

Darjeeling Railway (India)

No 944

Identification

<i>Nomination</i>	The Darjeeling Himalayan Railway
<i>Location</i>	Darjeeling District, State of West Bengal
<i>State Party</i>	Republic of India
<i>Date</i>	3 July 1998

Justification by State Party

The Darjeeling Himalayan Railway is a unique example of construction genius employed by railway engineers in the latter part of the 19th century. The manner in which height is gained in this railway by utilizing various loops and zigzag reversing stations is remarkable. This line also has the distinction of passing through the second highest railway station in the world.

Criterion i

This railway also exhibits an important interchange of human values, as it brought about a change in the life-style of the people living in the area. The concept of time changed, as the earlier journey time of five to six days between Calcutta and Darjeeling was compressed into less than 24 hours following the introduction of this railway.

Criterion ii

The railway bears a unique testimony to the cultural tradition of tea plantation, which is still the main source of livelihood of the inhabitants of this region, whether landowners, labourers, or traders.

Criterion iii

Various facets of the line, such as the innovative measures used to gain height and to overcome obstacles, the workshop at Tindharia, which is still using many original machines, the use of the original steam locomotives and original coaches, such as the *Everest* built in 1914, and the 19th century station buildings, which have preserved their original form, all bear witness to the technological skills of the bygone era and are an outstanding demonstration of their function, illustrating a significant stage in human history.

Category of property

In terms of the categories of cultural property set out in Article 1 of the 1972 World Heritage Convention, this is a *site*.

History and Description

History

The Darjeeling Himalayan Railway is intimately linked with the development of Darjeeling as the queen of hill stations and one of the main tea-growing areas in India, in the early 19th century.

The densely wooded mountain spur on which Darjeeling now stands was formerly part of the Kingdom of Sikkim. It was adopted by the British East India Company as a rest and recovery station for its soldiers in 1835, when the area was leased from Sikkim and building of the hill station began, linked to the plains by road. The region was annexed by the British Indian Empire in 1858.

Calcutta had been linked by rail in 1878 to Siliguri, in the foothills of the Himalaya. By this time the tea industry had become of great importance for the Darjeeling region, and the existing road transport system was inadequate to cope with the increased traffic. Franklin Prestage, Agent of the Eastern Bengal Railway, submitted a detailed proposal for a steam railway from Siliguri to Darjeeling. This received official approval and construction work began immediately. By 1881 it had been completed in three stages.

The privately owned Darjeeling Himalayan Railway (hereafter referred to as the DHR) was purchased by the Government of India in October 1948. Since 1958 it has been managed by the State-owned Northeast Frontier Railway.

Description

The DHR consists of 88.48km of 2ft (0.610m) gauge track that connects New Jalpaiguri with Darjeeling, passing through eleven stations between the two termini. One of these, Ghoom, is the second highest railway station in the world, at an altitude of 2258m.

Because it passes through a mountainous region, 73% of the total length of the line consists of curves, the sharpest of which is that between Sukna and Rongtong, where the track passes through 120°. There are six reverses and three loops on the line, the most famous of these being the Batasia Loop between Ghoom and Darjeeling. The steepest gradient is 1 in 18 (in zigzag reverses).

The nominated property consists of the permanent way itself, which varies in width between 3m and 50m, and all the associated buildings - stations, goods sheds ("godowns"), workshops, locomotive and rolling stock sheds, and railway residences. It repeatedly crosses the Hill Cart Road, necessitating the provision of 170 level crossings. During the monsoon months (July and August) land-slips make it necessary for many of these to be reconstructed.

The "Toy Train," as it is affectionately known, affords breathtaking views of high waterfalls, green valleys that are often hidden by cloud, and at its end the splendid panorama of the snow-capped Kanchenjunga range. There are several distinct sections: the 10km plains section between Siliguri and Sukna (partly urban and partly agricultural), the 11km densely forested section from Sukna to beyond Rongtong, the 38km largely deforested open hill section with its many tea gardens to Kurseong, and finally the 30km alpine section to Darjeeling, dominated by stands of Himalayan pine and tea gardens.

Management and Protection

Legal status

The only protection to the Railway applies to the permanent way, which is in principle controlled under the general measures relating to Central Government property and the specific provisions of the 1989 Railway Act.

Management

The DHR is the property of the Government of India, vested in the Ministry of Railways. Administration of the Railway is the responsibility of the Northeast Frontier Railway, the headquarters of which is located at Guwahati, the capital of the State of Assam.

The fixed and moveable assets of the line are documented by the Northeast Frontier Railway and the buildings are included in a comprehensive register.

Conservation and Authenticity

Conservation history

This is a working railway and as a result is maintained according to regular programmes. The funding for these is variable, being dependent upon current needs and the level of traffic generated.

Investment plans have been prepared for the rehabilitation of the station buildings at Darjeeling, Ghoom, Kurseong, and Tindharia. There is a programme of stabilization in progress for the stretch between Sukna and Mahanadi, which is most susceptible to land slips in the monsoon season.

Development of tourism in Darjeeling is heavily dependent upon the efficient working of the Himalayan Railway. Plans are therefore being developed to improve its services. These include track improvement and the purchase of new locomotives and rolling stock. Concurrently the Ministry of Railways has sponsored a comprehensive study of the line by professional transportation consultants.

There is regular interaction with the UK-based Darjeeling Himalayan Railway Heritage Foundation. Studies are in progress on comparable railway systems elsewhere in the world, such as the Festiniog Railway in Wales (UK), the design of which inspired the Darjeeling Railway.

Authenticity

The authenticity of the route as originally commissioned in 1881 has been preserved in a remarkably intact condition, with only minor modifications of an evolutionary nature. All the main station buildings (with the exception of Siliguri Junction and Darjeeling, both which have been rebuilt after being destroyed by fire) have been preserved in their original form.

Evaluation

Action by ICOMOS

An ICOMOS expert mission visited the property in January 1999. ICOMOS also benefited from the comparative study of historic railways coordinated by the National Railway Museum in York (UK) in 1998 (see below).

Qualities

The DHR represents an exceptional feat of civil engineering that has survived virtually intact up to the present day. It is notable also for the quality of many of its associated buildings, especially the intermediate stations, the railway residences and rest-houses, and the Tindharia workshops

Comparative analysis

The 1998 comparative study of *Railways as World Heritage Sites* defines specific criteria for evaluating historic railways. To be considered for inscription on the World Heritage List they should conform with one or more of the following:

- be a creative work indicative of genius;
- demonstrate the influence of, and on, innovative technology;
- be an outstanding or typical example;
- be illustrative of economic or social developments.

The DHR was selected as a case-study. It was adjudged to be "an outstanding line on several counts, but ... particularly significant with regard to [its] social, economic, and political effects and the route's relationship with the landscape."

The report stresses the fact that the DHR does not possess any grand structures; on the contrary, its design was based on minimal capital expenditure. However, the engineering solutions adopted to cope with the steep gradients and relatively short distances were exceptional.

It also emphasizes the social and economic importance of the line. The narrow gauge adopted, which was admirably suited to the terrain, permitted the transportation of passengers and goods in a way that had a profound impact on the social and economic development of the Darjeeling area.

Finally, the report describes the intimate relationship of the Railway with the varied terrain through which it passes as outstanding

In the light of these comments, there can be little doubt that the DHR is of outstanding quality. The combination of narrow gauge and zigzag reverses was the first in the world, and as such it is of exceptional technological interest. It was the first hill railway anywhere in the world and as such served as the prototype for numerous subsequent railways of this type, adopted in India, in Vietnam, in Burma, in Sumatra, in Java, and elsewhere.

One other point should not be overlooked. The DHR links not only the plains with the high Himalaya, but also two distinct cultural traditions - the Hindu culture of Bengal and the Buddhist culture of the mountain region. As a result Darjeeling, which lies at an important nodal point, reflects a cultural fusion between these two cultures (not forgetting, also, the British influence).

ICOMOS comments and recommendations for future action

ICOMOS is impressed by the quality of the DHR, and also by the commitment of those responsible for its management and maintenance to its conservation as part of the railway heritage, both of India and more widely. It is concerned, however, that there is no specific heritage expertise within the Northeast Frontier Railway staff. It proposes that Indian Railways should give special consideration to the possibility of transferring responsibility for conservation of the DHR to

a special unit with expertise in heritage matters as well as formal railway management skills. Such a unit would have conservation of heritage values as a high priority in its management and operation. This would appear to be consonant with the development of the line as part of the overall tourism plan for the Darjeeling region.

There is no buffer zone along the length of the DHR. Given the complexities of planning in India, ICOMOS urges the State Party to prepare an environmental management plan in association with all the relevant authorities responsible for the protection of the landscape along its route.

ICOMOS is conscious that both proposals will require a lengthy period before they can be developed and implemented. It is conscious of the significance of the DHR, of the current level of conservation, and of the existing commitment of all concerned to its continued existence. It does not therefore propose that inscription on the World Heritage List should be conditional upon their application. It suggests that the Committee consider asking the State Party to provide regular progress reports, with the objective of having appropriate structures in force within the next five years.

The significance of this property lies in its continuing use as a working railway. Its abandonment would necessarily call its continuing World Heritage value into question.

Brief description

The Darjeeling Himalayan Railway is the first, and still the most outstanding, example of a hill passenger railway. Opened in 1881, it applied bold and ingenious engineering solutions to the problem of establishing an effective rail link across a mountainous terrain of great landscape beauty. It is still fully operational and retains most of its original features intact.

Recommendation

That this property be inscribed on the World Heritage List on the basis of *criteria ii and iv*:

Criterion ii The Darjeeling Himalayan Railway is an outstanding example of the influence of an innovative transportation system on the social and economic development of a multi-cultural region, which was to serve as a model for similar developments in many parts of the world.

Criterion iv The development of railways in the 19th century had a profound influence on social and economic developments in many parts of the world. This process is illustrated in an exceptional and seminal fashion by the Darjeeling Himalayan Railway

ICOMOS, September 1999