the Wynberg Railway Company were similarly transferred to government ownership in 1876.

3.10.5. As mentioned previously, initially there was no reason to depart from the traditional standard gauge, but this changed when it became necessary to traverse the chain of mountains between the coastal plains and the inland plateau and it then became obvious that a railway on a narrower gauge would be less costly to build.

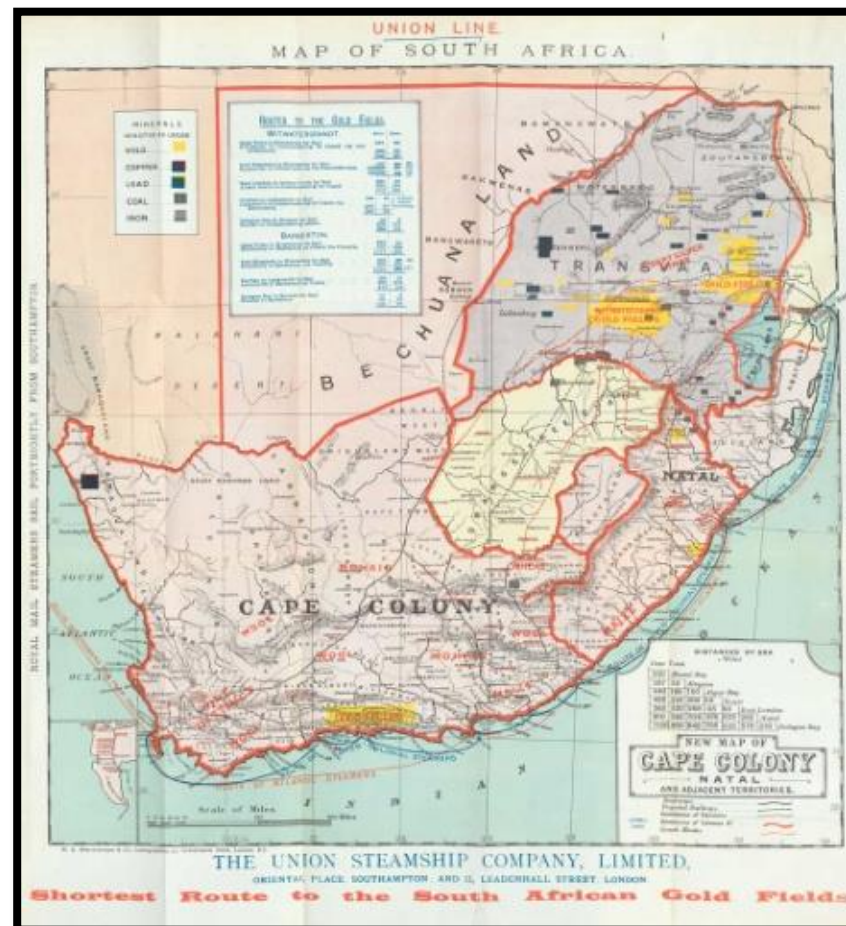
3.10.6. The result was that the Cape government decided to reduce the gauge to three feet six inches, or 1065 mm.

3.10.7. Fortunately South Africa was able to settle on a uniform gauge before construction of the regional network commenced, and only the lines from Cape Town to Wellington and Wynberg, as well as from Durban to Umgeni became mixed gauge for a short time before fully changing over to the new country-wide gauge.

3.10.8. The first section of 3’ 6” gauge track to be opened in South Africa was from Cape Town Docks to a junction with the main line on 11 May 1875.

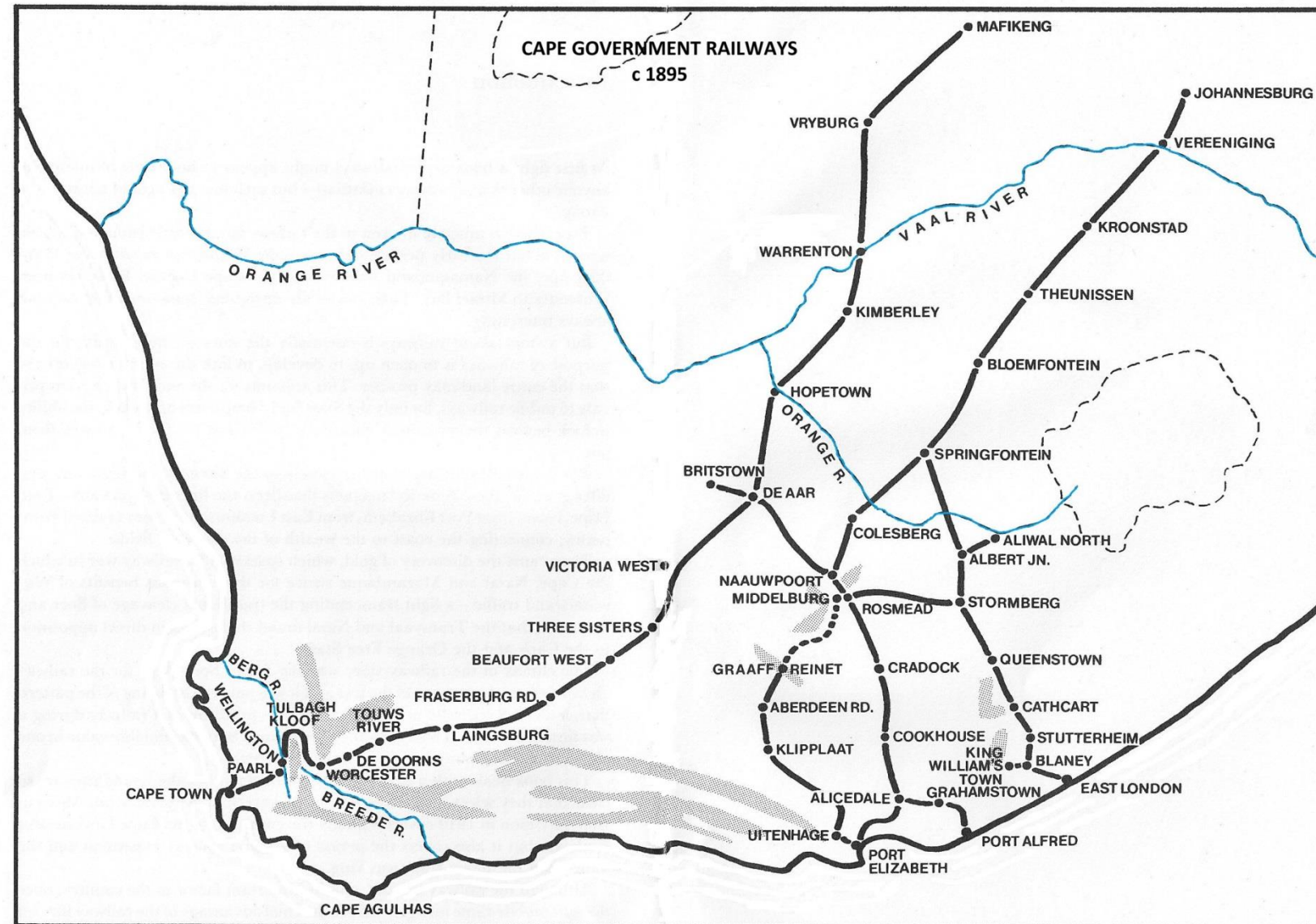
3.10.9. This comparatively narrow gauge subsequently became the standard for main line construction not only in South Africa, but for the majority of Southern Africa’s railways. It came to be known as “Cape Gauge”.

3.10.10. The plan adopted in 1873 was to build independent lines from the seaports (Cape Town, Port Elizabeth and East London) into the interior, and this formed the backbone of the development of the whole South African Railway system.



## CONSERVATION MANAGEMENT PLAN FOR “BLACKIE”

- 3.10.11. The period from 1873 up until 1895 saw the expansion of the main lines from the coastal ports into the interior to support the development of the Diamond and later Gold Mining sectors.
- 3.10.12. The Cape Western Main line was extended from Kimberley to Mafikeng via Warrenton and Vryburg and the Midland Main line was extended from Colesburg to the Free State Border.
- 3.10.13. Railways were also developed in the Orange Free State where the line from Noupoot, on the Midland line from Port Elizabeth to De Aar, to Colesburg was extended to the Vaal River via Bloemfontein and Kroonstad.
- 3.10.14. The Transvaal Republic also developed its own link with the coast with a line from Lourenco Marques (Maputo) to Pretoria – this line was designed to avoid British territory.
- 3.10.15. The position in 1895 was:



- 3.10.16. With the outbreak of the second Anglo-Boer war in 1899 the railways of the Cape Colony and Natal were placed under Military Control under the title of the “Imperial Military Railways”.
- 3.10.16.1. As the war progressed and the British forces moved into the Free State and Transvaal the Republican Railway systems were placed under Imperial Military control as well.
- 3.10.16.2. Following the peace treaty in 1902 the railways reverted to civilian control and the railways of the former Republics were amalgamated under the title of the “Central South African Railways” (CSAR).
- 3.10.17. From the Anglo-Boer war until Union in 1910 there was further development of the secondary and branch lines to link together some of the coastal ports as well as providing improved access and transport to key agricultural areas.
- 3.10.18. With the formation of the Union of South Africa in 1910 the separate Colonial Railways Systems and the CSAR were incorporated into a single entity, the South African Railways (SAR).

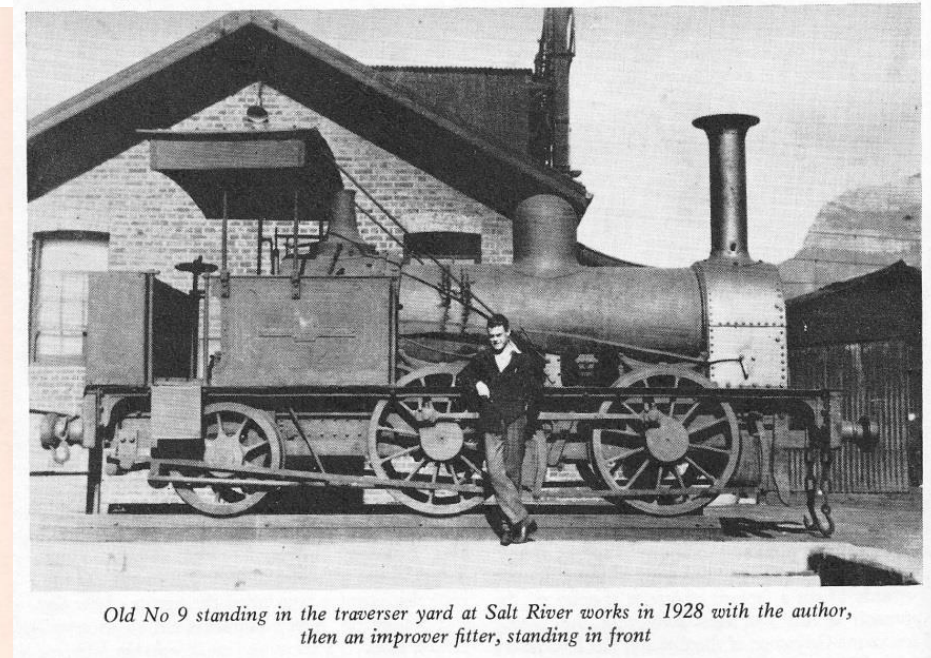
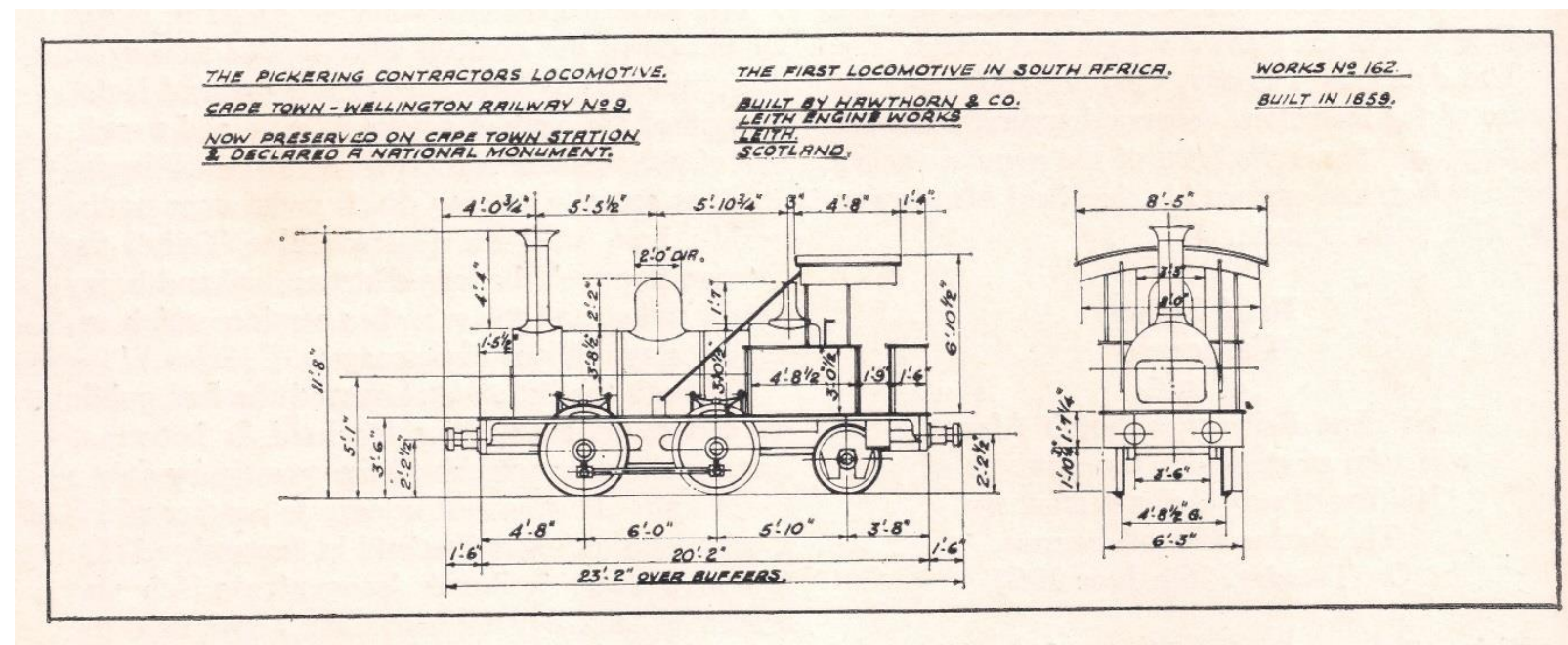
## CONSERVATION MANAGEMENT PLAN FOR "BLACKIE"

### 3.11. THE DEVELOPMENT OF THE RAILWAYS IN SOUTH AFRICA – 1910 TO 2010

- 3.11.1. From Union the railway network expanded further with the development of more secondary and branch lines seen as development catalysts for rural areas.
- 3.11.2. The First World War saw the expansion of the railway link to South West Africa (now Namibia) and then the incorporation of the South West African railway system which was operated as part of the SAR.
- 3.11.3. After the First World War up until around 1936 the railway network developed yet further with the construction of more secondary and branch lines to help develop even more rural areas as well as, in some cases, a degree of political expediency.
  - 3.11.3.1. This period also saw a major increase in migrant labour from other parts of Africa who used the rail system as a cheap and efficient way of accessing jobs in the South African mining and industrial sectors.
- 3.11.4. After the Second World War the development of an improved and expanded road system, the ready availability of cheap ex-military road vehicles and the increase in the use of private motor cars started to impact severely on the railway passenger traffic.
- 3.11.5. The decline in the railways was exacerbated by the deregulation of Road Transport in 1977 which saw high priority freight traffic move over to road transport and the withdrawal, in 1984, of most long distance and rural passenger trains.
- 3.11.6. The systematic replacement of Steam motive power with Diesel and Electric Traction began in the 1960's and mainline working with Steam Locomotives ceased on 11/12 December 1992 when the Kimberley – De Aar line finally changed over to Diesel power.
- 3.11.7. The last Steam Locomotive shunting duties were on 31 December 1992.
- 3.11.8. Thus ended the cycle begun in 1859 with Blackie.

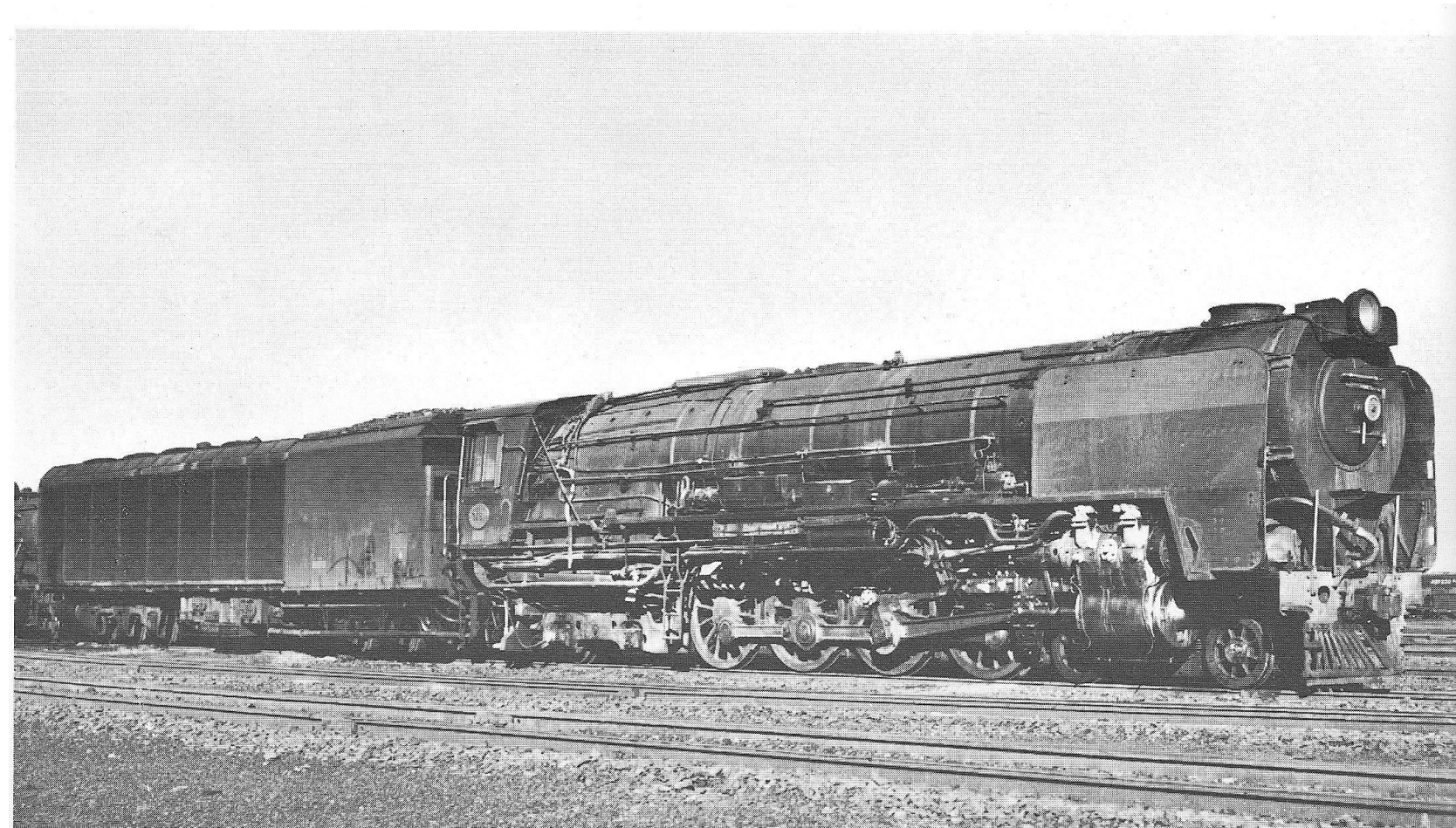
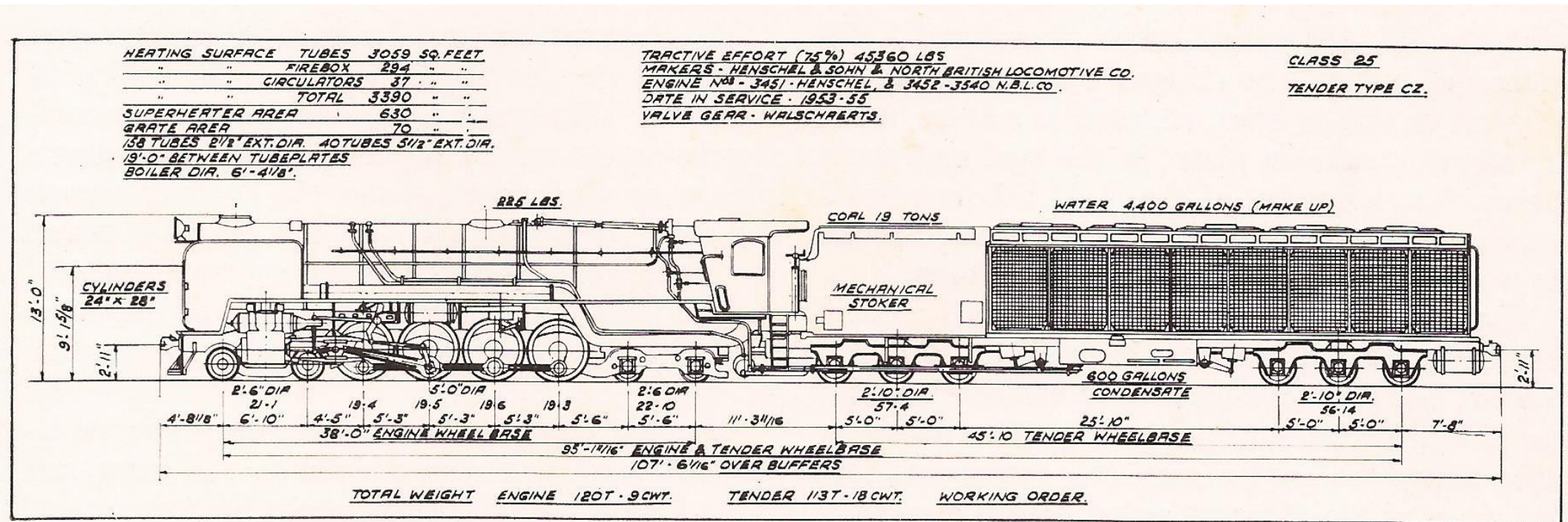
### 3.12. THE FIRST STEAM LOCOMOTIVE

### 3.13. "Blackie" – built 1859



## CONSERVATION MANAGEMENT PLAN FOR "BLACKIE"

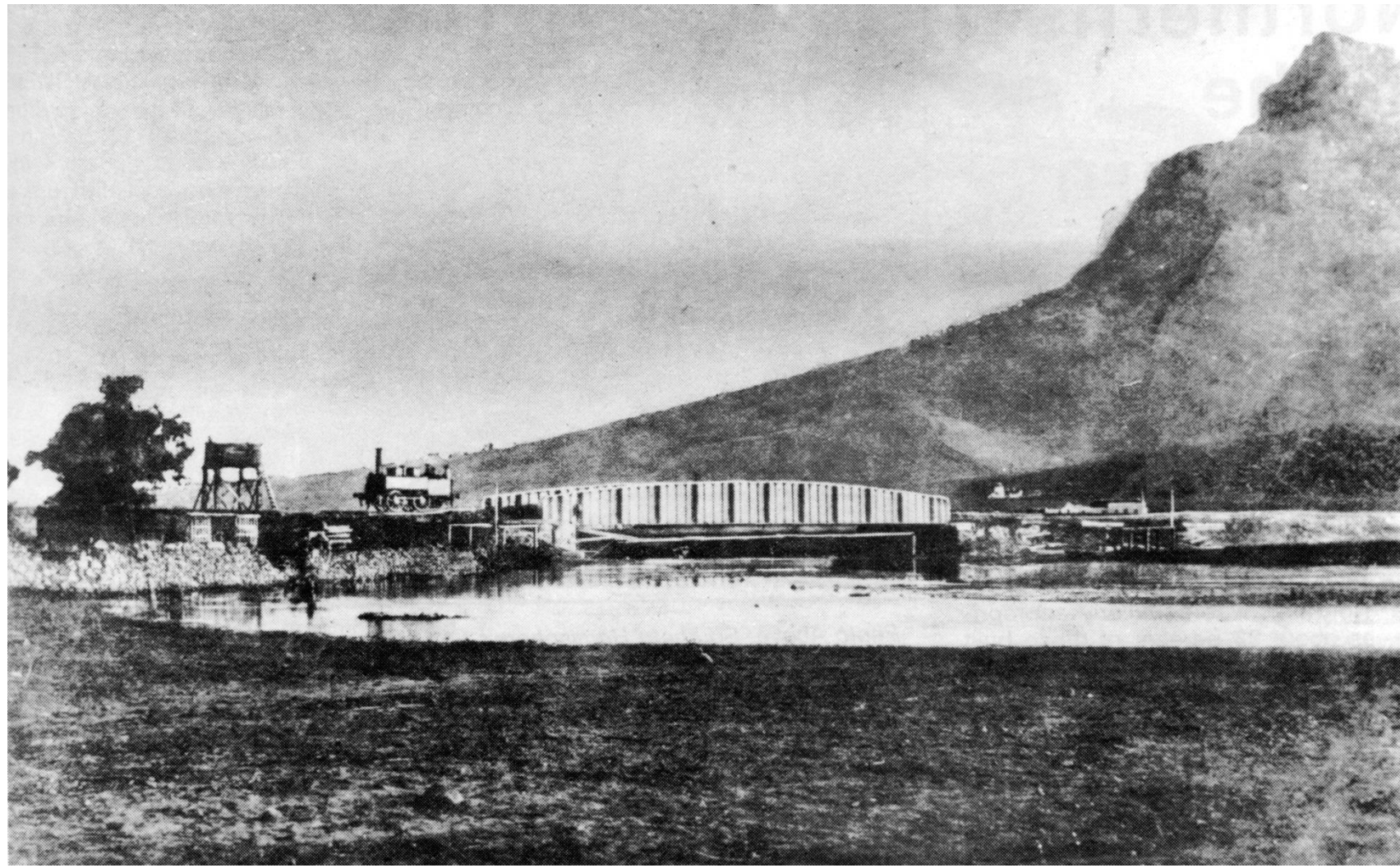
- 3.14. THE LAST STEAM LOCOMOTIVE
- 3.15. Class 25 Condenser – built 1953- 1955



## CONSERVATION MANAGEMENT PLAN FOR "BLACKIE"

### 4. HISTORICAL SIGNIFICANCE

- 4.1. "Blackie" was the first steam locomotive in South Africa, arriving in Cape Town in September 1859.
- 4.2. "Blackie" was built to the British standard gauge of 4' 8½" (1 435mm) which was the gauge used for the first railway lines constructed in South Africa.
- 4.3. "Blackie" was also the first locomotive to operate in South Africa, albeit on construction trains.
- 4.4. "Blackie", Engine No. 9, may well have been at the head of the first construction train to reach the planned railhead at Wellington on 4 November 1863, but whether this was so cannot be confirmed.
- 4.5. "Blackie" is the only 4' 8½" (1 435mm) gauge steam locomotive in existence that worked on the Cape Western Railway System of the Cape Government Railways.
- 4.6. "Blackie" is one of two 4' 8½" (1 435mm) gauge steam locomotives preserved in South Africa. The other locomotive is "Natal" which hauled the first public train between the Point and Durban in July 1860. "Natal" is currently plinthed in the concourse of the new Durban station.
- 4.7. "Blackie" was declared a National Monument in 1936.
- 4.8. "Blackie" was relocated to the current "new" Cape Town Station in the 1960's.



## CONSERVATION MANAGEMENT PLAN FOR “BLACKIE”

### 5. DESCRIPTION OF THE LOCOMOTIVE

#### 5.1. Description

5.2. The locomotive was originally built as a 0-4-0T Pannier Tank (side tank) locomotive with two cylinders mounted between the frames and an open cab – we are currently awaiting confirmation of this from the Hawthorn & Co. records held at the National Railway Museum at York in the United Kingdom.

5.3. The locomotive was subsequently modified to a 0-4-2T locomotive with a roofed cab.

5.4. In its current state the locomotive does not have side tanks – it at present does not have any water tank.

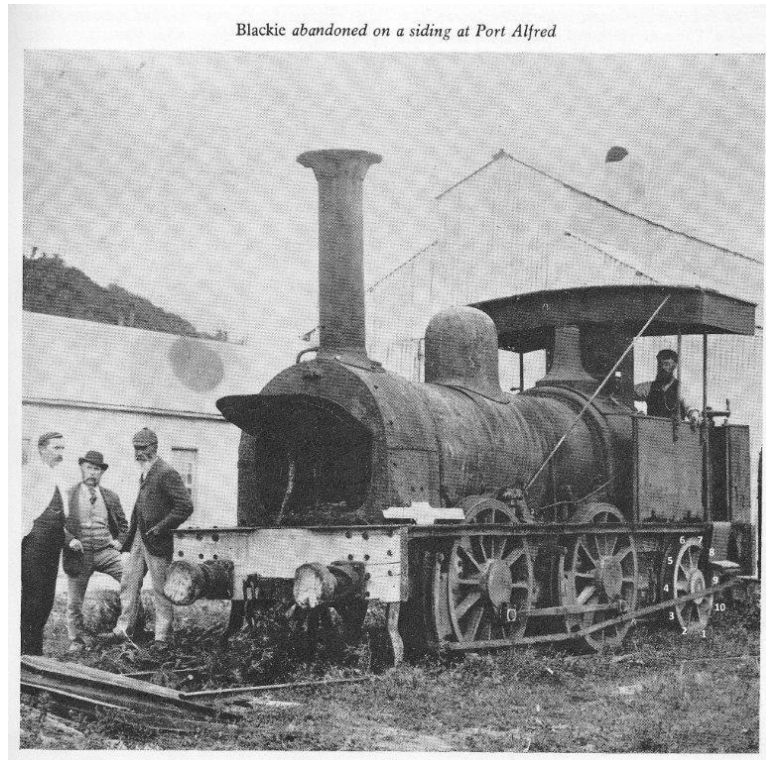
#### 5.5. Dimensions (final, modified form)

Length over buffers	7,087m	23' 3"
Height above rails (stack)	3,556m	11' 8"
Height above rails (cab)	3,162m	10' 4½"
Width (loco)	1,905m	6' 3"
Width (cab)	2,565m	8' 5"
Wheel-base over coupled wheels	1,829m	6' 0"
Wheel-base total	3,607m	11' 10'
Wheel gauge	1,465m	4' 8½"
Driving wheel diameter	1,372m	4' 6"
Trailing wheel diameter	0,914m	3' 0"
Boiler diameter	1,181m	3' 10½"
Boiler pitch	1,549m	5' 1"

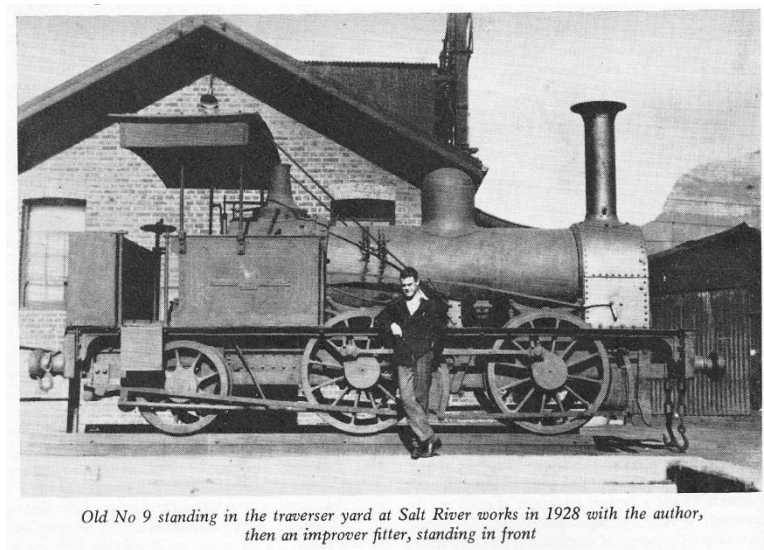
5.6. The current state of the locomotive is basically the same as it was when withdrawn from service at Port Alfred except for the rear carrying wheels.

5.7. From photographic evidence of the locomotive based on photographs taken when the locomotive was staged out of use at Port Alfred and later when the locomotive was plinthed at the Salt River Workshops in Cape Town it is noted that the rear carrying wheels were changed at some point in time after the photograph was taken at Port Alfred.

5.8. The rear wheels as seen in the Port Alfred photograph have 10 spokes.



5.9. The rear wheels as seen in the Salt River photograph taken in 1928 have 9 spokes.



5.10. The rear wheels as seen currently in storage at Firgrove have 9 spokes.





## CONSERVATION MANAGEMENT PLAN FOR “BLACKIE”

### 6. STATUS QUO REPORT ON CONDITION OF THE LOCOMOTIVE

- 6.1. The locomotive was inspected on 04 February 2015 at the premises of ALE in Firgrove by Bruce Brinkman & Mark Robinson of B4 Architects with Regina Isaacs and Nolitha Ngcai of SAHRA.
- 6.2. The inspection at ALE in Firgrove was only partially successful as it is difficult to properly inspect the whole locomotive in its present position.
- 6.3. The locomotive is currently covered in black plastic sheeting with no protective material between the paintwork and the sheeting.
- 6.4. The locomotive although under cover inside a building is not in a climate controlled environment.
- 6.5. At present neither the cab roof or the smokestack (chimney) are fitted to the locomotive nor were these not available for viewing.



- 6.6. The locomotive is currently extremely dirty and will need to be properly cleaned before a final review of the condition of the paintwork can be finally determined – it does not seem to be too bad.
- 6.7. The underside of the locomotive and the motion are covered in dust and will need to be thoroughly cleaned.
- 6.8. From the information given to us the locomotive has been moved whilst in storage at ALE.
- 6.9. We are concerned that the current storage arrangements are causing undue strain on the locomotive structure as the rails on which it is resting are not adequately supported and have deflected (see attached photographs).
- 6.10. We recommend that additional supports be inserted under the rails below the rear driving wheels (centre wheels) to avoid any further possible damage – this has not yet been done.
- 6.11. The boiler seems to be the same boiler that was in place on the locomotive when it was last used in Port Alfred in 1883 - It is probably the original boiler although there is no works plate or boiler identification plate to substantiate this.
- 6.12. The boiler tubes are still in place although some of them have been plugged and sealed off.
- 6.13. The main steam pipes and exhaust blast pipe are missing from the smokebox.



6.14. Based on the inspection we believe that the insulation under the boiler cladding is still in place.

6.14.1. This insulation may include asbestos fibres – however this is not a health hazard as long as the boiler cladding remains in place and the cladding is maintained in good condition.

6.14.2. The removal of the cladding is a major task and will result in damage to both the paintwork and the sheet metal cladding.

6.15. There is currently no indication of any well tank for water under the locomotive – however it was not possible to gain access to the underside at the rear of the locomotive in order to determine where the water feed pipes start.

6.15.1. We surmise that a water tank was contained in the bunker space at the rear of the cab.



6.15.2. This aspect requires further investigation.

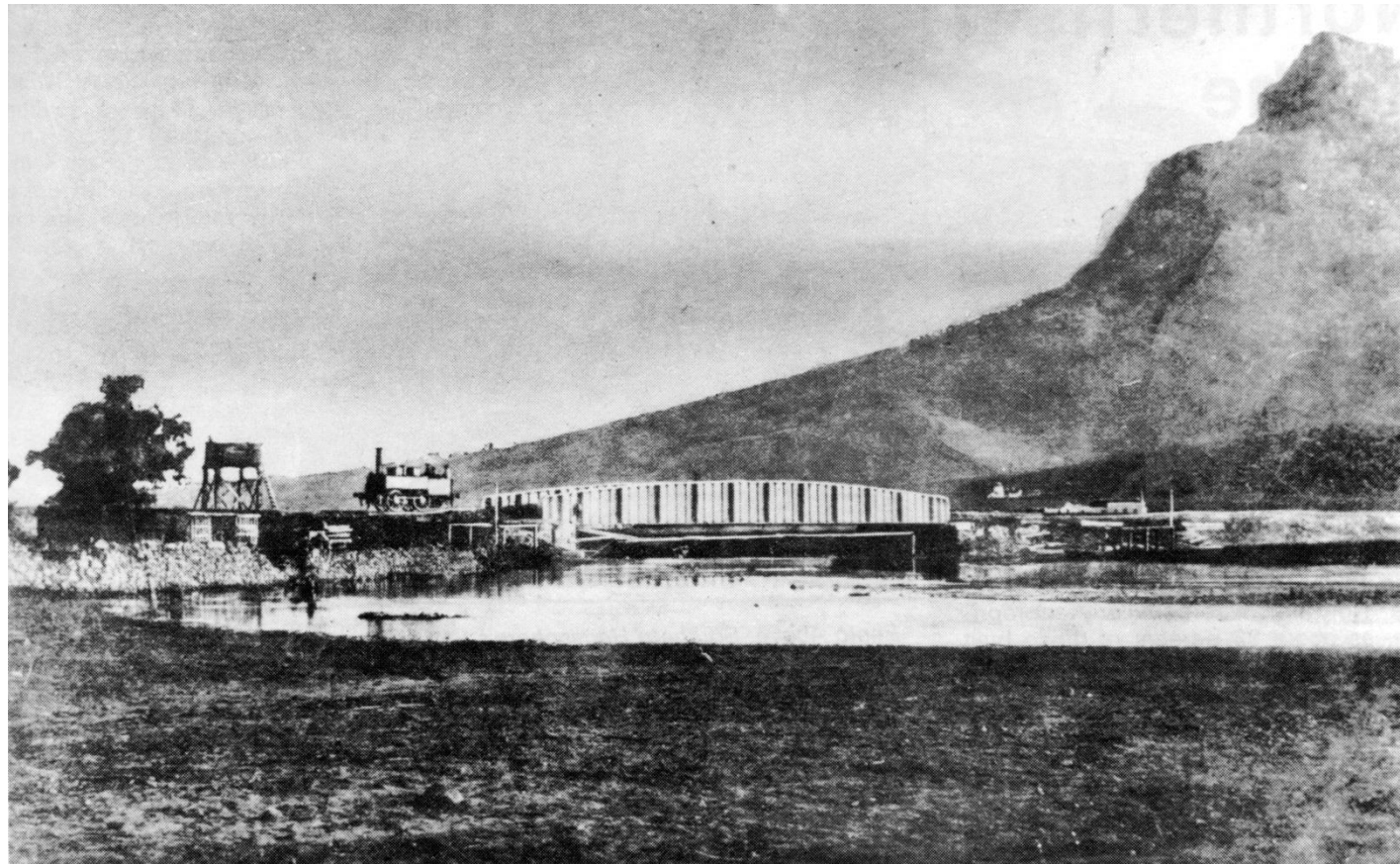
6.16. There are brackets on either side of the boiler which have bolt holes that are not currently used except for the cab stays.



6.16.1. There is also evidence that there was something fixed to the brackets on either side of the smokebox which corresponds to the early picture of "Blackie" which shows the locomotive as an 0-4-0 tank locomotive with pannier tanks.

6.17. Although the locomotive as preserved is a 0-4-2 without pannier tank or a well tank the joints where the extensions to the chassis join the original frames are not evident as they are hidden behind the horn blocks for the rear carrying wheels.

6.18. Based on the old photograph of "Blackie" as a 0-4-0 a number of differences in her appearance are evident:



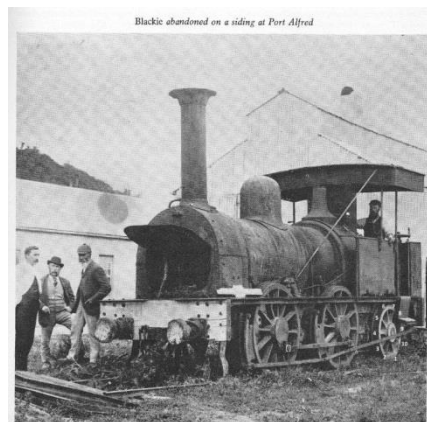
6.18.1. Originally had no cab roof.

6.18.2. Shortened cab area – no rear bunker or side access openings.

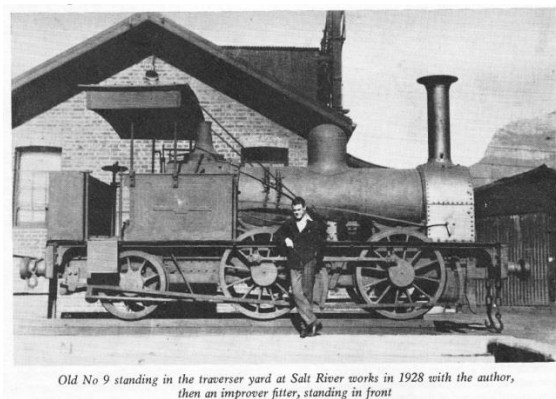
6.18.3. Side pannier tanks originally fitted.

6.18.4. Two rectangular boxes positioned above the boiler.

6.19. Thus the appearance of "Blackie" as now in storage is more or less how she looked when last in service at Port Alfred except for the rear carrying wheels being of a different pattern and that steel plates have been fitted over the timber buffer beams at the front and rear of the locomotive.



*Blackie abandoned on a siding at Port Alfred*



*Old No 9 standing in the traverser yard at Salt River works in 1928 with the author, then an improver fitter, standing in front*



6.20. A final report on the condition of the locomotive can only be compiled after a further inspection once the locomotive has been properly cleaned and re-assembled with the cab and chimney in place.

## CONSERVATION MANAGEMENT PLAN FOR “BLACKIE”

### 7. LIVERY FOR THE LOCOMOTIVE

#### 7.1. ORIGINAL LIVERY

- 7.1.1. No contemporary record of the colour/colours of the locomotive on delivery has been discovered.
- 7.1.2. However it would seem that its colloquial nickname *Blackie* is almost certainly an indication that it was black.
- 7.1.3. As a contractor's piece of equipment it would certainly not have had any fancy and expensive paintwork applied which would reinforce this conclusion.

#### 7.2. CURRENT DISPLAY LIVERY

- 7.2.1. The later application of a Cape Government Railways livery either dates back to its 1897 Grahamstown display days or, according to at least two narratives, to its return and restoration to go on display at Cape Town station in 1913.
- 7.2.2. It is currently in a Cape Government Railways livery (lined green).

#### 7.3. RECOMMENDATION ON DISPLAY LIVERY FOR THE LOCOMOTIVE

- 7.3.1. Since the locomotive has been displayed in its current Cape Government Railways livery for between 80 and 100 years and this was the livery that it was in when it was proclaimed a national monument it is recommended that it continues to be displayed in a Cape Government Railways livery.



## CONSERVATION MANAGEMENT PLAN FOR "BLACKIE"

### 8. REPAIRS / RESTORATION REQUIREMENTS

- 8.1. The locomotive "Blackie" was inspected on 04 February 2015, at the premises of ALE at Firgrove where it is in temporary storage.
- 8.2. The locomotive although under cover inside a building is not in a climate controlled environment.



- 8.3. From the information given to us the locomotive has been moved whilst in storage at ALE.
- 8.4. The locomotive is currently covered in black plastic sheeting with no protective material between the paintwork and the sheeting.
- 8.5. At present neither the cab roof or the smokestack (chimney) are fitted to the locomotive nor were these not available for viewing.
- 8.6. The locomotive is currently extremely dirty and will need to be properly cleaned before a final review of the condition of the paintwork can be finally determined – it looks to be in a reasonable condition and should not need any repainting.
- 8.7. The underside of the locomotive and the motion are covered in dust and fluff and will need to be thoroughly cleaned.



- 8.7.1. An initial cleaning must be done before the locomotive is removed from its temporary support cradle.
- 8.7.2. A final cleaning will need to be done when the locomotive is placed on display.

8.8. We are concerned that the current storage arrangements are causing undue strain on the locomotive structure as the rails on which it is resting are not adequately supported and have deflected.



- 8.8.1. We recommend that additional supports be inserted under the rails below the rear driving wheels (centre wheels) to avoid any further possible damage.
- 8.8.2. Provided that the rails on which “Blackie” is standing are propped up to ensure that they are level the locomotive should not need any structural repair work.
- 8.8.3. The final extent of any remedial work needed can only be determined once the locomotive has been relocated and reassembled.
- 8.9. Provided the locomotive is displayed under suitable conditions it should not need any special treatment or protective surface coatings.
  - 8.9.1. It is important that the locomotive is protected from direct sunlight.
- 8.10. From the visual inspection of the locomotive the boiler seems to be the same boiler that was in place on the locomotive when it was last used and we believe that the insulation under the boiler cladding is still in place.
  - 8.10.1. This insulation may include asbestos fibres – however this is not a health hazard as long as the boiler cladding remains in place and the cladding is maintained in good condition.
  - 8.10.2. The removal of the cladding is a major task and will result in damage to both the paintwork and the sheet metal cladding.
  - 8.10.3. We recommend that the boiler cladding and any insulation remain in place and that the locomotive be inspected on a regular basis to check on the integrity of the boiler cladding.
  - 8.10.4. Thus currently there are no hazardous materials that require removal and disposal.
- 8.11. As previously mentioned the locomotive does not seem to need repainting but any touch up painting and future remedial work will require paint to be colour matched to the existing paint colours.
  - 8.11.1. The paint used on the locomotive is not the original paint but was applied when the locomotive was placed on display and would have been to the then applicable South African Railways specifications.
  - 8.11.2. As these paints are no longer available it will be necessary to use current technology and request suitable products and application procedures from the major paint manufacturers such as Dulux and / or Plascon.
  - 8.11.3. Should it be necessary we can arrange for the Technical representatives from Dulux and Plascon to inspect the locomotive and submit their recommendations.
- 8.12. It is important that PRASA (or Transnet) keep proper records of any repair or restoration work so that future generations will know what work has been undertaken.
  - 8.12.1. A logbook should be kept which records not only any repair or restoration work but also all inspections.
- 8.13. We have received no input from PRASA regarding their plans for the reassembly and cleaning of the locomotive when it is relocated.
  - 8.13.1. Should PRASA require input we are prepared to assist them with this matter.

## CONSERVATION MANAGEMENT PLAN FOR “BLACKIE”

### **9. REQUIREMENTS FOR THE SATISFACTORY DISPLAY OF THE LOCOMOTIVE**

9.1. In considering the display conditions proposed by PRASA the following points need to be considered in order to minimise the risks for damage or accelerated deterioration of the locomotive:

9.1.1. The effects of sunlight and possible fading of the paintwork over time and how display location should be provided with shade.

9.1.1.1. The locomotive needs to be protected from direct sunlight.

9.1.2. Control of humidity inside the display enclosure and the provision of suitable ventilation to minimise corrosion.

9.1.2.1. If the locomotive is to be displayed in the forecourt then it needs to be displayed inside a building that has acceptable climatic conditions any display enclosure must ensure that the Humidity level is controlled so that the Relative Humidity does not exceed approximately 40% and that the conditions are such that the Dew Point of the air within the enclosure is around 5° C.

9.1.2.2. This will require a dehumidification & climate control system.

9.1.3. Any display enclosure needs to provide adequate access to the display enclosure for the purposes of regular monitoring and cleaning as appropriate of the locomotive and interior glass surfaces, as well as for any maintenance required.

9.1.3.1. There needs to be sufficient space within the enclosure around the locomotive for maintenance staff to move about and clean both the inside of the enclosure as well as the locomotive without damaging the locomotive.

9.1.3.2. There also needs to be sufficient space above the locomotive between the cab roof and the underside of the display enclosure roof to allow for proper access for cleaning and maintenance to the lighting system.

9.1.4. Review of the specifications for the glass to the display enclosure.

9.1.4.1. The glass needs to be HPR laminated safety glass.

9.1.4.2. The glass is not to be tinted.

9.1.4.3. If thermal insulation is required the glazing needs to be a double glazed system.

9.1.5. Illumination of the locomotive during the hours of darkness.

9.1.5.1. The light sources should be concealed or shielded so as not to distract viewing.

9.1.5.2. The light should not reflect off the inner surfaces of the enclosure.

9.1.5.3. The lighting system must be designed so that there is no heat build-up on the locomotive from the display lighting.

9.1.6. Consideration of appropriate security for the locomotive.

9.1.6.1. Whether the locomotive is displayed within a display enclosure or displayed within a building or the concourse it needs to be protected by a perimeter alarm system and should also be under CCTV observation & monitoring linked to the alarm system.

9.1.6.2. There needs to be a Safety and security Management System in place.

9.1.7. Consideration of viewing conditions to enable the locomotive to be viewed satisfactorily under all conditions.

9.1.7.1. The locomotive must be visible both during daylight hours and at night.

9.1.7.2. If the locomotive is displayed in a glass display enclosure the enclosure must be designed to ensure that the locomotive is clearly visible without reflections distracting from the viewing under all lighting conditions.

9.1.8. Signage and Information displays

9.1.8.1. In order for “Blackie” to be a meaningful historic display the following points need to be considered:

9.1.8.1.1. Information signs to be provided as part of the display and incorporated in the design of any enclosure or display area.

9.1.8.1.2. It is recommended that an electronic video display be incorporated that will enable the history of “Blackie” and the development of the railways in South Africa to be displayed.

9.1.8.1.3. The social impact of the development of the railways should also be included in the display material.

9.1.9. A review of the process followed by PRASA in determining the proposed location and what alternate locations were considered and the reasons that they were eliminated is to be carried out.

9.1.10. Alternate locations are to be considered and assessed for suitability.

9.1.11. A review to be carried to determine whether the proposed location is the most suitable available location for the display of the locomotive or whether there is a better vlocation.

## CONSERVATION MANAGEMENT PLAN FOR "BLACKIE"

### 10. OVERVIEW OF THE PRASA DISPLAY PROPOSAL

- 10.1. The attached drawings (Addendum A) show the location in the station forecourt proposed by PRASA together with plans of the proposed enclosure.
- 10.2. These drawings have been reviewed by B4 Architects and our comments and concerns are set out below:
  - 10.2.1. The design of the roof of the glass display enclosure will result in dirt accumulating on top of the enclosure and washing down the sides of the enclosure which will impede viewing and become a maintenance problem.
  - 10.2.2. The effects of sunlight and possible fading of the paintwork over time and how display location should be provided with shade.
    - 10.2.2.1. The proposal submitted by PRASA does not address the issue of protecting the locomotive from the effects of sunlight.
    - 10.2.2.2. The locomotive will be exposed to extreme temperature fluctuations and this will result in corrosive climatic conditions within the enclosure.
    - 10.2.2.3. Should PRASA still want to display the locomotive in the station forecourt then a proper structure will need to be erected that will provide shade and control exposure to direct sunlight whilst not obstructing the view of the locomotive.
  - 10.2.3. Control of humidity inside the display enclosure and the provision of suitable ventilation to minimise corrosion.
    - 10.2.3.1. The proposal submitted by PRASA does not address this issue.
    - 10.2.3.2. The provision of ventilation louvres at high level along the sides of the enclosure will interfere with the climate control and will allow dirt and dust to enter the enclosure.
    - 10.2.3.3. Without a proper climate control system condensation within the enclosure and on the locomotive will be a problem and could damage the locomotive.
  - 10.2.4. Access to the display enclosure for the purposes of regular monitoring and cleaning as appropriate of the locomotive and interior glass surfaces, as well as for any maintenance required.
    - 10.2.4.1. The PRASA proposal does not provide sufficient space within the enclosure around the locomotive for maintenance staff to move about and clean both the inside of the enclosure as well as the locomotive without damaging the locomotive.
    - 10.2.4.2. The PRASA proposal does not provide sufficient space above the locomotive between the cab roof and the underside of the display enclosure roof to allow for proper access for cleaning and maintenance to the lighting system.
  - 10.2.5. Review of the specifications for the glass.
    - 10.2.5.1. No details are contained on the PRASA drawings or have been provided subsequently by PRASA.
    - 10.2.5.2. PRASA maintain that the drawings are preliminary drawings.
    - 10.2.5.3. Limited structural information of how the enclosure is to be constructed.
    - 10.2.5.4. Based on the information available the proposed enclosure is not suitable.
  - 10.2.6. Review of the specifications for the illumination of the locomotive during the hours of darkness.
    - 10.2.6.1. The limited information of the lighting system that is shown on the PRASA drawings does not have any details of the specifications for the lighting.
    - 10.2.6.2. From inspection of the drawings the lighting system that is shown is not suitable.
  - 10.2.7. Consideration of appropriate security for the locomotive.
    - 10.2.7.1. No mention is made in the PRASA proposal of any perimeter alarm or CCTV system.
  - 10.2.8. Consideration of viewing conditions to enable the locomotive to be viewed satisfactorily under all conditions.
    - 10.2.8.1. We do not believe that the enclosure proposed by PRASA will satisfy the requirements for satisfactory viewing conditions due to the exposed nature of the glass enclosure and lack of climate control.
    - 10.2.8.2. The design of the roof of the glass display enclosure will result in dirt accumulating on top of the enclosure and washing down the sides of the enclosure which will impede viewing and become a maintenance problem.
  - 10.2.9. Review of signage proposed by PRASA.
    - 10.2.9.1. No information received from PRASA.
  - 10.2.10. A review of the process followed by PRASA in determining the proposed location and what alternate locations were considered and the reasons that they were eliminated.
    - 10.2.10.1. Pierre Cronjé of PRASA indicated to us that PRASA had considered locations within the Concourse but their Consultants had felt that any location within the Concourse would impact the pedestrian flows within the Station.
    - 10.2.10.2. Thus the external position in the Station Forecourt was proposed and agreed upon by PRASA.
    - 10.2.10.3. Unfortunately PRASA have not been able to provide any backup information regarding these decisions.



## **CONSERVATION MANAGEMENT PLAN FOR "BLACKIE"**

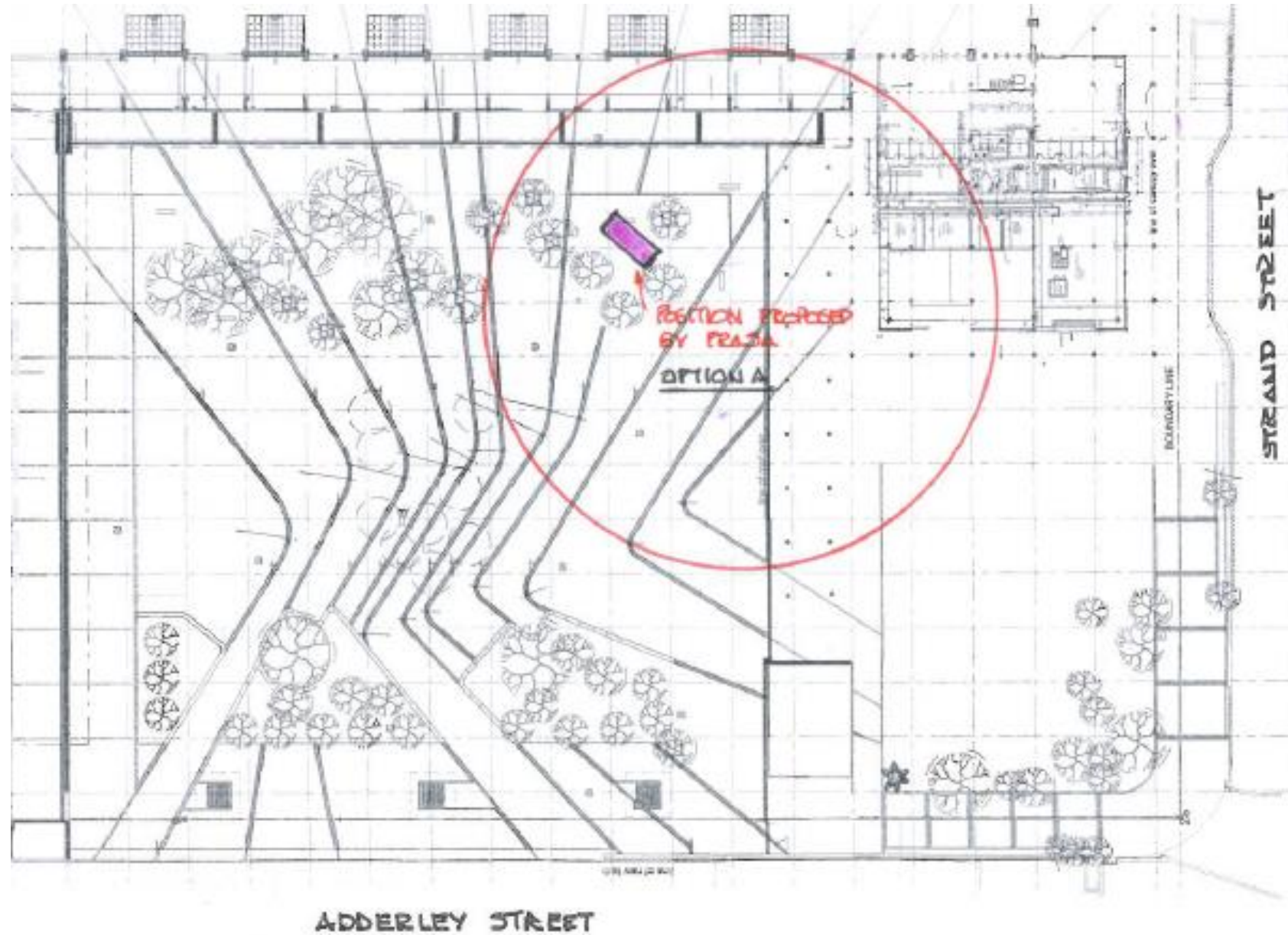
- 10.2.11. A review has been carried to determine whether the proposed location is the most suitable available location in Cape Town for the display of the locomotive.
- 10.2.12. Having inspected the proposed location in-situ with PRASA and SAHRA on 04 February 2015 as well as inspecting the Station Concourse we believe that there are alternate locations within the Station Concourse that should be considered.
- 10.3. We do not believe that the enclosure proposed by PRASA will provide acceptable conditions for the display of the locomotive and recommend that alternate display options be considered.

## CONSERVATION MANAGEMENT PLAN FOR "BLACKIE"

### 11. INVESTIGATION & REVIEW OF ALTERNATE DISPLAY PROPOSALS

11.1. We have considered the following options for the location of "Blackie" for display purposes:

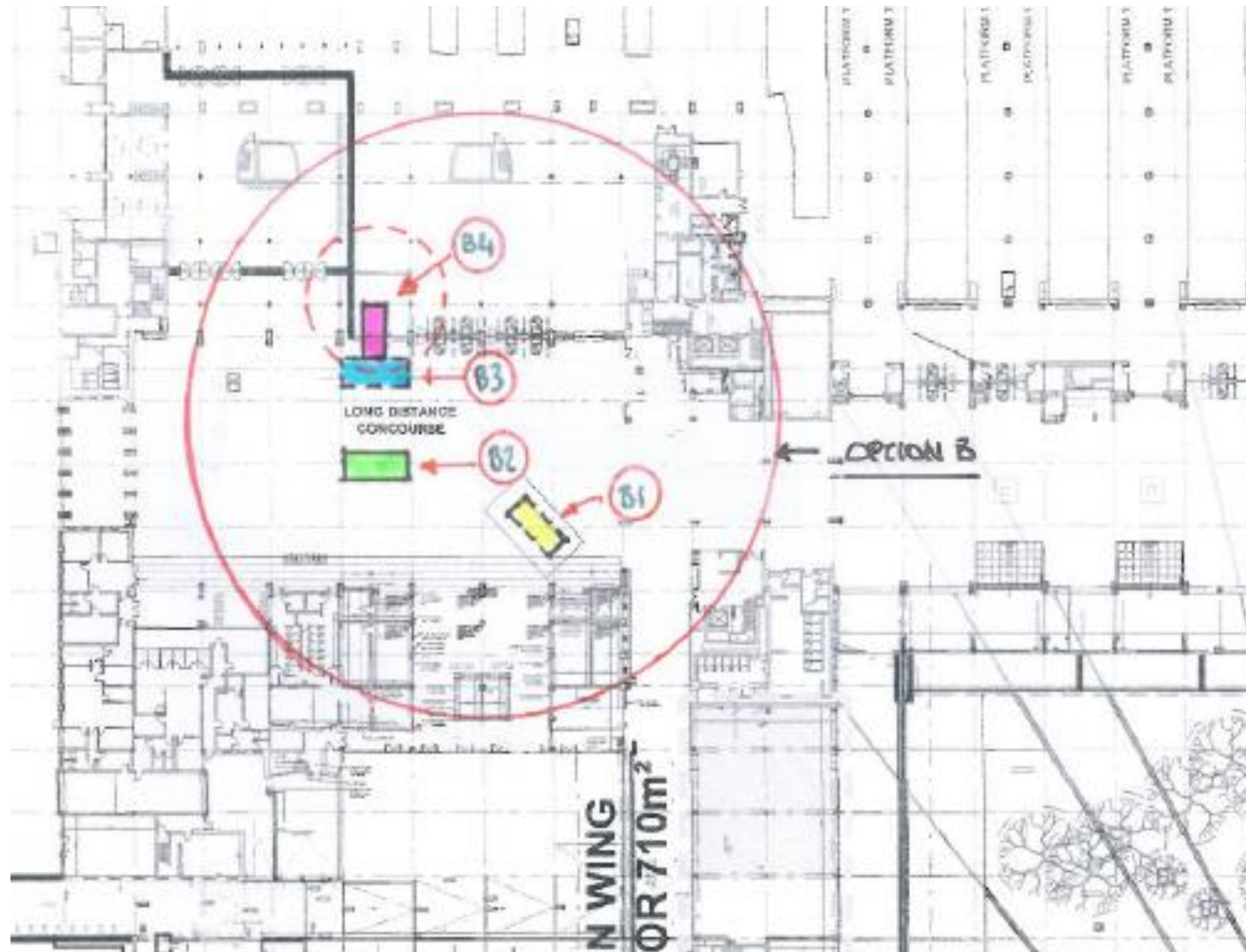
#### 11.1.1. OPTION A – Station Forecourt



- 11.1.1.1. Option A1 – PRASA Proposed position and Display enclosure
- 11.1.1.2. Option A2 – PRASA Proposed position but with proper display building to house the locomotive – External access
- 11.1.1.3. Option A3 – PRASA Proposed position but with proper display building to house the locomotive – Internal access

## CONSERVATION MANAGEMENT PLAN FOR "BLACKIE"

### 11.1.2. **OPTION B - Position within the Station Concourse – (see attached diagram)**



11.1.2.1. Option B1 - Old Position

11.1.2.2. Option B2 - Central Position in Main Line Concourse

11.1.2.3. Option B3 – Offset towards Main Line platforms in Concourse

11.1.2.4. Option B4 – Alcove near Main Line platforms in Concourse

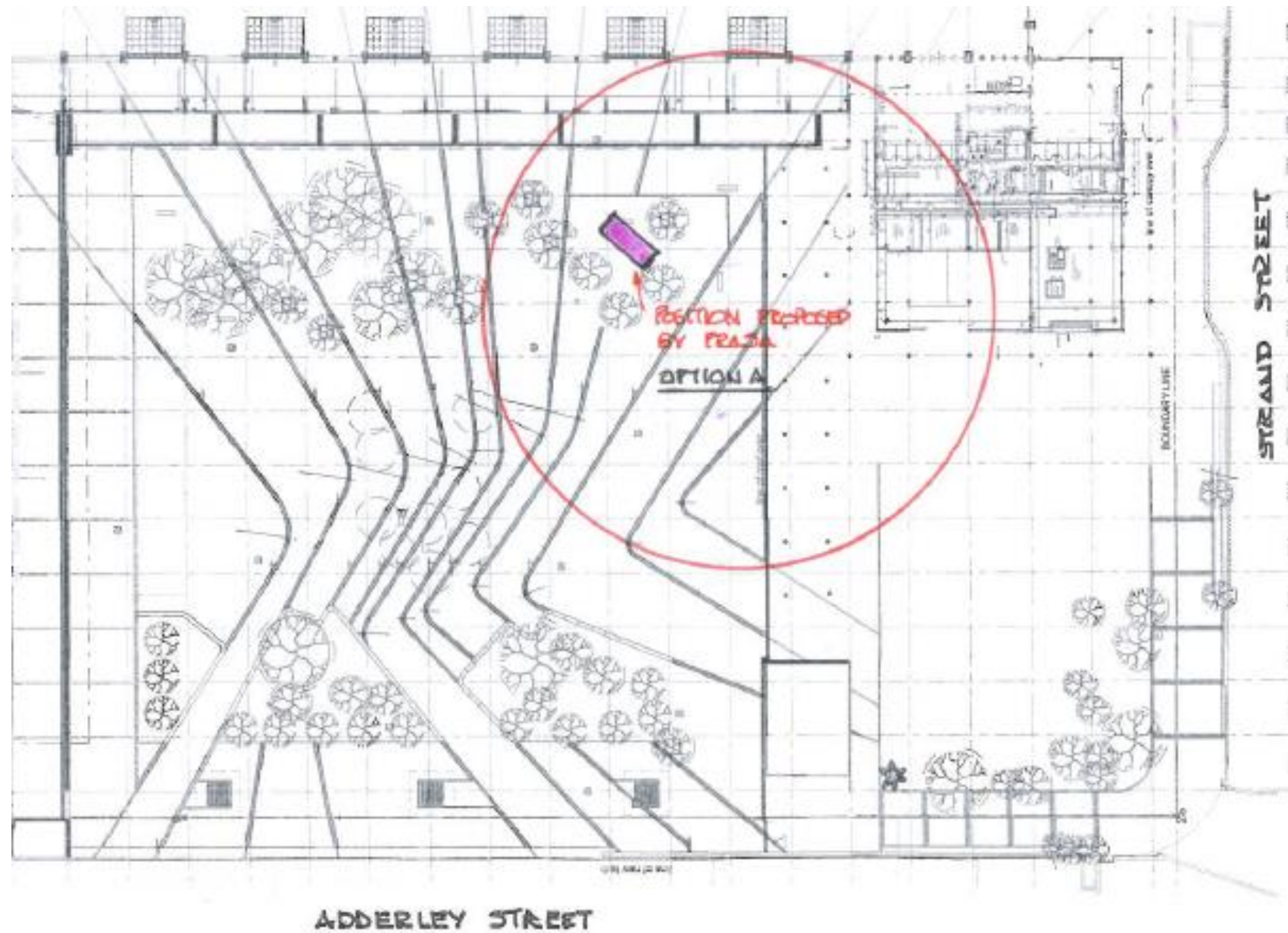
### 11.1.3. **OPTION C - Relocate to an alternate position within Cape Town**

11.2. We set out below an analysis of the relative strengths and weaknesses for each proposal.

## CONSERVATION MANAGEMENT PLAN FOR "BLACKIE"

### 11.2.1. OPTION A - FORECOURT POSITION

#### 11.2.1.1. Option A1 – PRASA Proposed position and Display enclosure



11.2.1.1.1. Good display position and would be in the position already approved by PRASA.

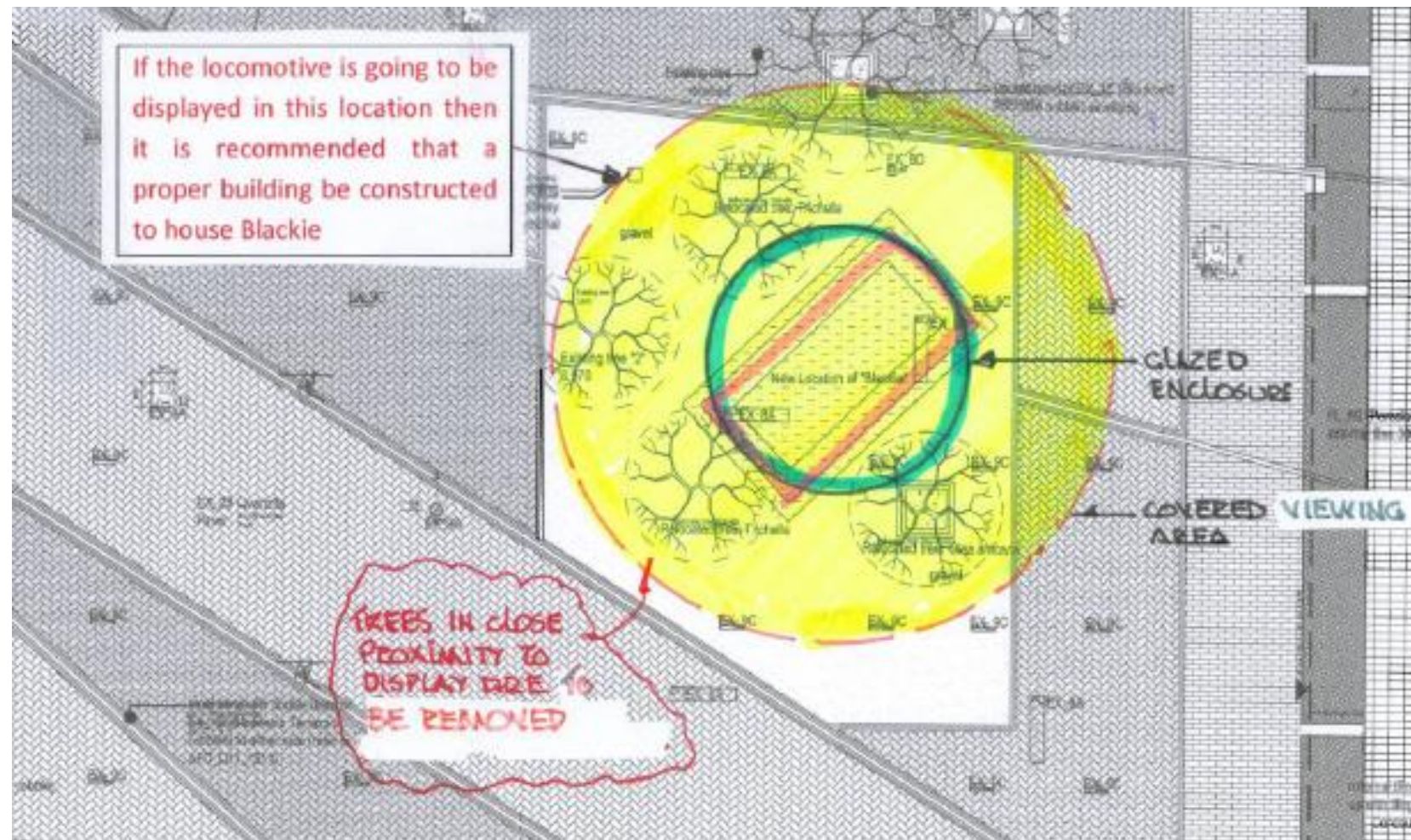
11.2.1.1.2. Would not interfere with pedestrian flow.

11.2.1.1.3. Display enclosure not suitable.

11.2.1.1.4. NOT an acceptable option.

## CONSERVATION MANAGEMENT PLAN FOR "BLACKIE"

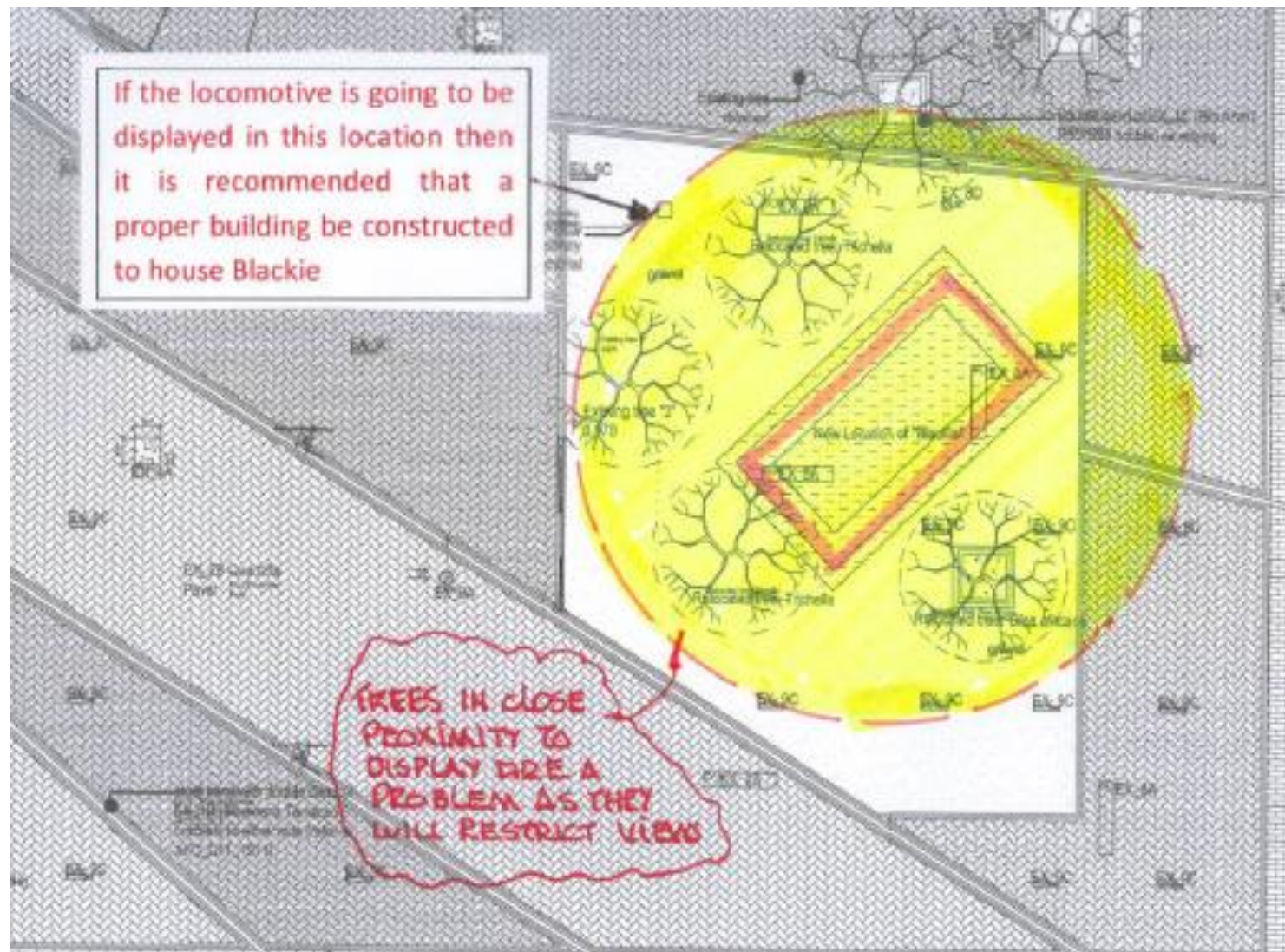
### 11.2.1.2. Option A2 – PRASA Proposed position but with proper display building to house the locomotive – External access



- 11.2.1.2.1. Good display position and would be in the position already approved by PRASA.
- 11.2.1.2.2. Would not interfere with pedestrian flow.
- 11.2.1.2.3. Special building with external shaded area will have to be built around the display enclosure.
- 11.2.1.2.4. Building will have to be climate controlled.
- 11.2.1.2.5. Viewing of locomotive will be through glazing.
- 11.2.1.2.6. Costs could be a problem.
- 11.2.1.2.7. The costs are likely to be greater than creating a display within the Concourse.
- 11.2.1.2.8. Would be an acceptable option.

## CONSERVATION MANAGEMENT PLAN FOR "BLACKIE"

### 11.2.1.3. Option A3 – PRASA Proposed position but with proper display building to house the locomotive – Internal access

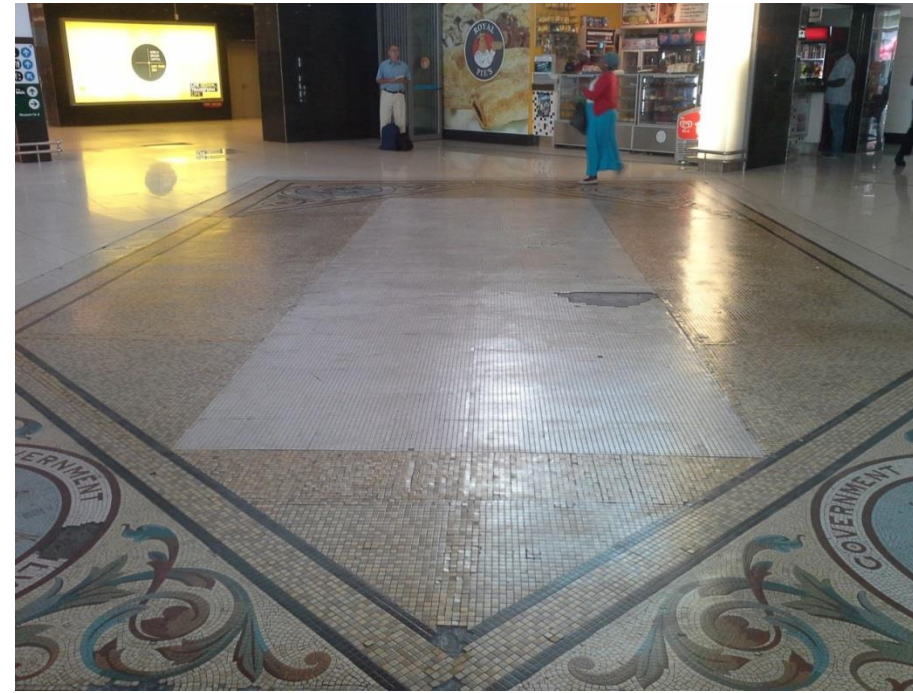
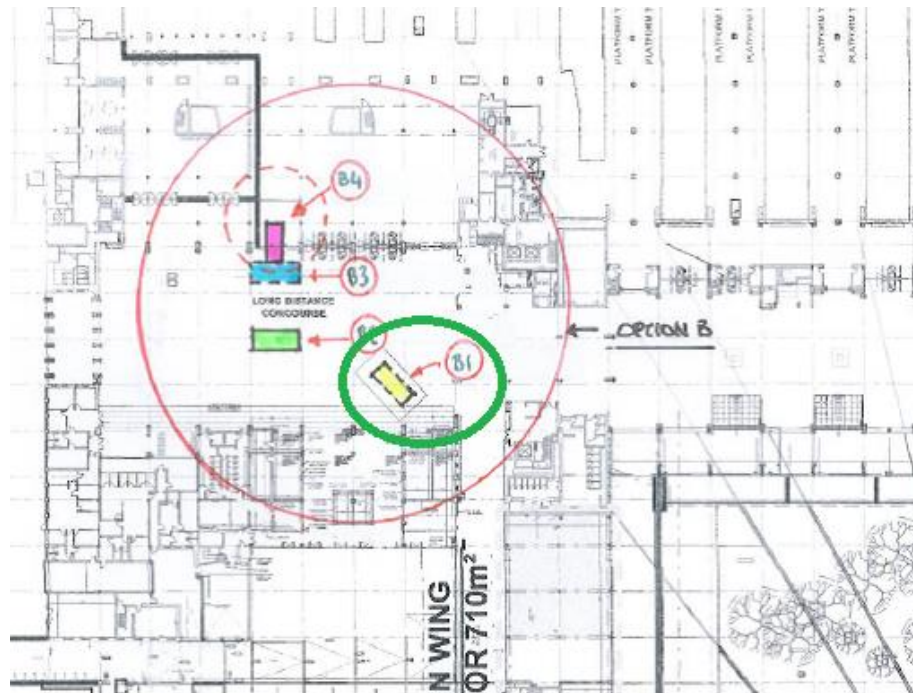


- 11.2.1.3.1. Good display position and would be in the position already approved by PRASA.
- 11.2.1.3.2. Would not interfere with pedestrian flow.
- 11.2.1.3.3. Special building to be built to house "Blackie" within an enclosed viewing area.
- 11.2.1.3.4. Building will have to be climate controlled.
- 11.2.1.3.5. Access to the building would have to be controlled and security systems put in place.
- 11.2.1.3.6. Good viewing conditions - viewing of locomotive will be by entry into the building.
- 11.2.1.3.7. Easy maintenance of the locomotive.
- 11.2.1.3.8. Ability to display other historical artefacts and documents relating to the development of the railways and railway station in Cape Town.
- 11.2.1.3.9. Costs and security management could be a problem.
- 11.2.1.3.10. The costs are likely to be greater than creating a display within the Concourse.
- 11.2.1.3.11. Would be an acceptable option.

## CONSERVATION MANAGEMENT PLAN FOR "BLACKIE"

### 11.2.2. OPTION B – STATION CONCOURSE

#### 11.2.2.1. Option B1 – Old Position in Main Line Concourse



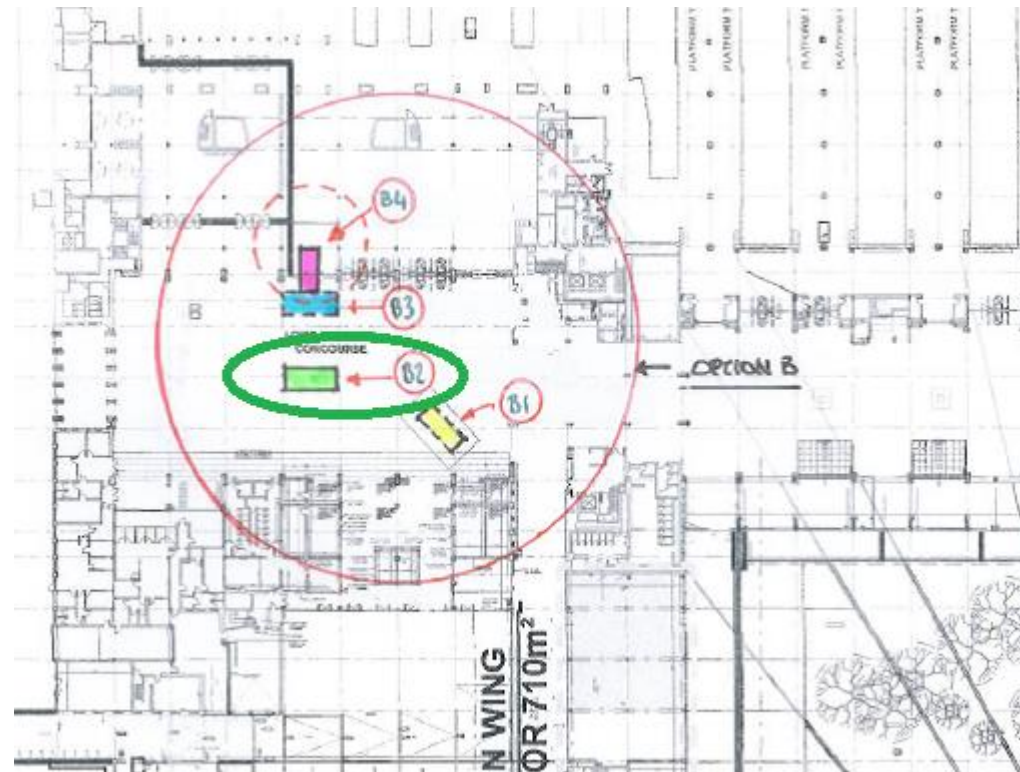
11.2.2.1.1. Position not acceptable to PRASA - Would interfere with pedestrian flow and access to retail food outlets.

11.2.2.1.2. Mosaic panel can remain in position and be repaired.

11.2.2.1.3. Would NOT be an acceptable option to PRASA.

## CONSERVATION MANAGEMENT PLAN FOR “BLACKIE”

### 11.2.2.2. Option B2 – Central Position in Main Line Concourse

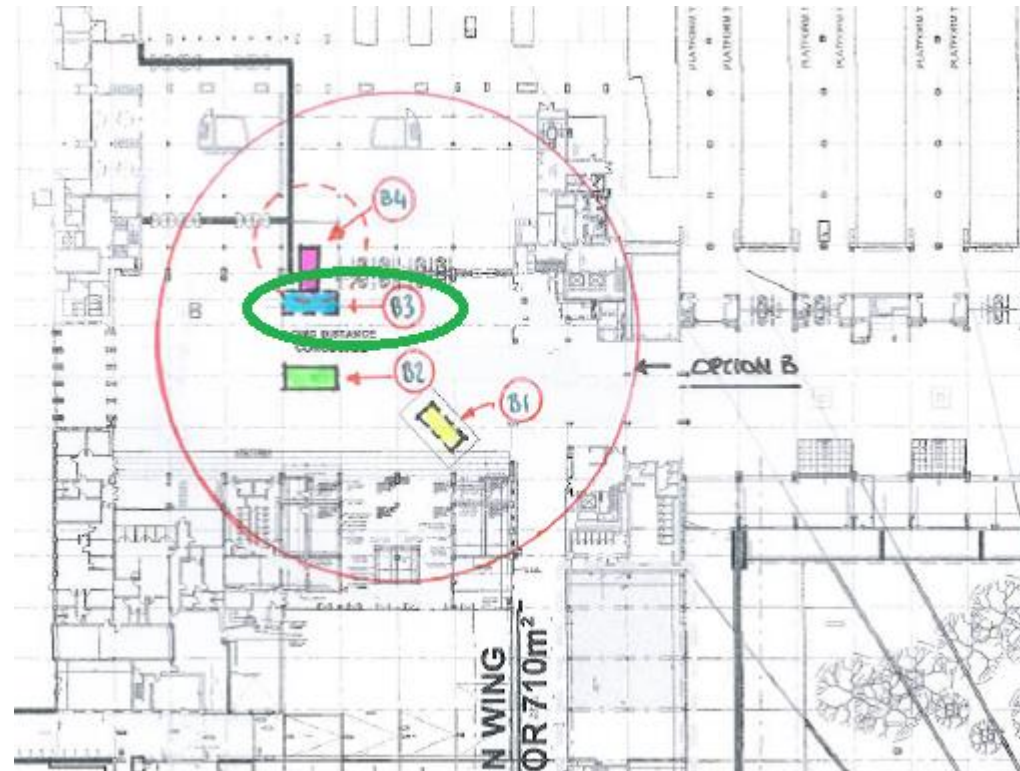


- 11.2.2.2.1. Mosaic panel will have to be uplifted and relocated.
- 11.2.2.2.2. Readily visible from all sides.
- 11.2.2.2.3. Will have some interference with pedestrian traffic flow in the Concourse but pedestrians can flow around display.
- 11.2.2.2.4. Will interfere with the overhead information boards in the middle of the concourse.
- 11.2.2.2.5. Would NOT be a recommended option.



## CONSERVATION MANAGEMENT PLAN FOR “BLACKIE”

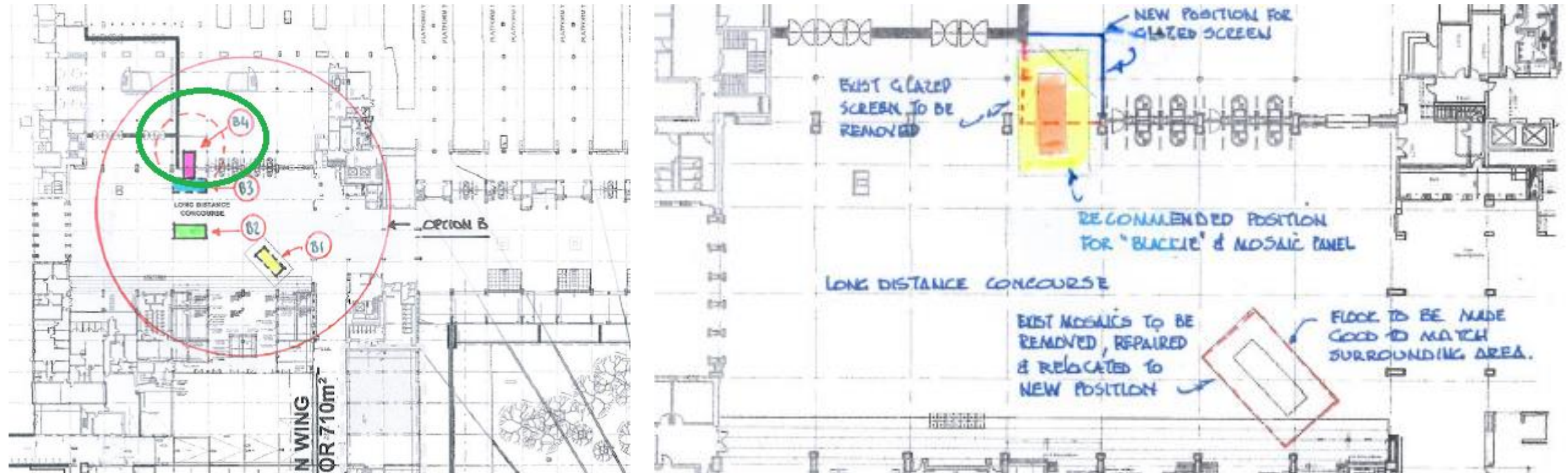
### 11.2.2.3. Option B3 – Offset towards Main Line platforms in Concourse



- 11.2.2.3.1. Mosaic panel will have to be uplifted and relocated.
- 11.2.2.3.2. Visible from all sides.
- 11.2.2.3.3. Will have minimal interference with pedestrian traffic flow in the Concourse
- 11.2.2.3.4. Position probably acceptable to PRASA.
- 11.2.2.3.5. Not preferred option.
- 11.2.2.3.6. Could be an acceptable option.

## CONSERVATION MANAGEMENT PLAN FOR "BLACKIE"

### 11.2.2.4. Option B4 – Alcove near Main Line platforms in Concourse



- 11.2.2.4.1. Mosaic panel will have to be uplifted and relocated.
- 11.2.2.4.2. Will have no interference with pedestrian traffic flow in the Concourse.
- 11.2.2.4.3. Will require modifications to existing glazed screen between Long Distance and Metro waiting areas.
- 11.2.2.4.4. Visible from all sides - position will provide good display position with minimal interference with other activities within the Concourse.
- 11.2.2.4.5. Ceiling of Concourse will need to be repaired before "Blackie" is placed on display.
- 11.2.2.4.6. Position suggested by PRASA and acceptable to PRASA.
- 11.2.2.4.7. Does have cost implications due to the modifications to the existing glazed screen.
- 11.2.2.4.8. Would be an acceptable option
- 11.2.2.4.9. Preferred location within Concourse.



## CONSERVATION MANAGEMENT PLAN FOR "BLACKIE"

### 11.2.3. **OPTION C - Relocate to an alternate position within Cape Town**

11.2.3.1.1. If none of the above options are acceptable then alternate options within the City of Cape Town will have to be investigated.

11.2.3.1.2. The Western Cape Government has indicated that they could be interested in displaying "Blackie" in a new Museum they are setting up in the centre of Cape Town.

11.2.3.1.3. The problem with any site away from the Cape Town Station is that the historical link between the locomotive and the railway would be lost.

11.2.3.1.4. This option should only be considered as a last resort.

## CONSERVATION MANAGEMENT PLAN FOR "BLACKIE"

### 12. RECOMMENDED DISPLAY PROPOSALS

12.1. Based on the reviews of the different options the following options can be considered further.

12.1.1. Option A2 – PRASA Proposed position but with proper display building to house the locomotive – External access.

12.1.2. Option A3 – PRASA Proposed position but with proper display building to house the locomotive – Internal access.

12.1.3. Option B4 – Alcove near Main Line platforms in Concourse.

12.2. Comments

12.2.1. Options A3 and B4 will allow access around the locomotive with a cordon to keep the public away from the locomotive.

12.2.2. Option – A2 will contain the locomotive in a glass display case and allow viewing through the glazing from a covered surround.

12.2.3. Options A3 and B4 will allow for additional displays' to be incorporated together with the locomotive.

12.2.4. Option B4 will allow the mosaic panel to be relocated together with the locomotive.

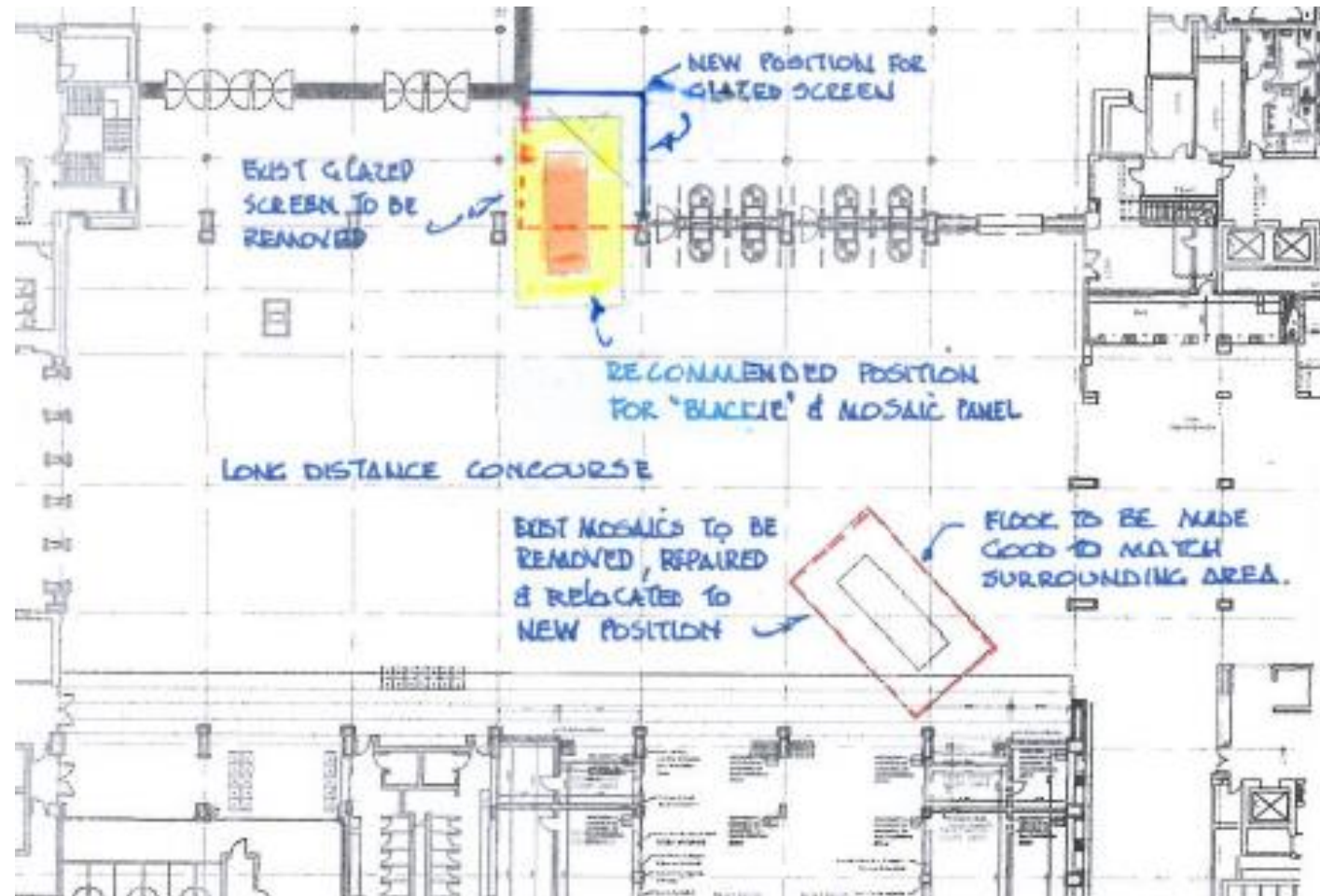
12.3. Implications

12.3.1. All these Options have cost implications that will be greater than those of the display enclosure originally proposed by PRASA.

12.3.2. These costs, together with the ongoing maintenance and operating costs need to be quantified so that an informed decision can be made on which of the above Options is the best way forward.

12.4. The original proposal from PRASA is NOT acceptable and a choice needs to be made from the above 3 options.

12.4.1. From a practical and cost perspective we believe that Option B4 should be the preferred option.



## CONSERVATION MANAGEMENT PLAN FOR “BLACKIE”

### 13. RESTORATION / RELOCATION OF MOSAIC PANEL

13.1. The mosaic panel in the Concourse around the old display area is currently still in place although it has suffered some damage.

13.2. There are a number of options to be considered as regards to the future of the panel:

13.2.1. Repair panel in its present location.

13.2.2. Uplift the mosaics and create recess in floor so that panel can be re-laid with protective glass floor over the panel.

13.2.3. Uplift the mosaics and relay them around “Blackie” in its new position.

13.2.4. Uplift the mosaics and preserve at least one of the Cape Government railways logos in another location at the Station.

13.3. Our comments on the options are as follows:

13.3.1. This option is not recommended as the mosaics will be subject to a lot of wear from pedestrian traffic and without the locomotive in place will have little significance.

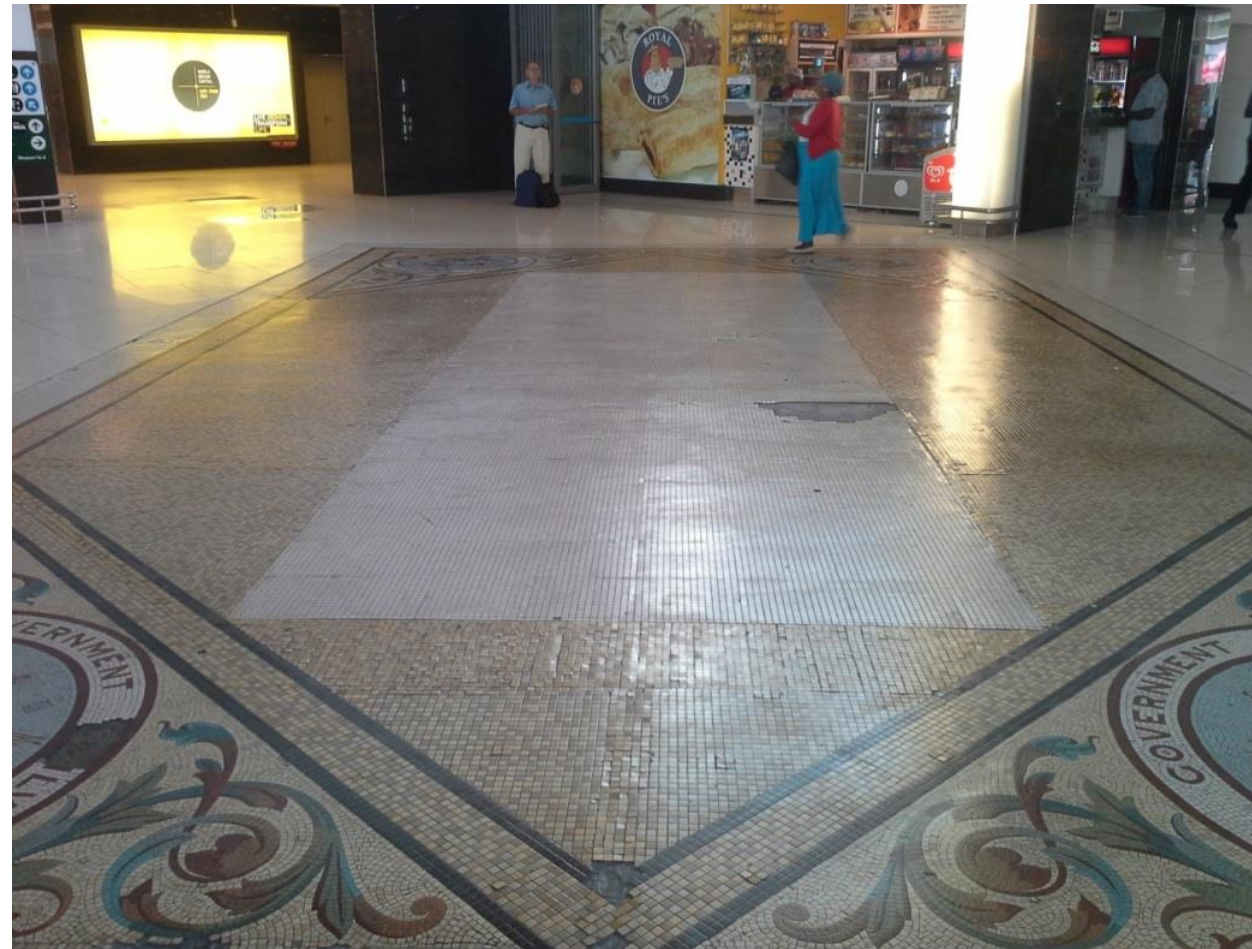
13.3.2. This option makes little sense as if the mosaics are uplifted they might as well be relocated to where “Blackie” is to be displayed.

13.3.3. This is the preferred option and would be practical with display options A3 and B4 as previously recommended.

13.3.4. This option could be utilised if display option A2 is implemented.

13.4. These mosaics have been part of the display of “Blackie” since the locomotive was first displayed in the old Cape Town Station and were relocated together with “Blackie” to the new Station.

13.5. We recommend that the services of a mosaic specialist be engaged by PRASA to carry out the uplifting and relocation of the mosaics.



## CONSERVATION MANAGEMENT PLAN FOR “BLACKIE”

### **14. PREPARATION OF NEW DISPLAY LOCATION**

#### **14.1. PREPARATION OF NEW DISPLAY LOCATION**

14.1.1. In order to prepare the new display location to receive “Blackie” the following items need to be attended to:

- 14.1.1.1. Dependant on the chosen location the construction of the display building or modifications to the glazed partitions in the existing Concourse needs to be completed.
- 14.1.1.2. If the Concourse option (Option B4) or the Display Building (Option A3) are chosen then the Mosaic panels need to be relocated.
- 14.1.1.3. If the Concourse option (Option B4) is chosen then a new display plinth will have to be manufactured and installed.
- 14.1.1.4. Suitable lighting for the display location will need to be installed.
- 14.1.1.5. A CCTV and security alarm system will need to be installed and commissioned.
- 14.1.1.6. Provision will have to be made for the transport and relocation of “Blackie” to the new position and for mounting the locomotive on the plinth.

#### **14.2. COMMISSIONING OF NEW DISPLAY LOCATION**

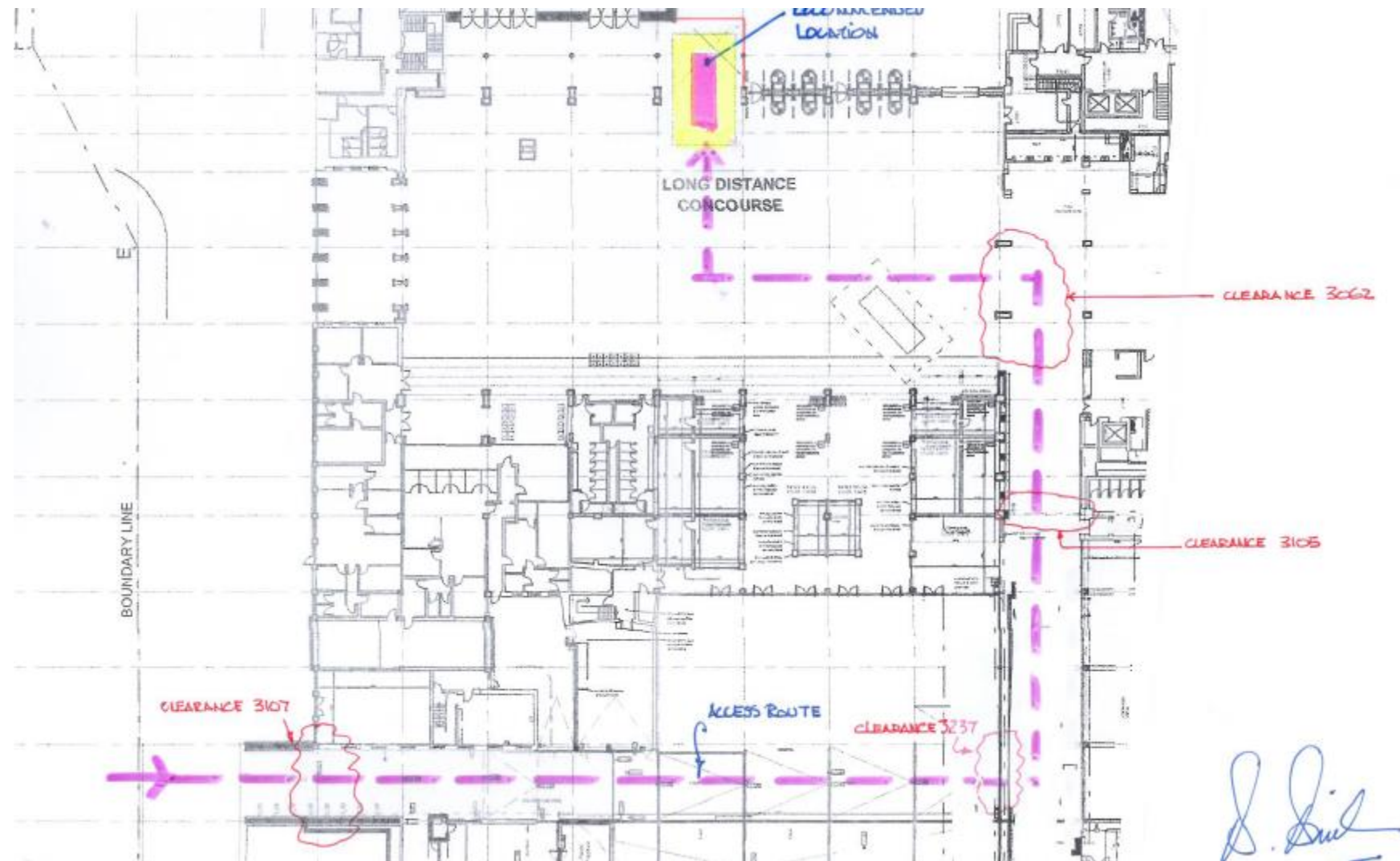
14.2.1. Following the positioning of “Blackie” on its plinth in the new position the following items will need to be attended to:

- 14.2.1.1. Re-instatement of the locomotive cab roof and smokestack on “Blackie”.
- 14.2.1.2. Completion of the lighting installation.
- 14.2.1.3. Installation of safety cordon where applicable.
- 14.2.1.4. Final cleaning of “Blackie”.
- 14.2.1.5. Installation of display signage.
- 14.2.1.6. Installation and commissioning of Information display system.
- 14.2.1.7. Inspection and sign-off by SAHRA that the display complies with the requirements.

## CONSERVATION MANAGEMENT PLAN FOR "BLACKIE"

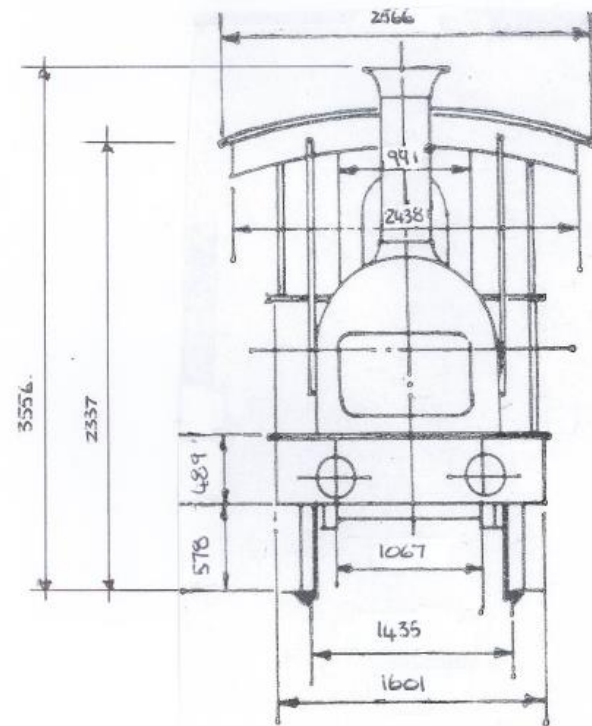
### 15. RELOCATION & TRANSPORT PLAN

- 15.1. Other than the fact that "Blackie" is stored at ALE and that PRASA intend to use ALE to transport and relocate the locomotive back to the Cape Town Station, as they were responsible for removing "Blackie" and placing her in storage, we have had no detailed information from either PRASA or ALE as to how this process is to be done or managed.
- 15.2. We understand that the methods will be similar to those used when "Blackie" was removed from the station in 2009.
- 15.3. We have taken measurements of the critical access route that will need to be used should "Blackie" be relocated in the Station Concourse as per Option B4 – these measurements confirm that it will be possible to insert "Blackie" into the existing Concourse building without any structural modifications to the building.
  - 15.3.1. Due to the restricted nature of the access route the locomotive will have to be off-loaded from the transport cradle in the Museum Courtyard and then manoeuvred on skids and rollers into the Concourse – extreme care will need to be taken when traversing the critical clearance areas.



## CONSERVATION MANAGEMENT PLAN FOR "BLACKIE"

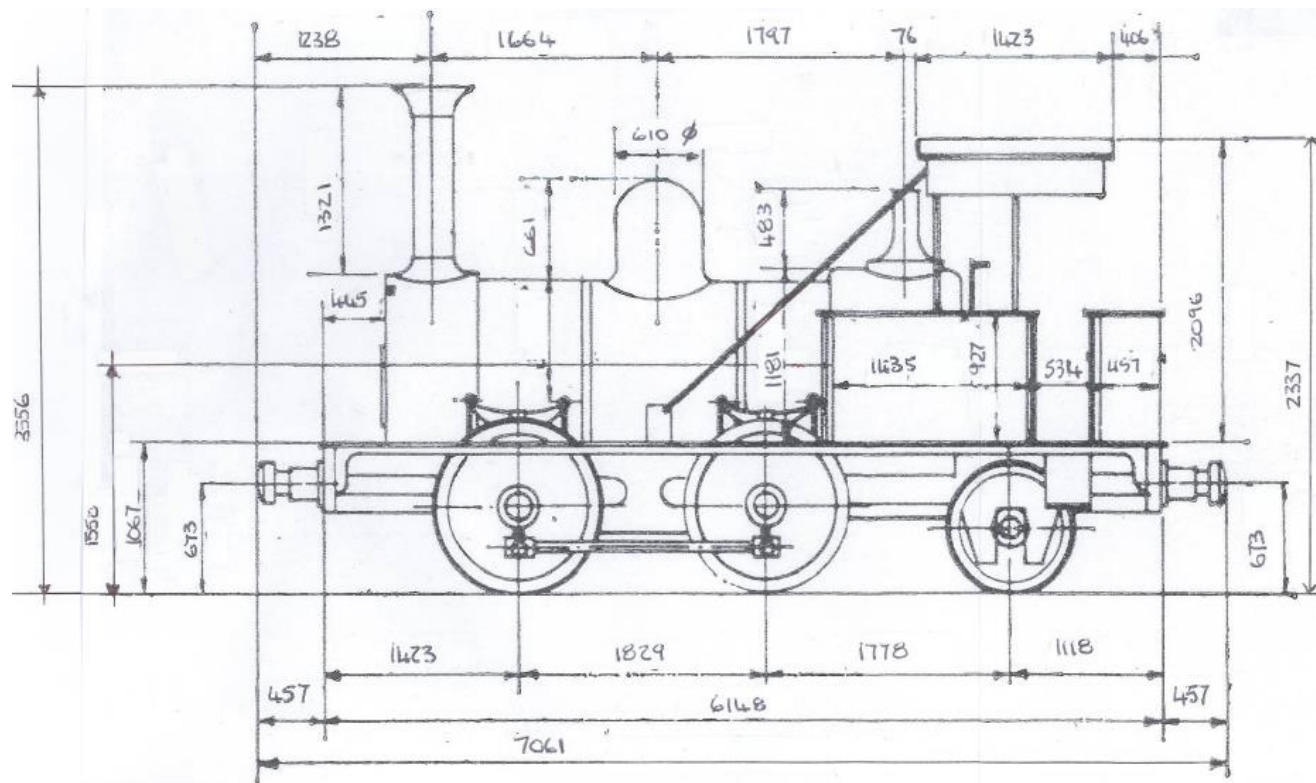
### 15.4. Critical Clearances



OVERALL DIMENSIONS	
Length over buffers	= 7061 mm
Height to top of stack	= 3556 mm
Width over cab roof	= 2566 mm

REDUCED DIMENSIONS	
Length over buffers	= 7061 mm
Height to top of dome	= 2905 mm
Width over body	= 1660 mm

TRANSPORT CLEARANCE DIMENSIONS	
Length over buffers	= 7500 mm
Height to top of dome	= 3205 mm
Width over body	= 1660 mm



- 15.5. Care will also have to be taken during the transporting of "Blackie" to ensure that the rails on which the locomotive is standing are properly supported to prevent the overstressing of the locomotive frame.
- 15.6. PRASA / ALE will have to provide SAHRA with their rigging and transport plan for review and approval before any movement takes place.
- 15.7. SAHRA will need to provide a monitor to watch over the movement process when it takes place.



## CONSERVATION MANAGEMENT PLAN FOR “BLACKIE”

### **16. MAINTENANCE & MANAGEMENT PLAN**

- 16.1. PRASA is responsible for the management and maintenance of “Blackie”.
- 16.2. PRASA needs to institute a Maintenance Management Plan to ensure that “Blackie” is properly looked after and maintained in the future.
- 16.3. The locomotive and display needs to be cleaned once a month to prevent the build-up of dirt and fluff – should display option A2 be chosen then this can be reduced to once every two months.
- 16.4. The locomotive and display need to be checked on a regular basis to ensure that there has been no interference with the display or damage to the locomotive.
- 16.5. It is also important that the display is checked on a regular basis to ensure that the lighting, CCTV security and alarm systems as well as the video information display are working.
  - 16.5.1. All these systems need to have proper maintenance plans in place and appropriate annual budgets allocated.
  - 16.5.2. PRASA needs to put maintenance procedures in place to attend to any problems as they occur so as to ensure that the display is well maintained and presented at all times.

## CONSERVATION MANAGEMENT PLAN FOR "BLACKIE"

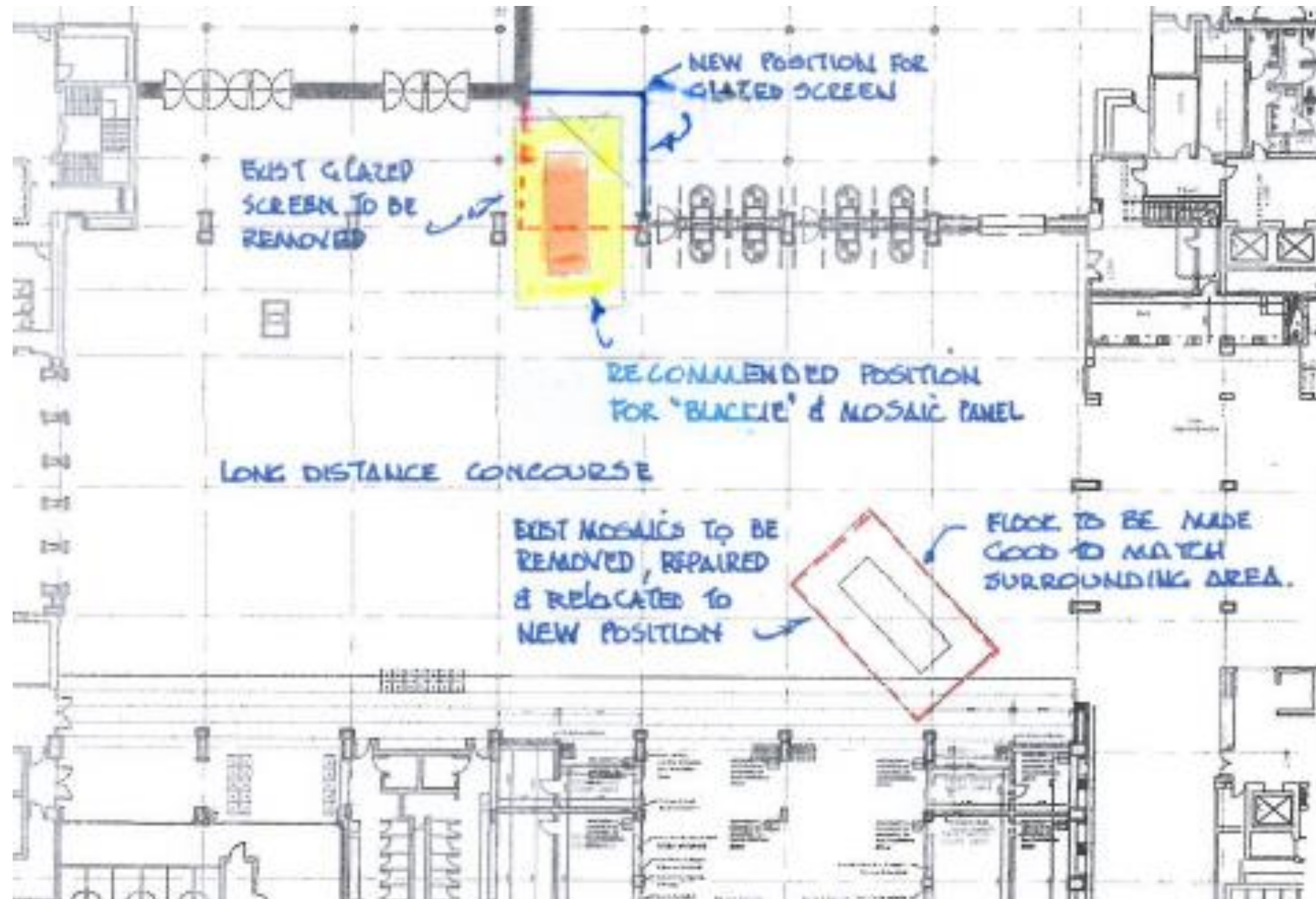
### **17. MONITORING & REPORTING PLAN**

- 17.1. PRASA is to provide bi-annual reports to SAHRA to confirm that "Blackie" is being properly cared for and maintained in good condition.
- 17.2. SAHRA is to carry out an annual inspection of the locomotive and display area and provide PRASA with a report listing any items that require attention.
  - 17.2.1. PRASA to attend to any items requiring attention within 3 months.
  - 17.2.2. PRASA to notify SAHRA when such maintenance has been completed.
- 17.3. SAHRA where necessary will carry out Ad Hoc inspections to ensure that the locomotive and display are being properly looked after.

## CONSERVATION MANAGEMENT PLAN FOR "BLACKIE"

### 18. CONCLUSION

- 18.1. The original proposal from PRASA is NOT acceptable and a choice needs to be made from the 3 options proposed.
- 18.2. From a practical and cost perspective we believe that Option B4, the location inside the Concourse should be the preferred option.



- 18.3. SAHRA needs to advise PRASA of these recommendations.
- 18.4. PRASA needs to review the 3 options proposed by B4 Architects and submit their revised proposal to SAHRA for review.
- 18.5. Once this process has been completed we can review and comment on the revised the PRASA proposals (as well as their transport and relocation plan).

*Bruce Brinkman*

Bruce Brinkman

**B4 Architects cc**

B4 Architects cc

## CONSERVATION MANAGEMENT PLAN FOR "BLACKIE"

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