

Lesser Known Stepwells

In and Around Ahmedabad-Gandhinagar Region



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The stepwells of Gujarat are an important part of its culture and built heritage. These Vavs were built by wealthy patrons, for the benefit of settlements and travellers. In and around Ahmedabad and Gandhinagar, there are 7 stepwells that have been protected by the centre or the state. Over the course of a series of heritage listing projects alongside the Ahmedabad Municipal Corporation, Ahmedabad Urban Development Authority, and Gandhinagar Urban Development Authority, Urban Management Centre identified an additional 38 stepwells that are not currently protected. As these structures were of some special interest to us, we revisited these sites to conduct a more detailed survey and compile this publication.



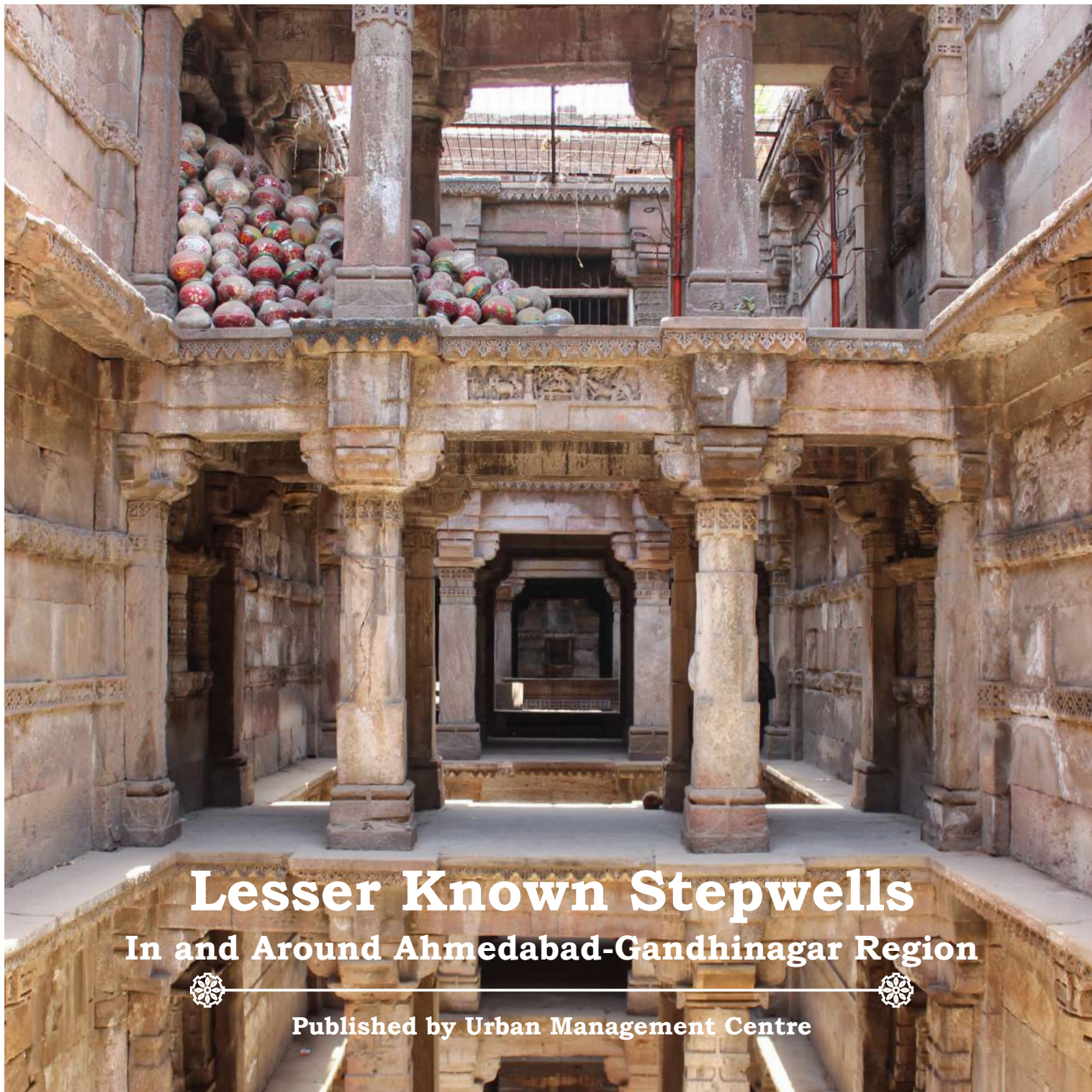
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Urban Management Centre, based out of Ahmedabad, India, aims to professionalize and strengthen urban management in India and South Asia. The organization's close association with International City/Country Management Association (ICMA) in the region has earned it the sobriquet of ICMA-South Asia. It reaches across all levels of governments to advance good governance practices by encouraging the creation, sharing and replication of innovations, and by conducting hands-on practical training of city managers. Through the network of City Manager's Associations in India, the organization also facilitates practitioner- based assistance to local government needs. UMC specializes in research and application of urban planning and governance, built heritage management, local government association development, city partnerships, urban indicators analysis and performance assessment of local governments.

Lesser Known Stepwells

In and Around Ahmedabad-Gandhinagar Region



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Cover image: Ashapura Mata ni Vav, Ambawadi, Ahmedabad
Back cover image: Jethabhai ni Vav, Isanpur, Ahmedabad

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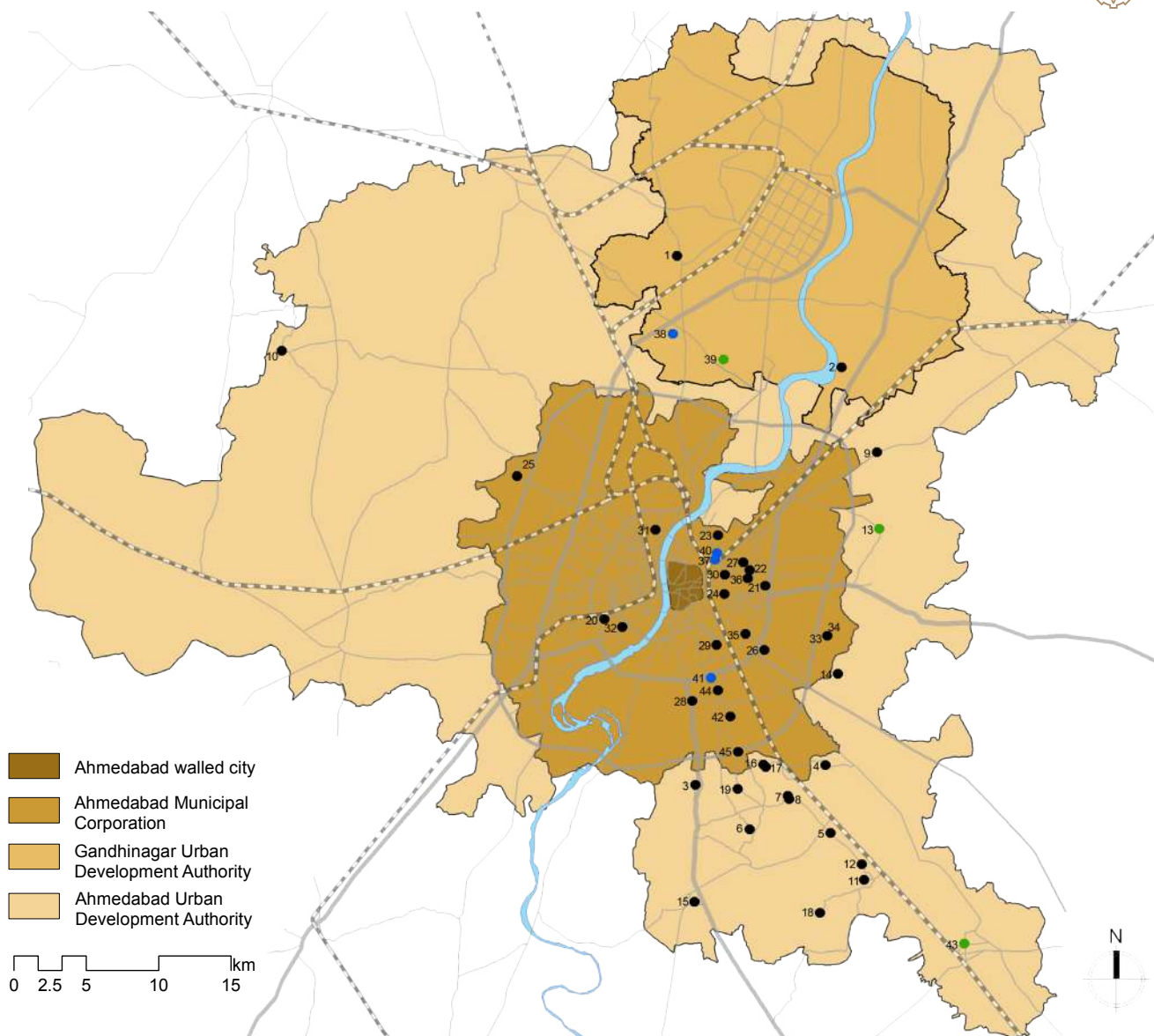
Sindhvai Mata ni Vav, Indrapuri Ward

List of Stepwells in the Ahmedabad and Gandhinagar Region

Protected by ASI, State Archaeological Department, Unprotected and Lesser Known

1. Stepwell at Uvarsad Village, Gandhinagar
2. Ancient Stepwell, Valad Village, Gandhinagar
3. Khodiyar Mata ni Vav, Aslali Village, Ahmedabad
4. Khodiyar Mata ni Vav, Badodara Village, Ahmedabad
5. Ancient Stepwell, Barejadi Village, Ahmedabad
6. Chara ni Vav, Chosar Village, Ahmedabad
7. Khodiyar Mata ni Vav – 1, Devdi Village, Ahmedabad
8. Khodiyar Mata ni Vav – 2, Devdi Village, Ahmedabad
9. Ancient Stepwell, Enasan Village, Ahmedabad
10. Ancient Stepwell, Jhaloda Village, Ta: Kadi
11. Guruji ni Vav, Kanij Village, Ta: Mehmedabad
12. Ancient Stepwell, Kanij Village, Ta: Mehmedabad
13. Prachin Vav, Kathwada Village, Ahmedabad
14. Khodiyar Mata ni Vav, Memadpur Village, Ahmedabad
15. Khodiyar Mata ni Vav, Bareja
16. Derani – Jethani ni Vav, Ropada Village, Ahmedabad
17. Khodiyar Mata ni Vav, Ropada Village, Ahmedabad
18. Ancient Stepwell, Sankhej Village, Ta: Kheda
19. Dholi Vav, Chosar Village, Ahmedabad
20. Vav Wala Amba Mata nu Mandir, Ambawadi, Ahmedabad
21. Khodiyar Mata ni Vav, Bapunagar, Ahmedabad
22. Mahakali Mata ni Vav, Bapunagar, Ahmedabad
23. Syed Hazrat Jalaluddin ni Vav, Girdharnagar, Ahmedabad
24. Suteshwar Mahadev Mandir ni Vav, Gomtipur, Ahmedabad
25. Stepwell, Bhadaj Village, Gota Ward, Ahmedabad
26. Sindhvai Mata ni Vav, Indrapuri Ward, Ahmedabad
27. Ashapura Mata ni Vav, India Colony Ward, Ahmedabad
28. Khodiyar Mata ni Vav at Lambha Ward, Ahmedabad
29. Ancient Stepwell, Maninagar Ward, Ahmedabad
30. Gandharva Vav, Naroda Road Ward, Ahmedabad
31. Stepwell, Vadaj, S.P.Stadium Ward, Ahmedabad
32. Stepwell, Vasana, Vasana Ward, Ahmedabad
33. Khodiyar Mata ni Vav – 1, Vastral Ward, Ahmedabad
34. Khodiyar Mata ni Vav – 2, Vastral Ward, Ahmedabad
35. Khodiyar Mata ni Vav, Khokhara Ward, Ahmedabad
36. Malekshaban ni Vav, Bapunagar, Ahmedabad
37. Dada Harir ni Vav, Asarva Ward, Ahmedabad
38. Rudabai ni Vav with inscription, Adalaj Village, Gandhinagar
39. Prachin Vav, Ambapur Village, Gandhinagar
40. Mata Bhavani ni Vav, Asarva Ward, Ahmedabad
41. Jethabhaji ni Vav, Isanpur Ward, Ahmedabad
42. Khodiyar Mata ni Vav, Vatva, Ahmedabad
43. Vav, Mehmedabad, Kheda
44. Ancient Stepwell, Saiyedwadi, Vatva, Ahmedabad
45. Sasu-Vahu ni Vav, Vatva, Ahmedabad

- Unprotected and Lesser Known Stepwells – (38)
- Protected by State Archaeological Department – (3)
- Protected by Archaeological Survey of India (ASI) – (4)



0 2.5 5 10 15 km





Ashapura Mata ni Vav, India Colony Ward

From the Commissioner's Desk



Mukesh Kumar, IAS
Ahmedabad Municipal
Corporation

Ahmedabad has been one of the most prosperous cities of Gujarat since its establishment by Ahmed Shah over 600 years ago. As a trading city, its architecture has been influenced by cultures from all over the world, giving rise to a unique mix of Indo-Islamic architecture. The stepwells of Gujarat are also a consequence of this extensive trade network. They are both, an important part of settlements and their surrounding communities, and an integral part of trade infrastructure. As places of rest, waypoints and meeting places, they played a critical role in the long journeys through the arid region of western India.

The Ahmedabad Municipal Corporation has always been committed to the conservation of our heritage. The Walled City areas have been known for a long time as a treasure trove of architecture and culture. It is this that has led to Ahmedabad's recent declaration as India's first World Heritage City by UNESCO. The Ahmedabad Municipal Corporation is proud to receive this distinction. This is a golden opportunity to work with increased vigour to support tourism and development in not only the walled city, but in entire Ahmedabad.

There are number of state and nationally protected monuments outside the walled city and these put together, form a great treasure of heritage in the region.

I am delighted to find out that Urban Management Centre has gone on to publish this book, highlighting the stepwells of Ahmedabad and Gandhinagar which are not currently protected by the State and National archaeological bodies. AMC has strived to make all out efforts to conserve stepwells for our future generations. I hope that this book will encourage more citizens and other stakeholders to get involved with our heritage and support our work.

Mukesh Kumar, IAS
Municipal Commissioner
Ahmedabad Municipal Corporation

Preface



Manvita Baradi,
Founder Director,
Urban Management
Centre

The Ahmedabad region has been a centre of trade for almost 600 years, leading to a unique architectural diversity not seen anywhere else in the world. The Walled City of Ahmedabad is known throughout the world for its monuments, residential house form and the rich urban fabric. The monuments are built in the Indo-Islamic style, a product of the harmonious relationship between the Mughal rulers of the city and their Hindu subjects. The citizens of the walled city live in close knit neighbourhoods called *pols*. This urban form and architecture has been the subject of decades of research. Even outside this Walled City, we see private residences, religious places and monuments with outstanding heritage value. Many of these structures are undocumented, neglected and threatened by ignorant interventions. The Ahmedabad Municipal Corporation requested INTACH-Gujarat to document these structures within its boundaries, and prepare a ranking to be used to protect and conserve these buildings. The Urban Management Centre supported INTACH and also undertook detailed documentation of lesser known stepwells which are located in Ahmedabad and Gandhinagar regions.

The focus of the documentation was to cover the structures not already protected by either the state or the national Archaeological bodies. Overall our team identified and graded more than 1200 heritage structures, based on their uniqueness, importance and current condition in the Ahmedabad and Gandhinagar regions.

During this exercise we were struck by the number of unprotected stepwells in the study region. We identified 38 ancient stepwells that are unlisted. Among these, a few lie in ruins, a few have been restored by municipal or other state authorities, and the majority are operated by community organisations, typically temples. These stepwells are not all heavily ornamented, or massive in scale in the way that most of the protected monuments are, but they are an important part of our history. They are part of the larger narrative that justify the title of “The Land of Stepwells” that Gujarat claims to, and are important to our understanding of other stepwells in the region. The variation that we see within them, in their structural systems, carvings and proportions, shows the evolution of the art of stepwell construction and helps us better understand other architecture in the region. These also help us to understand the societal needs of congregation or support infrastructure on trade routes and the traditional knowledge of water management systems.

This book is not intended to be a complete documentation of these stepwells, but a call to action. Our heritage is being lost to neglect and without a coordinated effort to sensitively revive it, we shall squander many opportunities for ourselves and future generations. In the drawings presented here, the red areas indicate alterations that have been made to the structure.

Each stepwell is denoted on the map with a number and its elaborate description is in the subsequent pages. In this book you will find 38 lesser known stepwells, out of which 30 are discussed in detail.

The stepwells presented here, are grouped by similarity in current condition and current use. We settled on this, rather than on a grouping based on geography or period of construction. This is to help us create the narrative of a way forward, rather than one looking back. The goal is not to try and freeze these stepwells in time, but to encourage a sensitive adaptive reuse of these beautiful structures.

We are grateful to Mr. Mukesh Kumar, IAS, current Municipal Commissioner of the Ahmedabad Municipal Corporation and to Dr. Guruprasad Mohapatra, IAS, former Municipal Commissioner of AMC. We are also thankful to the support extended by Ms. D Thara, IAS, former Chief Executive Authority of AUDA-GUDA; Mr. A D Gor, current Chief Executive Authority of AUDA; Mr. P K Ghosh, IAS (retd.), Chairman Heritage Committee of AMC and Mr. P K Vasudevan Nair, Dy. GM of Heritage Department, AMC.

We are happy to bring our research in the public domain. The need is to get the graded buildings notified and help the building owners avail incentives for their conservation.

Manvita Baradi
Founder Director
Urban Management Centre
July 2017



Ashapura Mata ni Vav, India Colony Ward

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Introduction

The Stepwells (Vavs) of Ahmedabad and Gandhinagar

Stepwells in India are both infrastructure and monuments. In the arid regions of Gujarat and Rajasthan, they are important places of water and shelter. The *Vavs* of Gujarat were built by wealthy traders and royal patrons alike. They are located along important trade routes and near settlements where they become important shelters and meeting places. The larger stepwells are ornamented heavily with stone carvings, ornamental arches and niches and reliefs.

In and around the Ahmedabad and Gandhinagar region there are 7 stepwells that have been protected by the state and central archaeological bodies. Adalaj ni *Vav*, Dada

Harir ni *Vav*, Mata Bhavani ni *Vav*, Jethabhai ni *Vav*, are protected by the Archaeological Survey of India. Further, Mehmabad ni *Vav*, Kathvada ni *Vav*, and Ambapur ni *Vav* have been protected by Gujarat State Archaeological department. These have been the subject of much research over the years. During the heritage listing project the Urban Management Centre (UMC) uncovered an additional 38 stepwells in the region. We found many of these stepwells to be of special interest and so, after the completion of the primary documentation, the UMC team revisited these stepwells to conduct a more detailed survey with the goal of bringing them into the public domain.



Bracket in Prachin Vav, Ambapur



Intrinsic stone carvings in Jethabhai ni Vav, Isanpur



Stepwells, Traders and Settlements

Gujarat and Ahmedabad owe much of their prosperity to the traders and trade routes that are inhabited here. In the arid climate of this region, water was an important resource. Shade and shelter was also precious. Stepwells perfectly fill all these needs. They were filled with ground water which is clean and naturally filtered. The brick and sandstone construction keeps the structure and its surroundings cool. And the tiered structure provides shade even in the hot and dry weather of the region.

When we map all the stepwells that we have currently documented, we can see some strong trends. They are largely concentrated routes passing along the old city of Ahmedabad, through the ancient settlements of Vatva, Mehmabad and Uvarsad. There is some literature indicating that many of these routes were important for the traders of the time and supported by local patrons. There is evidence that a trade

route between Vatva (area now within Ahmedabad city limits) and Mehmabad (Municipality near Ahmedabad) was supported by Mohammad Begda and the stepwells in that area were established as a part of it. In the north, we see a similar trend, corresponding to a similar trade route from Uvarsad (village) to Adalaj (village).

Stepwells are generally located on the outskirts of a settlement, rather than near its core. A few were used for irrigation, but the overwhelming majority were only used as places of gathering. In most cases, a small temple would be established nearby and the *Poojari* would also act as caretaker of the stepwell. This does not mean that the stepwells were extensions of the religious institutions. They were secular spaces, meant for the use of everyone and created as public goods.



Motifs, inscriptions and patterns in Dada Harir ni Vav, Asarva

Introduction

Elements and Structural Systems of a Stepwell

All stepwells share combinations of the following elements

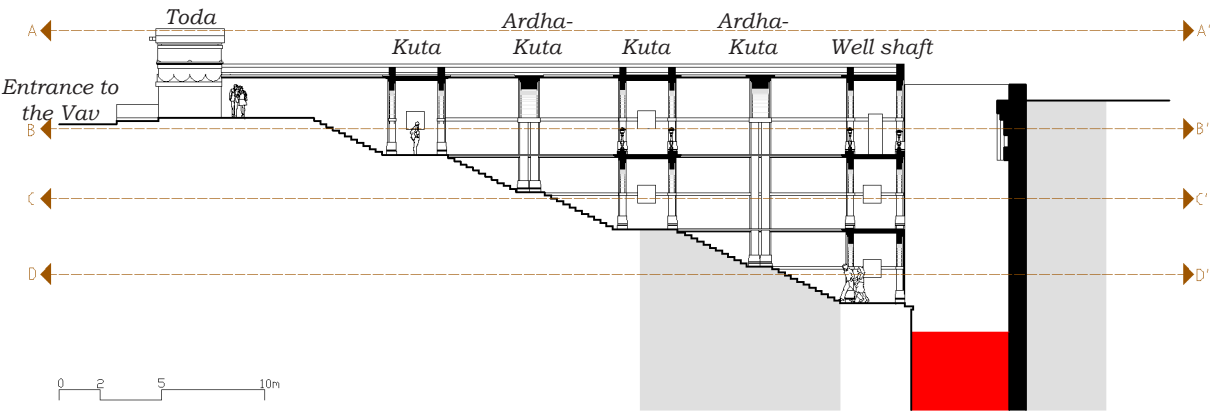
Toda: A pair of ornate pillars at the entrance of a stepwells to mark its locations. They can be very heavily ornamented or very plain depending of the style and scale of the stepwell. They typically contain a small niche to place an oil lamp.

Kuta: A landing between sets of steps in a stepwell to provide a place to stand and rest. *Kutas* are typically covered by

stacked pavilions divided into levels corresponding to previous *Kutas*. Stepwells can be divided into types based on the number of *Kutas* within them.

Ardhakuta: A supporting arch, like a *Kuta*, but without a pavilion or landing.

Well shaft: The circular shaft at the end of the stepwell giving access to groundwater can be refered to as the wellshaft.



Stepwell Section



All the stepwells have some combination of brick, lime mortar and sandstone as building materials. However, we see several different types of structural systems in stepwells, with variations in the middle.

In some, the *Kutas* are built from stone beams and columns, with brick only used as an infill material in the walls. In others, the *Kutas* are also built from brick, generally using arches with stone only placed in the springers and keystones. In stepwells where the arches are structurally brick, the final

level accessing the well is generally made from stone, for better durability.

A couple of stepwells also have stone arches in the entire structure. This is however, a rare system of construction. The more ancient stepwells, which lie as ruins today also have a combination of stone beams and columns on the lower levels and brick arches on the upper levels. The ruins suggest that the spans and scales of these stepwells would have been massive.



1. Brick arch
2. Stone column and Beam system
3. Stone arch
4. Brick arches and columns

Lesser Known Stepwells at a Glance



Sindhvai Mata ni Vav (26)



Khodiyar Mata ni Vav, Badodara (4)



Ancient Stepwell, Valad (2)



Khodiyar Mata ni Vav -1, Devdi (7)



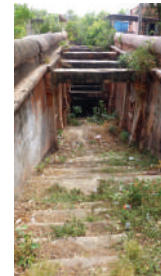
Guruji ni Vav, Kanij (11)



Dholi Vav (19)



Ashapura Mata ni Vav (27)



Stepwell at Uvarsad (1)



Gandharva Vav (30)



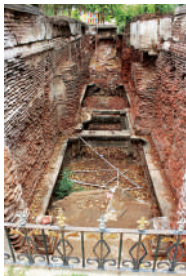
Ancient Stepwell, Maninagar (29)



Stepwell, Vadaj (31)



Khodiyar Mata ni Vav, Bapunagar (21)



Stepwell, Bhadaj (25)



Syed Hazrat Jalaluddin ni Vav (23)



Ancient Stepwell, Jhaloda (10)



Ancient Stepwell, Barejadi (5)



Stepwell, Vasana (32)



Mahakali Mata ni Vav, Bapunagar (22)



Ancient Stepwell, Enasan (9)



Ancient Stepwell, Sankhej (18)



Derani – Jethani ni Vav (16)



Khodiyar Mata ni Vav, Khokhara (35)



Chara ni Vav (6)



Vav Wala Amba Mata nu Mandir (20)



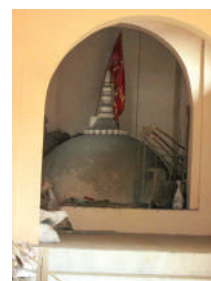
Khodiyar Mata ni Vav – 1,
Vastral (33)



Khodiyar Mata ni Vav – 2,
Devdi (8)



Khodiyar Mata ni Vav – 2, Vastral (34)



Khodiyar Mata ni Vav,
Lambha (28)



Khodiyar Mata ni Vav, Memadpur (14)



Khodiyar Mata ni Vav,
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Khodiyar Mata ni Vav, Aslali (3)



Jethabhai ni Vav, Isanpur (41)

Lesser Known Stepwells at a Glance



Dada Harir ni Vav, Asarva (37)



Khodiyar Mata ni Vav, Bareja (15)



Prachin Vav, Kathwada (13)



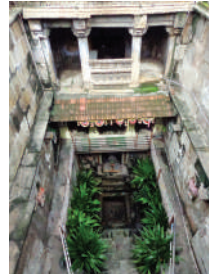
Ancient Stepwell, Kanij (12)



Ancient Stepwell, Saiyedwadi (44)



Khodiyar Mata ni Vav, Vatva (42)



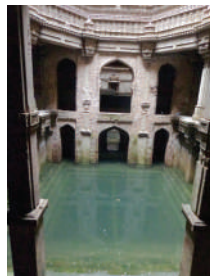
Mata Bhavani ni Vav (40)



Prachin Vav, Ambapur (39)



Suteshwar Mahadev ni Vav (24)



Rudabai ni Vav, Adalaj (38)



Sasu-Vahu ni Vav (45)



Malekshaban ni Vav, Bapunagar (36)



Vav, Mehmedabad (43)

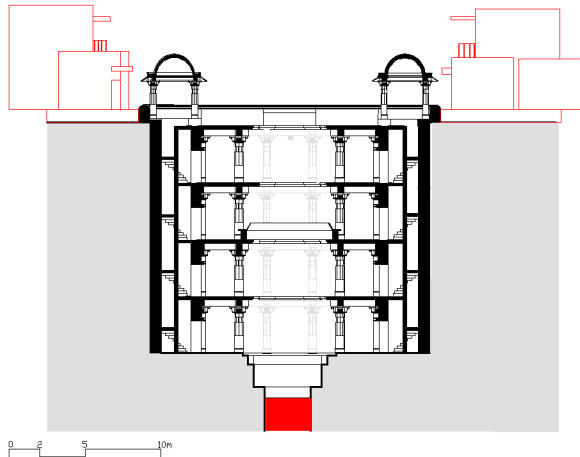


Dada Harir ni Vav, Asarva

Ashapura Mata ni Vav, India Colony Ward, Ahmedabad (27)

This stepwell is located within a residential colony eponymously known as Ashapura Mata ni Chali. It in turn, takes its current name from the shrine that now occupies the entrance and first courtyard of the stepwell. The entire structure of the stepwell is built from sandstone and covered with intricate carvings. The structure is divided into four *Kutas*, each of which has a series of floors above it, reaching up to the ground level. As with many other stepwells, the complexity gradually increases as we move deeper into the structure. There are some very worn out descriptions, which combined with the architectural sign suggest that the stepwell was constructed in the 15th or 16th century, perhaps even earlier than Rudabai ni Vav or Dada Harir ni Vav.

The entire first *Kuta* has been insensitively renovated by the temple, using paints, porcelain tiles, kota stone and other materials. Gates and lights have been installed haphazardly and some part of the stepwell is used by the temple for storage. However, in spite of this, the rest of the structure is in good repair, and in most recent visits was relatively clean.



Section of Vav



View of 3rd Kuta



The entrance of the stepwell, to the north, has *Toda* on either side, with stone carvings and a stepped top. Several carved niches and columns can also be seen in the first level which have now been painted over. There are two types of columns in the structure, 'Rucaka' which are not ornamented and square from the base to the capital, and 'Masraka' which are square at the base, then step in to octagonal and are

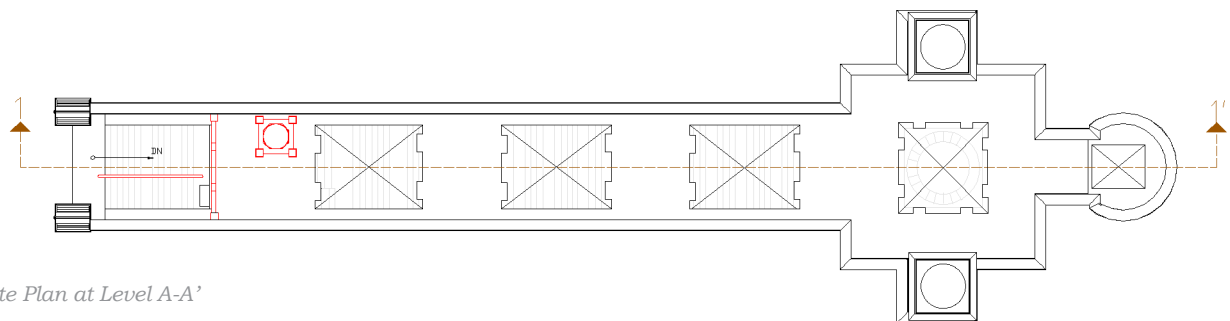
round near the capital. Both types of columns have some carved bands near the capital. The side walls of the structure are capped with semi-circular capping stones, and the walls themselves have geometric and organic patterns carved into horizontal bands all along the sides. Narrow walkways supported by brackets give access to every terrace level within the structure.



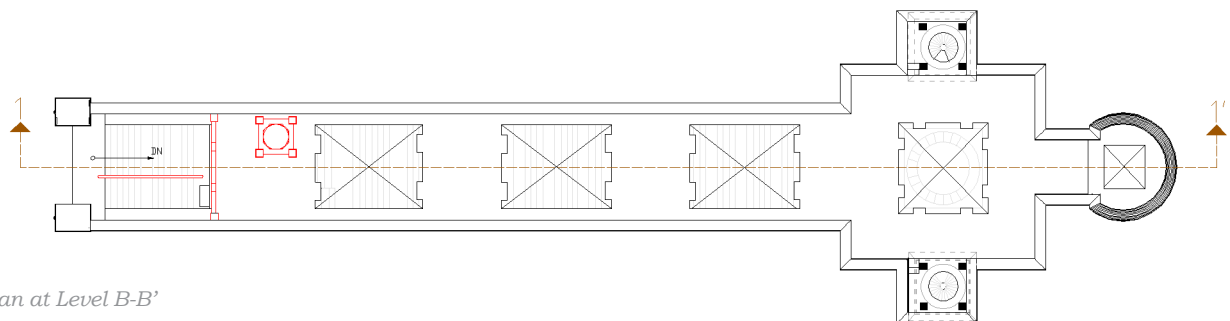
Rukaka column



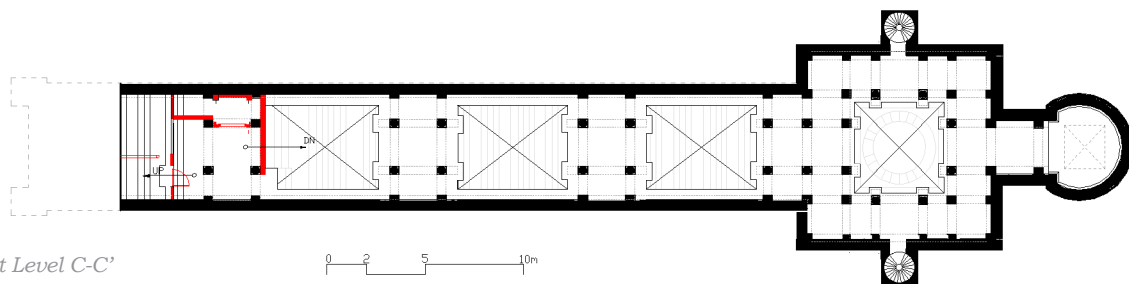
Masraka column



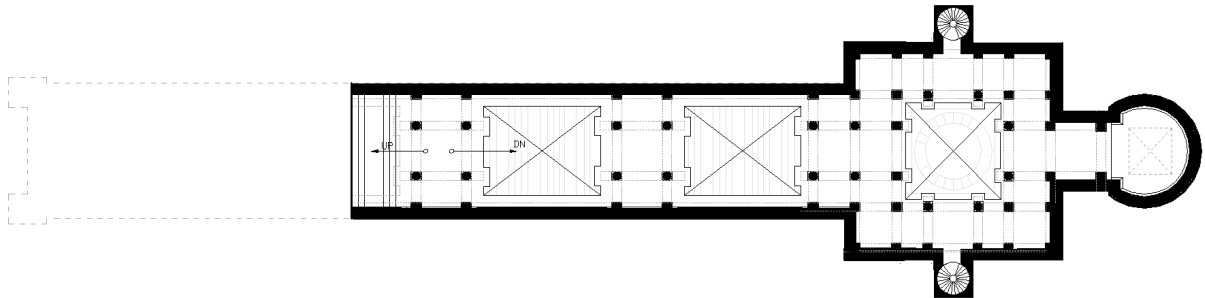
Site Plan at Level A-A'



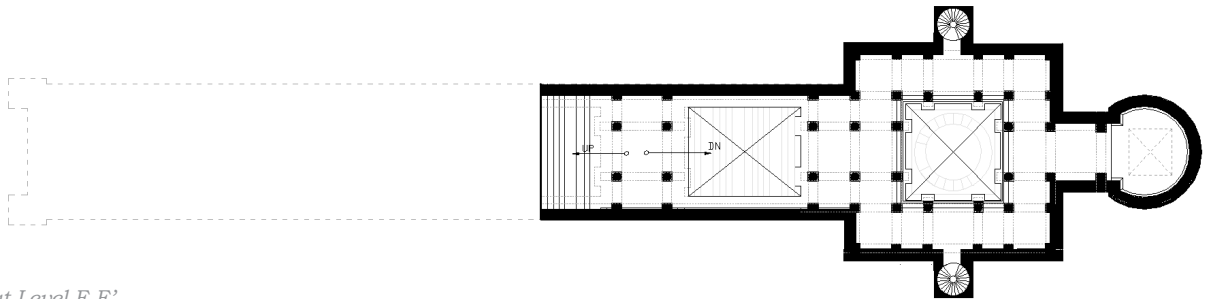
Plan at Level B-B'



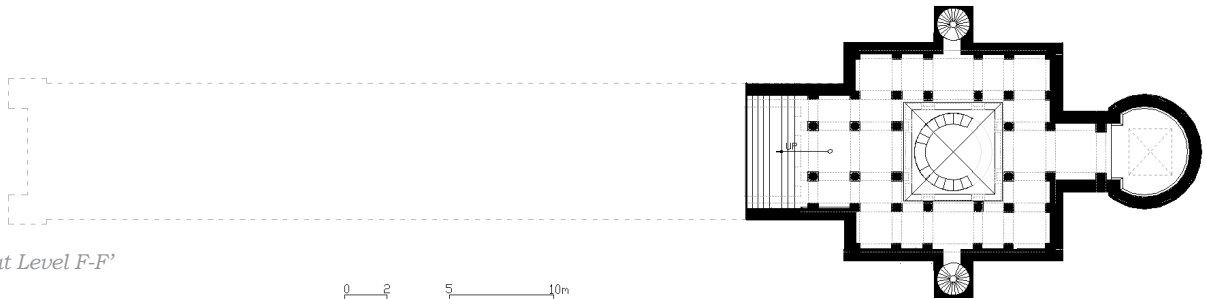
Plan at Level C-C'



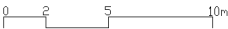
Plan at Level D-D'

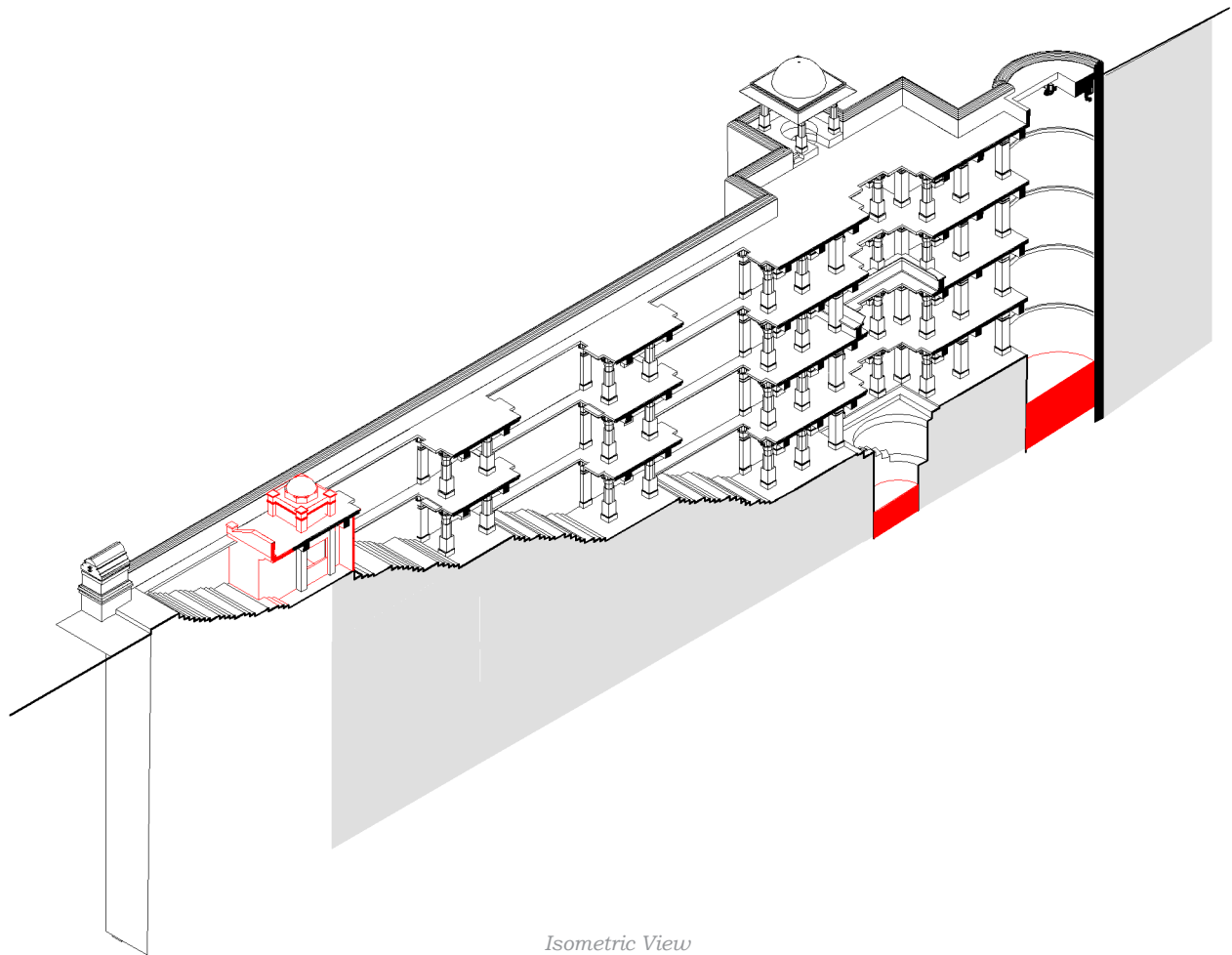


Plan at Level E-E'

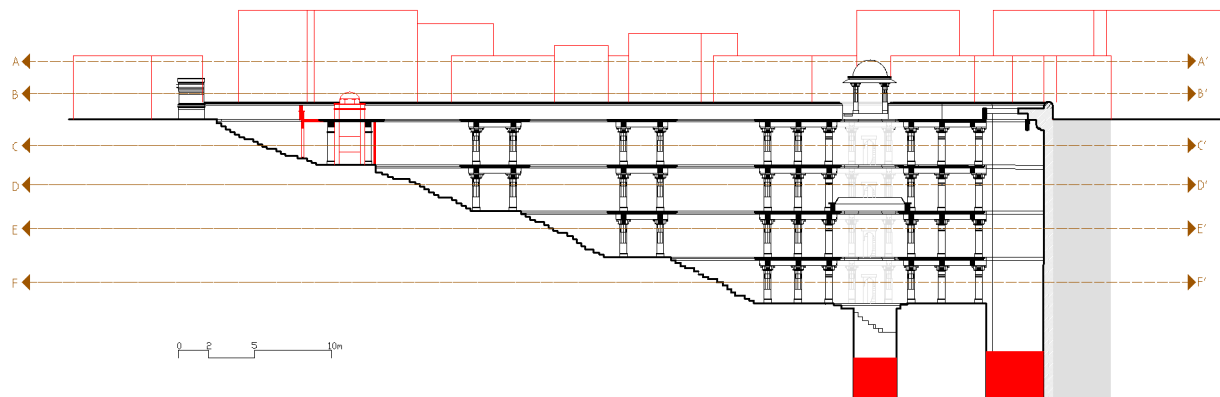


Plan at Level F-F'





Isometric View



Section 1-1'
Longitudinal Section



Carvings over spiral staircase



View along second floor

The final *Kuta* of the stepwell is 20 m below the original ground level, and gives access to both the primary and the secondary well. The primary well, located at the back of the structure, is circular in plan all the way to the ground level, and is framed with sandstone on all sides, except at the bottom most level where it is framed in brick. A beam,

supported on intricately carved stone brackets runs along the diameter of the opening. This beam is important to the stability of a well of this much depth. Even the internal walls of the well are ornamented with geometric and floral patterns.



Stepwell has been insensitively renovated by the temple administration



Primary well



Secondary well



Seating around secondary well

Two spiral staircases from the level of the secondary well lead upwards to the surface, with openings leading to each of the intermediate levels. At the ground level, these staircases are covered with domes, presumably to stop water from entering the structure. Part of the opening around the secondary well is

skirted by a seat with a sloped backrest known as 'Kasasana', ornamented by carvings of leaves and a geometric pattern. We see similar elements in the stepwell located in Bhadaj and in Dada Harir ni *Vav*, suggesting that the wells are related in some way.



a. Dome over spiral staircase



b. Spiral stair to lowest Kuta

c. Erotic reliefs on beams

d. Reliefs on side walls

e. Niches in side walls

f. Inscription with reliefs



The carvings of this stepwell alone can be the subject of several years' research. The niches are framed with many intricate carvings, including geometric and organic patterns. The motifs range from lotuses, to a lamp hanging from a chain, and many of these are unique. All the carvings suggest they were commissioned by a Hindu patron. One of the lintels has a series of erotic images, and a prominent pillar bears an inscription and an image of a woman having intercourse with a donkey. Other motifs include that of the Sun, the Moon, and a cow feeding a calf.

This stepwell is both protected and threatened by the encroachment of the temple. On one hand, it provides eyes on the structure and prevents the well from turning into a nuisance. However, the insensitive interventions by the temple administrators threaten the heritage value of the stepwell and make it difficult to access for tourists and researchers. Active education of the community is necessary to conserve this structure.



Stepwell at Uvarsad Village, Gandhinagar (1)

This stepwell is located next to the village of Uvarsad, and is about 5km away from the stepwell of Adalaj. The stepwell has 4 *Kutas* and consists of alternating *Kutas* and *Ardhkutas*. The entrance to the east has two ceremonial *Toda* on either side and begins on a raised platform, forming a massive plinth to separate it from the ground. The structure primarily consists of stone columns and beams without any intermediate landings. The walls are built from brick and lime mortar with stone elements running in between the columns for stability.

The fourth *Kuta* is connected to the well and unlike the other kutas has arches covering the openings. The lower-most arch is made of stone, as it would remain submerged almost constantly. The upper levels are made of brick and lime mortar.

Part of the well shaft extends above ground level, and was used to mount a waterwheel for irrigation as well as for human and animal consumptions. Channels constructed around the well for water flow are also evidence of this. The size of the bricks within the well suggests that it belongs to the Sultanate period.

The structure is in severe disrepair today. Most of the lime plaster has weathered and the bricks are exposed. The sandstone brackets have begun cracking and rampant vegetation growth are making the structure even more vulnerable. The residents are also using the structure as a garbage dump. This is even more unfortunate, because the village of Uvarsad has many beautiful colonial era buildings with intricate wood carvings. Given the proximity to Adalaj, the whole settlement has the capacity to be turned into a beautiful heritage destination. Conserving and maintaining the stepwell is an important step in that direction.



Part of well extends above ground



View from entrance



Support for water wheel



Todas



Frame around niches

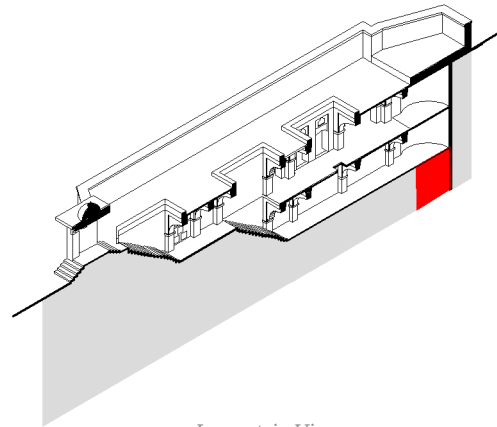


Column capitals

Gandharva Vav, Naroda Road Ward, Ahmedabad (30)

This stepwell, located near 'Phoolchand ni Juni Chali', is currently operated and maintained by the Saraspur Seva Trust. It is currently occupied by a temple and many alterations have been made to the structure for this purpose. The stepwell is originally of the 3 *Kuta*, *Nanda* typology. The main entrance faces east, and the overall typology has a few interesting modifications. The entire ground level has been paved over, and a makeshift stage constructed over the well shaft. Concrete parapets have also been added around the openings between the *Kutas*.

Unlike the traditional proportions, the stepwell is very wide, and has multiple arches across the span of the staircase. At the level of the first *Kuta*, there are passages leading off



Isometric View



The Vav has been paved over at ground level



to the side, and connecting to the second *Kuta* at the same level. It is probably an evolution of the narrow walkways used in other stepwells to access the upper floors.

The original columns on the periphery of this passage have been replaced by modern brick columns and arches, likely as a part of the interventions made to convert it to a temple structure. The openings between the *Kutas* have also at points been filled with concrete slabs, to use it as a worship space. Parts of the well shaft have also been closed with concrete slabs to make space for idols. This is accompanied by extremely insensitive cement plaster applied to most parts of this ancient structure.

The niches and arches that are remaining suggest that the stepwell was built during the Mughal era. Several modifications were made to the structure in the colonial era as well, such as the addition of a few parapets within the structure.



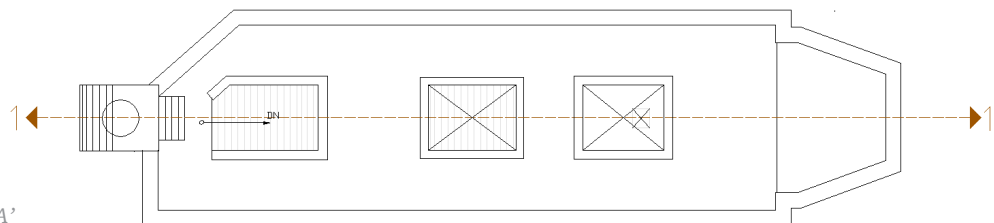
Slabs have filled in the openings on the lower level



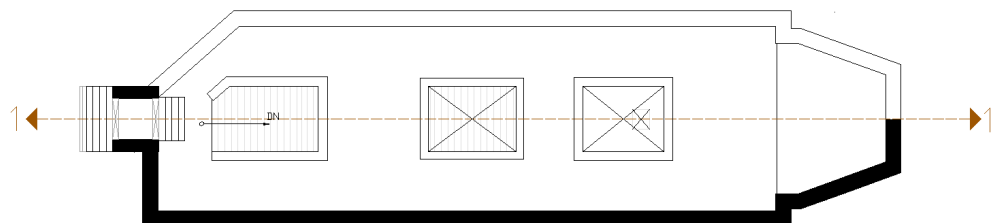
View from first Kuta



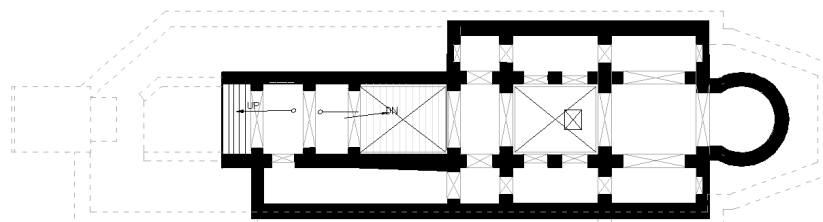
Ornate arches



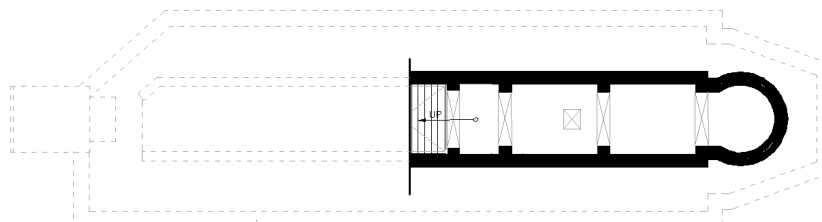
Site Plan A - A'



Plan at B - B'

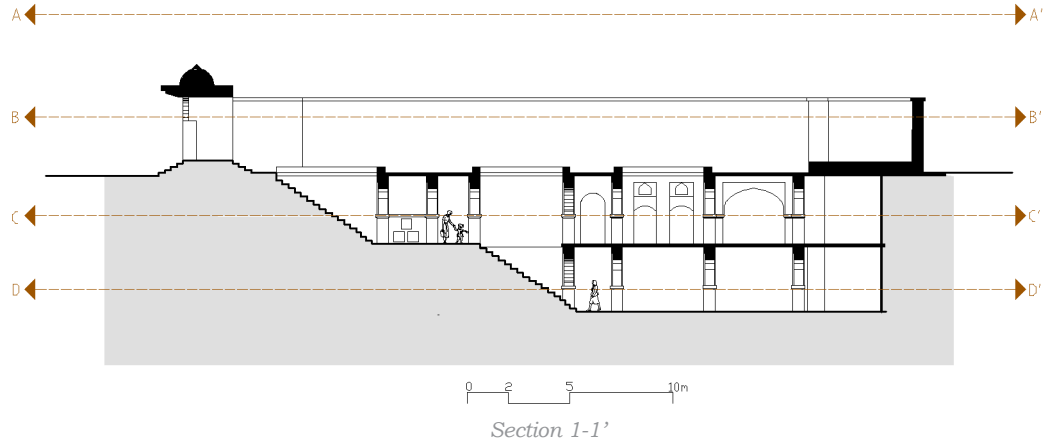


Plan at C - C'



Plan at D - D'

0 2 5 10m



Slabs have been filled till the well shaft



Toda at entrance have been removed

Ancient Stepwell, Maninagar Ward, Ahmedabad (29)

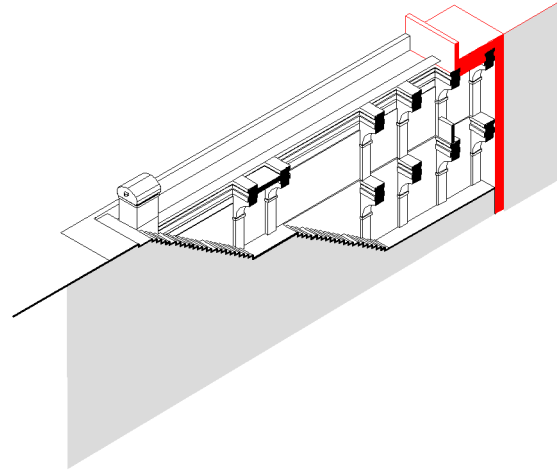
Relatively plain, but otherwise intact, this stepwell is located opposite the Uttamnagar Garden in Maninagar. The stepwell sits in a vacant plot surrounded by a residential neighbourhood. The entrance to the well points to the west. This entire structure was once completely buried. AMC acted proactively to unearth this stepwell and restore it. The stepwell has two 'Toda', or entrance pillars on either side and has two *kuta* going down into the well.



Dirty water accumulates in the well



View towards well shaft



Isometric View



View from well shaft

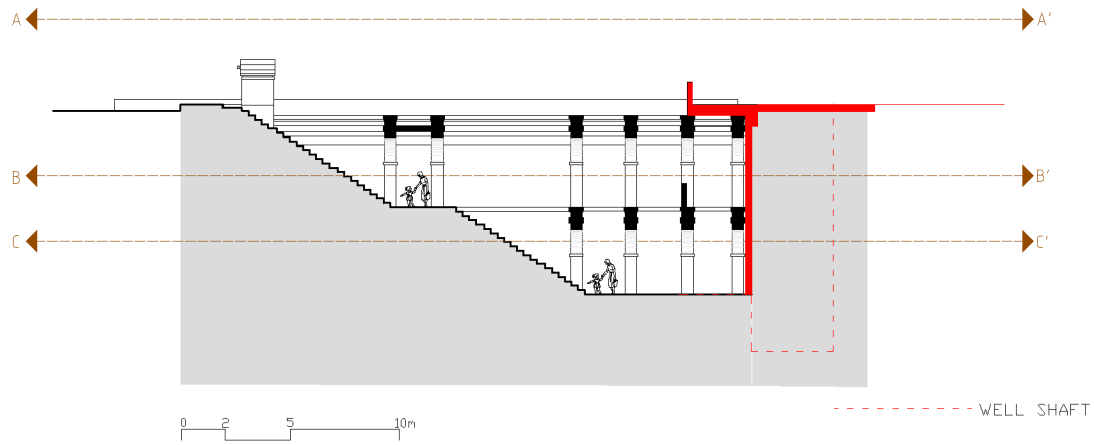


The original structure was made of brick and lime mortar. Lime plaster was applied to the walls as a part of the restoration. The structure is mostly unadorned, except for diamond patterns carved into the risers of the steps, and a few decorative bands in above niches in the side walls. Descending into the well, we first find a *Kuta* followed by two “*Ardh-kuta*” or supporting arches. These elements are

important to the lateral stability of the walls against earth pressure. The stepwell is today plagued by uncontrolled vegetation growth and by the ingress of sewage water into the *kutas*. The well shaft has also been filled up and covered with a tar road. The site is also used as a garbage dump by the residents and is not cleaned or maintained in any way.



Garbage being dumped inside the well

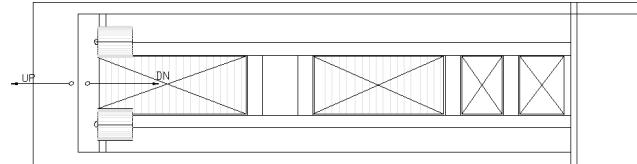


Section

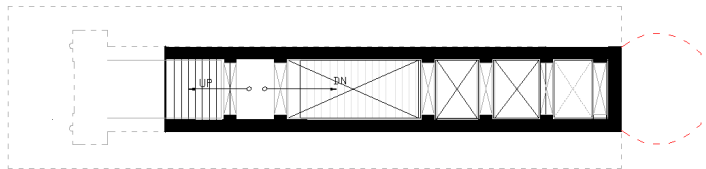


The structure is surrounded by a public garden

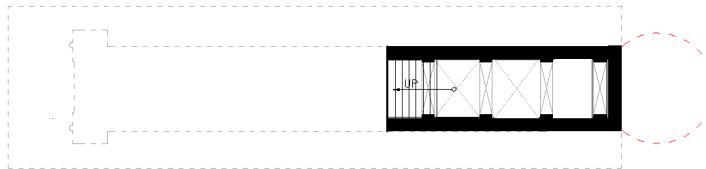
Site Plan A - A'



Plan at Level B - B'



Plan at Level C - C'



0 2 5 10m

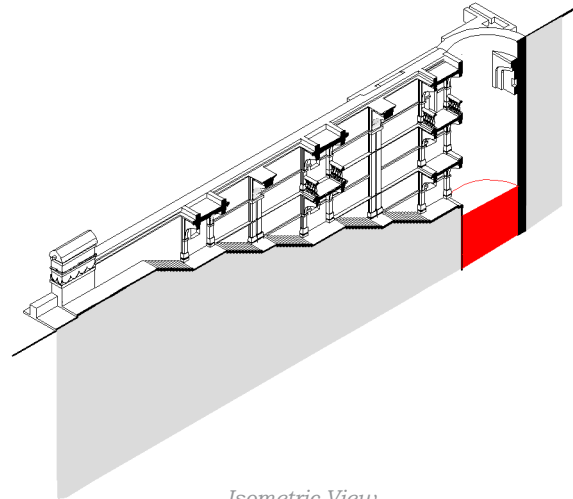
Stepwell, Vadaj, S.P.Stadium Ward, Ahmedabad (31)

Located within a residential colony, and maintained by AMC, this structure is a typical 3 *Kuta Nanda* type stepwell, with intermediate supporting arches between the *Kutas*. Its entrance faces west and has two relatively plain *Todas*, one of which has been reconstructed by AMC in 2013.

This stepwell is currently living its third life. One inscription near the base, declares that this Stepwell has been constructed in the reign of Emperor Aurangzeb, sometime in the 18th century. Another set of inscriptions states that the stepwell was renovated by Sheth Chunilal Nagindas Chinai of Kalpukhajurini pol in 1935. In 2013, AMC replastered the walls with lime plaster and resurfaced the stones with lime and stone dust.

The original structure is a composite between stone construction in the columns and arches, and brick and mortar in the walls.

There are some carvings and decorative elements in the structure, particularly on the stones ledges running between the columns. The niches are also framed with beautiful stone carvings. The well shaft also has a decorative arch in it, near the top of the shaft. The abnormal height of the entrance pillars suggests that the stepwell originally had a high plinth before descending back down towards the steps. The plinth was probably pillaged in later years.



Columns during restoration



Restored columns



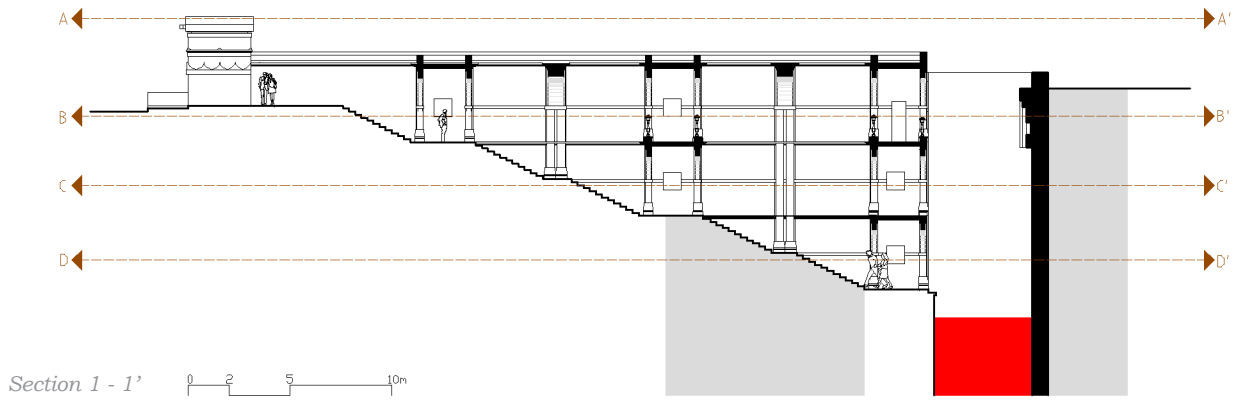
Before the restoration activity by AMC



After the restoration activity by AMC

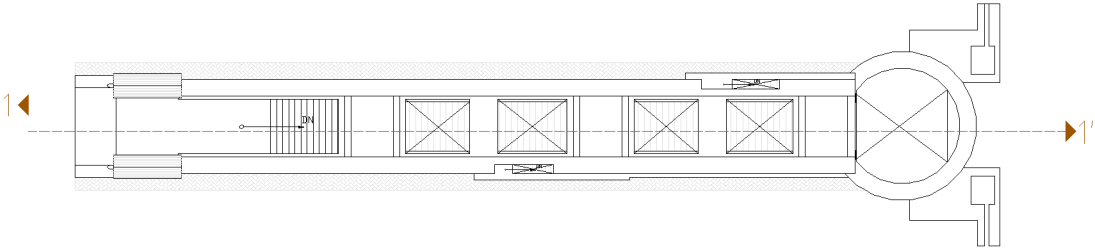


View inside well shaft

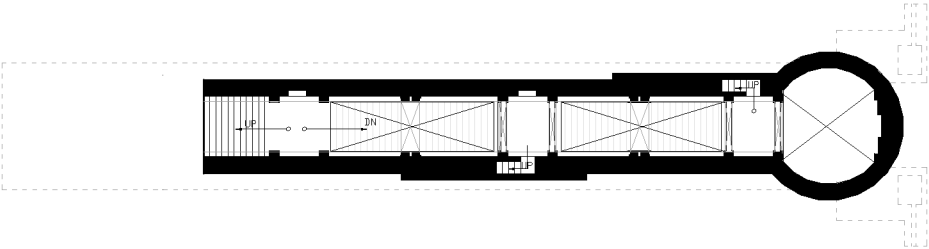


Full view of well

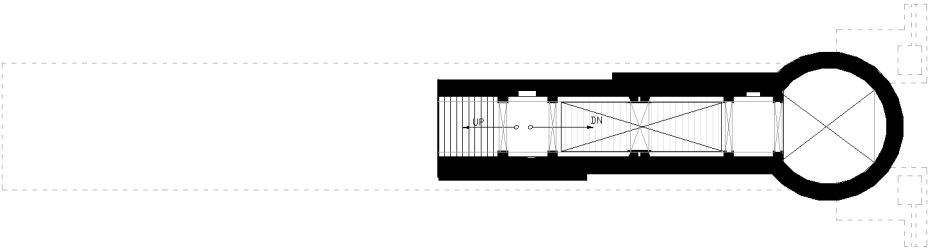
Site Plan at A - A'



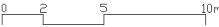
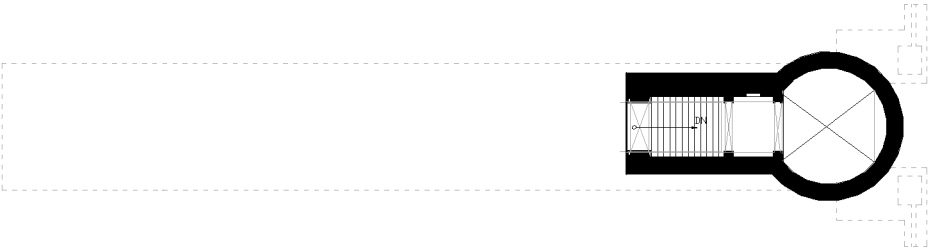
Plan at Level B - B'



Plan at Level C - C'



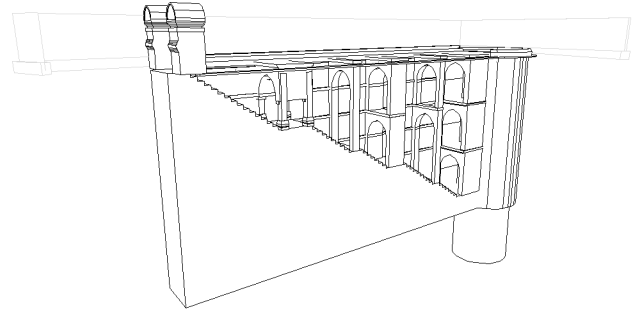
Plan at Level D - D'



Khodiyar Mata ni Vav, Bapunagar, Ahmedabad (21)

This stepwell, one among three in the Bapunagar Ward, is relatively intact. It is adjacent to the Viratnagar AMC sub-zonal office. The structure is looked after by the AMC office and some efforts have been made to maintain the structure. The stepwell has a south facing entrance and has three *Kutas*. It is not very heavily ornamented, only featuring basic details around the niches and along the walls.

The two *Toda* at the entrance are topped with stone blocks, with a pointed arch on their top. Each has a small recess to accommodate a small lamp, and several chiselled geometric bands. The structure of the well is a composite of sandstone columns, with brick and lime mortar in the arches and side walls. The side walls feature sandstone bands with geometric patterns. The arches supporting the first *Kuta* have reliefs of a lotus in full bloom.



Isometric View



Arch in first Kuta



*Before the restoration
activity by AMC*



*After the restoration
activity by AMC*



The well shaft features multi-layered arches and there are concentric geometric patterns on the walls and cornices. The arches themselves are narrow and pointed, suggesting that the stepwell was built in the Mughal era. In contrast, the lowermost level of the final *Kuta* is built entirely from stone. This level of the stepwell is expected to remain submerged for long periods of time when the well is in use and so must be made of a more durable material. AMC has been working to conserve the structure by restoring the lime plaster on the walls and columns. When the UMC team originally visited this well in 2014, the platforms were covered in rubbish and the well was used as an open defecation site. The water had turned black and the stepwell reeked.

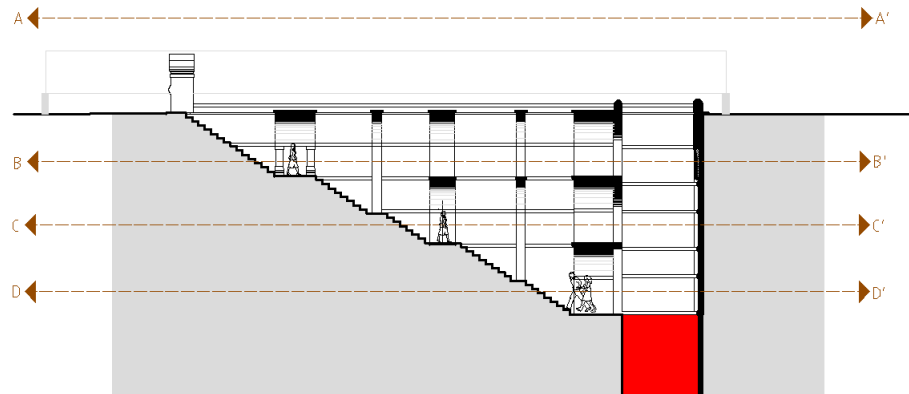
The silver lining is, that when revisiting the stepwell in 2017, we find that there has been a commendable effort to clean up the well. Most of the rubbish has been removed, and efforts are being made to try and clean the water in the well. The gates and grills installed are not sensitive to the original structure, but seem to be effective in providing access control to the stepwell.



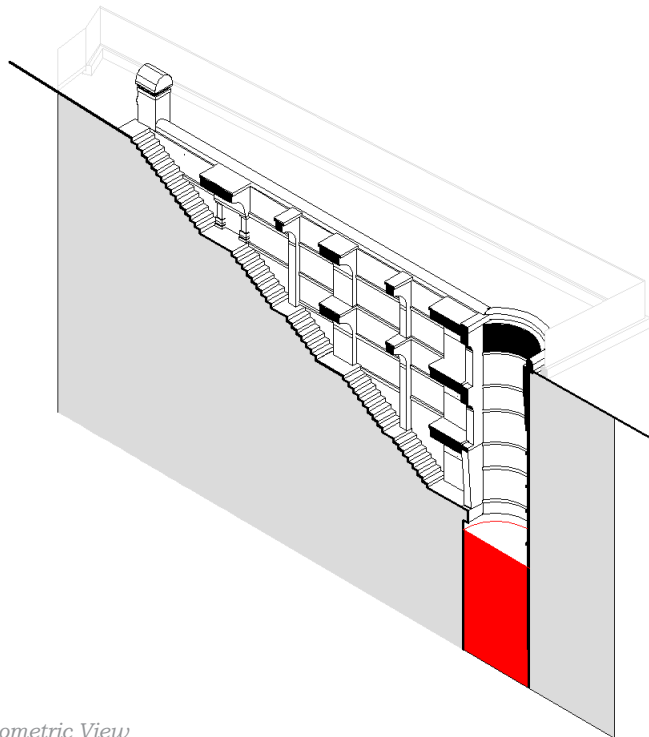
Layered arches are used to decorate the well shaft



The change in material is clearly visible



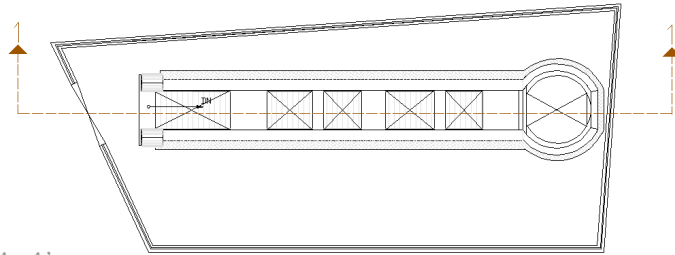
Section 1-1'



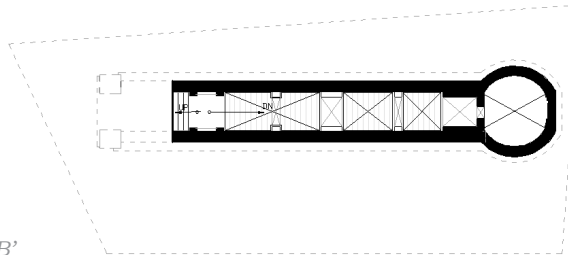
Isometric View



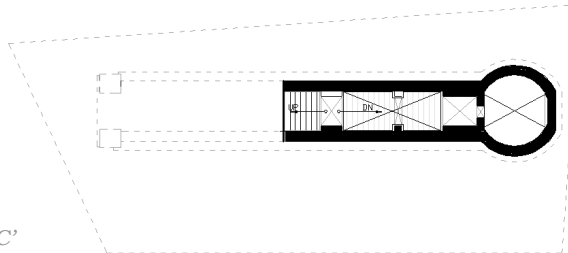
Stone is used in the lowest arch



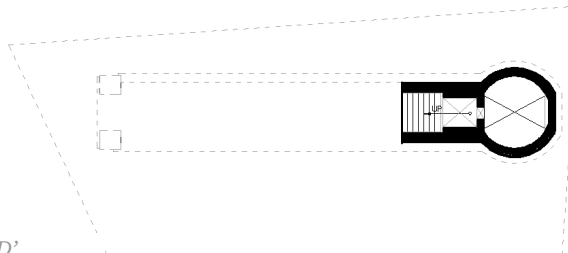
Site Plan at A - A'



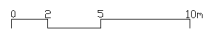
Plan at level B - B'



Plan at level C - C'



Plan at level D - D'



Stepwell, Bhadaj village, Gota Ward, Ahmedabad (25)

This structure from the Sultanate period is among the larger stepwells that have been identified as a part of our team's surveys, and unfortunately lies in ruins. At almost 42 m long and over 6m wide, the stepwell rivals many well documented structures. The entrance to the structure, lies to the west, and the well once lay in the east. We see evidence of 4 *Kutas*, and the proportions suggest that there was once a fifth. This type of spatial organisation is known as the *Bhadra* typology.



Layered arches are used to decorate the well shaft

The entrance and the fifth *Kuta* has been encroached by a small temple and only one of the *Toda* still exists. The steps leading down to the first *Kuta* and beyond have been filled with soil and other waste, but we can still see the carvings on the seating (*Kakshasan*) for the first *Kuta*.



Cracks along the walls.



A temple has been built over the entrance to the vav.



When our team first visited the site in 2014, the beam below the seating was visible. It was covered with an intricate lotus leaf pattern, known as a *Padmatra*. The rest of the seating above it has different patterns in different horizontal bands, building up to a backrest with an equally intricate *Kevra* (Pandanus) leaf pattern. However, when we revisited the site in 2017, we found that the level has been filled further and paved, eliminating more of this beautiful carving. These patterns are reminiscent of some seen in larger temples in the region.



Before



After



Before



After

Within the last 3 years, the 4th Kuta has also been removed by the construction of a wall and demolition of the remaining columns and beams. The structure is a composite of brick and mortar, and stone, and has brick arches over various spans all over the structure. Particularly, there are no other documented instances of the use of brick arches in the side walls of a stepwell anywhere else in Gujarat, making this an especially valuable specimen.



Brick arches are clearly visible in the side walls

The side walls have a carved diamond pattern which is then topped by large semi-circular stones, known as *Kubjapusthaghat* or “Elephant Backs”. All these features, and the sizes of the bricks suggest that this is among the largest stepwells constructed in the Sultanate Period.

This structure is extremely vulnerable today. In three visits over the last 3 years we have already seen significant deterioration of the structure, both due to decay and weathering and due to insensitive interventions by the adjacent temples. Not only are many of the visible features of the stepwell completely unique, but there is also potential for more to be revealed with careful excavation and conservation. This is only possible with conscientious intervention targeted toward the preservation of the well for future generations.



Vegetation increases the vulnerability of the ruin



View into the Vav

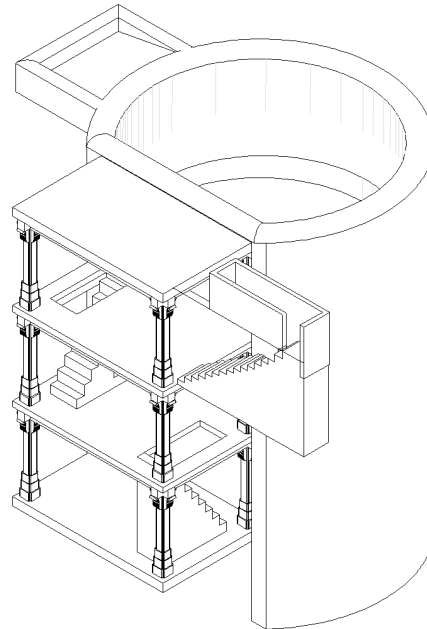
Syed Hazrat Jalaluddin ni Vav, Girdharnagar, Ahmedabad (23)

This step well, known formally as Saiyad Hazrat Jalaluddin Ni Vav and to the locals as Jajhar Vav, is unique among all the step wells documented in this book. Upon first inspection, this well appears to have an apartment like structure, with 3 levels stacked one above the other, rather than the traditional stepped layout. No other documented wells have this structure, making it completely unique. Upon closer inspection, however, we can see that this is a later modification.



View into the Vav

We know this because of the differences in the bricks used in the well shaft and the landings. The well shafts clearly have Mughal era bricks. In contrast, the landings have been sealed by bricks that seem to belong to the early colonial era. Except this, there is nothing about the modifications that would suggest that the apartment like structure was a later modification. The technical skill showed by these modifications indicate that the well was probably still in use at that point and the builders were quite knowledgeable of both the cultural and functional importance of the building. Each of the floor plates is just over 5.5 sqmt in size. While modifying it, the first and the second *Kutas* of the stepwell were filled completely and then cut outs were made in the stone slabs in the third *Kuta*. A straicase was added to the north to give access into the first level.



Isometric View



The ornamentation around the niches and on the columns, which are a part of the original step well, has elements that are reminiscent of Sultanate structures, but the quality of the carving seems inferior to specimens which belong to that period. Carved bands, also known as *gagrakapatti*, on the beams, and stepped 'Sunidhya' column capitals indicate the original axis of the Stepwell. There are symbols of a lotus in full bloom within the niches. Bands with floral and geometric patterns are also prominently visible.

Unfortunately, this stepwell has been neglected and seems to also have been encroached upon. The niches have in some parts been painted with bright oil paints, and in other parts been framed by porcelain tiles. Garbage is accumulating within the well-shaft and on the steps. Without some active conservation efforts, this structure will soon be lost.



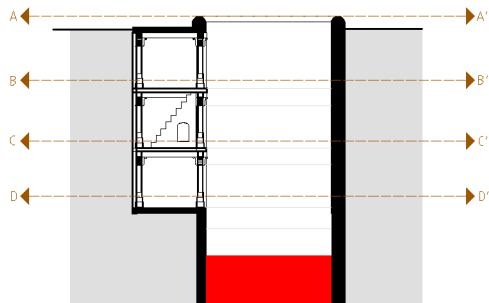
Steps have been cut out in the floor slabs



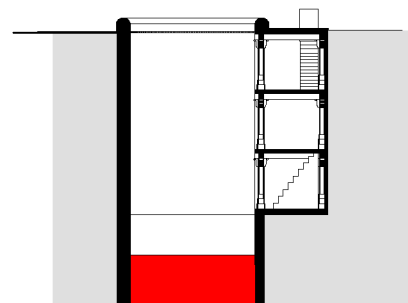
View at top of well shaft



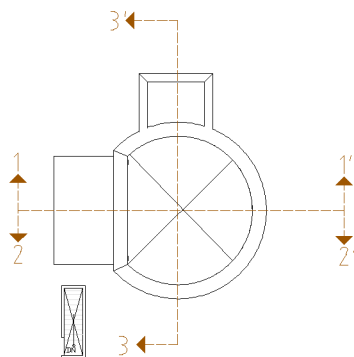
The niches have been carelessly painted



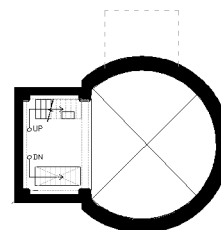
Section 1-1'



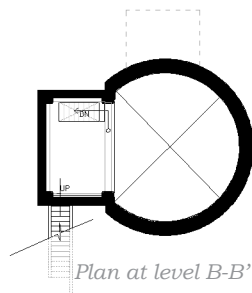
Section 2-2'



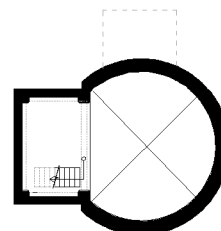
Site Plan A-A'



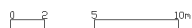
Plan at level C-C'



Plan at level B-B'



Plan at level D-D'





A resident looks into the well shaft

Ancient Stepwell, Jhaloda Village, Ta: Kadi (10)

This stepwell is the best specimen we have found of a stepwell located within a lake. It is oriented with the well in the north, and is constructed almost entirely out of lime and brick. It has a defined entrance pavilion with four columns and arches supporting the roof. Even the steps leading down toward the well are made of brick. Their sizes suggests that it was made in the Mughal Era.

The well is almost 34 meters long, and has 3 *Kutas*, with intermediate *Ardhkutas* between them. The walls are coped with semi-circular stones. Time, and the changing soil pressure has caused the side walls and wall shaft to deform and start slowly collapsing inwards. The structure has been completely overgrown, and the well is being used as a waste dump. The eastern wall of the well shaft has a layered brick arch. Generally, this feature would be in the front wall to the north. A water trough is connected to the stepwell to the west.



The well has been covered by vegetation



View from well shaft



View from entrance



Rather than Toda, this vav has an entrance pavilion

Sindhvai Mata ni Vav, Indrapuri Ward, Ahmedabad (26)

Situated adjacent to the Sindhvai-Mata temple in Indrapuri Ward, this stepwell is also threatened by dilapidation and decay. The stepwell is almost entirely built from stone. The structure is oriented with the entrance in the north, and has three *Kutas*, making it a *Nanda* type well. However, the first *Kuta* is not covered by a pavilion, and is much smaller than the other two. The second *Kuta* has very plain brackets, only made of single rounded stone piece, whereas the third *Kuta* has heavily ornamented brackets. The niches similarly, vary in different parts of the structure.

This variation suggests that the stepwell actually has some parts claimed from parts of other demolished buildings. Especially the variation in the brackets, and some of the stones used to construct the edge of the well on the upper floors suggests that the parts have come from a variety of other structures.

This makes it difficult to establish the age of the structure. Uncontrolled vegetation growth and encroachments from a nearby temple make the step well vulnerable.



Temple adjacent to the Vav



Comparison of bracket types in stepwell (L) and (R)



View of the well shaft



View of the first and second Kuta



Kutas get narrower at lower levels

Khodiyar Mata ni Vav, Badodara Village, Ahmedabad (4)

This stepwell is among a few that have been built within the basin of a lake. This placement gives a few advantages, such as reduced excavation to reach the water table and quicker recharging of the ground water in the wet seasons. This structure, unfortunately, has been converted into a ruin by the passage of time.

Only one of the entrance pillars is still standing. It has been hollowed out and is used to hold an image of a goddess. The stepwell is largely built from brick and lime, but there are also some blocks of sandstone visible today. The side walls have begun to collapse, and vegetation has started growing beneath the exposed steps. The site is used as a dumping ground by the locals. The first arch is still standing and is adorned by the pattern of a lotus in bloom. The subsequent arches have collapsed and the structure has silted up, making it difficult to judge the total length of the structure.

However, the platforms and the position of the well suggests that the stepwell was 3 *Kuta* deep. The final arch, connected to the well has a very similar structure to the final arch in Rudabai ni Vav in Adalaj, suggesting that this stepwell was built or renovated around the same time.



Improper materials have been used for restoration



The beam and column system is visible



No Kutas are visible in the entrance.



The stepwell is in a state of severe disrepair



The stepwell uses a system of stone beams and columns



Layered arches are visible in the well shaft

Ancient Stepwell, Valad Village, Gandhinagar (2)

This stepwell near the village of Valad has been completely overrun by nature. Very little of the lower levels is accessible today. Large sections of wall have collapsed, but the depth of the well suggests that the structure has 4 *Kutas*. The *Kutas* are made with stone columns and beams, and there are arched intermediate *Ardhkutas*. The walls are made of brick and lime and then clad with sandstone. The entrance is framed by two massive *Toda*, constructed in brick and lime and then faced with carved stones. Some of the carvings are visible today, decorated with the pattern of a jasmine flower. The column capitals are carved with organic symbols, and the niche frames are also similarly decorated. The back of the well also has an arched support running across the back and the centre. The style of the arches in the stepwell suggest that it was built in the Sultanate period. A carving in one of the arches supports that theory.

Several trees have sunk their roots into the structure, causing collapses and damaging the stability of the arches.

The overall effect is beautiful, but allowing this uncontrolled growth will further damage the structure. It is important to document, and conserve this structure for future generations.



The stepwell is in severe disrepair



One of the only Vavs with a stone masonry arch



Vegetation is damaging the structure of the stepwell



Motifs present in the stepwell



Intrinsic details of the stepwell



We can see remnants of the ruined Todas

Khodiyar Mata ni Vav-1, Devdi Village, Ahmedabad (7)

This stepwell is a ruin of what was once a massive structure. The scale of the surviving arches and the breadth of the well suggests that it had 5 *Kutas*, and was of the *Bhadra* typology. The structural system of this *Vav* is unique, with stone columns and beams used to construct the intermediate floors while a brick arch resting directly on the walls is used to construct the uppermost landings. This allows the upper landings to take on an impressive height.

Very little of the structure is visible. Only the two upper landings, and a part of the well shaft, are visible now. The brickwork projects inwards in the pavilions to make room to add ornamentation to the structure.

The style of the arches and the use of small unburnt bricks suggests that the stepwell belongs to the Sultanate period. The lower levels of the stepwell have been filled by earth and mud. The composite structure seems to suggest that there is more to the structure on lower levels, and more exploration should be done.

The scale of the stepwell also suggests that it was on an important trading route, and quite possible one of the last major stops before entering the city of Ahmedabad.



The well has almost been filled up



Very little of this massive structure survives today



The brick masonry in the arches is clearly visible



Combination of stone and brick



The water table is far below the original level



The extent of the damage suggests the stepwell was abandoned long ago

Guruji ni Vav, Kanij Village, Ta: Mehmedabad (11)



This stepwell, constructed in the Mughal era, is suffering from severe dilapidation. A small well, near the village of Kanij, it is currently covered in vegetation and has not been maintained. The lime and brick structure is extremely plain and does not have much ornamentation. The inside of the structure is plastered with lime.



The well is empty



The Toda has been rebuilt in a modern style



This is a very small and narrow structure

Dholi Vav, Chosar village, Ahmedabad (19)



This is a relatively modern stepwell, constructed in 1932 by Narandas Maganlal, a resident of Ahmedabad and a trader of the nearby town. This shows in the differences in the architecture. The well is small and contained. Rather than full *Kutas*, there are only two supporting arches in the structure. It is quite a narrow structure as well, and the well is small. The structure has been conserved by the *Jal Sampatti Vibhag* (Water Resources Department), Government of Gujarat, looking at it as a piece of water infrastructure, rather than of heritage value. The compound containing the well appears to still be in use to feed animals from the vicinity.



The residents use the stepwell to feed livestock



The water is dirty and putrid

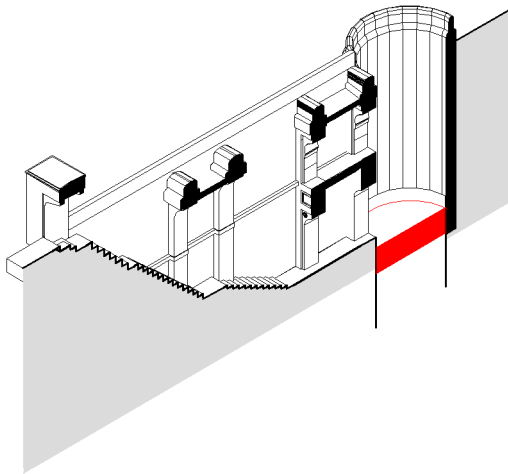
Stepwell, Vasana, Vasana Ward, Ahmedabad (32)



Located within the old mill colony of Guptanagar, this stepwell is among the most dilapidated that we have found. A small structure with only two *Kuta*, it faces considerable threat from encroachments and neglect. The adjoining house has extended its structure right to the edge of the stepwell, increasing the risk of collapse.

The well itself is oriented with its entrance facing north, and is constructed mostly from stone with a brick infill. The size of the bricks suggests it belongs to the Mughal period. The structure has a few geometric carvings on the risers and a carving of a lotus in bloom on the front of the arches. The stone on the steps appears to have been obtained from other collapsed structures from the time. Much of the structure has also been replaced at later dates.

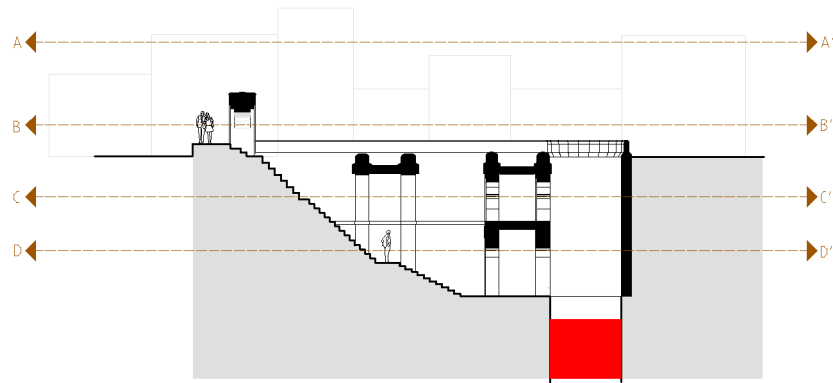
The stepwell is threatened by roots of a Banyan tree which has grown into the well shaft. The residents also use the stepwell as a dumping ground, and have built little shrines in the niches of the stepwell.



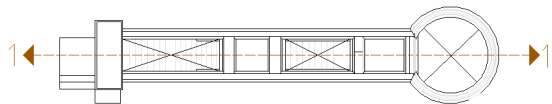
Isometric View



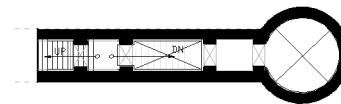
The residents have started encroaching on the structure



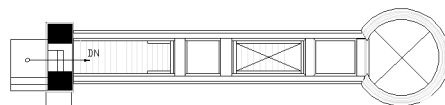
Section 1 - 1'



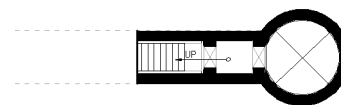
Site Plan A - A'



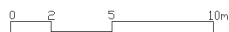
Plan at level C - C'



Plan at level B - B'



Plan at level D - D'





Vegetation is damaging the structure

Mahakali Mata ni Vav, Bapunagar, Ahmedabad (22)



The original structure for this stepwell, likely built in the 1800s, has been completely renovated into a temple by the local community. Only the first level of the structure is accessible today. All of the lower levels have been converted and sealed, making it impossible to postulate the original structure and geometry of the well. The surviving niches in the well have been reused to place images of deities and the lower levels have been converted into a worship space.

The original structure was extremely narrow, only wide enough for a single person to enter at a time. The structure was expanded at the level of the first *Kuta* to construct parts of the temple. A single inscription is still available along the inner edge of one of the walls, marking either the construction or renovation of the well. None of the original adornments of the stepwell are visible today.



The residents have converted the entire structure



The arches are barely recognizable

Khodiyar Mata ni Vav, Aslali village, Ahmedabad (3)



This stepwell is located on the edge of a lake along the Ahmedabad-Bombay National Highway. A part of the road has been constructed over the Stepwell, and the structure has been reinforced with concrete and cement plaster. An inscription within the stepwell indicated that it was built in the 18th century by a patron residing in Ahmedabad. Aside from this, however, no carvings or other details are visible.

The adjoining lake means that the water level within the well is still very high. However, due to the temple occupying the structure, the water has been polluted by trash from the devotees.



The water inside is putrid



A road has been built over the well

Vav Wala Amba Mata nu Mandir, Ambawadi, Ahmedabad (20)



Situated on Silver Park Road, near Jivraj Park in the Ambavadi Ward, this stepwell is currently occupied by the Leuva Patidar Kuldevi Trust, and has been renovated for use as a temple. The temple is currently accessible from two sides, to the north and the east. Only the upper levels of the stepwell are accessible today, and the access to the well has been sealed. Because of the extensive cladding, and the construction of walls closing the lower levels it is now impossible to determine the original geometry of the stepwell. The original well shaft is now used to draw water with a bore. The remaining elements have strong influences from Islamic Architecture and indicate that the *Vav* was probably constructed during the Islamic period.

The entrance to the stepwell has been completely covered by the temple. The deity is placed within what might have been the second *Kuta*, and is covered by a dome. It is safe to assume that the stepwell was built from sandstone, brick and lime mortar. The columns and the scale of the arches suggest that the stepwell was heavily ornamented.

The major motivation of the modifications to the structure appear to be maintenance and its present use as a temple by the locals. These interventions have however completely ruined its value as a heritage structure. Marble, glazed tiles and coloured glass give the structure a gaudy aesthetic and eliminate all the traditional carvings and textures



A steel roof has been erected over the stepwell



The entire structure is covered in glazed tiles

Khodiyar Mata ni Vav, Ropada Village, Ahmedabad (17)



The only part of this stepwell still visible today, is the wall of the well shaft. At almost 8 m wide, this is the largest well shaft among the wells we have documented. The well was probably abandoned long ago, as a replacement stepwell exists nearby, and has completed its own useful life. The rest of the structure is lost today, and has likely been pillaged and lost a long time ago.



Only part of the well shaft is still visible



A section of the wall gives us an idea of the orientation



The damage is continuing

Khodiyar Mata ni Vav, Khokhara Ward, Ahmedabad (35)



The entire structure of this stepwell near Hatkeshwar Circle in the Khokhara ward in eastern Ahmedabad, has been taken over by the Khodiyar Mata Mandir. The extent of the modifications make it impossible to determine the original number of *Kutas*, and the structural system of the stepwell. The area above the opening has been covered by a large concrete hall. The internal areas of the structure have been covered with ceramic tiles and acrylic paints. A steel railing has been added down the middle of the steps and significant additional excavation and expansion has been undertaken at the lower levels after knocking out the old side walls. The original plan is almost entirely lost today.



The intermediate levels have been converted to prayer halls



The stepwell has been encroached upon

Khodiyar Mata ni Vav – 1, Vastral Ward, Ahmedabad (33)



This stepwell, currently occupied by a temple, has been insensitively renovated by the temple administrators. The extent of the interventions makes it impossible to identify the original form or structure of the stepwell. The original structure has been covered by porcelain tiles and remodeled. A steel railing has been installed down the central steps and a steel walkway has been placed across the beams supporting the *Kutas*. A modern temple structure has been constructed over the entrance and the rest of the structure has been covered with a steel frame and plastic panelling. The extent of the modifications prevent any accurate dating of the structure.



The outside of the structure is still very plain



This is one of the larger stepwells in the region

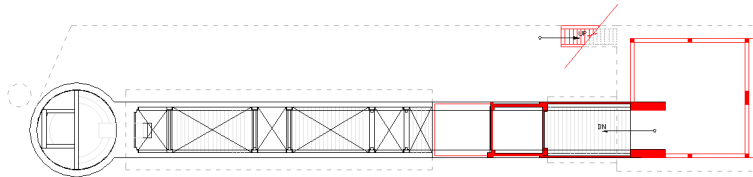


Only a faint idea of the original geometry can still be felt

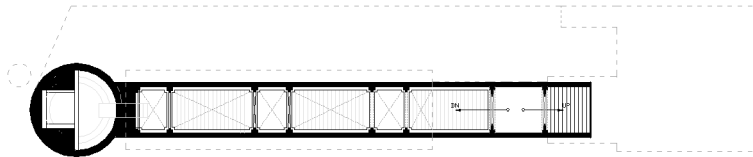
Site Plan A - A'



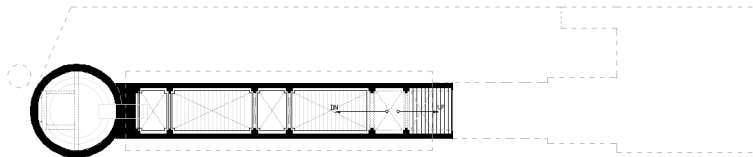
Plan at Level B - B'



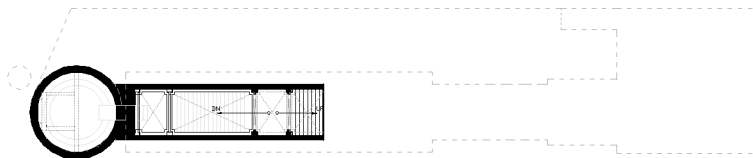
Plan at Level C - C'



Plan at Level D - D'



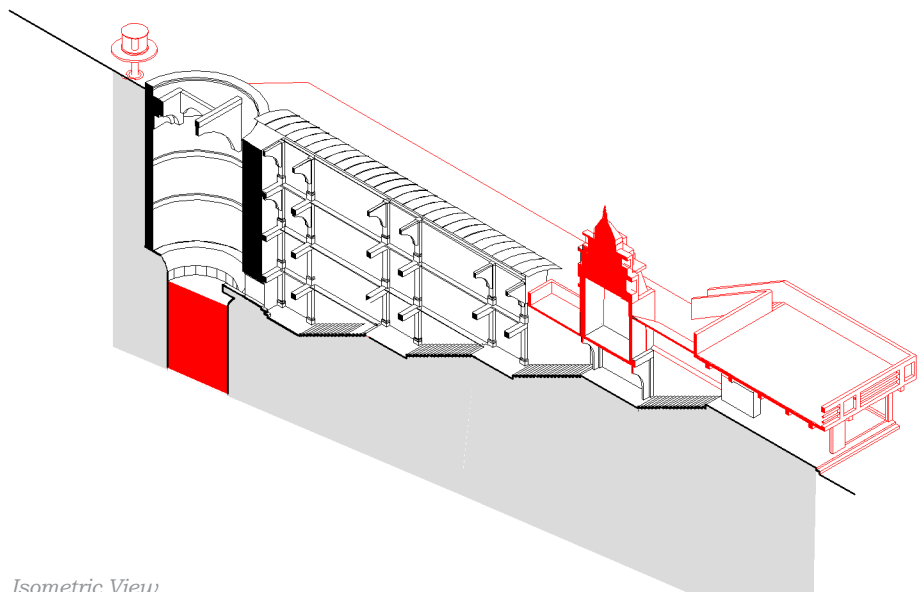
Plan at Level E - E'



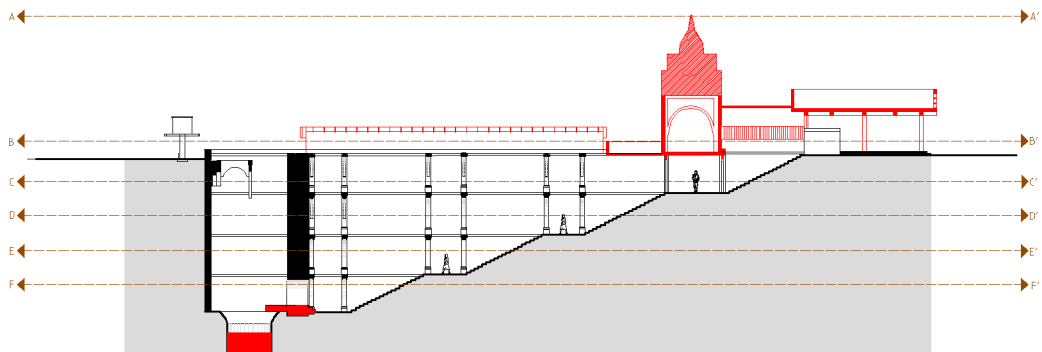
Plan at Level F - F'



0 5 10m



Isometric View



Longitudinal Section

0 2 5 10m

Khodiyar Mata ni Vav – 2, Vastral Ward, Ahmedabad (34)



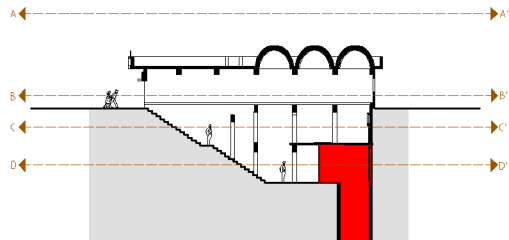
This stepwell is undergoing the same process as its sister in the village. A temple has completely encroached the structure and plastered the walls with cement plaster and installed railings on the stairs. The well shaft has been covered up and cement concrete slabs have been added haphazardly to make intermediate levels within the structure. Any original carvings or other features in the structure have been completely lost to the renovations.



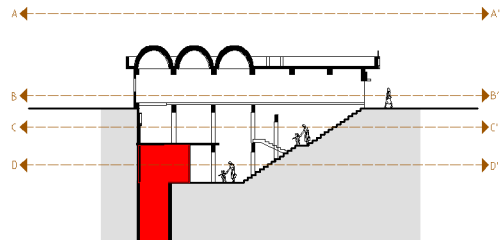
This stepwell is in the process of being encroached on



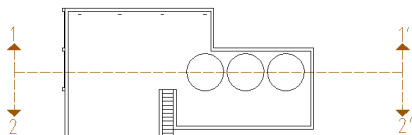
A temple has already occupied the front of the structure



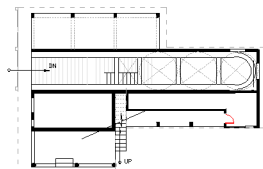
Section 1 - 1'



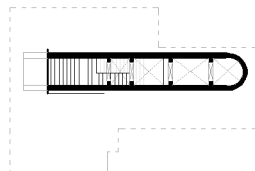
Section 2 - 2'



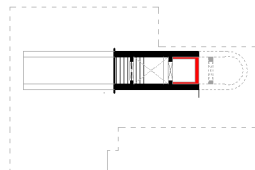
Site Plan at A - A'



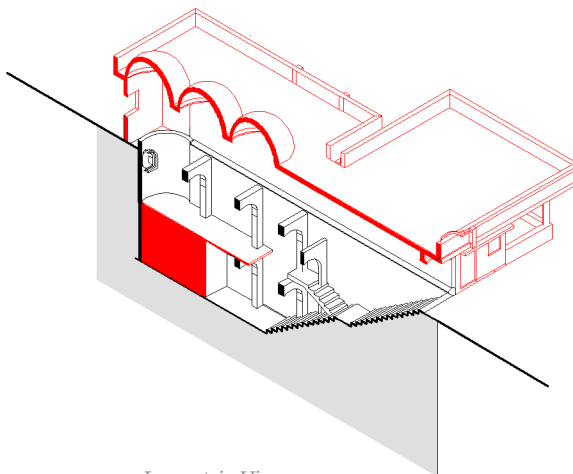
Plan at Level B - B'



Plan at Level C - C'



Plan at Level D - D'



Isometric View

Chara ni Vav, Chosar village, Ahmedabad (6)



The ruins of this stepwell lie on the Chorsar-Jetalpur road. Most of the structure has been filled with mud, and only the well and a few parts of the *Kuta* are visible today. The structure is built from brick and lime, with brick arches as the load carrying system. The size of the bricks suggests that it was originally built in the Mughal Period. What is left of the structure is obscured by vegetation and the well has been filled with very polluted water.



The walls are crumbling



The remnants of the well shaft



Narrow brick arches are visible along the length

Khodiyar Mata ni Vav-2, Devdi village, Ahmedabad (8)



This well is a fairly typical 3 *Kuta* stepwell. Built from brick and lime, with a system of arches to construct the *Kutas*. The well is built on a high plinth, parts of which have become exposed today. There has been an effort to conserve the stepwell by the *Jal Sampatti Vibhag*, but their methods have been incorrect. The entire structure has been covered in cement plaster and whitewashed. The stepwell acts as a shrine and porcelain tiles have been added in several parts, including tiles bearing the image of a goddess in the niches. From the arches and the proportions, the well appears to have been constructed in the Mughal era.

The structure has very little ornamentation. The undersides of the bands connecting the *Kutas* are carved, as are the frames of the niches. The locals still use the stepwell as a resting place today.



The structure has been recently covered with cement plaster



The stepwell is a typical 3 Kuta structure



There is no water in the well anymore

Ancient Stepwell, Enasan village, Ahmedabad (9)



Another typical *Nanda* type stepwell, it has been insensitively renovated with cement plaster and paint. The structure is built with brick and mortar, with brick arches in the *Kutas*. The pavilion in the first *Kuta* has collapsed. The stepwell is quite narrow and compact. All the ornamentation has been covered by plaster and none of the details are still visible. The alterations have completely destroyed the heritage value of the structure.



Cement plaster and paint have been used to restore this well



The Toda do not have any distinct form left



The arches have lost their original character

Khodiyar Mata ni Vav, Lambha Ward, Ahmedabad (28)



This stepwell has also been converted for use as a temple by the local community. The original structure has been insensitively expanded, and concrete slabs have been added haphazardly. Whatever is left of the original structure has been closed off. The entire heritage value of the structure is lost to these insensitive interventions.

However, from what is left of the structure we can see some Islamic elements in the stepwell, such as a dome in the chamber now occupied by the deity. The structure probably belongs to the Mughal period.



The inside of the well is dirty and degraded



The dome has been taken into the temple structure

Khodiyar Mata ni Vav, Memadpur Village, Ahmedabad (14)



This small stepwell, is also built within the area of a lake. The ground around the structure has been raised during renovations by the *Jal Sampatti Vibhag*, and the structure has been fenced off. The structure is very narrow, and once had three *Kutas*. One of the *Kuta* towers has been removed and replaced with a well and arched opening. The structure consists of sandstone pillars and beams, with brick and lime mortar infill in the walls. The lintels are carved with bird figures, while the niches have sculptures of seven saints. These motifs suggest that the structure was built by a Hindu patron. There is a small *Hawda* (a trough for livestock) with an irrigation channel connected to the stepwell.



The well shaft is still open



A lot of soil has been filled around the structure



The well is not in regular use today

Derani-Jethani ni Vav, Ropada Village, Ahmedabad (16)



This *Vav* appears to be a replacement for the far more ancient stepwell located closer to the village. The structure, like most others, is mostly made from brick and lime mortar. The *Jal Sampatti Vibhag* has made significant renovations and additions to the structure, including what appears to be the reconstruction of an entire level in the structure. Most of the structure has also been covered in cement plaster. The lowermost level of the last *Kuta* has been constructed in stone, rather than brick for better durability under water.

A lot of silt has accumulated in this well and there may be another layer to the structure that has been lost today.



The structure has a combination of beam, columns and arches



The well shaft is still accessible

Stepwell, Sankhej village, Ta: Kheda (18)



All that survives of this structure are two walls and a part of the well, serving as evidence of the stepwell that was once present here. The entire structure has otherwise been lost and covered in mud. The bricks suggest that this structure was originally built sometime in the 16th century.



Only two walls are visible today



More excavation could reveal further information



There are no other ruins around this structure

Conclusion



Stepwell, Bhadaj Village, Gota Ward

Today, most of our built heritage especially in cities faces severe threat. Built urban heritage requires a lot of resources to survive. Conserving built heritage in cities presents unique challenges and opportunities. Issues such as scarce and pressured land resources, changing aspirations of the common man as well as that of authorities make urban conservation a low priority.

The character of a city is not shaped in a day. They are the result of centuries of growth, with new elements constantly juxtaposed with the old. Our cities have been shaped by several layers of imprints of conquests and settlers.

Our heritage and traditional settlements should be looked upon as assets rather than as liabilities because they are a part of our collective history. They represent our traditions, stories and culture through the architecture and the urban form. With new aspirations of world class cities and infrastructure, we forget to balance these new aspirations of smart cities and glitzy buildings with that of our heritage which give the unique character to the city. This balance can be sought with the help of continuous research and documentation, policy intervention and sensitive conservation.

Heritage conservation in India is largely under the purview of the Archaeological Survey of India (ASI) and State Archaeological Departments. These bodies set the laws and guidelines for conservation, preservation, and any intervention in built heritage and their mandate is to protect ancient monuments and archaeological sites. However, their inventory is minute as it does not include the plethora of unlisted, ungraded and undocumented buildings in cities.

These organizations need support to translate these guidelines to city specific contexts and to implement these at the local level. This support needs to come from the



urban local bodies. In most cases, urban local bodies face acute challenges of lack of adequate and skilled human resources, and funds for conservation. Caught up with the challenge of providing basic services to its citizens, heritage conservation typically takes a back seat. This situation is further exacerbated due to lack of clear titles and occupation status of many of these structures.

Urban Local Bodies are the level of government that is closest to people. They also have the mandate to prepare development plans, local area plans and micro plans that ensure that old buildings are incentivised and adaptive reuse is encouraged.

Local governments should conduct surveys and studies of these areas and create an environment in which innovative ideas for revitalization can be realized. They must collaborate with private sector organizations to make this possible.

If built heritage is not in use, it stagnates. Attempting to freeze built heritage in time will always have limited success. A slightly different approach, centred around sensitive adaptation and appropriate reuse of these built forms might be a better strategy to adopt. Alternatively, developing an implementable framework for incentivising heritage conservation through tradable development rights, exemptions, tax rebates, special development permissions and other incentives might also bring private sector participation to the heritage management sector.

In the case of stepwells, this need is even more present. The structures may or may not be heavily ornamented. Individually they do not have outstanding or obvious value, but collectively they represent our culture and history. They can be preserved by allowing people to find new uses for these spaces which do not destroy the basic character of

the space. Acknowledging the economic or social potential of these spaces as cafes, small libraries or sit outs, and creating policies supporting these uses is the way forward for heritage in India.

ULBs can set a role model in allowing such changes within a framework and then allowing the private sector to adopt. ULBs need to address and respond to the immediate need for urban conservation with innovation and urgency if we are to save our age old built heritage for our future generations.

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Manvita Baradi has over 25 years of technical experience in developing and administering programs to local governments in the areas of heritage management, urban governance and management. She has been training and building capacities of local governments and has operationalized local government associations in India. She has served as technical expert on USAID, ADB, DFID and World Bank funded programs for local governance, local government association development and urban planning programs in post-conflict regions like Afghanistan, Sri Lanka and Indonesia. Manvita also serves as the Founder Dean of Faculty of (Urban) Management at CEPT University. She is the former Gujarat State Convener of Indian National Trust of Art and Cultural Heritage (INTACH) until recently. Manvita is passionate about theatre and is actively involved in developmental communication using street theatre as an effective medium for communication. She effectively uses her knowledge of city planning, design and theatre to work with people across age groups and knowledge skills. Manvita is a graduate in Architecture and holds a master's degree in Urban - Regional Planning from CEPT- Ahmedabad and is an alumni of the Senior Executive Institute, Darden Business School, University of Virginia and has studied local government management from University of Illinois, Urbana-Champaign.



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Meghna has been working in the fields of local governance, urban management, water-sanitation, urban health management and local government associations' development for over 18 years now. She has provided extensive technical support to donor funded programs in India, Sri Lanka, Indonesia and Afghanistan. She currently supports national and state programs of the Urban Management Centre to support urban livelihood and urban sanitation. She has managed city to city partnerships programs between cities of US and among Indian cities. Well aware of the role of communication in local urban governance, she is actively involved as technical leader in designing IEC strategies and material.

Meghna is a graduate in Architecture and holds a master's degree in Environmental Planning. She is passionate about sustainable solutions which local governments can implement and has been involved in several capacity needs assessment exercises for state and local government institutions.



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Researcher- Advisor

Munindra Joshi worked with the Gujarat State Archaeology Department for 32 years in a variety of roles ranging from exploration assistant, technical assistant, superintendent archaeology, head of office (Saurashtra region), assistant director to head of office (North Gujarat Circle). At UMC, with his vast field experience and expertise, he guides the team involved in the heritage projects. Munindra Joshi holds a Master's degree in Indian Culture from the Gujarat University.



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Kaninik is a student of Construction Technology at CEPT University and a writer. He has served as Editor of the Amateur Literature Magazine 'Estrade', and as the Moderator of the British Library Writers' Club for over 3 years. He is trained as a child actor and as a director by the Theatre Media Centre (TMC). He has conducted workshops on theatre with underprivileged children alongside TMC's veteran directors. He has research interests in sustainable construction and urban planning.



Dada Harir ni Vav, Asarva



Khodiyar Mata ni Vav, Bareja

Notes



Stepwell, Bhadaj Village, Gota Ward