STATE OF CONSERVATION REPORT

DARJEELING HIMALAYAN RAILWAY

Mountain Railways of India (India) (C 944ter)

Report Submitted by
Indian Railways - State Party, India
July, 2022
1. Executive Summary of the report

The Darjeeling Himalayan Railway (DHR) 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.

The train services are running well for more than 140 years with almost NIL accidents. Number of services and passengers also increased many folds over the time. Darjeeling Himalayan Railway has preserved Steam Locomotives more than 100 years old and Vintage Coaches of 1917 make and they are in working condition. Significant artefacts, communication instrument etc. are also preserved. Zigzag reverse and loops of track are unique engineering marvel and are still preserved and in operation.

In Twenty-third session at Marrakesh, Morocco 29 November – 4 December 1999, Bureau recommended that the Committee inscribe the site on the World Heritage List under 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 has 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.

Outstanding Universal Value as per criteria mentioned above is fully intact.

As State Party, Indian Railways is fully committed to comply with the guidelines of World Heritage Committee. An agreement has been executed with UNESCO for “Development of Comprehensive Conservation Maintenance Plan (CCMP) for Darjeeling Himalayan Railway (DHR) World Heritage site through effective stakeholders' empowerment” on 20-01-2017 at cost of USD 533,332. There were four review meetings held in past three years with UNESCO. Besides, three technical workshops and one International Workshop were also organized to understand the world heritage property. CCMP has been finalized with submission of e-version of the final report.

Darjeeling Himalayan Railway is headed by Director/DHR looking after preservation of Heritage Values of the property assisted by Assistant Divisional Engineer (Looking after Infrastructure and Track), Assistant Divisional Mechanical Engineer (Looking after maintenance of rolling Stocks and Crew Management), Area Officer (Looking after Traffic Operation and commercial Activities). Director/DHR reports to Divisional Railway Manager/Katihar/Northeast Frontier Railway. At Zonal Headquarter level, Heritage Conservation Unit is headed by Additional General Manager/Northeast Frontier Railway. At Railway Board Level, Heritage matters are being monitored by Executive Director/Heritage/Railway board and Secretary/Railway Board.

Attention was drawn during Forty-third session at Baku, Republic of Azerbaijan 30 June - 10 July 2019 43 COM 7b.62 regarding lack of monitoring, general maintenance, serious encroachment by illegal construction and dumping of waste along the tracks.

Regarding the maintenance of trains, track and associated structures, it is stated that DHR is in operation for more than 140 years with almost NIL accidents. It has been possible because of proper maintenance of trains, track and associated structures. Funds allocation for DHR has increased substantially during last three years. No compromise is made with respect to safe running of the trains on DHR.

The observation made regarding waste dumping was critically examined by Heritage Conservation Unit of Northeast Frontier Railway and DHR Management Group. Videography was done of entire DHR stretch. Wherever dumping of waste was observed, the same has been cleared on a special drive. Besides, regular cleanliness drives are being conducted and regular coordination is being done with local authorities as well as local people to prevent dumping of waste on or near the track.
As regarding encroachment, no new encroachment by illegal construction along the tracks on Railway Property since inscription has been allowed. This has been made possible because of regular follow-up with Local Authorities and continuous monitoring to prevent encroachment.

State Party is committed to preserve the OUVs of Darjeeling Himalayan Railway, the World Heritage Site.

2. Response to the Decisions of the World Heritage Committee

The World Heritage Committee on the basis of examination of document WHC/19/43.COM/7B and recalling decision CONF 209 VIII.C.1, 29 COM 8B.31, 32 COM 8B.28 and 43 COM 7B.62 adopted at the 23rd (Marrakesh, 1999), 29th (Durban, 2005), 32nd (Quebec City, 2008) and 43rd session at Baku, Republic of Azerbaijan sessions respectively requested the State Party India vide decision 44 COM 7B.26 in its extended 44th session, Fuzhou (China) online meeting, 2021 to submit to the World Heritage Centre by 1 December, 2022, a report on the state of conservation of the property and the implementation of the decisions for examination by the World Heritage Committee at its 46th session. Accordingly, the response of the State Party to decision 44 COM 7B.26 (Decisions 3-9) is given below.

Decision 3: Takes note that the State Party has provided an extensive state of conservation report on the Darjeeling Himalaya Railway (DHR) component of the property, and requests the State Party to submit to the World Heritage Centre similarly detailed reports for the Nilgiri Railway (NR) and Kalka Shimla Railway (KSR) components.

2.1. Response of the State Party:

Noted. Regarding SOC of KSR & NMR, Board may get the same from respective components of Mountain Railways of India.

Decision 4: Welcomes to the state party's advice that the DHR & KSR components of the property retain their operational and functional integrity, that repair, reconstruction, restoration and maintenance works continue to facilitate steam train operations, which are critical to the property's Outstanding Universal Value (OUV), that encroachment and waste dumping have been addressed, and that a conservation and management unit has been established for the property, and also requests the State Party to establish integrated heritage units with in-house heritage conservation expertise for each of the three component railways.

2.2. Response of the State Party:

A heritage Unit consisting of Assistant Divisional Engineer, Area Officer and Assistant Divisional Mechanical Engineer within the management structure reporting to Director/DHR already exists for DHR. Heritage unit (Zonal Heritage committee) exists at HQ also, which is headed by AGM/NFR.
For establishing in-house heritage conservation expertise, Heritage Consultant has been engaged for DHR. While dealing with the preservation and conservation of the heritage value of the property, the heritage consultant has a formal role in decision-making mechanisms in the matters related to conservation of Heritage.

Ms. Kavita Jain, Conservation Architect & Heritage Consultant to DHR on her visit to Open Air Museum, Ghum in presence of Curator of Museum Of HMI/DJ.

Ms. Kavita Jain, Conservation Architect & Heritage Consultant to DHR on her visit to Kurseong Archive.

Heritage Consultant to DHR on her visit to Kurseong Station Building
Ms. Kavita Jain, Conservation Architect & Heritage Consultant to DHR on her visit to Darjeeling Station

Ms. Kavita Jain, Conservation Architect & Heritage Consultant to DHR on her visit to Kurseong Printing Press Building.

Heritage consultant to DHR visiting Ghum station building.
Heritage Consultant to DHR visiting Sukna stn.

Heritage Consultant to DHR visiting TDH station

Heritage Consultant to DHR visiting Rongtong station
Decision 5:

Also takes note of the progress made towards determination of the boundary and buffer zone, and completion of the Comprehensive Conservation Maintenance Plan (CCMP) for the DHR component of the property, and reiterates its request that, prior to formal adoption, this plan be submitted to the World Heritage Centre for review by the Advisory Bodies.

2.3 Response of the State Party:
Draft CCMP & revised CCMP with comments submitted to Rly. Board/State party of Mountain Railways for further disposal. Railway Board may look into.

Map containing the boundary of Siliguri jn. Loco shed

Map containing the boundary of Sonada station

Decision 6:
Further requests the State Party to provide the World Heritage Centre with information about any restoration and proposed projects and their potential impact on the OUV of the property, including detailed information on Heritage Impact Assessments (HIAs), prepared in conformity with the 2011 ICOMOS Guidelines on HIAs for World Heritage cultural properties, and in line with Paragraph 172 of the Operational Guidelines, for review by the Advisory Bodies.

2.4 Response of the State Party:

2.4.1 Two station buildings Gayabari & Sonada burnt and vandalized during agitation has been restored to original form and made operational.
2.4.2 Proposed projects under implementation are:

a) Heritage Preservation Project of DHR Phase-I at the cost of Rs. 36 Million which intends to further restore the station buildings of Ghum and Darjeeling. It will not be a 'Major restoration and new construction' necessitating a notice to the World Heritage Committee as laid down in Para 172 of UNESCO of Operational Guidelines for the implementation of the World Heritage Convention. It will be a minor restoration work in which OUVs of the property shall be retained and hence, will have no impact on Heritage value of the property.

b) Provision of check rails on sharp curves for safety of passenger trains at the cost of Rs. 6.49 Million which will further reinforce safety of the trains running on DHR and will have no impact on the OUV of the property. It will not be a 'Major restoration and new construction' necessitating a notice to the World Heritage Committee as laid down in Para 172 of UNESCO of Operational Guidelines for the implementation of the World Heritage Convention.
c) Provision of PSC Sleepers for ensuring better safety of passenger trains at the cost of Rs. 36.3 Million and will have no impact on the OUV of the property.

d) Wooden Plank girder bridge replacement by RCC Box for better Passenger Safety at the cost of Rs. 11.17 Million. It will not be a 'Major restoration and new construction' necessitating a notice to the World Heritage Committee as laid down in Para 172 of UNESCO of Operational Guidelines for the implementation of the World Heritage Convention. It will be a minor restoration work in which OUVs of the property shall be retained and hence, will have no impact on Heritage value of the property.
e) Procurement of maintenance spares & boilers for Steam Locomotives of more than 100 years old at the cost of Rs. 47.86 Million is underway at different stages. Steam locomotive number 786 'B' built in 1903 by NBLC, Glasgow, UK & 791 'B' built in 1913 by NBLC, Glasgow, UK have been restored and given another lease of life by replacing the old and defective boilers with brand new boilers. Similar restoration work for steam loco no. 782 'B' built in 1899 by SS & C, Glasgow, UK is going on and this loco too is all set to get another life span after replacement of its old boiler with a brand new boiler. Vital spares for 'B' class steam locomotives are under procurement at a cost of Rs. 36.5 Million which is bound to reinforce the mechanical and operational sustainability of DHR as far as operation and maintenance of steam locomotives is concerned. It will go a long way to conserve the OUV and heritage of DHR.
New boiler at TDH/WS getting ready to replace the old one in Loco no 782 'B'
Loco no 782 'B' stands dismantled at TDH/WS to get its new boiler.

Loco no 782 'B' - dismantled.

Loco no 782 'B' - dismantled.
Loco no 782 'B'- dismantled

There shall be no impact on OUVs by any of the above mentioned projects as these are not 'Major restoration and new construction' works necessitating a notice to the World Heritage Committee as laid down in Para 172 of UNESCO of Operational Guidelines for the implementation of the World Heritage Convention. These all will be minor restoration works in which OUVs of the property shall be retained and hence, will have no impact on Heritage value of the property.

**Decision 7:** Further takes note of the 2019 Reactive Monitoring mission's recommendations, and requests furthermore the State Party to implement them, particularly by:

a) Establishing comprehensive, up-to-date Management Plans for the KSR and NR components,

*2.5.1 Response of the State Party:*
Board may get the requisite information from KSR.

b) Completing the CCMP for DHR and preparing, adopting or revising, as necessary, related management guidance documents,

*2.5.2 Response of the State Party:*
Draft CCMP with comments submitted to RB on 15.11.2021 for further disposal. Railway Board may look into for further necessary action.

c) Establishing an official decision-making and implementation mechanism for DHR, including consultation with stakeholders and participation of local organizations and community groups,

*2.5.3 Response of the State Party:*
Official decision-making and implementation mechanism for DHR is already in place. Consultation with stakeholders as well as participation of local organization & community groups are being done. Recently, meetings were held with the following stake-holders/groups/organizations:-

<table>
<thead>
<tr>
<th>Date</th>
<th>Station</th>
<th>Name of stake holder/Group/Org</th>
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</thead>
<tbody>
<tr>
<td>06.02.2021</td>
<td>SUKNA</td>
<td>1. Byawasayi Sanghathan</td>
</tr>
<tr>
<td>06.02.2021</td>
<td>RONGTONG</td>
<td>1. Rongtong Samaj</td>
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<tr>
<td>20.08.2021</td>
<td>DARJEELING</td>
<td>1. Mahakali Gram Sudhar Samiti</td>
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<td>2. Arun Kalyan Samiti</td>
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<td></td>
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<td>3. Prayash NGO</td>
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<tr>
<td></td>
<td></td>
<td>4. DHR Preservation Society</td>
</tr>
<tr>
<td>20.08.2021</td>
<td>GHUM</td>
<td>1. Sahara Samaj</td>
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<td></td>
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<td>2. Sangam Samaj</td>
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<td></td>
<td></td>
<td>3. Ghum Sports Academy &amp; Ghum Social Society</td>
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<td></td>
<td></td>
<td>4. Sushant Samaj</td>
</tr>
<tr>
<td>Date</td>
<td>Place</td>
<td>Organizing bodies</td>
</tr>
<tr>
<td>------------</td>
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<td>-----------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| 02.09.2021 | KURSEONG       | 1. Sai Samiti Kurseong  
2. HELP NGO  
3. Sherpa Busty Samaj |
| 02.09.2021 | MAHANADI       | 1. Mahanadi High School  
2. Mahanadi Gram Sudhar Samiti  
3. Member MHN taxi syndicate  
4. Social workers  
5. President Mahanadi Bazar |
| 07.09.2021 | SONADA         | 1. Upper Panchyat Sonada  
2. Social Workers |
| 7.9.21     | TUNG           | 1. Gram Bikash Samiti  
2. Shanti Tola Kalyan Sangh  
3. Dr. V.C.Roy School TUNG |
| 25.09.2021 | TINDHARIA      | 1. Members of Gram panchyat Gayabari  
2. Sri Ganesh Co-operative  
3. DHR Lovers Group |
| 25.09.2021 | GAYABARI       | 1. Representative of Gayabari 3 Gram Panchyat  
2. Himalayan NGO |
| 13.11.2021 to 05.12.2021 | Ghum, Darjeeling & Chourasta | 1. 'Ghum Festival' was observed with great enthusiasm and participation of local communities and cultural groups to display the shared heritage of DHR & the local multicultural community. |
| 08.12.2021 | RONGTONG       | 1. Rongtong Samaj |
| 15.12.2021 | SUKNA          | 1. Byawasayi Sanghatan  
2. Sahara Samaj  
3. Sangam Samaj  
4. Ghum-Jourbunglow Sporting Club |
| 05.02.2022 | DARJEELING     | 1. Mahakal Gram Sudhar Samiti  
2. Prayash NGO  
3. DHR Preservation Society |
| 16.02.2022 | GAYABARI       | 1. Representative of Gayabari 3 Gram Panchyat  
2. Himalayan NGO |
| 01.03.2022 to 02.04.2022 | Kurseong & Ghum | 1. 'Summer Festival' was observed with great enthusiasm and participation of local communities and cultural groups to display the shared heritage of DHR & the local multicultural community. |
| 12.04.2022 | TUNG           | 1. Gram Bikash Samiti  
2. Shanti Tola Kalyan Sangh |
| 03.05.2022 | SONADA         | 1. Upper Panchyat Sonada  
2. Social Workers |
| 27.05.2022 | GAYABARI       | 1. Representative of Gayabari 3 Gram Panchyat  
2. Himalayan NGO |
| 15.06.2022 | TINDHARIA      | 1. Members of Gram panchyat Gayabari  
2. DHR Lovers Group |
| 27.06.2022 | RONGTONG       | 1. Rongtong Samaj |
Meeting held at Sukna with members of Byawasi Sanghatana

Meeting held at Tung with members of Shanti Tola Kalyan Sangh and thorough cleaning around Tung station undertaken.

Children at Darjeeling after Special joyride on Children's day
Cleanliness drive being carried out with participation of local community/volunteers at DJ.

Heritage awareness program organized at Kurseong station

Heritage awareness program organized at Mahanadi station
Heritage awareness program organized at Mahanadi for local women

Cleanliness drive being carried out with participation of local community/volunteers.
Moments of Ghum Festival at Ghum station
Moments of Ghum Festival at Ghum station

Moments of Ghum Festival at Ghum station

Moments of Ghum Festival at Chaurasta, Darjeeling

Moments of Ghum Festival at Ghum station
Moments of Ghum Festival at Darjeeling station

Moments of Ghum Festival at Chaurasta, Darjeeling
Moments of Summer Festival organized at Kurseong station.
d) Investigating the legislative recognition of heritage value.

2.5.4 Response of the State Party:

DHR is recognized /declared as World Heritage Site by UNESCO in the year 1999. The heritage values of the Site are being preserved, maintained & safeguarded by relevant laws as under:-

- The Railway Act 1989.
- Monuments & Archaeological Sites & Remains Act 1958,
- Water (Prevention & Control of Pollution Act 1974)
- Air (Prevention & Control of Pollution Act, 1981).
e) Sustaining mechanical and functional operation for all three component railways.

2.5.5 Response of the State Party:
Sustainable mechanical and functional operations are being ensured by providing adequate funds for maintenance and operation of Heritage assets and imparting training to the staff for the same.

Locomotive 788: More than 100 years old
Locomotive 792: more than 100 years old

Vintage Coach: Observation Car (Built 1943)
Vintage Coach: Inspection Car (Built 1917)

f) Strengthening the national capacity of Indian Railways (IR) for the management of heritage-related components and aspects of the property in order to inform the decision-making process with professional heritage conservation expertise

2.5.6 Response of the State Party:
In DHR, the Heritage related components & aspects of the property in respect of decision making and its integration with professional Heritage Conservation expertise has been strengthened. For other components of property, Board may look into.

g) Exploring the training opportunities for managers and staff of the IR to raise their awareness of holistic heritage values of the property, including non-heritage staff.

2.5.7 Response of the State Party:
The training of staff regarding awareness and knowledge of holistic heritage values has been undertaken by the Heritage Consultant engaged by DHR. The manager & staff shall be involved to participate in national/international training program.

Training of staff regarding holistic Heritage values by the Heritage Consultant to DHR at Ghum Open Air Museum.

Training of staff regarding holistic Heritage values by the Heritage Consultant to DHR at Tindharia Workshop.

h) Ensuring the ongoing and future maintenance, repair, conservation or adaption for new uses of station buildings, architectural elements and associated structures is guided by specific conservation guidelines consistent with preservation of the attributes that justify the OUV of the property.

2.5.8 Response of the State Party:
It is ensured that ongoing and future maintenance, repair, conservation or adaptation for new uses of station buildings, architectural elements and associated structures is carried out as per specific conservation guidelines consistent with preservation of the attributes that justify the OUV of the property.
Rongtong Station maintained and conserved as per the Architectural Manual supplied under CCMP project.

i) Gathering baseline data by inventorying, recording and gathering historical plans and documents for all important elements and systematic inventorying of all moveable heritage associated with the railways and their history, and providing adequate display and storage conditions.

2.5.9 Response of the State Party:
Baseline data of historical plans and documents for all important elements has already been documented under CCMP & adequate display and storage condition provided.

Significant Artefacts preserved: Ghum Museum

Significant Artefacts preserved: Sukna Heritage Archive

Wooden sleepers intact in Sukna station yard

Metal water tanks intact at Sukna station

Promoting the three component sites and their respective history and values in order to contribute to the holistic understanding of the property.
2.5.10 Response of the State Party:
Promotion of DHR & its history is being ensured through its website and other means. Virtual tour of important stations and other installations of DHR have been made available on DHR website linked to the Google arts & culture website for general awareness about DHR. Periodic meetings with Local tour and travel operators and their associations are being held to promote DHR and its holistic understanding among the stakeholders and general public. For other elements of the property, Board may get the requisite information from KSR & NMR.
PCME cum Chief Heritage Officer, NFR in a meeting with local Tour and Travel Operators
Decision 8: Also reiterates its request to the State Party to submit to the World Heritage Centre a proposal to clarify the property's boundaries and define a buffer zone for each of the three component railways, along with details of proposed policy and legal instruments to improve the protection and management of the property, in conformity with Paragraph 164 of the Operational Guidelines.

2.6 Response of the State Party:
The boundaries of DHR have been clarified in CCMP. The maps indicating this property boundary have been submitted to Board in reference to Board's letter No. 2021/Heritage/UNESCO WHC dated 08.12.2021 on "Cartographic & Geographic information. Buffer zone for DHR has been defined under the CCMP.

Decision 9: Finally requests the State Party to submit to the World Heritage, by 1 December 2022, a report on the state of conservation of the property and the implementation of the above, for examination by the World Heritage Committee at its 46th session.

2.7 Response of the State Party:
Noted and submitted in desired format.

3. Other current conservation issues identified by the State(s) Party(ies) which may have an impact on the property's Outstanding Value

Remarks of State Party: From DHR side, there is no such issue which has any impact on OUV of property.

4. In conformity with Paragraph 172 of the operational guidelines, describe any potential major restorations, alterations and/or new construction(s) intended within the property, the buffer zone(s) and/or corridors or other areas, where such developments may affect the Outstanding Universal Value of the property, including authenticity and integrity.

Remarks of State Party: From DHR side, there are no potential major restorations, alterations and/or new construction(s) intended within the property, the buffer zone(s) and/or corridors or other areas.

It is to mention that development of areas under National Highway Authority of India, Municipality, Gorkhaland Territorial Authority, Forest Department etc. are beyond control of DHR. However, in this regard DHR has taken initiative for finalising MOUs with stake holders in co-operation of UNESCO office New Delhi so that, OUVs of property would not be affected.

5. Public access to the state of conservation report:

Remarks of State Party: State of Conservation report may be uploaded and shared.

6. Signature of the Authority
STATE OF CONSERVATION REPORT

NILGIRI MOUNTAIN RAILWAY

MOUNTAIN RAILWAYS OF INDIA (India) (C 944ter)

Report Submitted by
Indian Railways-State Party, India
November, 2022
1. Executive Summary of the Report

The Nilgiri Mountain Railway is among the first, and still an outstanding example of a hill passenger railway. Opened in 1899, it was a bold and ingenious engineering initiative to establish a rail link across a mountainous terrain of great beauty. The “engineering marvel” still stands a testimony to the skills of Railway engineering. It has retained much of its original components: stations, signals, environment, locomotives and rolling stock – a rare system of heritage value that is still operational.

The 46 KM long Nilgiri Mountain Railway was built in stages. The Mettupalayam – Coonoor line of 27 KM was declared open in 1899. The 19 KM line from Coonoor to Udhagamandalam or Ooty was extended in 1908. The elevation of Mettupalayam is 325.83.00 mtrs and elevation of Udhagamandalam is 2203.26 mtrs. Thereby the average gradient works out to 1 in 24.5. The gauge of the line is 1000mm. The Highest formation level is at km 43/600-700 between LOV-UAM at 2225.00 m from MSL.

The rack section on the line with Alternate Biting Teeth system, extends from km.7/6-7 from Kallar station to km 26/7-8 short of Coonoor station for a total length of 19.00 kms. The rack section has the steepest gradient in this section. The steepest gradient is 1 in 12.28. which is the steepest in Asia. The section consists of 209 curves, 256 Bridges & 16 Tunnels.

In the Twenty Ninth Session of WHC held at Durban, South Africa between 10-17 July 2005, the committee included Nilgiri Mountain Railway in the World Heritage List as extension of the Darjeeling Himalaya Railway and renames the extended property as Mountain Railways of India under the below criteria

**Criterion (ii):** The mountain railways of India are outstanding examples of the interchange of values on developments in technology, and the impact of innovative transportation system on the social and economic development of a multicultural 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. The Mountain Railways of India are outstanding examples of a technological ensemble, representing different phases of the development in high mountain areas.
2. Response to the Decision of the World Heritage Committee

The World Heritage Committee having examined the document WHC/21/44.COM/7B at its 44th session held at Fuzhou (China)/Online meeting and based on Decision: 44 COM 7B.26 requested the State Party to submit the response for examination by the World Heritage Committee on its 46th session. Accordingly, the response of the state party to Decision 44 COM 7B.26 is given below.

Decision 3: Takes note that the State Party has provided an extensive state of conservation report on the Darjeeling Himalaya Railway (DHR) component of the property and requests the State Party to submit to the World Heritage Centre similarly detailed reports for the Nilgiri Railway (NR) and Kalka Shimla Railway (KSR) components;

Response of the State Party

The administration of the Nilgiri Mountain Railway is the responsibility of the Salem Division under the Southern Railway (SR), the headquarters of which is located at Chennai, the capital of the State of Tamilnadu.

Principal Chief Mechanical Engineer of SR is the Chief Heritage Officer of Southern Railway and Senior Divisional Mechanical Engineer of Salem Division is the Director of NMR.

Additional Divisional Railway Manager of Salem Division is the Estate Office for Railway Land of NMR. Senior Divisional Engineer/Co-ordination, belongs to Civil Engineering Department of Salem Division is the in charge Officer maintaining the Land, Track, buildings and heritage structures. The fixed and moveable assets of the line are documented by the SR and the buildings are included in a comprehensive register.

A property Management Plan is in place for conserving and maintenance of the Heritage assets. However, a proposal to prepare and implement a detailed and extensive State of Conservation report is under progress.

Decision 4: Welcomes the State Party’s advice that the DHR and KSR components of the property retain their operational and functional integrity, that repair, reconstruction, restoration and maintenance works continue to facilitate steam train operations, which are critical to the property’s Outstanding Universal Value (OUV), that encroachment and waste dumping have been addressed, and that a conservation and management unit has been established for the property, and also requests the State Party to establish integrated heritage units with in-house heritage conservation expertise for each of the three component railways;

Response of the State Party

A Multi Disciplinary Management Unit (MDMU) consists of Officers and Supervisors who directly involved in day to day management of NMR has been formed. The MDMU is headed by
the Director/NMR & Senior Divisional Mechanical Engineer. Coaching Depot Officer, Assistant Divisional Engineer, Assistant Commercial Manager and other supervisors of NMR are the members of the MDMU. The MDMU discuss mainly about conservation of Heritage aspects of NMR and other developments and tourism aspects of NMR. Thus, the Officers and Supervisors have direct access to in-house heritage conservation and management and are involved in the management planning and decision making processes.

At the Zonal Level Heritage Committee is headed by Additional General Manager/Southern Railway.

**Decision 5:** Also takes note of the progress made towards determination of the boundary and buffer zone and completion of the Comprehensive Conservation Maintenance Plan (CCMP) for the DHR component of the property and reiterates its request that, prior to formal adoption, this plan be submitted to the World Heritage Centre for review by the Advisory Bodies;

**Response of the State Party**

Noted. Pertains to DHR

**Decision 6:** Further requests the State Party to provide the World Heritage Centre with information about any restoration and proposed projects and their potential impact on the OUV of the property, including detailed information on Heritage Impact Assessments (HIAs), prepared in conformity with the 2011 ICOMOS Guidelines on HIAs for World Heritage cultural properties and in line with Paragraph 172 of the Operational Guidelines, for review by the Advisory Bodies;

**Response of the State Party**

Presently there is no restoration work or project proposed that may have impact on the OUV of NMR.

**Proposed and Ongoing Projects:**

a) Relocation & Expansion of Heritage Museum at Udhagamandalam (ooty)

The Heritage Museum at Udhagamandalam is presently functioning at Station Building. It is proposed to relocate and expand the museum within the station premise at a cost of INR Five Million. It will not be a major restoration and it is relocation & expansion only and will not have any impact on Heritage Value of the property and the Outstanding Universal Value of the property will be retained.
Present Location of Ooty Museum at Station Building

Proposed Expansion of Museum at Ooty

PROPOSED EXPANSION OF RAIL MUSEUM AT UAM
b) Periodic Overhauling Facility for NMR Coaches at Mettupalayam

A facility for periodic overhauling of NMR coaches at Mettupalayam near the existing Coaching Depot at Mettupalayam has been sanctioned at a cost of INR 31 million under Umbrella works/PH42 for eliminating transportation of the coaches to Golden Rock Workshops for POH, to reduce the time taken for carrying out the periodic overhauling and to streamline the coach maintenance activities. The proposed facility will enhance the capability of NMR and reduce the dependency on other workshops in maintaining the coaches and it will help to conserve the OUV and heritage of NMR.
c) State of the Art Running Maintenance Facilities for MG Heritage Steam Locos

The Holding of X Class Steam Locos at Coonoor Loco Shed has increased from seven to nine locos due to two newly manufactured locos at Golden Rock Workshop in Sep 2021 & Oct 2022. To facilitate the maintenance of the increased holding and to modernize the existing maintenance facility, under the project of ‘State of the Art Running Maintenance Facilities for MG Heritage Steam Locos’ an amount of INR 20 million was sanctioned to construct one single bay along with machinery & Tools. On completion, the project will help to enhance the maintenance activities of Steam Loco Shed, Coonoor.

The proposed facility on completion will improve the maintenance of steam locos & it will help to conserve the OUV and heritage of NMR.

d) Overhauling of Coal Fired Steam Locomotive

The X Class Steam Locomotive Number X37384 built in 1918 by Swiss Locomotive & Machine Works, Winterthur, Switzerland has been overhauled at Golden Rock Workshop of Southern Railway and received at NMR in May 2022. The Boiler of the loco has been replaced and a new boiler is fitted and many defective components were replaced. The overhauling reinforces the conservation measures taken to keep the old locomotives in working order in up keeping the OUV and heritage value of NMR.
e) Conversion of Firing System in Oil Fired Steam Locomotives

Steam Loco Shed, Coonoor has a holding of Two Coal Fired & seven Furnace Oil Fired X Class Steam Locos. Due to high Sulphur Content, Furnace Oil is not good for the environment due to higher emission of polluting gas. Also the Loco Pilot & Fireman are experiencing heat & suffocation while on run, especially inside tunnels. To overcome these disadvantages, Steam Loco Shed, Coonoor has carried out a modification work of Conversion of Furnace Oil Firing System of one of the X-Class Steam Locos No. X-37398 into Diesel Firing System. The modification was successful and the loco was put in service from March 2022. Golden Rock Workshop has manufactured one new steam Loco X37401 with Diesel Firing system and put in service from October 2022.

The modification has improved the working condition for the loco pilot & fireman. The heat inside the driver cabin has been reduced. Due to relatively lesser carbon soot formation, a very high level of reduction of carbon deposit on the surfaces of Fire Box, Flue Tubes, Smoke Tubes, Smoke Box, etc. resulting in better heat transfer, clean loco components and better maintenance.
It is proposed to convert the remaining five furnace oil fired locos to Diesel fired locos at Loco shed Coonoor & Golden Rock Workshops. The modification does not have any impact on Heritage Value of the property and the Outstanding Universal Value of the property will be retained.

**Flag Off by Divisional Railway Manager/Salem of Diesel Fired steam loco X37398**

**Decision 7:** Further takes note of the 2019 Reactive Monitoring mission’s recommendations and requests furthermore the State Party to implement them, particularly by:

a) *Establishing comprehensive, up-to-date Management Plans for the KSR and NR components,*

**Response of the State Party**

The Comprehensive Conservation Management Plan (CCMP) for Nilgiri Mountain Railway will be established based on the final approved CCMP of DHR confirming to the guidelines.

b) *Completing the CCMP for DHR and preparing, adopting or revising as necessary, related management guidance documents,*

**Response of the State Party**

Noted. The DHR CCMP will be studied and comparative and relevant components will be included in the CCMP for Nilgiri Mountain Railway (NMR).
c) Establishing an official decision-making and implementation mechanism for DHR, including consultation with stakeholders and participation of local organisations and community groups,

Response of the State Party

i) Official decision making and implementation mechanism for NMR is already in place as per railway organizational structure.

ii) Engagement and Participation of Local Organizations and community groups are being done as mentioned below.

a) An MoU with Government Arts College, Udhagamandalam (Ooty) and NMR was signed on 05.10.2021 for development, preservation of the Heritage Museums at Mettupalayam and Udhagamandalam Stations and conservation of the Heritage aspects and tourism promotion in the World Heritage Site. To provide enough opportunities for the students and faculties of GAC, Ooty for carrying out visits, project works and research works and educating the students regarding Railways and Nilgiri Mountain Railway.

b) Running of various special trains on important occasions & participation of local population during various celebrations.

Signing of Mou with Government Arts College, Ooty

Inauguration of the 06147 MTP – UAM Azadi Ka Amrit Mahotsav Special Train on 02.10.2021

Tree Plantation by Volunteers from various Colleges at NMR Museum, MTP on 02.10.2021
Exhibition conducted by Field Outreach Bureau, Ministry of I&B 25 to 27th October’ 2021 at the Heritage Museum, UAM Station

Heritage Day Celebrations at NMR on 18.04.2022
A viewing gallery at Loco Shed, Coonoor is made for the tourists for observing the maintenance activities of steam locos.

View of Loco Shed from the Gallery

Participation of Government Arts College students in Online Seminars conducted by NMR as part of Heritage Day Celebrations 2022
d) Investigating the legislative recognition of heritage values,

**Response of the State Party**

The Nilgiri Mountain Railway is declared as a World Heritage site as a part of Mountain Railways of India during the year 2005 by UNESCO. The heritage values of the site are being preserved, maintained & safeguarded by relevant laws as under:

- The Railway Act, 1989
Public Premises (Eviction of Unauthorized occupants) Act, 1971
Monuments & Archaeological Sites & Remains Act, 1958
Antiquities & Art Treasures Act, 1972
Environment (Protection) Act, 1986
Water (Prevention & Control of Pollution) Act, 1974
Air (Prevention & Control of Pollution) Act, 1981

e) Sustaining mechanical and functional operation for all three component railways.

Response of the State Party

The Operational and functional integrity of NMR is sound enough.

The condition of the heritage attributes of OUV is generally good.

To maintain the current capacity to sustain the mechanical and functional operation of the NMR, Staff working in mechanical and functional positions in the property’s management entities are trained to deepen their awareness and knowledge of the holistic heritage management.

i) The Old signaling system is still in use with good functional ability achieved by proper maintenance procedures

ii) One new X Class Coal Fired Steam Loco X37400 & one new X Class Diesel Fired Steam Loco X37401 were manufactured by Golden Rock Workshop in September 2021 & October 2022 respectively. This will aid in sustaining and improving the operational ability of NMR in running train service.
SOUTHERN RAILWAY

X 37400
(YEAR OF MANUFACTURE 2021)

First Coal Fired ‘X’ Class Locomotive
Manufactured in
INDIAN RAILWAYS

(Make in India)

CENTRAL WORKSHOPS
PONMALAI (GOLDENROCK)
TIRUCHIRAPPALLI.

POH
### SPECIAL FEATURES OF COAL FIRED 'X' CLASS STEAM LOCOMOTIVE

**Firing System**  
Coal Fired

### SPECIAL ENGINE MOUNTINGS

**INJECTOR (RH-1 & LH-1)**
Steam injector is a feed pump used to deliver water from water tank to boiler against boiler pressure, using live steam. This critical component was developed by Reverse Engineering.

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steam Turbo Generator (1 No)</td>
<td>500 W Steam operated Turbo generator generates 32V DC Current for electrical equipments like Headlight, Floodlights, Cabin lights etc.</td>
</tr>
<tr>
<td>Headlights (2 Nos)</td>
<td>18&quot; Headlights powered by Steam Turbo generator provides illumination.</td>
</tr>
<tr>
<td>Blower</td>
<td>To produce “Induced draft” by using steam</td>
</tr>
<tr>
<td>Silencer for Hardy Brake</td>
<td>To release the exhaust steam from Ejector</td>
</tr>
</tbody>
</table>

### COAL FIRED BOILER

Original riveted boiler designed by Swiss Locomotive and Machine Works, Switzerland is replaced by welded boiler of same appearance. Boiler working pressure is of 14 kg/cm².

### SPECIAL BOILER COMPONENTS

- Fire Grate, Drop Grate and its Operating Mechanism
- Ash Pan and Operating Mechanism
- Protecting Ring
- Fire Hole opening arrangement

All these special components are of vintage values which are only present in Coal Fired X Class Locomotives. Golden Rock Workshop utilised its expertise for developing and assembly of these special components.

### GOC PREPARATORY WORK FOR MANUFACTURING OF LOCO

- IS Specifications have been derived equivalent to Swiss Locomotive and Machine Works (SLM), Specification. Totally 46 IS Spec were derived for 84 SLM Spec.
- Totally 1600 part drawings & 16 sub assembly drawings have been prepared in CAD and stored in digitized format.
- Reputed suppliers have been identified through regular and periodical vendor analysis meetings.
- Data base have been developed to track the status of the components/sub-assemblies by material control cell.

By providing the above components, GOC Workshop ensures the Heritage Value of Coal Fired Locomotive With Make in India initiative.
CRITICAL COMPONENTS OF 'X' CLASS STEAM LOCOMOTIVES

FRAME ASSEMBLY
A sturdy riveted structure of Engine Frame assembly is 22 mm thick plate structure. Frame length and width is 900mm and 1000mm respectively. The frame is strengthened by cross structures and buffer plate at both ends. The quality of frame structure is ensured by the expertise and experienced staff of GOC workshop.

RACK CYLINDER
Rack cylinder made up of cast steel (2200 kg) is a single intricate casting. GOC’s expertise has been utilised in developing 3D modelling, pattern making, machining and CMM inspection at various stages of manufacturing.

ADHESION CYLINDER
Adhesion cylinder made up of cast steel (900 kg) is a single intricate casting.

Both cylinders have been fitted on the frame and components like covers, piston rod assembly, valve head assembly, liners were mounted on the cylinders by expertise at Machine shop and Erecting shop.

WHEEL AND AXLE, CRANK DISC & COG WHEEL ASSEMBLY
Wheel shop is pioneer in wheel and axle assembly and undertakes the manufacturing of wheel sets. Crank shaft and cog wheel assembly utilising the experienced staff.

WEIGH BAR SHAFT
Weigh bar shaft is made up of single forged steel of IS: 1875/1992 class 2 material. It has been a challenging task to achieve it.

NEWLY DEVELOPED COMPONENTS BY REVERSE ENGINEERING
Since there were no drawings and sketches available for the vital components such as Hydrostatic lubricator, Ejector and Mechanical lubricator GOC took effort for manufacturing these items by Reverse Engineering successfully.
Newly manufactured Coal Fired Steam Loco X 37400 at Mettupalayam-Sep 2021

Flag off by General Manager/Southern Railway of newly manufactured Diesel Fired steam Loco at Golden Rock Workshop on 27.09.2022
iii) Preservation of Old NMR Coaches.

All the coaches in service are at least 90 years old and they are well maintained to work the train services of NMR.

| Wooden Body Coach F 84 | Steel Body Coach SLR 75 |

iv) Introduction of ICF built coaches in service.

Integral Coach Factory at Perambur, Chennai has designed and manufactured 28 new coaches for NMR. RDSO trials for induction of these coaches were conducted during April-May 2022 and the trial report was received in Sep 2022. The induction process is in the final stage and these coaches will be inducted in service in the near future. The introduction of new coaches will supplement the existing fleet of Heritage NMR Coaches and increase the operational ability of NMR in running train service.

f) Strengthening the national capacity of Indian Railways (IR) for the management of heritage-related components and aspects of the property in order to inform the decision-making process with professional heritage conservation expertise,
Response of the State Party

The capacity for management of heritage-related components and aspects of NMR with professional advice and expertise for heritage conservation shall be strengthened by:

1. Establishing a high-profile, in-house expert position within NMR or the Zonal heritage unit, or any other institution. This heritage professional would be involved in the planning and decision making processes for all issues relating to the management and preservation of heritage components, including the maintenance and repair of the elements of Engineering/Industrial heritage, historical buildings, landscape and other values associated with the OUV of NMR;

2. Ensuring that the above mentioned expert and the heritage unit have formal membership in the decision making mechanisms when dealing with the preservation of heritage values of the property;

3. Exploring opportunities to provide Officers and Supervisors working in Mechanical, Engineering and other functional positions in the NMR’s management entities with training and professional learning opportunities, thereby deepening their awareness and knowledge of holistic heritage management and the values to be preserved.

4) Exploring the training opportunities for managers and staff of the IR to raise their awareness of holistic heritage values of the property including non-heritage staff,

Response of the State Party

Variety of training opportunities will be explored to the concerned staff of the Railways, primarily through their involvement in the process of heritage preservation to improve the general understanding of World Heritage management and associated requirements.

h) Ensuring that ongoing and future maintenance, repair, conservation or adaption for new uses of station buildings, architectural elements and associated structures is guided by specific conservation guidelines consistent with preservation of the attributes that justify the OUV of the property.

Response of the State Party

It is ensured that during maintenance, repair, conservation or adaption for new uses of station buildings, architectural elements and associated structures is guided by specific conservation guidelines to make them consistent with the preservation of heritage attributes justifying the OUV of the property.

i) Gathering baseline data by inventorying, recording and gathering historical plans and documents for all important elements and systematic inventorying of all moveable heritage associated with the Railways and their history and providing adequate display and storage conditions.
Response of the State Party

The baseline data required are available for monitoring and conservation for all important elements. Adequate display and storage condition available for preservation of Heritage items. The List of items to be preserved are available.

Nilgiri Mountain Railway Museum was opened at Mettupalayam on 10.10.15

The museum Preserves and promotes the heritage values of NMR

Heritage Museum was opened at Udhagamandalam on 15.06.18

The museum Preserves and promotes the heritage values of NMR
Coal Fired Steam Loco X37390 preserved and exhibited near Steam Loco Shed, Coonoor

Oil Fired Steam Loco X37386 with NMR Coach No SLR 91 preserved and exhibited near Steam Loco Shed, Coonoor

NMR Coach S44 preserved at Ketti Station
j) Promoting the three component sites and their respective history and values in order to contribute to the holistic understanding of the property.

Response of the State Party

In order to understand the history and value of NMR, the major milestones and important key incidents with photographs are being exhibited in the Museums at the terminal stations of NMR, viz. Mettupalayam and Udhagamandalam. Similarly, history and events connected to the Stations are being exhibited in the respective Stations for promotion of the sites and NMR.

Virtual Tour of important stations and other sites of NMR have been made available in Google Arts & Culture website for creating awareness about NMR.
Decision 8: Also reiterates its request to the State Party to submit to the World Heritage Centre a proposal to clarify the property’s boundaries and define a buffer zone for each of the three component railways, along with details of proposed policy and legal instruments to improve the protection and management of the property, in conformity with Paragraph 164 of the Operational Guidelines;

Response of the State Party

The line boundaries of the NMR component are already available. However, the definition of the buffer zone is to be decided after the consultation with other stakeholders, regarding adoption of boundary for NMR. The boundaries of NMR will be clarified along with the CCMP.

Decision 9: Finally requests the State Party to submit to the World Heritage Centre by 1 December 2022, a report on the state of conservation of the property and the implementation of the above, for examination by the World Heritage Committee at its 46th session in 2023.

Response of the State Party

Noted and the details requested is submitted in requested format as above.

3. Other current conservation issues identified by the state party which may have an impact on the property’s Outstanding Universal Value

Response of the State Party

In NMR there are no issues identified which may have an impact on the OUV of the property.

4. In conformity with paragraph 172 of the Operational Guidelines, describe any potential major restorations, alterations and/or new constructions intended within the property, the buffer zone and/or corridors or other areas, where such developments may affect the Outstanding Universal Value of the property, including authenticity and integrity.

Response of the State Party

There are no major restorations, alterations and/or new constructions intended which may affect the Outstanding Universal Value of the property, including authenticity and integrity.

5. Public access to the state of conservation report

Response of the State Party

The State of Conservation report of NMR may be shared for public access.

6. Signature of the Authority

Sr.DME/SA & Director/NMR
STATE OF CONSERVATION REPORT

MOUNTAIN RAILWAYS OF INDIA

State Party-India
Identification Number- C944ter

Name of the Heritage Party - Kalka Shimla Railway
1. Executive Summary of the report

The Kalka Shimla Railway (KSR) is to preserved as an outstanding example of Hill Railways. The old Rail link, across the mountain terrain of great beauty, is being maintained and kept operational. The conservation is being done to keep it, as much as possible, in original condition with its original features even to the extent of maintaining steam traction.

The Kalka Shimla Railway represents exceptional technical achievements in the development of the Himalayan Mountain because of its length altitude and the difficulty of the terrain through which it runs in difficult tropical climatic conditions. The Railway was designed under British colonial rule, as Shimla was the Government’s Summer Capital. The effectiveness of Rail Transport, which considerably reduced the difficulty of travel, was an essential factor in the social and cultural development. The Kalka Shimla Railway has seen its traction regularly upgraded, in a spirit of use in keeping with its origin, while its infrastructure has been maintained in very good condition by ongoing maintenance and repair work, which has been both exemplary and in line with the Railway’s authenticity.

The Kalka Shimla Railway is an outstanding example of how the access has been provided to the plain and plateaux of the Indian Mountains. It is emblematic of the technical and material efforts of the human societies of this period to disenclave mountain population through the railway. It is a well-maintained living line. It is used in a spirit and for purposes that are the same as those of its inception.

The property has been very satisfactorily maintained since its inception both with regard to the general state of infrastructure conservation and operation. The long continuity of maintenance and of uses for local passengers, tourism for more than one hundred years is a testament to the line’s authenticity.

Indian Railway is committed to preserve the Outstanding Universal Values (OUV) of Kalka Shimla Heritage Mountain Railway. It is further stated that there is no loss of OUVS of structure and or decorative components.
2. Response to the Decision of the World Heritage Committee

The World Heritage Committee having examined the document WHC/21/44.COM/7B at its 44th session held at Fuzhou (China)/Online meeting and based on Decision: 44 COM 7B.26 requested the State Party to submit the response for examination by the World Heritage Committee on its 46th session.

**Point No.3 Takes note that the State Party has provided an extensive state of conservation report on the Darjeeling Himalaya Railway (DHR) component of the property and requests the State Party to submit to the World Heritage Centre similarly detailed reports for the Nilgiri Railway (NR) and Kalka Shimla Railway (KSR) components:**

State of conservation report already submitted includes detailed executive summary and elaborative administrative conservation and management arrangement. Integrated Heritage Units specifically for KSR headed by Deputy Director/KSR and Heritage officer has already been established over KSR to minutely observe and monitor the activities over KSR.

The operation and maintenance requirement to keep it running and conserved, in terms of manpower, revenue expenses and assets, are provided for various departments through a well-defined organization structure under overall control of Ministry of Railway under Government of India.

**Organization Structure and Management of KSR:**

- **Chairman and Members Railway Board**
  - :
  - :
- **Secretary Railway Board**
  - :
  - :
- **ED/Heritage**
  - :
- **General Manager & Principal Head of Department Northern Railway New Delhi**
  - Heritage Officer Northern Railway
  - :
  - Divisional Railway Manager, Northern Railway/Ambala Division
  - :
- **Branch Officers of Various Departments/Ambala Division**
  - :
- **Heritage Officer/Ambala Division**
  - :
  - **Dr. Director/Heritage/KSR**
    - :
    - ADM/ADEN-SSSE-JE
    - :
    - Staff

**RAILWAY BOARD**

**NORTHERN RLY HQ**

**AMBALA DIVISION**

**KALKA SHIMLA RAILWAY (KSR)**
The management and organization that makes it possible is through Railway Board, Zonal Railway (Northern Railway) and Division (Ambala Division). This provides necessary planning, resources, budget and directions. The continued operation of this old Railway is only possible through necessary inputs for movable and immovable assets for maintenance, replacement and addition. For this, Railway provides various arrangements through Railway Board, Zonal Railway and Division for maintenance of the assets through the Works Programme, Rolling Stock Programme and necessary revenue inputs.

**Point No.4 Welcomes the State Party’s advice that the DHR and KSR components of the property retain their operational and functional integrity, that repair, reconstruction, restoration and maintenance works continue to facilitate steam train operations, which are critical to the property’s Outstanding Universal Value (OUV), that encroachment and waste dumping have been addressed, and that a conservation and management unit has been established for the property, and also requests the State Party to establish integrated heritage units with in-house heritage conservation expertise for each of the three component railways:**

Control of encroachment within the property and its buffer zone is being done. Written land records are available and maintained. The Senior Divisional Engineer of the section is entrusted with the power of estate officer assisted by Assistant Engineer and Senior Section Engineer of the section, who have been empowered by various railway acts for removal of encroachments and preventing unauthorized occupation. Encroachment is very much under control with no incident of encroachment reported.

By involving territorial authority, Municipal corporations and other Govt. departments of concerned area as well as schools, NGOs, Bharat Scouts and Guides, etc. Special cleanliness and plantation drives are launched regularly with their help to keep the area neat and clean as well as to maintain the ecology. All the NG carriages are already equipped with dustbins to throw the garbage and same is collected at terminal ends. Moreover, Rail users and passengers are also addressed through Public announcement system of stations, to not to throw garbage near the track and station area, use the dustbins for the purpose and help the Railway to keep heritage line neat and clean. This is a regular system adopted by the station staff of every halt station.

![Cleanliness drive underway near Barog Tunnel (No.33)](image-url)
Tree plantation carried out at Ghumman railway station

Integrated Heritage Units specifically for KSR headed by Deputy Director/KSR and Heritage officer has already been established over KSR to minutely observe and monitor the activities over KSR. The operation and maintenance requirement to keep it running and conserved, in terms of man power, revenue expenses and assets, are provided for various departments through an organization already explained above. At Divisional level, this is controlled acting under the charge of Divisional Railway Manager through various departments that are primarily as under:

<table>
<thead>
<tr>
<th>TECHNICAL</th>
<th>NON-TECHNICAL</th>
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<tbody>
<tr>
<td>a) Mechanical Engineering.</td>
<td>a) Operation and Commercial.</td>
</tr>
<tr>
<td>b) Civil Engineering.</td>
<td>b) Accounts.</td>
</tr>
<tr>
<td>c) Electrical Engineering.</td>
<td>c) Medical.</td>
</tr>
<tr>
<td>d) Signal &amp; Telecom Engineering.</td>
<td>d) Store.</td>
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<td></td>
<td>e) Personnel.</td>
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<td></td>
<td>f) Security.</td>
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</tbody>
</table>

These departments are each headed by Branch Officers, who report to Divisional Railway Manager and have necessary technical, trained and skilled personnel to take care of necessary requirements for operating and maintaining the KSR Hill Railway, conserving its authenticity.
The technical requirement with respect to movable and immovable assets is taken care of by the technically trained personnel from various departments. The Officers, Supervisors and workers are recruited, based on their technical qualifications. There is a provision to engage consultants and subject experts as per requirement for various works pertaining to KSR. Cartographic and geographic representation of KSR is under process and shall be prepared by expert agency.

It is worthwhile to mention that specific dedicated society named as Kalka Shimla Railway Society involving members of railways and civic society has been formed and registered under Societies Act with Himachal Pradesh state government with the objective promoting and conserving Kalka Shimla Railway.

**Point No.5** Also takes note of the progress made towards determination of the boundary and buffer zone and completion of the Comprehensive Conservation Maintenance Plan (CCMP) for the DHR component of the property and reiterates its request that, prior to formal adoption, this plan be submitted to the World Heritage Centre for review by the Advisory Bodies;

Noted please. Point pertains to DHR.

**Point No.6** Further requests the State Party to provide the World Heritage Centre with information about any restoration and proposed projects and their potential impact on the OUV of the property, including detailed information on Heritage Impact Assessments (HIAs), prepared in conformity with the 2011 ICOMOS Guidelines on HIAs for World Heritage cultural properties and in line with Paragraph 172 of the Operational Guidelines, for review by the Advisory Bodies;

Reactive monitoring mission has also found the operational and functional integrity of the KSR without major concern as well as the condition of the heritage attributes of OUV generally fair and good over KSR. It is further apprised that Railway, particularly Ambala Division, is very much concerned and aware about its responsibilities to maintain the Heritage KSR section and its outstanding universal values befitting to its status, hence there is no apprehension of deterioration in future, even the recent works of modernisation of Kalka and Shimla station were carried out after due consultation with College of Architecture keeping in line with Heritage status of both the stations. It is further stated that there is no loss of OUVs of structural and/or decorative components. All the key indicators viz bridges, tunnels, structure and Annexe buildings are preserved and well maintained. Railway is committed to preserve the OUVs of Kalka Shimla Heritage Mountain Railway

![Platform No.1 Shimla railway station](https://example.com/platform-1.jpg)
It is worthwhile to mention that Indian Railways is alive to the need to conserve the entire KSR system in its original glory and is committed to preserve the outstanding universal values (OUV) of Kalka- Shimla Heritage Mountain Railway. It is also corroborated from the Reactive Monitoring Mission Report that there is no threat or loss of OUVs of the Kalka Shimla Railway.

**Point No.7** Further takes note of the 2019 Reactive Monitoring mission's recommendations and requests furthermore the State Party to implement them, particularly by:

a) Establishing comprehensive, up-to-date Management Plans for the KSR and NR components.

The Conservation Management Plan for KSR has been established, however, in the report of the last Reactive Monitoring Mission it was pointed out that Management Plan for the KSR is out of date and needs to be updated. Accordingly, on the basis of the operational guidelines, manuals for maintenance of the property have been prepared, and up-to-date Comprehensive Conservation Management Plan (CCMP) is being prepared and will be implemented.

b) Completing the CCMP for DHR and preparing, adopting or revising as necessary, related management guidance documents.

Noted please. Point pertains to DHR.

c) Establishing an official decision-making and implementation mechanism for DHR, including consultation with stakeholders and participation of local organisations and community groups.

Noted please. Point pertains to DHR.

d) Investigating the legislative recognition of heritage values.

All service buildings, tunnels, bridges and signaling systems are maintained preserving the authenticity and integrity of the heritage structures so that the aesthetic and historic values are preserved and the Outstanding Universal values of the World Heritage property are not abridged.

The heritage values of the Site are being preserved, maintained & safeguarded by relevant laws as under:-

- The Railway Act 1989.
- Monuments & Archaeological Sites & Remains Act 1958,
- Water (Prevention & Control of Pollution Act 1974)
- Air (Prevention & Control of Pollution Act, 1981).

Most of the buffer zone is in forest covered areas and no major encroachments are reported in the KSR buffer zone. To address various issues concerning encroachment etc., the legislative measures in force are, Railway Act (1989) and the public premises (eviction of unauthorized occupant) Act 1971. Further, the Senior Divisional Engineer of the section is entrusted with the power of estate officer assisted by Assistant Engineer and Senior Section Engineer of the section, who have been empowered for removal of encroachments and preventing unauthorized occupation.
e) Sustaining mechanical and functional operation for all three component railways.

The Kalka Shimla Railway (KSR) is to preserved as an outstanding example of Hill Railways. With its 117 year old steam locomotive viz. KC520 still preserved and operational, the conservation is being done to keep the heritage railway line, as much as possible, in original condition with its original features. The property has been very satisfactorily maintained since its inception both with regard to the general state of infrastructure conservation and operation. The long continuity of maintenance and of uses for local passengers, tourism for more than one hundred years is a testament to the line’s authenticity.

There is system of scientifically recording the maintenance history of rolling stock being used in the Kalka Shimla Railway section. The vintage steam locomotive KC520 is being maintained in good running condition, displayed with proper history and technical details.

Age-old and original ‘Semaphore signaling system’ is still maintained and functional on the heritage Kalka Shimla Railway line. Documentation of maintenance procedures and history of components is properly recorded.
f) **Strengthening the national capacity of Indian Railways (IR) for the management of heritage-related components and aspects of the property in order to inform the decision-making process with professional heritage conservation expertise.**

The conservation management unit for KSR is active at all levels and all activities on KSR are being closely monitored by the Division, Head-Quarter and Railway Board through a well-defined and established channel of reporting.

**g) Exploring the training opportunities for managers and staff of the IR to raise their awareness of holistic heritage values of the property including non-heritage staff.**

The technical requirement with respect to movable and immovable assets is taken care of by the technically trained personnel from various departments. The Officers, Supervisors and workers are recruited, based on their technical qualifications. Proper training is imparted to the officials deputed for duty. Subsequently for Officers, the training institute for technical and management training are part of Indian Railways, such as The National Academy of Indian Railways (Railway Staff College) at Vadodra, Indian Railway Institute of Civil Engineering at Pune, Indian Railway Institute of Electrical Engineering at Nasik, Indian Railway Institute of Mechanical Engineering at Jamalpur, Indian Railway Institute of Signal & Telecom Engineering at Secunderabad. Supervisors & staff are trained in their respective Zonal training Institutes as well as various training schools and facilities available within Northern Railway, and deputed to institutes and schools of other railway zones for training as per requirement from time to time. In addition, all categories of employee are considered for training in other institutes of Private and Public sector in India and abroad. Training sessions and interaction with professional bodies such as INTACH have also been organized at Darjeeling and Pune which were attended by representatives of KSR.

**h) Ensuring that ongoing and future maintenance, repair, conservation or adaption for new uses of station buildings, architectural elements and associated structures is guided by specific conservation guidelines consistent with preservation of the attributes that justify the OUV of the property.**

Reactive monitoring mission has also found the operational and functional integrity of the KSR without major concern as well as the condition of the heritage attributes of OUV generally fair and good over KSR. It is further apprised that Railway, particularly Ambala Division, is very much concerned and aware about its responsibilities to maintain the Heritage KSR section and its outstanding universal values befitting to its status, hence there is no apprehension of deterioration in future.
It is reiterated that there is no loss of OUVs of structural and/or decorative components and that Indian Railways is alive to the need to conserve the entire KSR system in its original glory and is committed to preserve the outstanding universal values (OUV) of Kalka-Shimla Heritage Mountain Railway. All the key indicators viz bridges, tunnels, structure and Annexe buildings are preserved and well maintained. Railway is committed to preserve the OUVs of Kalka Shimla Heritage Mountain Railway.

i) Gathering baseline data by inventorying, recording and gathering historical plans and documents for all important elements and systematic inventorying of all moveable heritage associated with the Railways and their history and providing adequate display and storage conditions.

Efforts have been made to preserve original drawings and documents, which are more than hundred years old. Some of the traced out, hundred years old, drawings have been digitized and converted to digital format. A detailed inventory of all the tunnels, bridges and important architectural buildings has been prepared and proper technical monitoring is being done through well documented maintenance practices. All the structures, bridges and tunnels are duly documented by engineering department while filing application to UNESCO for heritage conferment.

All the artifacts, old record and books displayed have been displayed in the Baba Bhalku Rail Museum at Shimla. All these records have also been digitized. A dedicated website with history and all relevant details with specific links for tour planning and ticket booking, for promoting KSR and bringing people close to KSR has been launched viz. www.kalkashimlarailway.in. An e-catalogue in the form of book containing photos and detail of all the artifacts of the museum has been published and uploaded on the KSR website. All the digitized information has been securely preserved and will be made available to public on the information kiosks planned to be provided in the museum for the information of visitors.

Recently, a book titled Kalka Shimla Heritage Mountain Rail dedicated to KSR was released. This book documents present day KSR with photographs and is available for public through the souvenir kiosks at Kalka and Shimla.

Baba Bhalku Rail Museum at Shimla
j) Promoting the three component sites and their respective history and values in order to contribute to the holistic understanding of the property.

A dedicated website with history and all relevant details with specific links for tour planning and ticket booking, for promoting KSR and bringing people close to KSR has been launched viz. www.kalkashimlarailway.in.

Renowned authors, legal experts, retired and serving government officials and defense personnel, eminent scholars and other intellectuals and volunteers have joined the Kalka Shimla Railway Society for supporting and promoting the cause of conserving the Kalka Shimla railway.

This practice is creating awareness and promoting a sense of responsibility through regular social engagements, cleanliness drives and intellectual discussions and is giving good results. Heritage walks to various sections of Heritage Kalka Shimla Railway are carried out time to time involving retired defense personnel, legal fraternity, social organizations of that area to promote the heritage and to bring people close to KSR. Heritage walk path to the historic third end of uncompleted Barog tunnel has been earmarked on pathway to facilitate tourists and enthusiasts for exploration.
Similarly, train rides are booked for scholars, artist and school children to get them acquainted with the beauty of this section and enjoy toy train ride.

Heritage displays and Photo Exhibitions

The book titled Kalka Shimla Heritage Mountain Rail dedicated to KSR was released by Hon’ble Minister of State for Railways and Chief Minister of Haryana. This book documents present day
Recently, to commemorate the World Heritage Day, a bouquet of events was organised across the Heritage Kalka Shimla Railway at various stations and Baba Bhalku Rail Museum. The WHD celebration kicked off with a bicycle rally from Kalka railway station to Ghumman railway station with over a 100 participants. Display of Heritage photo exhibition was done at Kalka, Painting, quiz competitions and heritage walk were organised for school children. Free tour to Baba Bhalku Rail Museum was cherished by youngsters and Kalka Shimla Railway Society Annual meeting was held at Shimla where the members of the society interacted with the Design and Fabrication team of RCF Kapurthala working on the new coaches for KSR. Tree plantation drive was carried out and bikers rode from Kalka Railway station to Shimla Railway station to mark the day. Iconic blue lighting has been done on stations of KSR and Baba Bhalku Rail Museum for 3 days on the occasion. All these events were organised in association with Kalka Shimla Railway Society and were widely covered by press and electronic media.
Media coverage of activities over KSR

Point No.8 Also reiterates its request to the State Party to submit to the World Heritage Centre a proposal to clarify the property's boundaries and define a buffer zone for each of the three component railways, along with details of proposed policy and legal instruments to improve the protection and management of the property, in conformity with Paragraph 164 of the Operational Guidelines:

The boundaries and buffer zones of KSR have been defined under the Conservation Management Plan. Control of encroachment within the property and its buffer zone is being done. Written land records are available and maintained.

Section wise maps of KSR are available in .dwg format and the requisite information is available with Ambala Division.

Work for survey and preparing cartographic and geographic representation of KSR as per guidelines issued by UNESCO is under process and will be done by remote sensing and cartographic techniques through an experienced and qualified agency.

Point no.9 Finally requests the State Party to submit to the World Heritage Centre by 1 December 2022, a report on the state of conservation of the property and the implementation of the above, for examination by the World Heritage Committee at its 46th session in 2023.

The report is being submitted as per the format.
3. Other current conservation issues identified by the State[s] Party(ies) which may have an impact on the property's Outstanding Universal value

Already explained in para 2 above. It has been mentioned in the report that KSR property is well maintained without any major issue. However, it is clarified that vagaries of nature are never predictable. Railway has taken various measures for reinforcement of retaining walls to check the settlement on the tracks, construction of check dam at one arrival area for formation of Patrolling gang slash breakdown gang to curve search issues and keep the section operational. At present there is no conservation issue having an impact on the Outstanding Universal Value of property.

4. In conformity with Paragraph 172 of the of the operational Guidelines, describe any potential major restorations, alterations and/or new constructions intended within the property, the buffer zone(s) and/or corridors or other areas, where such developments may affect the Outstanding Universal Value of the property, including authenticity and integrity

Boundaries of the KSR property are well defined and ear-marked. There is no loss of OUV. Care is taken that alterations or new construction which could affect the OUV’s of the heritage property is not made on the Kalka Shimla Railway. All service buildings, tunnels, bridges and signaling systems are maintained preserving the authenticity and integrity of the heritage structures so that the aesthetic and historic values are preserved and the Outstanding Universal values of the World Heritage property are not abridged.
Most of the buffer zone is in forest covered areas and no major encroachments are reported in the KSR buffer zone. There is no potential major restoration, alteration and or new construction indented within the property the buffet zone and or corridor or other area which may affect the outstanding universal value of property.

5. Public access to the state of conservation report
State of Conservation Report may be uploaded.

*Dy. Director/Heritage/KSR*