Distance Matrix

Distances from Capital City to Major Towns (km)								
	Harare	**Bulawayo**	**Gweru**	**Mutare**	**Chinhoi**	**Masvingo**	**Beitbridge**	**Victoria Falls**
Harare		439	275	263	115	292	580	878
Bulawayo	439		164	577	425	280	321	439
Gweru	275	164		405	261	164	403	603
Mutare	263	577	405		378	297	585	1016
Chinhoyi	115	425	261`	378		407	664	864
Masvingo	292	280	164	297	407		288	719
Beitbridge	580	321	403	585	664	288		760
Victoria Falls	878	439	603	1016	864	719	760	

Beitbridge																																	
Bindura	667																																
Binga	756	630																															
Birchenough Bridge	460	475	791																														
Bulawayo	321	526	435	452																													
Chegutu	572	193	437	494	333																												
Chimanimani	547	501	898	107	559	520																											
Chinhoyi	664	152	428	503	425	92	529																										
Chipinge	504	530	855	64	516	549	69	558																									
Chiredzi	301	505	822	196	434	487	252	533	209																								
Chirundu	900	389	489	740	662	329	766	237	795	770																							
Chivu	439	228	591	265	300	247	372	256	329	277	493																						
Gokwe	661	381	249	542	370	188	649	280	606	524	517	342																					
Gwanda	195	653	652	446	126	459	553	551	510	428	788	425	496																				
Gweru	403	362	455	336	164	169	443	261	400	318	498	136	206	290																			
Harare	580	87	503	388	439	106	414	115	443	418	352	141	294	566	275																		
Hwange	658	865	210	789	337	670	896	769	853	771	691	637	423	463	501	776																	
Kadoma	537	228	402	470	298	35	577	127	534	452	364	270	153	424	134	141	635																
Kariba	912	450	403	751	673	340	777	248	806	781	137	504	528	799	509	363	577	375															
Karoi	752	290	340	591	513	180	617	88	646	621	149	344	368	639	349	203	518	215	160														
Kwekwe	465	300	393	398	226	107	505	199	462	380	436	198	144	352	62	213	563	72	447	287													
Marondera	654	161	617	314	513	180	340	189	369	492	426	215	368	640	349	74	850	215	437	277	287												
Masvingo	288	379	619	172	280	333	279	407	236	203	644	151	370	274	164	292	617	298	655	495	226	366											
Mhangura	733	165	450	573	495	162	599	70	628	603	259	326	350	621	331	185	832	197	270	110	269	259	477										
Mt Darwin	737	70	700	545	592	263	571	222	600	575	459	298	451	723	432	157	933	298	470	310	370	231	449	222									
Mutare	585	350	806	125	577	369	151	378	180	318	615	269	611	571	405	263	906	404	626	466	467	189	297	448	420								
Mutoko	723	194	686	449	582	249	475	258	504	561	495	284	437	709	418	143	919	284	506	346	356	135	435	328	263	324							
Mvurwi	679	63	539	487	538	205	513	111	542	517	348	240	393	665	374	99	875	240	359	199	312	173	391	95	117	362	242						
Nyamapanda	818	289	781	544	677	344	570	353	599	656	590	379	532	804	513	238	1014	379	601	441	451	230	530	423	358	419	95	337					
Nyanga	693	351	807	233	685	370	259	379	288	426	616	312	654	679	448	264	949	405	627	467	477	190	405	449	421	108	196	363	291				
Plumtree	421	626	535	552	100	433	659	525	616	534	762	400	470	226	264	539	437	398	773	613	326	613	380	595	696	669	682	638	777	712			
Rusape	678	252	713	218	518	276	244	285	273	411	522	218	560	643	354	170	855	311	533	373	383	96	369	355	325	93	231	269	326	94	618		
Victoria Falls	760	965	312	891	439	772	998	864	955	873	801	739	561	565	603	878	102	737	715	652	665	952	719	934	1035	1016	1021	977	1116	1124	539	957	
Zvishavane	336	476	618	269	183	288	376	380	333	251	617	248	325	177	119	389	520	253	628	468	181	463	97	450	546	394	532	488	627	502	283	466	622

The distances given are those over the shortest practical route for a light passenger vehicle. Some routes therefore include gravel roads if the alternative surfaced distance is excessive.

25° ❶ 26° ❷ 27° ❸ 28° ❹

Rail Security

The NRZ has also suffered of the general decline of the country's economy. Neglect of maintenance, lacking spare parts and overdue replacement of equipment have led to a situation where only part of the railroad net is in good condition and equipment problems have led to reduced service. Steam locomotives have been reintroduced since 2004 as coal is in relatively good supply, while diesel must be imported and electricity shortages are common. Further, the company is seriously indebted, making it impossible to solve this situation without external help. Goods transport has declined, from 18 million tonnes in 1998 to below 2 million tons in 2014. NRZ is yet to have a fully constituted board of management. Members of the board occupy positions beyond terms of appointments. Appointments to the board and management show visible preference for people with military background. NRZ also has an obese structure that is increasingly proving to be difficult to manage, given that it is yet to recover from most of the operational challenges inflicted by the socioeconomic meltdown, namely, aging traffic system, skilled manpower shortage, deteriorating infrastructure, theft and vandalism, poor signalling system, shortage of spares for locomotives and signalling equipment. It is currently debt-ridden, operates below the 18 million tons of freight traffic per annum, has dilapidated equipment, and is struggling to pay its employees. Scenarios at the NRZ pose a serious threat to industrial production and the current national socioeconomic recovery drive.

Rail Class and Surface Conditions

Besides the country's economic performance, which had a significant effect on railways, low availability of locomotives and other rolling stock and the old and poorly maintained track have been among the main causes of the decline in service levels of the railway. The substantial deterioration in locomotives, wagons, and coaches over the past decade was the result of inadequate maintenance and non-replacement of obsolete assets that, in turn, stemmed from the weak financial position of the NRZ.

Track Information

The NRZ-operated railways in Zimbabwe have a route length of 2,759 km, comprising 1,881 km of mainline and 878 km of branch lines. Some 313 km of the route length, from Dabuka to Harare, is electrified. This line has been vandalized and is no longer in operation. In addition, there is 385 km of track operated by the Bulawayo Beitbridge Railway concession. The total track length is 4,313 km.

The Zimbabwe railway gauge of 1,067 mm is the same as in all southern African countries. It supports an axle load of 18.5 tons on the main line and most branch lines, this being more than or equal to the axle load in all other countries except South Africa. Zimbabwe also had a well developed signaling and communication system prior to the deterioration of the past

decade. There has been continued deterioration in the condition of the track over the past decade. The percentage of the route length with speed restrictions increased steadily from about 4 percent in 2000 to 21 percent in 2007, and has since declined as a result of rehabilitation efforts.

At end 2009, up to 98 sections, a combined distance of 451 km, or about 16 percent of the entire mainline, was under speed restrictions. These are, on average, 5 km long sections where the operating speeds vary between 10 and 20 kilometers per hour. The worst affected is the line from Gweru to Masvingo. With the sharply reduced traffic flows at present, these speed restrictions are probably not having a major effect on operations.

However, when traffic starts increasing again, the risk is that these speed restrictions could become a serious capacity constraint and could erode the competitiveness of rail services relative to road transport. In the absence of timely action, removing the speed restrictions will also become increasingly costly.

To eliminate these restrictions, a total of about 658,000 concrete sleepers need to be replaced on the total affected track. According to NRZ, the estimated cost of this replacement is about $70 million. Locomotives: Locomotive availability and utilization are the most critical areas in operations. The locomotive fleet of 168 includes 61 that are in service, 85 mainline locomotives, 28 of which are in service, 73 shunt locomotives, 33 of which are in service, and 10 steam locomotives, none of which is in service. At the end of 2004, NRZ's locomotive fleet size was 213, comprising 149 diesels, 30 electric and 34 steam locomotives. At that time, locomotive availability was 67 percent, but it had dropped to 38 percent by 2008. Analysis of locomotive availabilities indicates that in 2004 the railways could provide only 67 percent of the total locomotive requirement: in other words, the railways could have carried 50 percent more traffic if adequate numbers of locomotives had been available. The most crippling constraint to carrying all the traffic on offer has been the poor availability of locomotives.

Moreover, the utilization of locomotives was between 60 and 80 percent of the peak utilization achieved earlier. The World Bank (2006) estimated that by restoring utilization to previous levels and with the same availability, NRZ could have carried close to 7 million tons in 2004 and 8 million tons in 2005.

Low reliability of locomotives is one of the main causes of poor utilization and this continues to be of serious concern. Locomotive reliability has significantly deteriorated from its peak figure, i.e., from 57,000 kilometers between failures to just 16,000 between failures. Even the

peak figure achieved in the past was not a satisfactory achievement as the normal target of reliability in an efficiently run railway should be more than 100,000 kilometers between failures.

Railway Overview			
Track gauge	Cape rail – 1065mm is used in southern Africa The rail network uses track from 55-30kg – depending on areas of use.		
Total track distance	4,321km's		
Route distances are as follows:			
Southern Region Route	**KMS**	**Eastern Region Route**	**KMS**
Durban – Bulawayo (via BBR)	1820 or 1692	Beira – Mutare	329
Durban – Bulawayo (via NRZ)	2073 or 1945	Beira – Harare	598
Durban – Harare	2191 or 2063	Harare – Chinhoyi	130
Maputo – Bulawayo	1150		
Maputo – Harare	1268		
If relevant, form this point to Capital (road)			
Equipment:	**In Service**	**Undergoing Repairs**	
Locomotives	30	98	
Freight wagons (covered) / size	134	267	
Freight wagons (flatbed) / size	127	303	

Transit times: Current average time taken through main line sections			
Section	**Hours**	**Section**	**Hours**
Thompson Junction – Mpopoma	6.55	Beitbridge – Rutenga	2.84

Mpopoma – Dabuka	3.75	Rutenga – Chicualacuala	2.2
Dabuka – Harare	6.49	Harare – Mutare	6.78
Rutenga – Dabuka	5.55		
Rail cautions (speed restrictions) continue to pose a major challenge to the turnaround efforts.			

NRZ Southern Region

Most WFP traffic is railed to Zimbabwe from Durban and Gauteng (RSA). From Beitbridge to Bulawayo there are two alternative routes, either using NRZ network through Rutenga/ Dabuka or using BBR – Bulawayo Beitbridge Railway services, directly to Mpopoma. The port of Maputo is also linked to the corridor Bulawayo – Harare via NRZ Southern Region using the Chicualacuala route (Mozambique border station) or through Spoornet using Machava – Komatipoort (RSA) – Beitbridge.

NRZ Midlands Region

This region plays a vital role in the whole network. The Centralized Traffic Control station is located in Dabuka (23 km from the junction of South East corridor to South West axis; Harare to Plumtree/Victoria Falls). Besides the transit traffic from south to Harare and Zambia, the Midlands region has also to handle local Zimbabwe traffic to and from the agro industrial hinterland. Lack of funds to invest in maintenance and structural improvements has caused an evident decline in the performance of the system in general. Passenger trains have become unreliable, overcrowded, breakdowns are frequent and power cuts cause frequent interruption on the network. The signals are now all manual, as the electronic equipment has never been replaced, due to lack of foreign currency necessary to purchase spare parts from abroad.

Railroad capacity

This represents the average number of trains through a given section of the rail network per day. At current levels of operations (15-20%) of potential capacity (10 million tonnes per year), the NRZ line capacity can be depicted as below:

Section	Design Capacity (Trains)	Current Capacity (Trains)	Average Wagons / train	Average train load (tonnes)	Total Tonnes /day
Thompson Junction – Victoria Falls	16	**2**	**30**	**1200**	**1682**
Thompson Junction – Bulawayo	17	**2**	**35**	**1400**	**2198**
Bulawayo – Plumtree	12	**1**	**30**	**1200**	**624**
Bulawayo –Gweru	21	**2**	**35**	**1400**	**3227**
Gweru – Beitbridge	16	**2**	**40**	**1600**	**2109**
Rutenga – Chicualacuala	11	**1**	**35**	**1400**	**463**
Chiredzi – Rutenga	12	**1**	**35**	**1400**	**728**
Gweru – Kwekwe	26	**3**	**35**	**1400**	**4932**
Gweru – Masvingo	10	**1**	**20**	**800**	**80**
Kwekwe – Harare	19	**2**	**35**	**1400**	**2698**
Harare – Zawi	10	**1**	**13**	**520**	**63**
Harare – SZ	12	**1**	**8**	**320**	**166**
Harare – Mutare	14	**1**	**30**	**1200**	**1178**
Shuruguwi – Kwekwe	11	**1**	**15**	**600**	**136**
Zvishavane - Bannokburn	12	**1**	**22**	**880**	**421**
Thompson Junction – Victoria Falls	16	**2**	**30**	**1200**	**1682**
Possible daily tonnage					**20,706**
Line capacity/year					**7,557,529**

Management / Consortium

Entity(s) in Charge	Contact Names & Email	Website
BBR  Beitbridge Bulawayo Railway (PVT) LTD	Name: Avo Yakobovich Title: CEO Email:y-avi@bbr-nlb.co.zw Tel1:+263(0)11870548 Tel2:+263(04)495139 Fax:+263(04)490908	www.nlpi.net

Summary of Role and Services:

Implemented in Zimbabwe on a BOT (Build-Operate-Transfer) project between Government of Zimbabwe and BBR, the 350-kilometre railway line from Beitbridge (the border post between South Africa and Zimbabwe) to Bulawayo was built in record time, with the construction phase lasting only 18 months. The Beitbridge Bulawayo Railway (BBR) is a privately owned railway company that provides a rail link in Zimbabwe between Beitbridge at the border to South Africa and Zimbabwe's second city Bulawayo. The 1,067 mm (3 ft 6 in) gauge BBR project has shortened the distance between the Bulawayo and South Africa to 317 km. Prior to its inauguration, rail service between SA and Zimbabwe took a route about 200 km longer through Botswana. The shorter line has been used for primarily for freight transportation. The BBR was inaugurated on July 15, 1999. The BBR line links an essential corridor of development in Zimbabwe, reviving closed mines and businesses and enabling new business initiatives, thereby significantly contributing to the economic development of the country. The new railway line has shortened the time of the journey between the South African border and Bulawayo from six days to only nine hours, thus providing seamless rail service from the South African ports to Bulawayo and other destinations along this line.

The railway line connects South Africa to the industrial heartland of Zimbabwe, contributing to increased trade between the two countries. By being a part of the shortest and most efficient transport corridor in the region, linking Zimbabwe and South Africa as well as Zambia and the Democratic Republic of Congo, the new link is in great demand for transit traffic throughout the region. The BBR line has shortened the distances between countries in terms of geographical distances, time and efficiency, but it has primarily reduced the gap between the people of the region and the access to modern infrastructure.
During the implementation, as well as in the current operation stage, the BBR line and the related operation have created employment for thousands of indigenous Zimbabweans who presently hold key management positions in the company.

Provide a freight movement option from Beitbridge to Victoria Falls where their sister company (RAZ) will take over. BBR work closely with NRZ and National Foods to best serve their customers in areas such as handling and storage. BBR refurbished 157kms of the Beitbridge-Bulawayo line over a year and a half period 1997/99; this is over half the route and is made up of the Cape Town type gauge. The total track length is 351kms and their locomotives (15 engines) have the capacity to pull 550tns. BBR are by no means operating to their capacity and can very easily double the work load with minimal effect. Traffic import density is high but is seasonal and often more traffic comes down from the Copper-belt (Ndola) in Zambia and mines in the DRC. Wagons are shared and demurrage charges come into effect after 24hours. Rates can be negotiated depending on load size and type of product moved. After 30 years of service the BBR will be handed over to the National Railways of Zimbabwe at no cost. It had a profound impact on the profitability of Botswana Railways that saw its Zimbabwe-related freight volume drop by 90,000 to 10,000 tons.

http://nlpi.net/group-overview/bbr/

Entity(s) in Charge	Contact Names & Email	Website
NRZ  National Railways Zimbabwe	Name: Title: Regional Marketing Manager Email: marketing1@nrz.co.zw Tel1:+263(09)362688 Tel:+263(0)712615037 Fax:+263(09)362685	http://www.planet.nu/sunshinecity/nrz/index.html

Summary of Role and Services:

NRZ operates about 3,000km of rail at the gauge providing passenger and freight services. NRZ has an important transit function in the southern part of Africa and is well linked with neighbouring countries: toward the north, at Victoria Falls the system links to the Zambian Railways, crossing the Victoria Falls Bridge. Toward the Indian Ocean the system links to the Beira Railroad Corporation in Mozambique. A second line towards Mozambique reaches Maputo. To the west, a connecting link ups to Botswana Railways to reach South Africa, eventually reaching Durban and Cape Town. A direct line to South Africa is provided from Bulawayo by the Beitbridge Bulawayo Railway.

http://en.wikipedia.org/wiki/National_Railways_of_Zimbabwe

Other Information

Please note that a number of electric engines are currently working on shunt routes as opposed to main lines. Further information of current assets is still pending from NRZ Head Office in Bulawayo. The current active locomotive fleet is distributed by operational zones as follows:

Depot	**Main Line Locomotives**			**Shunt Locomotives**			
	DE10A	**DE11A**	**EL1**	**DE9A**	**DE6**	**Steam**	**Total**
Eastern (Locinvar)	12	0	0	15	0	0	27
Midlands (Dabuka)	0	6	5	16	0	0	27
Southern (Mpopoma)	13	0	0	3	6	3	25
Total	25	6	5	35	6	3	79

Wagon fleet size	
Wagon type	**Number**
High sided	3560
Drop sided	1093
Containers	269
Covered	331
Total	5253

Locomotive requirements			
Locomotive type	**Traffic requirements**	**Average availability**	**Shortfall**
DE 11	11	6	5
DE 10	41	25	16
DE 9	38	35	3
DE 6	6	5	1

Steam	5	3	2
Total	109	79	30
Wagon requirements			
Wagon type	**Traffic requirements**	**Average availability**	**Shortfall**
HIS	5843	3560	2283
DSI	1085	1074	11
Tankers	328	244	84
PNN	499	255	244
Others	400	290	190
Total	8965	5423	3542

Major lines and stations

Line	Stations	Notes
Victoria Falls – Bulawayo	• Victoria Falls • Thomson Junction • Hwange • Dete • Bulawayo	Link from Victoria Falls to Zambia Railways, Zambia

Bulawayo – Harare	• Bulawayo
	• Somabhula
	  ○ Mbizi
	  ▪ Chiredzi
	  ○ Sango
	  ○ Chicualacuala
	• Gweru
	  ○ Masvingo
	• Kwekwe
	• Kadoma
	• Chegutu
	• Harare
		Link from Chicualacuala to Maputo, Mozambique

Bulawayo – Francistown	• Marula • Plumtree, border to Botswana • Francistown, Botswana	Part of the line is in Botswana Connects further to Mafeking, South Africa In 1911 Rhodesia Railways was granted a special agreement to preserve its rights of access under the Tati Concessions Land Act, which

		formally annexed a former territory of Matabeleland, an area including Francistown, to the Bechuanaland Protectorate (modern Botswana).

Harare – Shamva/Kildonan/Zawi	• Harare
	  ○ Shamva
	• Maryland, Zimbabwe
	  ○ Kildonan
	• Zawi
		•

Harare – Mutare	• Marondera • Macheke • Rusape • Nyazura • Mutare,	Link from Mutare to Beira Railroad Corporation, Mozambique
Beitbridge Bulawayo Railway (privately owned)		Connects to Beitbridge, South Africa. The privately owned Beitbridge Bulawayo Railway (BBR) provides a direct rail link to South Africa. This railway was opened in 1999 and will become part of the NRZ after 30 years.