

CHAPTER – IV

Preservation and Conservation Works

Preservation²⁷ and Conservation²⁸ of ancient Monuments is a multi-disciplinary activity which requires support of researchers, technicians, architects and historians.

The principles guiding the preservation and restoration of ancient buildings should be agreed and be laid down on an international basis, with each country being responsible for applying the plan within the framework of its own culture and traditions²⁹.

This calls for standards of planning and execution of preservation and conservation works. The ASI and the Ministry were found lacking in the areas of policy formulation, setting standards, monitoring and documentation of conservation works.

The conservation and restoration of monuments must have recourse to all the sciences and techniques which can contribute to the study and safeguarding of the architectural heritage³⁰.

4.1 Adequacy of Policy, Guidelines and Monitoring

4.1.1 Lack of Conservation Policy

The ASI did not have an updated and approved Conservation Policy to meet its requirements of preservation and conservation. There were no compiled instructions for the Circles. The ASI stated that it was following the conservation manual of Sir John Marshall, which was published in 1923. Besides, ASI was also following the Manual of Archaeological Survey of India, published in 1984, and Archaeological Works Code which were more than 30 year old.

In the absence of a comprehensive conservation policy, the performance evaluation of these agencies was found highly subjective. The process of revising the Manual and Works Code which had started in August 2011 did not yield any result till December 2012.

²⁷ Preservation: The activity of protecting a monument from loss or danger

²⁸ Conservation: The activity relating to maintenance of monument in its present shape

²⁹ International Charter for Conservation and Restoration of Monuments and Sites (the Venice Charter 1964)

³⁰ The International charters for conservation and restoration of ICOMOS

4.1.2 Ineffective Monitoring by the ASI HQ

As pointed out earlier, the Circle offices were responsible for carrying out the works for preservation and conservation of the monuments. As per the ASI Works Code, the Superintending Archaeologist of the Circle was responsible for reporting any irregularity during the execution of the work and for maintenance of the documents. The DG ASI was overall responsible for monitoring the performance of the Circle in-charge.

We noted the following irregularities in carrying out conservation works:

- ✓ No mandatory requirements for inspection by Superintending Archaeologist were prescribed;
- ✓ Non preparation of inspection notes after site inspection,
- ✓ Absence of complete documentation of the works estimates,
- ✓ Faulty budgeting of the conservation works resulting in inclusion of extra items,
- ✓ Delays in completion of works and
- ✓ Non preparation of completion reports along with photographs after conservation.

4.1.3 Status of Monuments as per Joint Physical Inspection

We carried out joint physical inspections of 1655 (45 *per cent*) monuments along with the staff members of the Sub Circle offices of the concerned monument. The inspection revealed many conservation issues and concerns, some of them were as follows:-

- ✓ In 63 monuments plaster were coming off.
- ✓ In 78 monuments vegetation was not properly cleaned by the Sub Circle offices.
- ✓ In 33 monuments, walls of the monument had developed big cracks requiring immediate repairs.
- ✓ 64 monuments were in need of urgent chemical treatment/cleaning. These included monuments like temples at Hampi in Bengaluru Circle, temple of Lakshmi Narayan in Aurangabad Circle, Bidar Fort in Dharwad Circle and Jantar Mantar in Delhi Circle.
- ✓ As per the accepted conservation principles, the ASI prohibited the use of cement on the monuments. Even the John Marshall's conservation manual instructed the same. However in 64 monuments, cement was used on the

main structure of the monument. These included the Taj Mahal, Fatehpur Sikri and Jhansi Fort in Agra Circle; Gulara Mahal in Bhopal Circle and Baijnath Temple in Dehradun Circle.

- ✓ In 63 monuments, seepage was noticed.
- ✓ In 33 monuments either the design/structure of the monument was changed or decoration was obliterated.
- ✓ In three monuments modern tiles were used on the monuments which changed the original appearance of the monuments.
- ✓ In 40 monuments, some part of the wall or the domes of the monument was broken since long. However, no action was taken by the ASI to repair these.
- ✓ In 16 monuments, original stones and tiles were missing from the monument.
- ✓ In 12 monuments garbage/*malba* was lying in the monument.
- ✓ There were three monuments where the roof of the monument was found damaged and big cracks were noticed. For e.g., vaulted roof of upper and lower basement in the Vice Regal Lodge in Shimla Circle.

The cases highlighted above indicated the need for the ASI to implement the Conservation Policy in conformity with the laid down provisions.

4.2 Conservation Documentation

4.2.1 Maintenance of Log Books of Conservation Works

“The recording of the cultural heritage is essential to permit informed management and control of construction works and of all changes to the cultural heritage and to ensure that the maintenance and conservation of the heritage is sensitive to its physical form, its materials, construction, and its historical and cultural significance³¹.

For the appropriate conservation to take place at a site, it was essential to have adequate information on earlier conservation efforts including details of material used, changes made, architectural drawings etc. We noticed that earlier the ASI maintained Log Book for each monument which had all the information in respect of the works carried out at the monument. However, we found that this practice was not being followed any more.

³¹ Principles for the recording of Monuments, Groups of Buildings and Sites (1996) ratified by the 11th ICOMOS General Assembly in Sofia, October 1996.

There were three separate branches of the ASI viz. the Circle (structural conservation), Horticulture (environmental) and Science (chemical cleaning and treatment) to take care of various aspects of conservation. Due to lack of coordination between these Branches and abysmal state of monitoring by ASI HQ, details of expenditure incurred and conservation efforts made on a particular monument were not available in a comprehensive manner.

Incidence of poor documentation was also evident in the Horticulture Branch where we found that the Directorate of Horticulture did not have adequate information in respect of the total number of gardens and original heritage gardens. The Directorate of Horticulture intimated that the total number of gardens was 504 whereas the combined figure from its four divisions stood at 525. Similarly as per the Directorate office, total number of gardens with original designs was 60. However, the figures did not tally with the response of their own divisional offices.

In the absence of any authentic documentation, it was difficult to fix responsibility for a damaged portion, incomplete work of repair etc. For example, the use of cement was prohibited in the protected monuments. We found many cases where cement had been used. However, in the absence of documentation, it was difficult to fix responsibility or determine any details of the irregularity.

We found that in 1984, the Mirdha Committee had also emphasised the need for such documentation by stating that maintenance of the Log Book of the monument with complete details of the work carried out should be properly recorded for future references. However no action was taken by the ASI on this recommendation of the Mirdha Committee.

4.2.2 Maintenance of Work Related Records

The Archaeological Work Code prescribed maintenance of the following records for the documentation of any conservation work undertaken at a monument:

1. Cash book (form TR 4)
2. Measurement book (form CPWD -92)
3. Tenders and contract documents like contractor's ledger, tender sale and opening register, agreement and security deposit register
4. Estimates including register of deposit works and sanctioned estimates
5. Other works records like registers of tools and plants, unpaid wages and cement stock register etc

In addition, documentation of the details of labour in the form of labour registers, daily labour report etc. were also required to be maintained.

We observed that many Circles viz Delhi, Agra, Lucknow and Bhubaneswar did not maintain the register of works and thus year wise details and item-wise expenditure incurred on various conservation works could not be ascertained.

Recommendation 4.1: *The Ministry should develop a Comprehensive Conservation Policy and update its Manuals and Works Code. The ASI should make it mandatory to maintain log books for each protected monument with detailed documentation of all conservation efforts.*

Recommendation 4.2: *Maintenance of work related documents should be a responsibility of the head of the Circle/Division, which should be monitored regularly by the ASI HQ on test check basis.*

The Ministry (May 2013) accepted the recommendation and intimated that necessary instructions were being issued.

4.3 Irregularities in Planning of Conservation Works

Table 4.1 Irregularities in planning of conservation works

Sl. No.	Irregularity	Details
1.	Criteria for selection of Monuments for conservation	<ul style="list-style-type: none"> ASI was not following the procedure prescribed in John Marshall Manual of Conservation. There was no system of assigning priorities across various works in Circles/Branches. Works were taken up mostly in ad-hoc manner as per the subjective assessment of the officials.
2.	Monuments without special repair work/annual maintenance work	<ul style="list-style-type: none"> No prescribed criteria for planning and prioritisation of monuments taken up for conservation works. ASI HQ could not provide monument wise information of special repairs and annual repair works. In 765 monuments, no special repairs were taken up and in 691 monuments no annual conservation work was carried during the period of audit.

3.	Delay in submission of Revised Conservation Program (RCP)	<ul style="list-style-type: none"> • There was a delay of upto 69 days in submission of RCPs by the Circles/Branches to DG ASI which was required to be submitted by February of the year for the works which were to be carried out in the next financial year. • This delay in the first step of the conservation works had a cascading effect and led to further delays at all the succeeding stages.
4.	Scrutiny of RCP at ASI HQ	<ul style="list-style-type: none"> • ASI, HQ was not receiving the expenditure statements from all the Circles/Branches regularly. • There was no scrutiny of the expenditure statements that were actually received. • For Example, Special repairs of Hauz Khas Complex in Delhi Circle reflected the estimated expenditure as ₹ 14.63 lakh in RCP of 2010-11 and further requirement for 2010-11 and 2011-12 was ₹ 83.81 lakh and ₹ 10.00 lakh respectively.
5.	Works approved but not carried out	<ul style="list-style-type: none"> • In five Circles³², 103 works worth ₹ 5.37 crore approved by DG, ASI were not taken up during the year. • No reasons were found on record for not taking up the works approved by DG ASI.
6.	Estimates without assessment	<ul style="list-style-type: none"> • Approved budget and expenditure incurred on the works did not tally in Delhi, Srinagar and Jaipur Circles. • Difference in the approved budget and expenditure ranged up to 266 per cent. • DG, ASI did not ascertain the reasons

³² Shimla, Ranchi, Goa, Guwahati and Delhi

		for the substantial variation between approved budget and actual expenditure.
7.	Works carried out without inclusion in RCP	<ul style="list-style-type: none"> 30 works of ₹ 4.54 crore and 8 works of ₹ 23.29 lakh in Delhi and Goa Circle respectively were carried out without inclusion in RCP. These works were not planned while preparing the annual conservation programme.
8.	Inclusion of non plan items in plan budget heads	<ul style="list-style-type: none"> In four Circles³³, the RCP submitted for special repair works for ₹ 10.37 crore included works of recurring nature which should have been included in the list of annual repairs such as clearance of vegetation, grill fencing, works on pathways etc. Expenditure on maintenance of the gardens related to the World Heritage Sites and the ticketed monuments was wrongly booked under the plan heads. In Science Branch, during 2007-08, an amount of ₹ 17.97 lakh was incurred on the items such as purchase of laboratory equipment, running of science lab, annual maintenance contract of the equipment etc. by divisional/zonal offices.
9.	Inclusion of plan items in non plan budget heads	<ul style="list-style-type: none"> Conservation work of Flag Staff Tower in the Delhi Circle was carried out during 2011-12 at a cost of ₹ 7.04 lakh. The items of work included dismantling of old decayed plaster, carrying out thick lime plaster on monument and laying of thick concrete on terrace. It is worth mentioning that special repair works needed approval of Director General whereas the annual repair works were approved only by SA of the Circle.

³³ Delhi, Bhopal, Ranchi and Srinagar

10.	Office expenditure through conservation budget heads	<ul style="list-style-type: none"> In the 176 Sub Circle offices, expenditure on purchase of computers, printers and cartridges, water coolers, travelling etc. was met from the budget head of Minor Works (Non Plan) which was specifically meant for the conservation and preservation of monuments as no budget was provided to these Sub Circle offices under the head office expenses.
11.	Incomplete Works	<ul style="list-style-type: none"> Cases were noticed where the special repair works were left incomplete like the conservation work of Vittala temple in Bengaluru Circle, started in 1999-2000 left in midway.
12.	Unauthorised expenditure on unprotected monuments	<ul style="list-style-type: none"> several cases were noticed where Circles were incurring expenditure on the monuments which were not protected under AMASR Act. Delhi Circle incurred ₹ 18.67 lakh on Jama Masjid, an unprotected monument. Dehradun Circle incurred expenditure on unprotected temples. Ranchi Circle incurred ₹ 2.30 lakh in 2008-09 on repair of Kolhan Rest House which belongs to Government of Jharkhand. Similarly Hyderabad, Bengaluru and Trissur Circles incurred expenditure on monuments which did not fall under centrally protected monuments.



Pillar lying in the mandapa at Hampi World Heritage Site, Karnataka



Stones lying scattered inside the monument at Ananthashayana Temple, Hampi, Karnataka

The Mirdha committee strongly recommended that important monuments should be identified for thorough conservation including environmental conservation on an integrated development basis. For this purpose, it was necessary that inter-disciplinary teams should be asked to study all the problems at the monuments and lay down guidelines for their conservation. Only then, all the needs of the monuments in respect of their structural stability, chemical preservation of paintings/sculptures, development of environments, landscaping etc. be fully met.

Recommendation 4.3: *There should be standards for the prioritisation of special repair and maintenance of every protected monument. This should form part of the Comprehensive Conservation Policy.*

Recommendation 4.4: *The scrutiny at the DG ASI's office on the estimates received from various Circles needs improvement. Detailed guidelines should be developed in this regard.*

The Ministry (May 2013) accepted the recommendation and intimated that the draft conservation policy will be modified accordingly.

4.4 Improper Conservation Works

A few neglected monuments requiring immediate conservation works are discussed below:

1. Saraswathi Temple, Singanathanahalli, Bengaluru Circle

This temple was situated in a remote area and had no proper access road. It was in dilapidated condition and was badly in need of conservation and proper access.



Dilapidated condition of the Saraswathi Temple, Bengaluru Circle

2. Krishna complex, Hampi, Bengaluru Circle

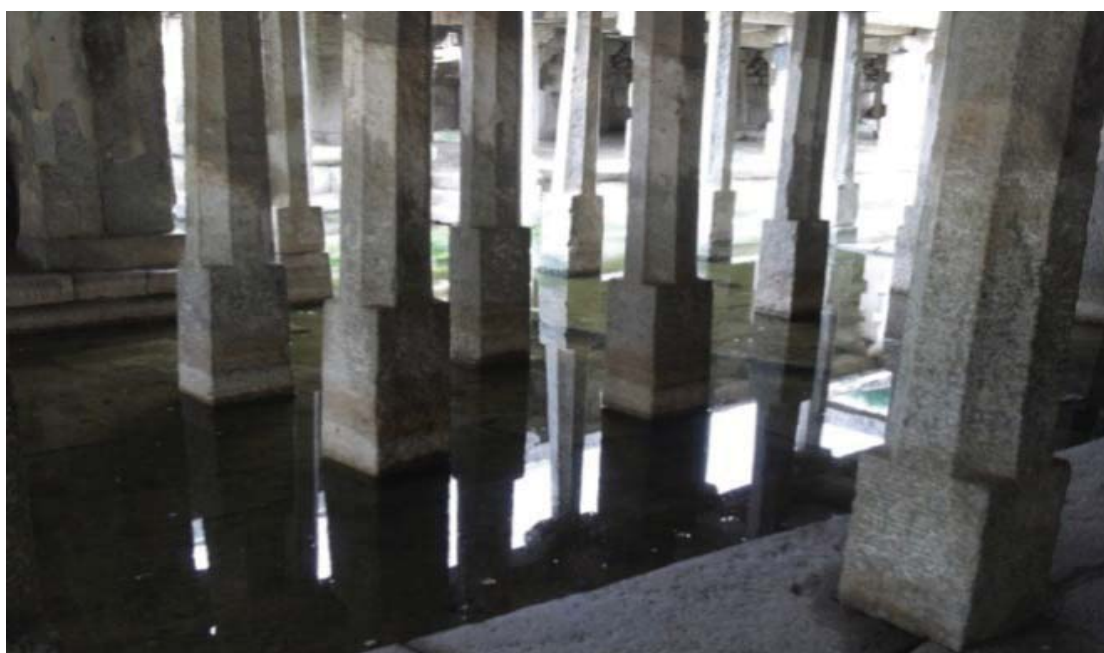
The Mahadwara (main entrance) and stone wall of the temple had developed cracks and needed immediate attention along with other structures inside the complex. The bazaar mantapa in front of the Krishna complex also required conservation.



Cracks in Krishna Temple, Hampi, Bengaluru Circle

3. Underground Shiva Temple, Hampi, Bengaluru Circle

Water logging was noticed at the underground Shiva Temple at Hampi as water from the adjoining fields had entered the temple. Thus, visitors were unable to access the temple.



Water logging in Shiva Temple, Hampi, Bengaluru Circle

4. Fort at Vatakaottai, Chennai Circle

In the Vatakkottai in Kanyakumari, in the Chennai Circle, out of the four simple pillared mandapas, one of the mandapas was closed by constructing walls and a door. ASI had been using it as a store house, completely altering its original look.



Mandapa's original look and after conversion to store house

5. Fatehpur Sikri, Agra Circle

Agra Circle incurred an expenditure of ₹ 7.45 lakh up to 2005-06 on account of conservation of a Mint House at Fatehpur Sikri against the sanctioned cost of ₹ 15.72 lakh. Conservation work was not carried out in accordance with the norms. The work was declared substandard and was stopped midway following declaration of unsatisfactory work by Assistant Superintending Archaeological Engineer of the Circle. No rectificatory action had been taken since then.





Mint House, Fatehpur sikri, Agra

6. Sangagiri Fort, Chennai Circle

The reconstruction work of Bastion/Fort wall and reconstruction of revetment wall at Sangagiri Fort, Chinnakavaudanur, Salem Sub- Circle was taken up during the years 2006-10. The total expenditure incurred for the two items of works was ₹ 13.61 lakh. Joint physical inspection revealed that both the Bastion/Fort wall and the revetments wall of the temple tank were in a damaged condition even after execution of the work.



Chinnakavandanur, Sangagiri – Fort bastion in a damaged condition



Chinnakavandanur, Sangagiri - Damaged side wall of the lower tank

7. Krishna Temple in a part of Donka with Gopuram, Kalyanamandapam and Masonry built Tank, Kalyanamandapa at Hyderabad Circle

Visible signs of shrinkage and tilting of the Kalyanamandapa was reported by the ASI as early as 1977, suggesting complete repair and conservation. The work of dismantling (sanctioned in 2003-04 for ₹ 60.00 lakh) was completed in March 2006. The DG, ASI accorded (July 2006) sanction for reconstruction of the mandapa with an estimate of ₹ 3.48 crore. The foundation work scheduled for completion by July 2006, was actually completed in August 2009. Subsequently the work was executed departmentally and an expenditure of ₹ 3.55 crore had been incurred as of March 2012.

Thus, lack of proper planning, change in foundation design led to huge increase in the cost of reconstruction and delay in completion of the work.



Before dismantling



After dismantling



During reconstruction

8. Baisgazi Wall, Malda, Kolkata Circle

The wall had recesses at regular intervals prior to the conservation work. However, the ASI left no such recess in the inner wall, while restoring the northern part of the wall. But recesses were made while restoring the western side of the wall. Thus the conservation work changed the original appearance of the monument.



Original recess in the wall



No recess in the reconstructed wall



Recess in certain portion of the reconstructed wall

9. Jor Bunglow, Bishnupur, Kolkata Circle

The entire four side wall was built with ornamental bricks whereas the patch work as visible was completed with the plain bricks marring the appearance of the monument.



Patch work carried out at Jor Bunglow, Bishnupur, Kolkata Circle

10. Yellow Mosque, Murshidabad, Kolkata Circle

The name Yellow Mosque was derived from its colour; however, the improper conservation carried out by the ASI, completely changed its original appearance. We found that the mosque now had been painted white.



Old view



Current view

11. Ancient Palace of Raja Suchet Singh, Srinagar Circle

The arcaded verandah of the right side of the ancient palace of Raja Suchet Singh in Ramnagar was converted into a lounge with bathrooms and kitchen and a portion was used as office.

12. Great Stupa at Amaravati, Hyderabad Circle

The great stupa or *Mahachaitya* at Amaravati was considered to be one of the biggest Buddhist stupas in India. During the excavation, brick built circular *vedika* or drum with projecting rectangular *Ayaka* platforms in four cardinal were excavated. We noted that the ASI built (2006) an additional circular Vedika or drum with bricks on the existing Vedika. This altered the original identity of the excavated site.



General view of Mahastupa without drum wall



General view of Mahastupa with additional drum wall

13. St. Angelo Fort, Trissur Circle

During the conservation work carried out in 2000-01, the horse stable originally made of lateritic roof in triangular shape was changed to cylindrical shape roof using cement concrete. The conventional air holes were replaced and its original shape and appearance was drastically changed. This was done despite the prohibition on use of cement concrete on the monuments.

14. Tripolia Gate, Delhi Circle

The work order for special repair work of Tripolia Gate was awarded to M/s AIC Building Solutions Ltd. in July 2010 for ₹ 21.97 lakh with the completion date of 8 November 2010.

In November 2011 during a site inspection, Deputy Superintending Archeological Engineer observed that the plaster work executed by the contractor did not match with the original plaster as the original had various block, moulded and ornamental designs besides floral motif above the arches of Gate. The contractor executed plain plaster work instead of the ornamental designs thus defeating the basic purpose of conservation and restoration. However, the ASI made the payment of ₹ 8.17 lakh. The Circle informed the contractor that the work executed by him had altered the very character of the monument and destroyed the aesthetic view of the monument, which would be difficult to restore at this stage. The Circle asked the contractor to complete the work as per the terms of the Work Order followed by verification by the Deputy Superintending Archeologist. This work had not been corrected till the completion of audit. Thus lack of monitoring by the Circle resulted in improper conservation work by the contractor. The work had not been completed even after a delay of more than 32 months.



Tripolia Gate before conservation



Tripolia Gate after conservation (missing designs)

4.5 Preservation and Conservation Works by External Agencies

Conservation is a specialised technical work. Except Delhi Circle, all other Circles of the ASI carried out conservation and preservation work departmentally. No provision was found either in the ASI Works Code or the ASI Manual for executing conservation work through external agencies in the centrally protected monuments. The Works Code however allowed the ASI to receive funding for conservation work from the external organisations. However, in recent years some external agencies like INTACH, Aga Khan Trust etc. were given monuments for conservation and preservation works. Delhi Circle was getting all its works executed through external contractors.

4.5.1 Monitoring of External Agencies

The ASI had no guidelines regarding engagement of agencies to carry out the conservation works. No laid down criteria regarding the qualification and minimum experience in the related field were fixed by the ASI. In the absence of any laid down criteria, the selection of the agency was done on case to case basis. The following instances with regard to lack of monitoring of the works carried out by external agencies were noticed.

- (i) The ASI entered into an agreement with Aga Khan Trust through NCF in April 1999 for the conservation, research documentation, reinstating of water systems and illumination apart from restoration of gardens of Humayun's Tomb, Delhi Circle. Aga Khan Trust for Culture (AKTC) entered into another MoU in July 2007 with the ASI for the conservation of the protected monuments within the Humayun's Tomb complex. The AKTC was to arrange

for the funding through domestic or International donors with no financial obligations on the ASI. The Sub Circle incharge of Humayun's Tomb intimated (January 2013) that he was not aware of terms and conditions of the agreement or the time schedule of the work being carried out by AKTC and thus had no monitoring role. This highlights how the ASI has given up its responsibilities as per the MoU.

- (ii) The conservation work of five monuments in Lodhi garden complex at Delhi Circle was carried out by Indian National Trust for Art and Cultural Heritage (INTACH) in 2006. The work was given to INTACH as the ASI found itself overburdened with the works associated with the Commonwealth Games 2010. No formal agreement was signed with INTACH and no work order was issued to the firm. The Delhi Circle was to supervise the work. However, it was noticed only in October 2009 that INTACH had carried out faulty and inferior quality of conservation work. An expert committee appointed by the DG, ASI in July 2011 reviewed the work and found the work to be of poor quality and unacceptable. The Committee mentioned that there was poor workmanship, use of inferior material, poor supervision and management of the work. The Committee also doubted whether the work 'repairs to the flat roof' was actually executed as mentioned in the utilisation certification. No corrective action was taken by the INTACH till November 2012 and the ASI also took no action for blacklisting the agency or imposing penalty.
- (iii) We also noticed that the ASI entered into an MoU in November 2009 with Global Vaish Organisation for the maintenance of the 'Ugrasen ki baoli' a Centrally protected monument of national importance of Delhi Circle.

Case Study 4 : Ugrasen Ki Baoli



The ASI signed an MoU in 2009 with Global Vaish Organisation (GVO) for the maintenance of Ugrasen Ki Baoli, Delhi. The MoU was not legally vetted by Ministry of Law and Justice. We found that the proposal for MoU was originally from Delhi Pradeshik Agarwal Sammelan (DPAS) but the MoU was finally entered into with GVO. No reasons were found recorded for this change.

The initial proposal was submitted under the National Culture Fund (NCF) scheme, yet the NCF was not made a party while entering into the agreement. Permission of the Ministry was not sought at any stage.



Non maintenance of the monument by the GVO

As per the MoU, Project Implementation Committee (PIC) was to be constituted to define the scope of work, set the target date and time schedule etc. The PIC was not constituted till 2012.

No details were available in respect of the contributions given by GVO to the ASI for the monument as defined in the MoU.

GVO was to print and distribute books, periodicals, leaflets, brochures etc, however, no such work was carried out. GVO was not authorised to use the monument for any meeting, worship or religious activities. We noticed cases where meetings were held in the monument and no action was taken by the ASI. Without any assessment of GVO's performance, the MoU was renewed for five more years in January 2011.



Monument in use as residence
by the chowkidar



Porta Cabin erected by GVO

During the joint Physical inspection we found that GVO was running an office in the premises from the porta cabin erected to stock the literature, stationery, computers etc. The chowkidar was residing in the monument permanently. The monument was in a bad condition and there was no water in the *Baoli* any longer.

Thus, ASI had not laid down any procedure for appointing, regulating or monitoring the work of external agencies deployed for the preservation and conservation of centrally protected monuments.

4.5.2 Unauthorised Conservation Works by External Organisations

We found several cases where organisations other than the ASI carried out conservation works on monuments or its parts without the ASI's approval. A few cases are given below:

Table 4.2 Works carried out by other agencies

Sl. No.	Name of monument	Nature of work done	Work Executing Organisation	Expenditure incurred	Remarks
1.	Summer palace of Maharaja Ranjit Singh, Amritsar	Restoration works	Punjab Heritage and Tourism promotion Board	₹ 2.17 crore	No permission given by ASI
2.	Lakes of Kirat Sagar and Vijay Sagar and Tank at Barua Sagar, Jhansi	Conservation works	Uttar Pradesh State Government	--	State Government Authorities unauthorisidely developed a picnic spot and utilised the water for irrigation and drinking purposes
3.	Jama Masjid, Imambara of Amin-ud-daula, Lucknow Circle	Wood and Glass work, Electrification and wooden frame work	Hussainabad Trust, Uttar Pradesh	--	Works undertaken to give a modern look to the monuments

In all the above cases, the ASI took no cognizance of the unauthorised conservation activities carried out on the centrally protected monuments by other agencies.

4.6 Registration of Contractors

As per para 3 of the Manual of the ASI, the registration of contractors in the ASI would be done at the Circle/Branch office, if they intended to operate within the jurisdiction of a particular Circle/Branch. In case, if any particular contractor/firm intended to operate in more than one Circle or Branches their names would have to be registered with the DG, ASI. A half yearly statement giving details of registered contractors was to be submitted to the DG, ASI.

The ASI, HQ intimated that they were not registering any contractor though there were contractors working for more than one circle office. The ASI, HQ was also not receiving the half yearly reports in respect of the contractors registered with the Circles as required in the Manual of the ASI from any of the 24 circles.

The registration of the contractors in the Delhi Circle was carried out without verifying the credentials of the contractors.

4.6.1 Non-recovery of Worker Cess from Contractors

As per the Delhi Building and Other Construction Workers (Regulation of Employment and Conditions of Services) Rules 2002, cess at the rate of one *per cent* of the cost of construction is to be collected and remitted to the Delhi Building and Other Construction Workers Welfare Board after deducting the cost of collection of cess. Delhi Circle carried out the conservation and maintenance works through the contractors; however cess was neither collected nor remitted to the Board. The total expenditure incurred on conservation of ancient monuments during 2007-12 was ₹ 64.64 crore. In response to the correspondence emanated from Deputy Labour Commissioner, Labour Department, Government of NCT Delhi, the Delhi Circle replied (November 2012) that they were not aware of the provision regarding deduction of the workers welfare cess. Given that all the works had now been completed, it would be difficult to recover the cess.

4.7 Conservation Works carried out through National Culture Fund

One of the most important objectives of the National Culture Fund (NCF) was to administer and utilise its funds for the conservation, maintenance, promotion, protection, preservation and upgradation of monuments protected or otherwise.

The ASI supplied two lists of selected 36 and 100 centrally protected monuments in 2000 and 2007 respectively for which funding from donors was requested through the NCF. **NCF was required to select monuments from the list supplied by the ASI.** We noted that there was no priority defined amongst these selected monuments. We also noticed that monuments other than those listed in the two lists were also selected by the NCF for donor projects. e.g. Jantar Mantar, Delhi and the Taj Mahal, Agra. There were no recorded reasons for selecting monuments outside the lists given by the ASI.

It was also noticed that the NCF failed to arrange donors for some of the most important monuments like the Red Fort, Delhi, Agra Fort, Safdarjung Tomb, Ranthambore Fort etc. No documentary evidence was found on record showing the efforts carried out by the NCF to promote these monuments amongst public and private organisations to seek potential donors for the conservation of these monuments. Meetings with prospective donors were not recorded and there were no systematic plans to cover all listed monuments (as suggested by the ASI) over a defined period of time.

Since 1999, the NCF signed 19 MoUs with public and private sector organisations. We found these MoUs not well drafted and cases were noticed where the timeline

for completion of projects was not even mentioned in the MoUs. There was no legal vetting of these MoUs by the Ministry of Law and Justice.

The Ministry (May 2013) intimated that templates for MoUs had been prepared and were being finalised in consultation with Ministry of Law.

Complete details of the item wise expenditure on each project were not being maintained in the NCF. In the absence of this information, we could not ensure that the expenditure incurred on any project was actually for the purpose for which MoU was signed or for the administrative expenses/consultation services only. There was no documentation to provide such assurance even to the donors.

The Ministry (May 2013) intimated that details of scope of work, budget and time line are being included in the MoU for monitoring the progress.

We noticed that out of the 19 projects taken up for the conservation of centrally protected monuments, only two had been completed till November 2012 despite availability of funds with NCF. The details of the projects along with our comments are placed at **Annex 4.1**.

Recommendation 4.5: *To be effective, the ASI needs to prioritise its projects requiring funding through NCF. For this, a comprehensive assessment of funds needs to be carried out in advance.*

4.8 Role of the ASI in the Maintenance of Living Monuments

As per para 26 of John Marshall's Manual of Conservation, living monuments are monuments which were in use at the time of notification. These included temples, mosques etc. As per section 6 of the AMASR Act 1958, the Central Government may enter into an agreement with the owner of the monument for its maintenance and custody and may restrict the owner from destroying, removing, altering or defacing the monument or to build on or near the site of the monument. However, we found that the ASI failed to enter into formal agreement with owners of all of such living monuments.

As the owners were in the actual possession of the monument, they carried out repair and maintenance of the monument as per their understanding and requirement without always considering the historical and artistic value of the monument. In many cases this destroyed the aesthetic value and original look of the monument. The ASI was not able to exercise full authority over these monuments and was unable to stop these activities. In a number of living religious sites like temples, gompas and mosques, it was noticed that alterations had been made by the management without any approval from the ASI. The ASI on its part had no guidelines on the changes that could be allowed considering these were living buildings with evolving needs for extension etc. The present rules placed a ban on any sort of additions/alterations that was practically un-implementable.

Instances were noticed where the trusts/private persons managed these monuments and carried out works in the nature of painting of walls by modern enamel paints, fixing of ceramic tiles and electrical equipments etc. altering the aesthetic value of the monument. Some examples were the mosque in Qutb Minar, the ancient mosque in Palam in Delhi Circle, Shey monasteries, Hemis monasteries in Leh Mini Circle, Bara Imambara and Chhota Imambara in Lucknow Circle and the Churches in Goa Circles.

Recommendation 4.6: *There should be detailed guidelines on management of 'living' monuments.*

Recommendation 4.7: *Documentation on 'non living' monuments should be properly maintained to curb instances of unauthorised possession and use.*

The Ministry (May 2013) accepted the recommendation and intimated that necessary guidelines in this regard are being incorporated in the draft conservation policy.

4.9 Environmental Conservation

The architectural composition of the historic garden included:

- Its plan and its topography
- Its vegetation, including its species, proportions, colour schemes, spacing and respective heights
- Its structural and decoration features
- Its water, running or still, reflecting the sky

Continuous maintenance of historic gardens is of paramount importance. The preservation of the garden in an unchanged condition requires both prompt replacements and a long-term programme of periodic renewal (clear felling and replanting with mature specimens)³⁴.

The Manual of the ASI stated that till Independence, the horticulture works at centrally protected monuments were looked after mainly by the Central Public Works Department. However, to carry out the works strictly in accordance with the archaeological principles, a separate garden branch was extended in 1952-53. The 'horticulture works' in the ASI included all topographical areas, landscapes, historical parks and gardens, setting up of new gardens, maintenance and renovation of existing gardens, which are of archaeological, historical or aesthetic values. It included supply, repairs, acquisition and transport of machinery, tools, livestock and other ancillary items essential for the execution of such works.

³⁴ ICOMOS -The Florence Charter 1981

The main functions of the horticulture branch of the ASI were designing, laying out, renewal and maintenance of gardens and enclosing the areas proposed for development besides providing effective entrances and exit etc.

The ASI's Directorate of Horticulture was in Agra and there were four Horticulture Divisions which had different states under their jurisdiction, each maintaining a large number of gardens. The details are as follows:

Table 4.3 Details of divisions of Horticulture Branch

Division	Location of the Division	Total number of gardens	States covered by the Division
I.	Agra	81	Uttar Pradesh, Madhya Pradesh, Uttarakhand and Maharashtra
II.	Delhi	186	Delhi, Rajasthan, Himachal Pradesh, Punjab, Gujarat, Haryana, Daman and Diu and Jammu & Kashmir
III.	Mysore	126	Andhra Pradesh, Goa, Karnataka, Kerala and Tamil Nadu
IV.	Bhubaneswar	132	Odisha, West Bengal, Bihar, Chhattisgarh, Assam, Sikkim, Tripura and Manipur

We noticed that with the available manpower it was very difficult for the Horticulture Divisions to maintain the gardens and have regular inspection of the works being carried out on these gardens as the area to be covered was vast. The Agra Division was headed by Chief Horticulturist of the rank of Superintending Archeologist but the other three Divisions were headed by Deputy Superintending Horticulturists (DSH). Thus, one DSH was responsible for gardens spread over upto eight states. It was practically impossible for a single officer to monitor all the gardens spread over such a large area.

One particular incongruity noticed by us was that of the garden-in-charge in Hyderabad who had been made in charge of the Buddhist remains of Sankaram, in Vishakhapatnam, which was approximately 592 kms away. Similarly the DSH of Division II was responsible for all gardens from Jammu & Kashmir to Daman & Diu. As a result, monitoring was ineffective, in most of the gardens. The gardens were either not maintained at all or were left to gardeners/labourers without any supervision.

4.9.1 Documentation of the Heritage Gardens

Gardens were part of some of the protected monuments as per their original design. As an integral part of the monuments, these heritage gardens helped us to understand and interpret monuments in proper context. The Horticulture Branch was responsible for the maintenance of such heritage gardens according to the style,

age and temperament of the concerned monument and used period specific flora to retain the original character of the site.

We noted that the divisions were not consulted by the Circle offices to obtain information about monuments sites which included gardens according to the original designs. As a result the division failed to segregate the heritage gardens from other gardens around the protected monuments.

There was no information available with the Horticulture Branch on the original structure, flora and fauna and other decorative features of the historic gardens. There were many gardens around Mughal monuments whose layout and other features were reasonably well documented. However, we did not notice any such garden being maintained with due consideration of its original design.

In many monuments the ASI was even unable to ensure flow of water in fountains and *Neher – e- Bahist* (water channels) which was an important feature of Mughal gardens. These included the Taj Mahal, Agra, Red Fort, Delhi and Itmatuddula, Agra etc.

We did not find any evidence of the ASI's efforts to document or develop heritage gardens through proper research.



Blocked water channels at Humayun's Tomb, Delhi

4.9.2 Non-Maintenance of Gardens

Gardens require maintenance on a daily basis. This includes watering of plants and grass, pruning of plants and cleaning. The Horticulture Branch carried out annual maintenance and upkeep of gardens under the head Minor Works 'Non Plan'. As per the information furnished by Division II, there were 50 gardens in Delhi against 174 centrally protected monuments (which included gardens at the offices of the DG ASI, NMA, NMMA and Children Museum etc.). However during the last five years the number of gardens taken up for annual maintenance ranged from 25 to 37.

Evidently the Horticulture Divisions failed to maintain even the existing gardens.

In contrast, we found that the Branch was maintaining gardens which were actually not pertaining to their jurisdiction. For example, the Division III was maintaining a garden named Chandrashekara garden, Kamalapur, Hampi where there was not even a centrally protected monument.



Chandrashekara Garden with no monument- Kamalapur, Hampi

Joint physical inspection of gardens in and around the protected monuments revealed that the maintenance of gardens were not appropriate. The condition of some of the gardens in the Delhi Circle is depicted in the photographs below:



Indiscriminate Digging: Garden at Safdarjung Tomb



Debris lying in the garden at Humayun's Tomb



Unkempt garden at Purana Qila



Unkempt garden at Red Fort Delhi

Even at World Heritage Sites viz. the Red Fort and Humayun's Tomb of Delhi Circle, gardens were not properly maintained by the Horticulture Branch. The Branch attributed the poor maintenance to lack of human and financial resources. They also pointed out that the Director (Horticulture) requested the DG, ASI several times to increase the strength of the Branch but there were, however, no concrete efforts made by the ASI, HQ so far.

Recommendation 4.8: *The ASI, HQ should accord priority to the Horticulture Branch and provide budget and manpower commensurate with actual requirement.*

4.10 Chemical Conservation and Functioning of Science Branch

The Science Branch of the ASI was established in 1917 with the principal function of chemical treatment and preservation of Museum-exhibits and other antiquities. The

preservation of monuments through chemical conservation had become an important function of the Science Branch. The Science branch was headed by Director (Science) situated at Dehradun, Uttarakhand. The Branch had three divisional offices situated at Bhubaneswar, Hyderabad and Indore and 11 zonal offices spread over the country, besides laboratories at Dehradun, Agra and Ajanta.

4.10.1 Criteria for Chemical Treatment

Similarly, the main criteria for selection of monuments for chemical treatment were on the basis of:

- the observations made during the inspections of monuments by executing staff and senior officers,
- monuments which are not chemically treated for more than 5-6 years
- references from the VIP visits

We found that there was no system in place for regular physical inspection of monuments to assess the requirement of chemical treatment. In the absence of any specific guidelines and criteria for selection of the monument to be taken up for chemical treatment, many monuments which required chemical treatment, were never taken up. Expenditure statement for 2009-10 revealed that only 149 monuments were selected which accounted for four *per cent* of the total protected monuments. There was no justification on record for selecting monuments for treatment. Thus monuments were chosen for chemical cleaning without objective assessment, prioritisation and documentation.

In Dharwad Circle, though 19 proposals were approved for carrying out chemical treatment during the period 2009-10 to 2011-12, only four works were taken up till 31 March 2012. No reasons were recorded for leaving the rest.

4.10.2 Monitoring of Works and Expenditure

As per para 4.1 of the Manual of the ASI, Director (Science) lays down policy for the execution of chemical preservation works and functioning of Science Regional, Zonal and Field Laboratories with the approval of the DG, ASI. It was his responsibility as administrative head of the Chemical Branch to administer the financial grant and with this object in view, keep a close watch over the progress of expenditure.

We noted that work wise details, including physical and financial progress was not being maintained and monitored by either the zonal/divisional office or by Director (Science) office.

4.10.3 Coordination with Structural Conservation

Structural conservation should always precede chemical conservation in the restoration of monuments. However, we found instances where the structural conservation was carried out after the chemical treatment. This nullified the process of chemical treatment. For example, the chemical treatment of Sawan Pavilion at the Red Fort in Delhi Circle was carried out by the zonal office in the year 2010-11 involving an expenditure of ₹ 3.98 lakh whereas the structural conservation of the Sawan Pavilion by the Circle office was carried out in 2011-12 at the cost of ₹ 21.63 lakh.

Recommendation 4.9: *The ASI should devise a mechanism to have a proper coordination between these three branches before carrying out any conservation work on any monument.*

The Ministry (May 2013) while accepting the recommendation, intimated that necessary guidelines have been proposed in the draft conservation policy and instructions are also being issued to field offices.

4.10.4 Functioning of Laboratories

A stone conservation lab was established in November 2006 in Agra fort with the purpose of ensuring that the right qualities of stones are used in conservation works. Each stone was subjected to testing before use in order to assess the physical qualities including colour, water absorption, hardness, porosity and compressive strength.

We found that in the Agra Circle stones used in 13 conservation works during period 2007-08 to 2011-12 costing ₹ 3.44 crore were never tested in the stone conservation laboratory. There were no reasons on record for this violation.

Para 8.3.2 of Archaeological Works Code emphasised that a separate register for the chemical and other consumable stores required for use in the Chemical Laboratory was to be maintained. However, the Head of each office was to ensure proper and judicious use of all Chemicals.

We noticed that chemicals were purchased for the works of Mural Paintings in Shri Guru Ram Rai Darbar, Dehradun and work of preservation of Trident at Gopeshwar, Dehradun. However about 45 *per cent* of chemicals in the case of mural paintings and above 94 *per cent* of chemicals for work on the Trident remained unutilised and were kept in damp store rooms.

In the Bhopal Circle, chemicals worth ₹ 3.66 lakh were purchased during 2005 to 2009 but could not be utilised in time resulting in the expiry of the shelf life.

Besides following deficiencies were also noticed:

- Four³⁵ out of the nine laboratories (lab) in Dehradun were non- functional for the last ten years.
- Stock registers for scientific equipment and chemicals in the labs were not maintained.
- Detailed accounts of analytical or chemical treatment work carried out in these labs were not maintained as prescribed in the Manual of the ASI.
- The equipment in these labs which were more than two decades old had not been changed inspite of the proposal submitted to DG ASI in April 2008.
- Director (Science) was responsible to finalise the firms and their rates for supply of chemicals to all their field offices. However, this system was terminated after April 2011 without citing any reasons.
- Director (Science) did not take any action against the firms which failed to supply chemicals inspite of the rate contract with them.

4.10.5 Cases of Bad Conservation of Chemical Treatment

The temple of Lepakshi in the Hyderabad Circle was most celebrated for its mural paintings. The paintings revealed the history of the monument and also added aesthetic beauty to it. We noted that despite the chemical treatment carried out on the paintings of Sri Veerabhadra Swamy temple, the same were not visible as there was seepage from the roof and soot formation due to burning of camphor, oil and incense sticks.



Damaged Mural paintings of Lepakshi Temple, Hyderabad

³⁵The four laboratories not functional are 1. Geo-Chronological Laboratory, 2.Surface probe laboratory (Electron Microscope), 3. Radiographic Laboratory and 4. Laboratory for study of environmental pollution and application of preventives

Similar instances were noticed in Sri Ramappa Temple, Hyderabad Circle and Ghiyasuddin Tomb in Delhi Circle.



Water seepages in Ramappa Temple after chemical conservation



Stains at the Ghiasuddin Tomb, Delhi

Chemical conservation work of the ancient Trident cum axe (Parashu) in the compound of the Gopinath temple in Uttarakhand Circle was sanctioned for ₹0.79 lakhs. Joint physical inspection revealed that the work was not properly carried out and rusting was visible as evident from the following pictures.



Rusting on Trident

Rusting on part of a monument

Case Study 5 : Kos Minars



The **Kos Minars** or *Mile Pillars* are medieval milestones that were constructed by the Afgan ruler Sher Shah Suri and subsequently by the Mughal emperors. These Minars were erected on the main highways across the mughal empire to mark the distance (at a distance of 3.2 kilometers i.e. one kos). A Kos Minar was typically a solid round pillar, around 30 feet in height that stood on a masonry platform built with bricks and plastered over with lime. These were an important part of communication and travel in the Mughal period. The ASI protected 110 Kos Minars located at five Circles i.e. 63 in Chandigarh, eight in Jaipur, 15 in Agra, 23 in Lucknow and one in Delhi Circle. Our scrutiny showed that Kos Minars as a specific category of monuments were never researched and analysed by the ASI. In our joint physical inspections, we covered 40 Kos Minars (36 *per cent* of the total kos minars) and found many of them encroached, missing and were in urgent need of preservation. **(Details are in Annex 4.2).**

- i. We found no system in the selection of Kos Minars to be protected by the ASI. Many Kos Minars were identified by a particular number like Kos Minar no 13, Kos Minar no 16, 17, 24 and so on. However, there was no information available with the ASI on the missing numbers. In some cases multiple Kos Minars were notified as a single Protected monument viz. 'Two Kos Minar' at Taraf Unsar, Panipat in Chandigarh Circle were notified as a single monument. The ASI was protecting one Kos Minar in Delhi whereas three Kos Minars in Delhi were also protected by the State Archaeology Department of Delhi Government.
- ii. Kos Minar No 13, Mujessar, Ballabgarh in Haryana and Kos Minar in Shahabad, Kurukshetra of Chandigarh Circle were found missing. The ASI was informed by the district authorities (January 1984) that the land of Kos Minar no 13 had been allotted to a private company and the Kos Minar was demolished by the company. No legal action against the company had been taken.

In 2004-05 the land of Kos Minar, Shahabad, Kurukshetra was acquired by the Haryana Urban Development Authority and plots were sold to private parties. At present, several buildings had been constructed there. There was no trace of the protected monument of national importance. The ASI had no information on when and how the monument disappeared.

- iii. Out of 40 Kos Minars physically inspected, it was noticed that 20 Kos Minars were without any Protection Notice Board and 36 were without any Cultural Notice Boards explaining their significance and history.
- iv. 17 Kos Minars had no access roads. The Kos Minar in Delhi Circle was situated inside the Delhi Zoo and was inaccessible without permission of the Zoo authorities.

Delhi, Lucknow and Agra Circles did not incur any expenditure on the Kos Minar for their preservation and conservation during 2007-12. The Chandigarh Circle incurred an amount of ₹ 36.20 lakh for the conservation of these Kos Minars. 51 *per cent* of the total monuments of Chandigarh Circle were Kos Minars. However, the expenditure incurred on these 51 *per cent* monuments was 0.65 *per cent* of the total expenditure incurred during last five years. Jaipur Circle incurred expenditure amounting ₹ 0.41 lakh on one Kos Minar and ₹ 0.17 lakh on five Kos Minars. Two Kos Minars were never taken up for any conservation work.

- v. Joint physical inspection revealed that Kos Minar No. 24 at Banchari, district Palwal in Haryana Circle was in a dilapidated condition. The Kos Minar was situated in a field encroached by nearby farmers. There was no access to the site and the grill fencing had been removed.



Dilapidated condition of Kos Minar No. 24, Banchari

- vi. Unauthorised constructions in prohibited/regulated area had been noticed around 21 Kos Minars. Seven Kos Minars had been encroached by farmers and local residents.

Instances of encroachment were noticed in Kos Minars of Jaipur and Chandigarh Circles. The Kos Minar situated at Jaipur- Ajmer road, Ajmer was covered by the residence of the Superintendent of Police (SP), Ajmer and the Kos Minar No. 26 at Hodal, in Chandigarh Circle was situated inside a private house where a wall had been constructed around the Kos Minar, thus covering almost half of it.



Kos Minar No. 26, Hodal encroached by a house



Kos Minar at Jaipur – Ajmer Road, Ajmer encroached by the residence of SP, Ajmer

There was no deployment of monument attendant and security staff at these Kos Minars for their proper maintenance and conservation.

In our opinion, Kos Minars need to be protected uniformly as a single project. The Mirdha Committee also recommended such action. However, no such project was initiated by the ASI for conserving these monuments.

