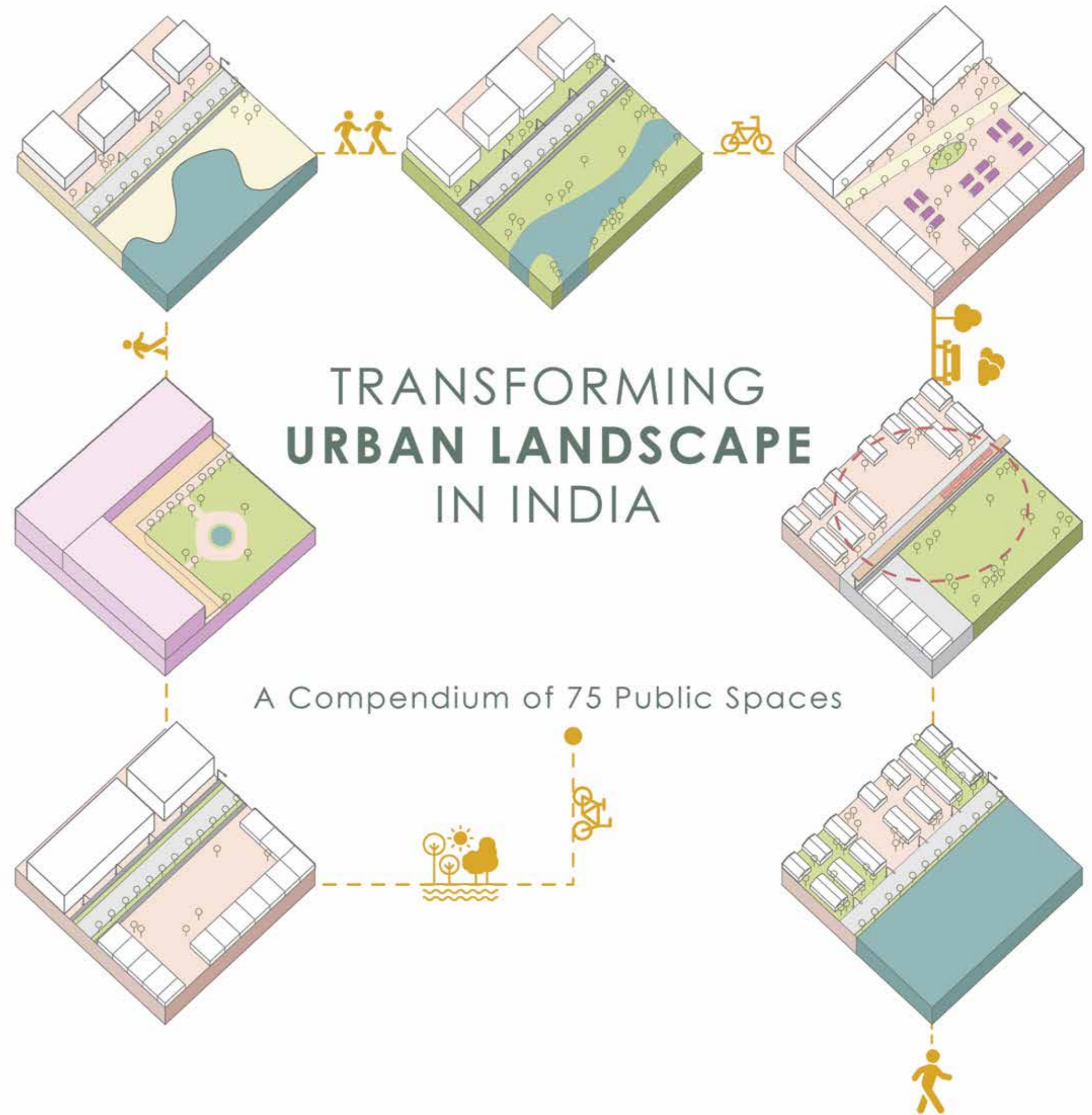


TRANSFORMING URBAN LANDSCAPE IN INDIA

A Compendium of 75 Public Spaces



National Institute of Urban Affairs



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Message from the Minister

Hardeep S Puri

Minister,
Ministry of Housing & Urban Affairs



India is witnessing rapid urbanisation today. The urban missions of the Government of India have introduced modern concepts such as walkable cities, compact neighbourhoods, and place-making initiatives to mitigate the negative effects of urbanisation. These approaches have been integral in co-opting citizens and stakeholders in the shared vision of the nation towards revitalising Indian cities. Inclusive public spaces and vibrant urban activity are significant indicators of the 'Quality of Life' of a city. Under various programmes of the Ministry of Housing and Urban Affairs (MoHUA), a concerted effort has been made to recognise this lived reality, and incentivise cities to creatively improve the quality of the public realm.

I am glad to see that the National Institute of Urban Affairs (NIUA) is releasing 'Transforming Urban Landscape in India: A Compendium of 75 Public Spaces'. Some of the best examples across India have been collated in this compendium, showcasing the effect that safe, vibrant and accessible public spaces have in bringing communities together to enjoy their unique cultural heritage. It helps the city in promoting tourism prospects and providing wider livelihood options. I am also pleased to see that this compendium captures some of the transformative work done under MoHUA's flagship Missions, including in some landmark projects that have reimagined waterfronts, derelict spaces, and heritage precincts into world-class destinations.

I congratulate NIUA and all the stakeholders involved for their sincere efforts in preparing this compendium. I am certain that this book will inspire people to view public urban spaces through a different lens, and will nudge them to fully appreciate the rich socio-cultural quotient that exists in every Indian city.

Message from the Secretary

Manoj Joshi

Secretary,
Ministry of Housing & Urban Affairs



This compendium on public-space-design provides new insights into re-imagining how the open-space and public-realm defines the ‘experience of the city’ for its residents. Streetscape design, waterfront promenades, lakefronts, market streets, heritage precincts and transit nodes collectively reflect the unique cultural heritage and the experience of the city.

A connected open space network, linear corridors, inclusive streets to navigate, and programmed waterfronts all contribute to making the city more accessible, fun and enjoyable. Streets, parks and the public open space in the city also need to be designed to combat the climate-change challenges and help mitigate the impact of storm water flooding, urban heat island effect, and vehicular pollution. Categorised under various themes like Heritage, Transit, Waterfronts, Parks, etc., these projects are trailblazers in their own right, overcoming the complex urban challenges and inspiring many others across the country.

This collection of public-space projects that have been built in different Indian cities, demonstrates the on-ground achievement. Celebrating 75 years of India’s Independence, this compendium is the start of a bigger engagement aimed to institutionalise the focus on getting cities to unlock the potential of their urban spaces – not only for place making but also as a response to tackling the climate-challenges. As a part of the Azadi ka Amrit Mahotsav, I am happy to share the best practices in the form of completed projects by different cities, consultants, and other stakeholders, contributing to improved mobility, enhanced walkability, non-motorized transport in cities and inclusive design in cities.

Message from the Joint Secretary

Kunal Kumar

Joint Secretary, Ministry of Housing and Urban Affairs

Mission Director, Smart Cities Mission

Vice President, National Institute of Urban Affairs



With increasing urban densities, the prospect of access to good quality public open space within walking distance from home is a dream for any resident. To escape all the stress of modern urban life and relax in natural settings is truly an invaluable asset for any urban community. It is important to bring in the natural green spaces within the city's dense urban fabric for recreational and commercial purposes. Also, it offers improved ease of living by ensuring a lower urban heat-island effect, better air quality, lesser pollution, and better human interactions. I am happy to see that the projects demonstrated in this compendium show how good quality public spaces are being realized in Indian cities.

The place-making projects in this compendium contribute to the liveability factor in the city and have been broadly categorized under the eight-core categories: Transit systems, Waterfront landscapes, Streetscape, Plaza, and promenades, Parks, Market-street, Heritage rejuvenation, and Temporal spaces. Open spaces can be destinations like district parks, incidental spaces like streets, plazas, and new transit nodes acting as gateways to the city. The celebration of the city's unique heritage is another opportunity for urban renewal and heritage revival. Connected new blue-green infrastructure with a public realm also helps to leverage the unique character and history of the city.

All public spaces in the city need to be proactively taken up and designed as safe, accessible, inclusive, and vibrant spaces. Some examples have demonstrated working landscapes, organic farming, rain gardens, and water recharge zones, incorporated within these landscapes to address sustainable development goals.

Global thinking, translated into local action on ground, is now an urgent mandate for us to mitigate the climate challenge. We need to celebrate where efforts have been made to reclaim derelict spaces in the city and transform them into eco-sensitive public places. This compendium is the first of its kind to attempt to recognize the various design initiatives that have been built in the country. I acknowledge the hard work put in by all stakeholders across Indian cities, including the Smart Cities to keep forging ahead, and persevering to improve the lives of the citizens. I hope this compendium will inspire other cities to learn and replicate these models in their own local contexts.

Foreword by the Director - NIUA

Hitesh Vaidya

Director,
National Institute of Urban Affairs



I am delighted to present this Compendium of Public Spaces to you. This e-book - demonstrates India's path-breaking journey to transform public spaces in its cities. It comprises seventy-five successfully completed place making projects.

India is witnessing rapid urban transformation under various government flagship programmes like Smart Cities Mission, HRIDAY and AMRUT. The Government has catalysed action on the ground to reimagine public spaces in cities across India. Pedestrian-prioritized streets, urban renewal, reclaiming derelict landscape, reviving water bodies, urban parks, multi-modal integration, and designing plazas and promenades are some of the strategies used to transform public spaces into people-friendly inclusive spaces. The compendium is a contribution to the Azadi Ka Amrit Mahotsav, a Government of India initiative to celebrate and commemorate 75 years of progressive India. It is dedicated to the cities of India that have been instrumental in transforming the nation to become an economic and cultural force to reckon with.

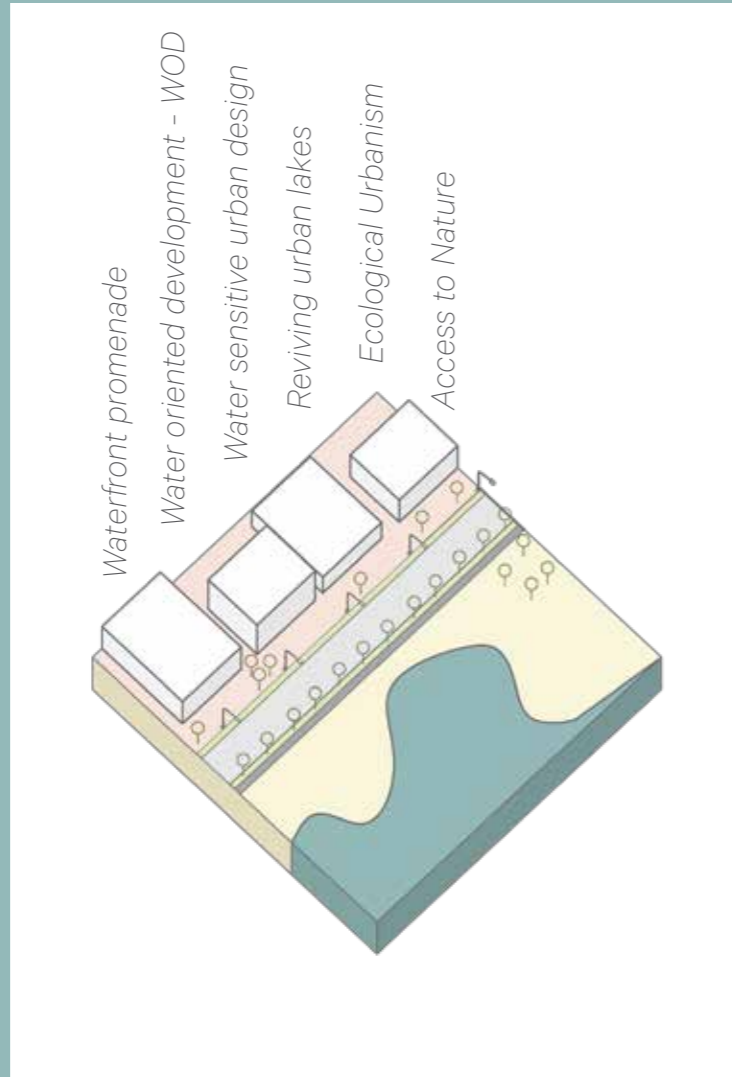
This new momentum of cities in reimagining the public realm and discovering place making opportunities needs to be brought to public attention. The idea of this compendium, apart from celebrating the existing public space projects, is also to inspire other cities and take the theme forward. Many more cities are presently engaged in urban public space projects that we hope shall also find a place in this collection.

The NIUA team would like to thank all contributors - Smart Cities, architects, landscape and urban designers, consultants, and city authorities for taking out the time to send in their entries. As with any intellectual work, the content is drawn from many different sources, accomplished professionals, practitioners, consultants and students constructively contributed directly or indirectly to the development of all the projects in this publication. Some of the pioneering public-realm works of the late Ar. Pradeep Sachdeva also finds a mention here as an acknowledgement of his contributions to the field.

Finally, a big thanks to the team from NIUA and Oasis Designs Inc. - Arvind Varshney, Akash Hingorani, Ambika Malhotra, Manasa Garikaparthi, Mukta Izardar, and Ayushi Govil on collating and formatting the document for several months and co-anchoring this effort.

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Any city blessed with a waterfront – be it a sea, river, or a lake – has the opportunity to build public space for all categories of people, transiting through or temporally. A waterfront adds so much value in enhancing the liveability of a city. A promenade along the waterfront can be programmed for simple activities like exercising, catching the sunset, meeting friends, or more elaborate ones like hosting events and fairs as cultural and economic catalysts. They contribute in the cleaning and maintenance of the water body and help to reduce the impact of climate change and the rise in sea levels.

Big waterbodies are often large carbon sinks and help in improving the Air Quality Index (AQI), thereby, raising the quality of life in an urban settlement. The waterfront is designed as part of the city’s natural infrastructure, often referred to as Blue-Green Infrastructure, with a host of natural edges, native plantations, grasses to promote biodiversity in achieving a healthy eco-balance and flood resilience.

Urban Local Bodies (ULBs) play an essential role in preventing the polluting inlets into the water bodies, maintaining clean edges, and structuring their masterplan to integrate the water systems into the urban fabric. Apart from a host of ecosystem services that can benefit a city, Waterfront Oriented Development can, directly or indirectly, contribute to the economic health of the city as well. For example, increased economic/job opportunities, enhanced property values in the vicinity, contribute in raising revenue generation for the local government.

The projects in this section present various approaches architects, designers, and local governments have adopted to connect people to the waterbody, with maintenance and resuscitation of ecological systems, and improving economic health.

1

Waterfronts

- Anasagar Lakefront | Ajmer
- Carter Road + Bandra Bandstand | Mumbai
- Chandi Ghat | Haridwar
- Gandhi Ghat | Patna
- Gullaua Taal | Jabalpur
- Juhu Chowpatty | Mumbai
- Kankaria Lakefront | Ahmedabad
- Marine Drive Walkway | Kochi
- People’s Promenade | Coimbatore
- Periyakulum North Promenade | Coimbatore
- Rajokari Lake | Delhi
- Sabarmati Riverfront | Ahmedabad
- The Verandah | Coimbatore

Anasagar Lakefront

Ajmer, Rajasthan

Status: 2015 to 2017 - Completed

Site Area: 16 km Lakefront and 9.02 Hectares (22.3 acres) Park

Location: Ajmer, Rajasthan

Client: Ajmer Municipal Corporation and Ajmer Smart City

Consultants: DRONAH

Aim: The aim of the project was to create improved recreational facilities which are linked to the natural and cultural heritage assets of Ajmer. The objective was to have an open public space for the locals and tourists which could be used throughout the day. The provision for walking/jogging and cycling facilities along the natural feature helped in enhancing the space usage and the quality of public life.

Project Overview: The Anasagar (12th century) lake in Ajmer holds tremendous significance and enjoys heavy footfall due to its central location. Parts of the lakefront include the Mughal Baradari, under the Archaeological Survey of India (ASI), that extends into a public garden, the historic Daulat Bagh that was converted into Subhash Udyan in the early 20th century. The project included improvement of the lakefront area into a public promenade as it was previously being used as a dumping space at various points with inadequate infrastructure. It also transformed the unused and neglected Subhash Udyan into an extended public space which was linked to the lakefront promenade and the ASI site, besides incorporating multiple cultural and recreational activities for children, families and the elderly who visited the park.

Project Details: The creation of public areas at various points included seating of visitors, paving the pathways, placing dustbins at appropriate distances and proper signages besides complete redesigning of the park area linked with the historic garden and the Baradari in sync with its cultural significance. The Anasagar lakefront and Subhash Udyan have great aesthetic appeal thus, attracting a large number of people daily since the project has been implemented. These spaces have become very popular with the locals and tourists.

Process: The design process was inclusive and participatory in nature considering the consultations with all stakeholders and residents of the city for their ideas and suggestions.

Highlights: Besides the popularity of these designed public spaces for daily use, one of the key sustainable aspects was the Operation and Maintenance which was successfully tendered by the Ajmer Municipal Corporation showcasing a viable revenue model for such public spaces in future and for other regions as well.

Challenges: A few challenges in developing the lakefront and the Subhash Udyan included permissions from ASI as the area falls within the stipulated 300 metres of the Baradari lakefront which is under their jurisdiction; and, redoing one patch of the lakefront that involved residents in decision making and on-site execution of the previous neglected historic garden and park. The outcome has been most satisfactory and rewarding considering the appreciation and extensive use of these spaces by local public and visitors.

Outcomes: A holistic design approach to waterbodies and public spaces that benefits the citizens' quality of life is essential for the sustenance of any city. All Indian cities should ensure optimum use of such waterfronts and public spaces.



1. The existing roadside and lake edge interface
2. The redesigned interface of road and lake edge
3. Aerial overview of Anasagar Lake
4. Promenade overlooking the lake
5. The restoration of historic structures along the lake
6. The viewpoint along the lake

Carter Road and Bandra Bandstand

Mumbai, Maharashtra

Status: Completed in 2002

Site Area: 1.2 Hectares

Location: Mumbai, Maharashtra

Client: Bandra Bandstand Residents Trust

Consultants: PK Das Associates, Harish Shah (Landscape Design), AA Design (Product and Signage Design)

Aim: The primary objective of the Carter Road promenade project was to re-claim the natural waterfront from the abuse and misuse that it was being subjected to. Re-claim to utilise the waterfront as an accessible public space. Development of the Carter Road seafront not only conserved but regenerated the mangroves.

Project Overview: Mumbai has a long coastline dotted with beaches, unusual rock formations, mangroves, wetlands, rivers and creeks. The mangroves formed the central point of the Carter Road seafront. The development meandered around it. Patches of grass, planned adjacent to the mangroves, extended the lush green expanse. The Carter Road promenade continues all along the water's edge where people can walk, relax and experience the vast beauty of the sea.

In the case of Bandstand, the promenade responds to the monolithic basalt rock-beds along the coastal edges. The project is an example of the planning and design interventions for public movement and participation.

Project Details: A 1.3 km-long, low painted, yellow wall, with rounded mosaic coping, demarcates the forecourt at the water's edge and separates the promenade from the road. The promenade is paved with parallel lines of red Agra stone at regular intervals. A large central forum has a gallery of steps leading down to the water while at other places, large steps lead towards the rocks. At one point, the bay opens up, allowing you to experience the vastness of the ocean. Galleries of steps at two places offer scope for get-togethers and cultural events. Over 30 varieties of Palms planted along the promenade predominates while the lighting of the mangroves at night provides a different ambience.

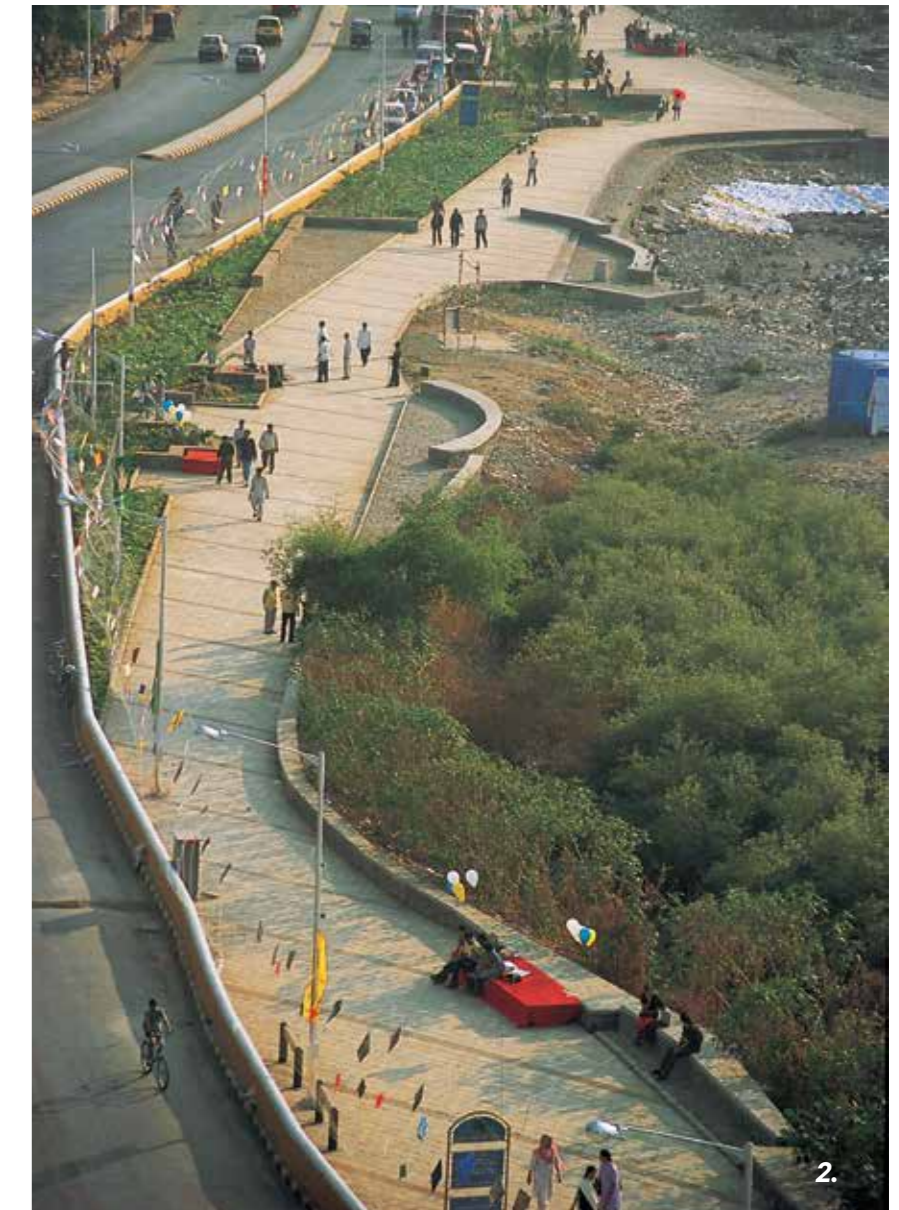
Process: The Bandra project was initiated by architects in collaboration with local citizens, who under the unified front of the Bandra West Resident's Association (BWRA) interacted with authorities and agencies. BWRA still remains the guardian of the promenade in co-ordination with the Municipal Corporation of Greater Mumbai (MCGM) and MMB (Maharashtra Maritime Board). They actively participate in the daily maintenance and on-ground vigilance of the project.

Highlights: At the initiation, the waterfront was in a state of neglect and open to garbage dumping and illegal activities including drug peddling. Since the water-edge had not been mapped by the city agencies, it was left open for misinterpretation and abuse.

The project not only successfully saved the natural asset from destruction, but also brought it back into the public realm as an open space for easy access and daily use by the locals. The long seafront of Bandstand and Carter Road has un-barricaded walkways, promenades and gardens and the space is accessible to all social classes.

Challenges: Such public initiatives require funding which is sometimes difficult to organise. In this case, the BWRA was able to get MPLADS (Members of Parliament Local Area Development Scheme) funds for the execution of this project.

Outcomes: The waterfront promenades of Bandstand and Carter Road have become beacons of hope for participatory planning and led to the creation and sustaining of successful public spaces. These projects paved the way for citizens' groups to play an active role in the governance of spaces in their neighbourhoods, and showed that despite several impediments, there is a way to achieve success.



1. Conceptual section of the seaside promenade
2. Bandstand promenade
3. The carter road promenade
4. Aerial view of the seaside promenade

Chandi Ghat

Haridwar, Uttarakhand

Status: Completed in 2019

Site Area: 5 km long

Location: Haridwar, Uttarakhand

Client: Ministry of Water Resources, River Development and Ganga Rejuvenation

Consultants: WAPCOS (Project Management), Beyond Built (Landscape Architects)

Aim: Chandi Ghat has been designed as a significant public landscape in the historic, sacred landscape of Haridwar to access water for cultural traditions and rituals related to birth, death and festivities.

Project Overview: Chandi Ghat lies on the banks of the river Ganga in the state of Uttarakhand.

It has been designed as a linear, continuous, safe, gender-inclusive open space. This stepped landscape contributes to vital infrastructure planning for the iconic Kumbh Mela (considered the largest conglomeration of humanity in one place held over a 12-year cycle) through its monumental open scale, comfortable bathing and changing spaces and barrier-free access to the Holy waters of the Ganges.

Project Details: The axes of approach are visually defined by the gateways for easier movement of people through the Ghat. Paving patterns of the promenade keep the linearity of the Ghat in continuum with the river's direction of flow. The material palette for hardscape and softscape responds to the flood levels of the river, thus maintaining the site context.

Process: Some considerations in the design included the spiritual link with the Chandi Mandir above, a pontoon link to Har ki Paurhi during the Mela and the fast-flowing Neel Dhara (Ganga). Using steps, platforms, chattris, prayer halls and defined circulation, distinct spaces of various scales have been crafted.

Highlights: The main objective is to reduce congestion on the main Ghats during the peak festive season. Another highlight of the development is the removal of unregulated waterfront cremation with improved wood crematoria. This offers the possibility of private public partnerships (PPPs) for people management and maintenance of Ghats in all Indian towns and cities.

Challenges: The design of Chandi Ghat needed to address a public ritual bathing and cremation space that offered an intimate and memorable experience to individuals, small community groups while also expanding to cater to the emergency preparedness for mass gatherings during the Kumbh mela. A critical concern was providing a space for safe, flexible and intuitive use that was changing which was well tested during the pre- and post-pandemic experience of public spaces.

Outcomes: Addressing the spiritual sanctity of the place, the multiple interpretations of faith and the physical manifestation of these on ground required considerations of the lived experience. The balancing for access, safety, security and equity for users was achieved using nuances of steps, platforms, chattris, prayer halls, semi concealed changing areas for women and defined circulation, to craft distinct spaces of various scales.



1. Shade canopies along the Chandi Ghat
2 & 3. The stepped plaza with seating along Ghat.
4. Overview of Chandi Ghat

Gandhi Ghat

Patna, Bihar

Status: Completed in December, 2019

Site Area: 7.5 Hectares

Location: Patna, Bihar

Client: BUIDCO, The World Bank and National Mission for Clean Ganga

Consultants: Sen & Lall Consultants, Akshay Kaul and Associates

Aim: For a city like Patna, having its back to a river punctuated with isolated Ghats and disconnected development proposals, the project offers a comprehensive development solution. It addresses vital civic concerns like public spaces, lack of facilities along with environmental awareness and ecological restoration.

Project Overview: Engaging a 6.5-km long stretch along the river, the proposed development includes a 6.5-km promenade, six community, educational and recreational buildings, public toilets, changing rooms, lifeguard & first aid, food kiosks, recreation and ecological landscaping including signages.

Project Details: The project connects existing fragmented open spaces to provide a continuous public area along the river, aiding in religious festivities and recreation. Riparian edge restoration protects the littoral zone, helping river dolphins, and the local flora and fauna to thrive. Designed as a multi-purpose space, the promenade has a range of facilities with which to engage the users and acts as a magnetising cause for flow of people of all age groups.

Process: Stakeholder participation and consultation has been a continual course of action promoting public understanding and awareness. Land pooling, consolidation, developing access roads have been the key to the overall urban strategy.

Highlights: Ghats are used by a city for various activities, aiming at developing Ghat-prototypes that could create a typology for the river edge, ultimately providing an active public space to be used by the locals and tourists.

Challenges: Integration of heritage precincts and buildings in the project protects the dilapidated heritage buildings and highlights the existing indigenous ones which are of cultural importance.

Outcomes: As a holistic development of the river edge, the proposal promotes a walkable city, creating larger usable open spaces for the citizens and being sensitive towards the local context.



1. The overview of different typology of ghats along the river
2. Aerial view of people performing rituals along the ghat
3. Night view of the ghat
4. Vertical structures framing the ghat
5. Aerial view of one of the ghat



Gullaua Taal

Jabalpur, Madhya Pradesh

Status: Completed in July, 2018
Area: 4.15 Hectares (10.25 acres)
Location: Jabalpur, Madhya Pradesh
Client: Jabalpur Smart City Ltd.
Consultants: EDMG consultants, Manoj Patkar (Contractor)

Aim: Lakes and water bodies are important natural assets of a city, and the Gullaua Taal is no exception. The aim was to develop the area and attract citizens to use it for daily activities like morning and evening walks, family outings etc.

Project Overview: As Jabalpur Smart City Ltd (JSCL) developed the Gullaua Taal, the value of the area around has increased significantly. It is now recognised as a visually attractive space for fun and outdoor activities thereby, enriching the social fabric of the communities living nearby and enhancing the quality of life for the participants. The project provides a boundary-free space which can be enjoyed by a larger number of people.

Project Details: Covering an area of 4.15 Ha (Approx 10.25 acre) and depth of 0.5–3.0m, the area has great potential to develop as a major recreational zone. The project focuses on beautification and provision for recreational facilities. The project also offers a number of activities including an open gym, space for cycling, space for exhibitions, a cafeteria, a hawkers' zone, safe pedestrian space along with public utilities and green areas.

Process: The project was implemented by Jabalpur Smart City and Jabalpur municipal corporation (JMC) wherein cafeteria development, footpaths, approach roads, lighting works, musical fountain, open gym and public utilities were developed by Jabalpur Smart City while cleaning of the water body, the surrounding pathway, etc was carried out by JMC.

Highlights: The Gullaua Taal project has created a 750-m long walkway and an open-air theatre to enjoy the musical fountain installed in the lake. The property value of the area around the Taal has increased by 20–25%. Moreover, there is a drastic change in the economic activities as the footfall of the area has increased by 50%–60%.

A Sewage Treatment Plant (STP) has been installed to treat wastewater and remove contaminants. The wastewater mainly consists of household sewage. The treated water is safe to be released into the pond to maintain the water level. Open gym equipment has also been installed at the periphery of the pond.

Challenges: The water body was facing problems of deteriorating water quality, reduction in water holding capacity, discharge of sewage, and dumping of garbage resulting from weddings and other festivities. Simultaneously, other illegal activities had also started which converted the surroundings into a threatening zone for citizens.

Outcomes: Since Jabalpur is an important tourism city of Madhya Pradesh and Central India having a number of tourist spots, some notable sites including lakes are in a derelict state and have lost their tourist attraction. The successful implementation of this project augurs well for other lake sites in the region.



1. Aerial night view of the lake
2. Walkway along the lake
3. After redevelopment of the pathway
4. View point/sit out areas
5. Aerial view with aerators and fountain in the lake

Juhu Chowpatty

Mumbai, Maharashtra

Status: Completed in 2002

Site Area: 4.5 km Waterfront Length

Location: Mumbai, Maharashtra

Client: BMC

Consultants: PK Das Associates, Dhanashree Sawant (landscape design), Shantanu and Manisha Poredi.

Aim: The key objective was to reclaim the beaches for public access and conservation of this significant environmental asset.

Project Overview: Juhu Beach is one of Mumbai's most largely visited public spaces. It is a place to unwind, relax and take in the sea air. Unfortunately, ad hoc, unplanned commercialisation, without a cohesive and comprehensive vision, had considerably destroyed its natural environment. This restoration project covered the entire length of the main beach and the promenade from Koliwada at the southern tip to the northern tip, a length of nearly three kilometres. The project could be completed only after a protracted legal battle in the court.

Project Details: As the plan shows, it covered a whole spectrum of activities along the stretch, both on and off the beach and its immediate surroundings. The already existing stalls and podia had been incorporated into the plan. The project's salient features included proposals to reduce traffic congestion, generate substantial new parking spaces, pedestrian crossings and islands. There was provision for a whole gamut of conveniences for the visitors such as taxis, autos, bus stands, toilets, phone booths, information kiosks, garbage disposal and enhanced lighting.

Process: The plan was to connect the various beaches with other open spaces and their neighbourhoods to prevent their isolation while achieving the integration and expansion of open spaces in the city.

Highlights: A 'food court' was developed on the land opposite the Shivaji statue and all the 42 licensed stalls which were occupying the Central Chowpatty were to be relocated. The food court includes proper drainage, garbage collection, lighting, furniture, paving and other facilities. The cleared Central Chowpatty serves as the gateway to the beach. It has been equipped with a redeveloped and landscaped podium with seating and lighting. Adequate public conveniences have been created at two locations by renovating and expanding the existing dilapidated facilities. In all, now there are eight accesses to the beach, apart from the Central Chowpatty. The available vacant sites at the end of the different accesses on Birla Lane and Holiday Inn Lane have been developed as a children's park and a public facility.

Gandhi statue garden: A garden around the existing statue has been reconstructed with a central ramp to facilitate Ganapati immersion.

Challenges: Like most of our coastlines, beaches too have been neglected, abused and misused over the years. Many of these beaches have also been damaged and eroded due to indiscriminate land filling in different areas and encroachments.

Outcomes: Due to the citizens' movement, the project was able to reclaim the beach from illegal encroachment both by hawkers as well as private residences. A comprehensive plan re-located the hawkers without displacing their livelihood. It even provided them with civic permissions to function legally. Hence, it is necessary for multi-disciplinary action to resolve urban issues.



1. The green walkway near Chowpatty beach
2. Overview of the busy tourist destination
3. Landscape lawn overlooking the beach
4. Before the restoration
5. Plaza after redevelopment

Kankaria Lakefront

Ahmedabad, Gujarat

Status: Completed in 2009

Site Area: 56.5 Hectares

Location: Ahmedabad, Gujarat

Client: Ahmedabad Municipal Corporation

Consultants: HCP Design, Planning and Management Pvt Ltd (Primary Design Consultants)

Aim: The primary aim of the project was to develop the Kankaria lake as a safe, robust, and pedestrian-friendly, recreational hub that would foster new activities in addition to supporting the current activities.

Project Overview: Kankaria lake is an integral part of Ahmedabad's visual identity. It was developed as an artificial lake by Qutb-ud-din Aibak, the Sultan of Delhi, in 1451 AD. Until the early 1990s, Kankaria served Ahmedabad as a very pleasant and enjoyable recreational asset within the city. However, by the turn of the century, increasing traffic, unregulated parking, unorganised vending and poor upkeep had greatly diminished Kankaria's value as a recreational spot. To address this, Ahmedabad Municipal Corporation (AMC) appointed HCP Architecture, a Design, Planning and Management Co., to redevelop the lake precinct and restore its status as a vibrant public asset of the city.

Project Details: To transform the area along the Kankaria lake from a vehicular road to an exclusively pedestrian promenade, an outer ring road was designed to accommodate the area's heavy traffic load. Clear and consistent signages have been put up across the precinct. Robust and sustainable construction material and finishes were used throughout the development. Trees have been planted at regular intervals, and old or dying trees have been replaced wherever necessary. Adequate street lighting and comfortable seating is also provided at regular intervals. An outer ring road has specifically been developed to cater to the area's heavy traffic.

Process: Heritage structures found on the site were sensitively cleaned and restored. Multiple public access points were provided to the Ghats, which were cleaned and repaired as part of the proposal.

Highlights: Improving Pedestrian Experience: The entire 2-km long stretch encircling the lake has been made exclusively for pedestrians. Sufficiently wide, continuous, tree-lined and accessible sidewalks are provided to ensure a pedestrian-friendly environment.

Upgrading Public Amenities: "Pay and Use" toilets, telephone booths and kiosks for newspapers and magazines have been placed at strategic locations along the precinct. Clusters are identified for vending activities and provided with required amenities in an organised manner, including water supply and drainage connections.

Organising Traffic Movement: Different modes of traffic are segregated into clearly demarcated lanes using physical barriers or changing the surface material. A dedicated bicycle lane has also been provided to encourage health, well-being and environmental sustainability.

Challenges: The main challenge of the project was to transform the traffic congested lakeside road into an attractive pedestrian promenade lined by linear gardens, food courts and organised vending spaces.

Outcomes: Amongst the various recreational activities provided, the mini train circling the lake is the most popular. The initial design proposed laying the rails of the train 6-inches lower than the level of the pedestrian walkway. A 6-foot wide sample was prepared on site and it was observed that the level difference between the walkway and the rails would cause hindrance to the comfort and safety of the pedestrians. The design was revised to lay the rails on the same level as the promenade.



1. Lawns & children's play area overlooking the lake
2. Mini-train circling around the lake - popular attraction for visitors
3. Organized space for vendors along the promenade
4. Adequate street lighting and comfortable seating at regular intervals on the sunset promenade
5. Aerial view - 2 km long pedestrian walkway encircles the entire lake creating a continuous recreational hub

Marine Drive Walkway

Kochi, Kerala

Status: Completed in February, 2021

Location: Kochi, Kerala

Site Area: 2.5 km

Client: Cochin Smart Mission Limited

Consultants: Studio Aranya (Architects), IPE Global and Haskoning DHV Consulting (PMC)

Aim: The 2.5-km long Kochi Marine Drive Walkway redevelopment project was a place-making initiative carried out to ensure a more equitable, accessible, vibrant and pedestrian-friendly recreation space along the water edge.

Project Overview: The project was successfully implemented by introducing various activities for all categories and age groups by providing children's play areas, open gym, yoga space, seating areas and creating more walkable zones by planting trees and improving the quality of space through landscaping initiatives. The pedestrian entry points to the walkway were defined and strengthened to achieve the desired result. Adequate lighting and improved safety measures along with distribution of various activities ensured that the walkway remained active even during late hours thus, making it an active public corridor.

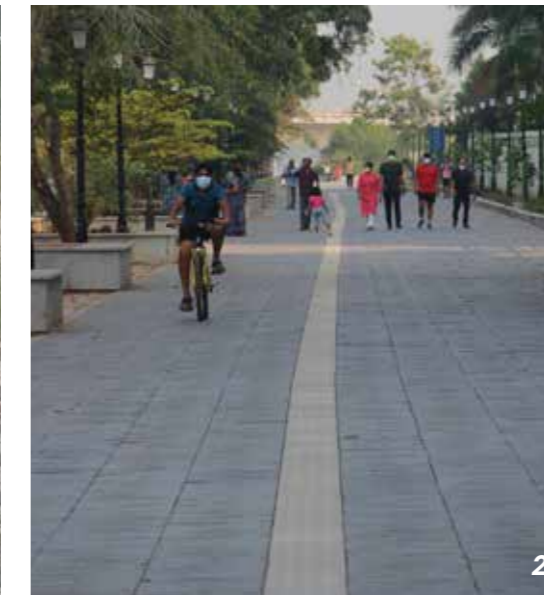
Project Details: Along the 2.5-km stretch, there were three bridges which broke the continuity of the walkway, so there was a need to establish a character throughout which was achieved through material palette and landscaping towards the landward edge. This also provided seating along the water edge and defined the walkway. Multiple pedestrian access ways to the walkway were strengthened to ensure improved accessibility. The recreational corridor was further divided into eight stretches based on the character of the walkway.

Process: There was privately owned land and land owned by various Government agencies along the mainland edge of the walkway resulting in more stakeholder meetings for design approval and execution.

Highlights: The project has resulted in the creation of a much more vibrant public space, which is active throughout the day and night. The redevelopment has also triggered people to follow a healthy lifestyle by walking, jogging, cycling, using the open gym and the yoga area.

Challenges: There were multiple challenges that were faced during the execution of the project as the site was active and in use with a lot of floating population visiting the walkway on a daily basis, so at times, crowd management was difficult.

Outcomes: For the successful implementation and execution of any public project to happen as envisioned, it is important to bring all stakeholders together which, in itself is a herculean task. Also, maintenance is the key for any public space in the long run, even though this project has a short-term maintenance contract. It is important to devise a plan for maintaining these public spaces and look out for funding agencies, so that this recreational public corridor remains usable, accessible and provides a memorable experience to all participants.



1. Before
2. After
3. Family play area
4. Walking & cycling track
5. Walkway edging ferry parking
6. Walkway & yoga area

People's Promenade: Valankulam Lake

Coimbatore, Tamil Nadu

Status: Completed in March, 2019

Site Area: 650 m Length

Location: Coimbatore, Tamil Nadu

Client: Coimbatore City Municipal Corporation (CCMC)

Consultants: Oasis Designs Inc. (Lead Consultants), CDD Society (Consortium Partner), Arthagam Architects (Local Architect), Jaitly Associates (Structural Consultants), TNS Consultants (Electrical Consultants), Vinayak Engineering (Plumbing Consultants)

Aim: The Peoples Promenade, as the name suggests, is designed as a pedestrian prioritised street, with both sides of the lake edge offering many options of boating, sitting around or actively playing.

Project Overview: Blessed with large canopy trees, the entire street enjoys shade and comfort all day long. The complete stretch has been designed as a boulevard with expansive lakefront views on either side, anchored around these existing big, beautiful trees.

Project Details: The street links Trichy road in the north to the Sungam Bypass road in the south. The People's Place is the northern corner of the People's Promenade at the lakefront in Valankulam and is designed as a community space with attractions for all age groups.

Process: The most important component in the whole project is the bund slope correction and redefinition of the edge to create an ecological balance for the lake. The pedestrian prioritised street helped to achieve a landscape shaped around the natural topography and a pedestrian promenade overlooking the expanse of the lake on either side.

Highlights: The Floating Jetty and Roof: Deck Restaurant: Midway to the People's Promenade are two anchor attractions – the Floating Jetty and the Roof-Deck restaurant. Linked with a pedestrian crossing across the street, each one has an exclusive view, one of the east lake, and one of the central area of Valankulam.

The Waterfront Cafes at the Float-Walk Entry Plaza: While approaching the People's Promenade from the south-west, as one goes down the flyover towards Sungam, coming in from Ukkadam, on the left are the Waterfront Cafes at the entrance to the Float-Walk Plaza which lead to the 'Verandah-East' cultural hub under the flyover.

Challenges: While maintaining the water area in the overall lake, the challenge was to fill it up with earth and achieve a minimum space of 15-m flat area for a pedestrian walkway. The main challenge was to maintain the overall water area of the lake and at the same time maximise the space for pedestrian movement.

Outcomes: Beauty is about celebrating each tree differently. The two ends of the promenade are the most important nodes of the project. The first one from the left is the People's Place which is designed to cater to all age groups. It has food kiosks along with seating spaces under the trees. The junctions are designed as pedestrian-friendly crossings with traffic calming measures and smart city iconic markers at each end to mark the entry to the People's Promenade.



1.



2.



3.

1. The pedestrian promenade with sit out spaces
2. The promenade with shipping containers as shaded seating
3. Viewing deck
4. Amphitheatre looking towards the lake with shade structures



4.

Periyakulam North Promenade

Coimbatore, Tamil Nadu

Status: Completed in March, 2019

Site Area: 1.2 km

Location: Coimbatore, Tamil Nadu

Client: Coimbatore City Municipal Corporation (CCMC)

Consultants: Oasis Designs Inc. (Lead Consultants), CDD Society (Consortium Partner),

Arthagam Architects (Local Architect), Jaitly Associates (Structural Consultants),

TNS Consultants (Electrical Consultants), Vinayak Engineering (Plumbing Consultants)

Aim: Periyakulam is the sixth lake in the inter-connected eight-lakes system of the northern catchment of river Noyall Valley. The project focuses on rejuvenating the lake, removing encroachment and reclaiming the lakefront as a public open space.

Project Overview: This lake is fed by the northern catchment of the river Noyall, while the southern and eastern sides become the main bunds which needed to be maintained 2.1-m above the Full-Tank-Level (FTL). The existing levels of the bund were at the same level so, the broad strategy was to retain the same height.

Project Details: The eastern edge flanking the boundary road has a green grass slope edge towards the city, making it very difficult to negotiate. This was redesigned to incorporate pedestrian access by allowing people to come up from the road, especially from near the junction and the existing temple. Here, a Non-Motorised-Transport (NMT) track has been newly constructed on top of the eastern bund, the slope has been stabilised using some concrete filled fabric technology. Numerous inlets into the lake, where it is proposed to divert, combine, treat and have only two inlets which are then further treated by wetlands at both these locations, situated towards the north-western corner of the lake.

Process: While working with experts for water treatment, biodiversity and ecological restoration, the plan focused on integrating nature-based solutions to help restore and regenerate healthy aquatic ecosystems for the lake and build resilience into the overall development.

Highlights: The northern edge of Periyakulam is a roadside lakefront promenade with expansive view of the lake which is designed as an attractive water edge. This high visibility edge integrates all entries to be aligned with bus stops, junctions and other mid-block pedestrian crossovers. One formal entrance plaza is being planned in the corner of Ukkadam Junction which shall complement the other two corner entrances at the end of the northern and eastern edges.

Challenges: The lake's main outlet is towards Ukkadam, in the north-eastern corner but because of the encroachment, this water outlet was very narrow and required re-engineering and infrastructural intervention. The project proposed the Ukkadam land be reclaimed and the entire water canal connection between Periyakulam and Valankulam be re-designed as a destination project. This ensured that the water linkage between the sixth and seventh lake was restored. The other outlet on the eastern side was a small sluice outlet, which was also properly re-engineered.

Outcomes: Periyakulam is located at the focal point of the city connecting the northern and southern sides. It also has the capacity to be a city-level as well as a tourist destination. The northern edge of Periyakulam (North) is bound by the Perur Bypass road, an important road in the city which connects to the Perur main road, ultimately connecting to Perur. The northern edge is a walkway bund and hence, the bund height is lowered allowing for better visual access and also creating active promenades along the lakefront. Different nodes have been defined along the edge as per site context and these act as city-level attractions.



1. The existing lake edge bund blocking view of the lake from the road.
2. The Periyakulam green amphitheatre and kids play area
3. Night view of the lakefront
4. The lakefront plaza with bioswales, shade structures and seaters
5. I love Kovai signage at the lakefront a destination for the city of Coimbatore

Rajokari Lake

Delhi

Status: Completed in 2018

Site Area: 2 Hectares

Location: Rajokari, Delhi

Client: Revenue Department, Government of the National Capital Territory of Delhi (GNCTD)

Consultants: Delhi Jal Board, Irrigation and Flood Control Department (IFCD) of GNCTD.

Aim: The project to restore the Rajokari Waterbody was aimed at cleaning it through a constructed wetland, creating enhanced capacity to hold monsoon flows, reconnecting and restoring the larger catchment, sustainable Chatt Ghats for use by the community, and delivering an ecologically designed easy to maintain public space.

Project Overview: The waterbody restoration project at Rajokari was a pilot initiated by the Delhi Jal Board (DJB) in partnership with Irrigation and Flood Control Department (IFCD), Government of National Capital Territory (NCT) of Delhi. As most water bodies in Delhi, the Rajokari pond also faced issues of water contamination, historical sludge, solid waste dumping, encroachments, general disrepair and neglect, and most importantly lack of civic pride. In addition to cleaning the water, restoring the ecological value of the site and creating economic value, the pilot aimed at arriving at an approach and Standard Operating Procedures (SOP) for the restoration of water bodies across the city. Launching the pilot, the National Green Tribunal (NGT) directed all public authorities to adopt a similar approach to restore/revive water bodies in their jurisdiction.

Project Details: The restoration proposal included the trapping and cleaning of 0.5 MLD of wastewater through ecologically sensitive bio-remediation techniques of a constructed wetland to rejuvenate the water body, removal of historical sludge to clean the water body bed from contamination, solid waste and construction debris, creation of enhanced capacity to be able to hold monsoon flows through creation of a wetland park, parts of which are designed to remain inundated during floods, restoration and reconnection of the larger catchment of the water body, creation of Ghats, and ecologically designed easy to maintain landscape.

Process: The project also included the setting up of management regimes that are sustainable in the long term, and working with the community, a key stakeholder. As a 'public' project, the cost effectiveness was another important priority and design details were prepared accordingly.

Highlights: The project focused on constructed wetland to clean the contaminated water, rain gardens to act as 'sponges' to hold monsoon flows and maximisation of permeable surfaces to enhance ground water recharge. The park provided the only public space for all age-groups in the village of Rajokari. A dedicated play area is a key feature of the project. Keeping in mind the needs of its various users, small areas have been carved out for play, informal seating, gatherings and socio-religious activities. The Chatt Ghats double up as an amphitheatre and form the heart of the scheme.

Challenges: Finding good landscape contractors for the project proved to be a challenge. Larger, more established contractors were not forthcoming to participate in the procurement process and the smaller ones were unable to deliver high quality. Despite such challenges in implementation, the water body and the public space around it has been used extensively by the local community, irrespective of gender and age. It is also a popular location for the annual Chatt Pooja.

Outcomes: The project also has multiple long-term benefits including ground water recharging, local flood mitigation, positive impact on local micro-climate, enhanced value of nearby properties and improvement of social conditions and public health of the surrounding areas. For the long-term sustainability of a waterbody, it is as important to create a successful low maintenance public space around it as it is to clean the water and restore its hydrology.



1. Aerial view
2. Restoration with bio remediation measures
3. Before: a dump yard and encroachment
4. After: water body restoration and creating a public realm along the lake
5. Stepped amphitheater plaza

Sabarmati Riverfront

Ahmedabad, Gujarat

Status: Phase 1 Completed in 2015

Site Area: 202 Hectares; Length of River: 11.5 km

Location: Ahmedabad, Gujarat

Client: Sabarmati Riverfront Development Corporation Limited

Consultants: HCP Design, Planning and Management Pvt Ltd (Primary Design Consultants)

Aim: The project aimed to create a lively public realm along the banks of the Sabarmati River, protect the city from flooding, and protect the river from the perils of rapid urbanisation.

Project Overview: Ahmedabad was founded in 1411 on the banks of river Sabarmati, the main source of water for its inhabitants. As the city industrialised, the riverbed became a place to dump sewage and garbage, and slums and haphazard development encroached upon its banks. By the late 20th century, the polluted river had become inaccessible. Around the same time, several irrigation projects came up which made it possible to impound water in a 15-km stretch. The monsoon fed the river which otherwise remained dry for nine months, creating a perennial linear lake.

In 1996, the Ahmedabad Municipal Corporation (AMC) established the Sabarmati Riverfront Development Corporation Ltd (SRFDCL) and formulated a project to tackle the years of abuse of the river. In 1997, HCP Architecture, a Design, Planning and Management Co, was appointed to lead the architectural, structural and urban design aspects of the project, to bring the people back to the river.

Project Details: The project created a 12-km long, public realm on both sides of the river. The reclaimed land provided space for public parks, waterside promenades, markets, public amenities, cultural institutions, commercial developments and new streets. A large number of these facilities are utilised to host flower shows, kite festivals and other events.

Process: HCP collaborated with elected representatives, administrators, professionals and eminent citizens for the design and implementation of this project, which was driven by the AMC and supported by the Gujarat Government. The design was comprehensive and catered to

the innumerable problems faced in the urban realm where building local capacities, trust and consensus by engaging citizens was of utmost importance. The design worked within local resource constraints and made it a self-financing project.

Highlights: A few low-lying downstream riverside neighbourhoods faced the risk of flooding annually. Building sufficiently high embankments has eliminated the risk of flooding and erosion of the sandy riverbanks. Untreated sewage that was flowing into the river from over thirty storm-water and open drains were diverted into two large interceptor sewers along both edges of the river.

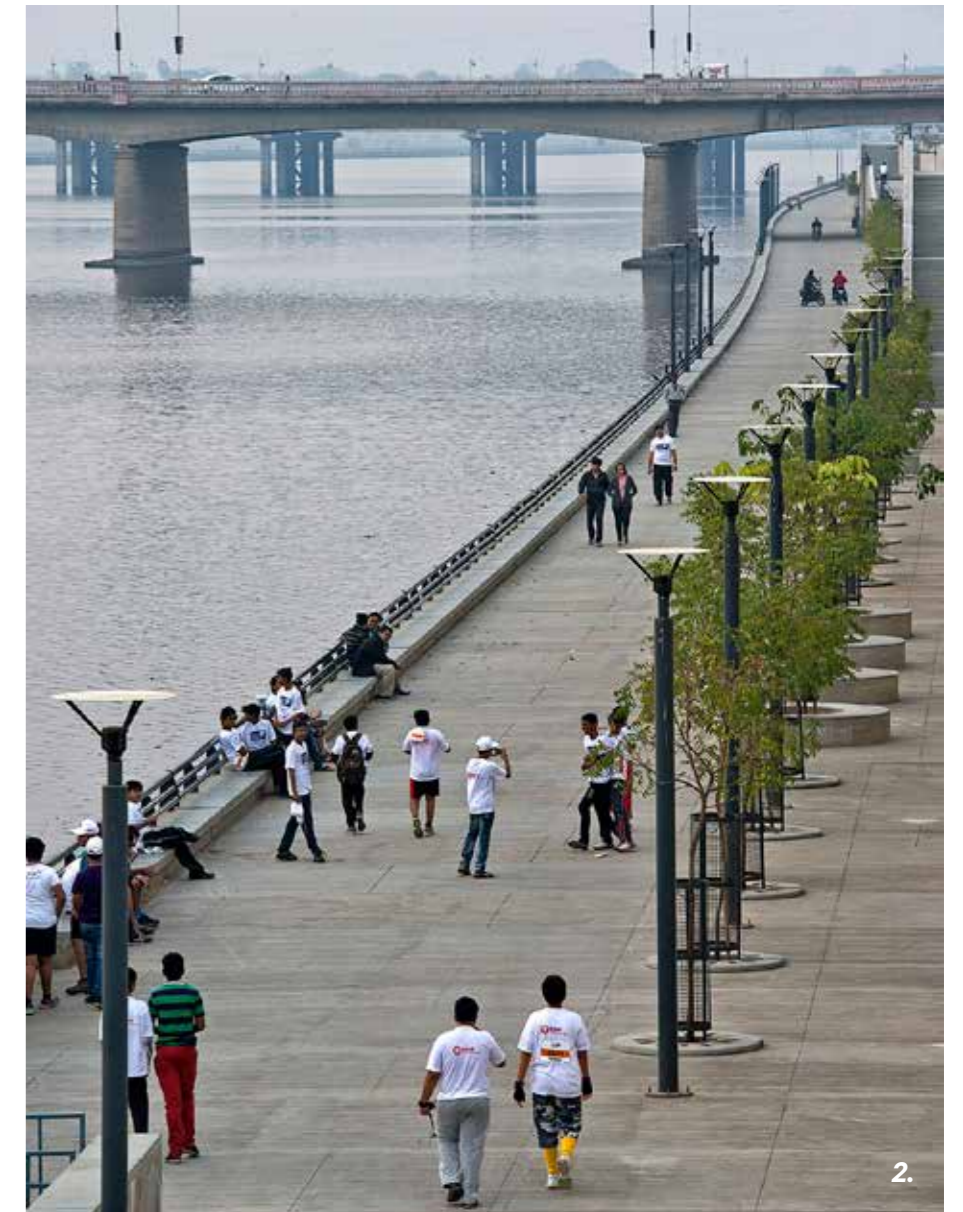
Challenges: Approximately 10,500 households living in the riverbank slums were identified and relocated to highly subsidised, purpose-built, low-rise apartments, clustered in 19 housing colonies in various parts of the city. The relocation process was closely monitored by the Gujarat High Court.

Two sets whose livelihoods depended on the river were affected by the development of the riverfront - riverbed washer folks and vendors in the Ellis Bridge Sunday Market. To protect the livelihoods of the washer folks, a large laundry facility with suitable infrastructure was built on the reclaimed land. To protect and expand the Sunday Market, a large open-air market has been constructed between Ellis Bridge and Sardar Bridge, serving the needs of the low-income families from the surrounding areas.

Outcomes: The project demonstrates how to tackle urban challenges, despite limitations of democratic politics, the lack of resources, and limited technical and managerial capacities.



1. The existing view of the Sabarmati after channelization
2. The renovated riverfront promenade
3. The redesigned open-air market between ellis bridge and Sardar bridge
4. The view of people enjoying an evening along the river.
5. 12km long public realm along the river



The Verandah: Valankulam Lake

Coimbatore, Tamil Nadu

Status: Completed in March, 2019

Site Area: 1.82 Hectares

Location: Coimbatore, Tamil Nadu

Client: Coimbatore City Municipal Corporation (CCMC)

Consultants: Oasis Designs Inc. (Lead Consultants), CDD Society (Consortium Partner), Arthagam Architects (Local Architect), Jaitly Associates (Structural Consultants), TNS Consultants (Electrical Consultants), Vinayak Engineering (Plumbing Consultants)

Aim: The under-flyover space and its immediate surroundings of the Sungam bypass road flanking the southern edge of Valankulam lake, comprises approximately 4.5-acre. The intent was to reclaim the under-flyover space and transform the area into a recreational destination for the community.

Project Overview: The Verandah at the waterfront was envisaged as a multi-purpose space that could be enjoyed by the entire city. As the only shaded space along the lakefront, it had the potential of being activated all day long with a spectacular view of the waterfront.

The multipurpose performance areas and exhibition areas were designed to attract all the artists, painters, photographers, sculptors, dancers and musicians and make this the city's new Cultural Hub.

Project Details: The design was focused to utilise the shaded space under the flyover and provide relief during the hot and sunny Coimbatore summer, allowing the gentle cool breeze to filter through this area. The design challenges included a full clean-up, bund restoration, and then creating a usable space.

The whole verandah space and the Valankulam lake itself was divided at an angle into two parts by the railway line. This gave an opportunity to program both parts differently as per the scale of the space and the viewing cone available.

Process: The Valankulam Flyover project was conceived under the umbrella of Coimbatore Smart City. The project Verandah is located along one of the largest lakes. Valankulam lake (105-acres), is one of the identified 500-m long sub-part of the overall project.

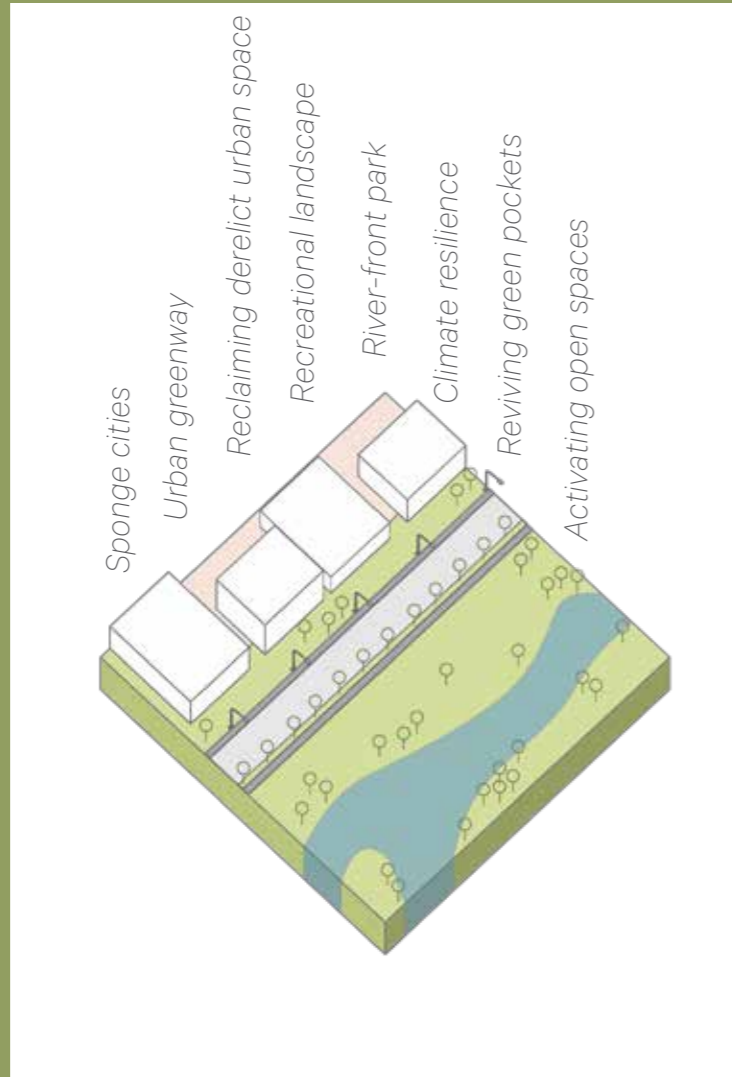
Highlights: The east verandah is a more outward-looking space providing panoramic views of the lake and the hills. Therefore, more eating areas and lookout spaces are provided here. The west verandah was a more inward-looking space so it has been designed as a more self-sufficient and cosy space with more activity areas for kids and teenagers. The large children's play area and skating rink are also designed here.

Challenges: This flyover was built over an existing railway track and had space tucked away under it. Before redevelopment, this space was lying derelict and being misused as a dump yard and for open defecation. The potential of turning around this negative space was identified by the design team and taken up as a design challenge.

Outcomes: Due to the large scale of the project, it was subdivided into smaller parts and executed in different phases. Though each part was completed at different times, it still got connected in spirit to the overall vision to create a specific identity for the entire smart city project.



1. The Verandah east with performing stage and kids play areas
2. Float-walk: View of the under flyover space from pontoon bridge
3. Derelict space under flyover before reclamation
4. The transformation of the space after reclamation
5. Co working space and recreational zone for residential neighbourhood



Public parks and open spaces are a perfect panacea for the growing socio-economic disparity that can be seen in cities. They allow everyone in without any discrimination. Climate change being one of the biggest concerns, the cities have an opportunity to construct functional, ecologically sustainable and socially equitable open spaces for the residents.

Green spaces can evolve to prevent drastic changes in climate, loss of biodiversity and dissolution of the social fabric. These spaces bring people together, creating a sense of belonging. They can also change with time to become more malleable towards the growing needs of the urban region and its people.

The projects in this section present various approaches to the building of such public green spaces that can help in improving the liveability of the people by providing them with opportunities for walking, cycling and accessing nature. Parks and open spaces are also the stewards for a healthy, active living.

2 *Urban Landscape*

- All Abilities Park | Visakhapatnam
- Bhubaneswar Smart Parks | Bhubaneswar
- Garden of Five Senses | Delhi
- Jogger's Park | Mumbai
- Kishore Kumar Baug + Vijay Tendulkar Rangmanch | Mumbai
- Kunnara Park | Kochi
- Kurinji Garden Park | Coimbatore
- Lotus Garden | Mumbai
- Neela Hauz Biodiversity Park | Delhi
- Noida Biodiversity Park | Noida
- Prakasham and Padmavati Park | Tirupati
- Ravine Park | Manjari
- River Hills | Pune
- Riverfront Flower Park | Ahmedabad
- Sabarmati Riverfront Park | Ahmedabad
- Vanasthali Park | Lucknow
- Vasant Udyan | Delhi
- Vesu Linear Park | Surat
- Wazirabad Bundh | Gurugram
- Yamuna Biodiversity Park | Delhi

All Abilities Park

Visakhapatnam, Andhra Pradesh

Status: Completed in 2017

Site Area: 2,156 sq. m

Location: Visakhapatnam, Andhra Pradesh

Consultant: AECOM Asia, PwC, Giri Santhosh Engineering Works, S.S. Constructions

Client: Visakhapatnam Smart City

Types of Users: Women, Children, Aged, and Disabled

Aim: The aim was to develop a space that was accessible and could be enjoyed by differently-abled children, with a design that would attract families, especially the children.

Project Overview: The idea was to create innovative and stimulating play spaces and dedicated zones for different age groups for various activities by keeping in mind the existing topography and surroundings to reinforce play areas with planting designs. The park has also tied up with the Greater Visakhapatnam Municipal Corporation (GVMC) for taking over and further maintenance after the Smart City mission.

Retrofitting the existing GVMC parks and transforming them as "Universally Accessible and Functional Public Spaces" is the focus of this project. Urban parks are dynamic institutions that play a vital role in the social, economic and physical well-being of urban areas.

Project Details: The project was planned comprehensively for better sustainability. The infrastructure installed is robust and procured to meet the standards of coastal climate and longer durability. The tree cover was increased by 100% by planting additional 50 trees. New multiple resting areas were added under the trees. A universally accessible design was created by the introduction of multiple ramps for access by children with special needs and the elderly.

Process: The project also includes a defect liability period and regular preventative maintenance for the smooth functioning of the park. An operation and maintenance team has been engaged for regular upkeep and maintenance. The renewable energy projects have resulted in cost savings for GVMC. The money saved is being used to offset the maintenance costs of the parks.

Highlights: The Smart City Plan for Vizag revolves around the vision of creating "A Resilient and Healthy Metropolis for the People". Aligning with the Smart City Vision, Visakhapatnam focused on the health and well-being of its citizens especially children and the elderly, and upgraded its parks and open green spaces.

Challenges: "Access is not only a basic human right; it is an important part of ensuring a high quality of life". This project focused on balancing the needs of the differently-abled without segregation from the rest of the community, increased spaces for active and passive recreation, interaction with nature, along with improved health and well-being for all.

Outcomes: The main benefit of the project was greater use of the parks that were otherwise under-utilised along with a disciplined use of the play equipment. All ability parks have become very popular amongst children and adults. Increased footfall of 300 to 500 members has been observed with all strata of age-groups and abilities visiting the park.

The adjoining residents now take pride in being next to an upgraded park with all the necessary amenities. Walking/jogging activities are also on the rise.

No littering has been observed, even though there is an increase in the organised outdoor activities due to availability of a greater number of shaded and safe spaces with the addition of trees, lighting and EPDM flooring. There is also greater visibility and awareness through enhanced artwork and transparent boundary walls.



1. After transformation of the space
2. Vibrant kids play area
3. Spatial design and details
4. Overall proposed layout
5. Before

Bhubaneswar Smart Parks

Bhubaneswar, Orissa

Status: Completed in July, 2018

Site Area: 7,810.4 sq. mt.

Location: Various locations in Bhubaneswar, Orissa

Client: Bhubaneswar Smart City Limited (BSCL)

Consultants: Bhubaneswar Urban Knowledge Centre (PgMC managed by IBI Group India Pvt. Ltd.)

Aim: The Smart Parks were developed with the aim to incorporate elements and features that promote inclusivity and accessibility for all while creating a vivid experience and environment for the children.

Project Overview: The Smart Parks was one of the initial efforts of the smart city to affirm its vision to become India's first child-friendly city. It helped in fulfilling the gap in terms of availability of active recreational outdoor spaces in the city as documented by the city authorities. With Bhubaneswar's aspiration to become a Child-Friendly Smart City, the development of the parks from a child-friendly lens became essential. That apart, provisions had to be created not just for children and adults but also for senior citizens and differently-abled people to utilise the open public spaces of the city for their benefit and in turn, instil some healthy habits.

Project Details: Each set of the outdoor fitness equipment that was installed in the open-air gym comprised an air walker, sit-up bench, air swing, twister, set back or glider, push and pull up chair, knee/hip raise on parallel bars, big shoulder wheel, spinner, bench with a fixed dumb bell, bench with fixed weight lifts and poles with a fixed weight.

Process: The authorities managed to create Bhubaneswar's first Child-Friendly Park. Children of different age groups were engaged in the decision-making process developing stewardship among them. It was a first of its kind programming of the parks as an active vibrant community space as compared to the earlier existing passive gardens. For the first time in Bhubaneswar and in the state, outdoor fitness equipment or open-air gym was welcomed by the citizens. They had a choice of 12 different stations to work out and build a healthier, smarter life-style.

Highlights: Special emphasis on the child-friendly design makes the parks unique. Some of the features implemented are: Children anthropometry as the base for designing the seating, steps, etc; a careful selection of materials to ensure minimal injuries to kids while playing; porous compound walls that allow clear visibility inside the park's inclusion of educational yet visually soothing landscape features, such as bio-swale; and selective installation of the play equipment that boosts the development of fine and gross motor and cognitive skills of kids.

Challenges: From design to implementation, a lot of details were omitted or overlooked due to the lack of contractor's implementation skills and availability of material. Convincing the locals to give away two by-lanes which were dividing the series of parks was another major challenge. After several stakeholder workshops and meetings, the authority was able to convince the locals that incorporating the two by-lanes will improve the safety and accessibility of the parks.

Outcomes: Having designed the parks in a participatory manner, it was a lesson to attempt building capacities of the local contractors to counter issues of workmanship, unavailability of materials and delayed execution. The Smart Parks are an example of efficient use of available resources, including redeveloping underutilised land with integrated technology that is more rewarding and effective. Including the maintenance of any public space is more important than designing and implementing - linking the local community with the maintenance of public spaces might do wonders - making the process as democratic as possible.



1. Children playing basketball in a half basket ball court created as per the demand of the children during the design charette
2. Dedicated play spaces for children with safety measure
3. Inauguration of park with a community activity of painting
4. Watch tower installed as per the demand of the children and adults during the design charette

Garden of Five Senses

Delhi

Status: Completed in 2003

Location: Said-ul-Azaib, Delhi

Site Area: 8.09 Hectares (20 Acres)

Client: Delhi Tourism and Transportation Development Corporation

Consultants: Pradeep Sachdeva Design Associates, Arvind Gupta Consultants (Structure), Krim Engineering

Aim: To design an urban recreational public space for everyone in the community, from all socio-economic backgrounds.

Project Overview: The Garden of Five Senses is a unique public space that offers an array of attractions, including theme gardens, food courts, speciality shops, a Solar Energy Park and an Amphitheatre.

Project Details: Natural features of the ridge with its dramatic rocks have been left in their natural state while planting and development has been restricted to the lower peripheral areas.

Process: The site is in the vicinity of the Qutab Minar and commands a spectacular view of the 800-year-old monument. The proximity to the Mehrauli Archaeological site provided an architectural context which led to the use of Delhi Quartzite stone and Red Sandstone in the buildings and boundary walls.

Highlights: The garden showcases a vast range of plants from native to exotic, aromatic to herbal, and rare specimen of trees. Strewn all over the garden are sculptures and artworks from artists and craftsmen from around the country. It is one of India's largest commissions of public art featuring works of over 25 artists.

Challenges: The general topography at the site was quite difficult to work with. The central part of the site typically comprised of rocky outcrops and dense Keekar trees making it difficult to survey and design around them.

Outcomes: This project was a turning point for PSDA, a multi-disciplinary design studio based in New Delhi, in terms of Landscape design and a very diverse/intensive vocabulary of plant species, materials, elements etc was developed during and after the project was completed.



1. Stage wall backdrop in formal garden
2. Specimen tree walk
3. Guided visit to the garden by Late Architect Pradeep Sachdeva
4. Amphitheatre

Jogger's Park

Mumbai, Maharashtra

Status: June 2019 to March 2021 - Completed

Site Area: Approx. 1.2 Hectares

Location: Juhu, Mumbai, Maharashtra

Client: MCGM Mumbai, Local Municipal Councillor, and Ward Level Municipal Council

Consultants: Atelier ARBO (Architect), Capstone Consultants (Structural Design)

Aim: The aim was to revive and rejuvenate Jogger's Park. For this, design up-gradation proposals were prepared by the Brihanmumbai Municipal Corporation (BMC) along with the local corporation and the residents of the area.

Project Overview: The design spoke about a holistic overview for the park as against piecemeal clean-up projects as is commonly done. The design was also not very intrusive and dramatic to overturn the existing walking track usage, but added features and facilities that would complement the space. Since the land is next to the Sea and holds a prominent location as a public open space in the city of Mumbai, it was essential to consider the design along with building materials that will last for at least 10 to 15 years.

Project Details: The park defined clear seating spaces and signages for better maintenance. The design also managed to demarcate a larger children's play space and gym space in the park which was earlier vacant or was not used for any purposeful activity.

Process: The design took a lot of time to evolve as it included initial meetings with residents to understand their requirements and to keep in mind the most common usage of the park as per the current scenario. It was essential to intervene as an Architect to provide some level of assistance that could make a change and have a larger impact on the lives of the residents and the visitors.

Highlights: The overall park design got three upgraded walking tracks, i.e. one with mud finish, second with soft finish, EPDM track and the last with stone flooring. This has enhanced the walking and jogging experience of the regulars as well as other visitors.

Challenges: The construction was done during the main COVID-19 Lockdown when it became evident that open spaces are not just for one section of the community but for all. With such a difficult situation in hand, it became a challenge to get it done as soon as possible so when the lockdown scenario eased, people could make the best use of the space. The most interesting focus has been on creating a 5000 sq ft themed children's play area which was earlier within a limited space of 2000 sq ft, with four play equipment. Usually around 4500 to 5500 people visit the park over the weekends, among which about 1000 are kids who need a much larger space to explore.

Outcomes: Mumbai has only 1 sq. m. public open space available per person, which is the lowest in the world. In such a scenario, only one thing could be done i.e. conserve, rejuvenate and upgrade the existing public open spaces. It is not just about the overall area of a park that needs to be considered for up-gradation but also to identify and work upon whichever land parcel is available for use by the locals.



1. Children's play area
2. Kids enjoying in the tunnel
3. Colourful play structures
4. Mounds with EPDM slope and play structures installed



Kishore Kumar Baug + Vijay Tendulkar Rangmanch

Mumbai, Maharashtra

Status: Completed in 2017

Site Area: 7000 sq. m.

Location: Juhu, Mumbai, Maharashtra

Client: BMC

Consultants: Rajdeep Enterprises, Siddharth Consultants, Dhanashree Sawant (landscape design).

Aim: The aim was to create a vital public space, intended as a garden in the Development Plan for Mumbai.

Project Overview: A host of public institutions and amenities are situated adjacent to the Irla nullah. The re-invigoration proposal looked to interconnect these amenities and open spaces to the nullah to increase participation and thereby, improve the vigilance of these public spaces. The chain of public parks along the Irla Nullah in the form of the Kaifi Azmi Park, Kishore Kumar Baug and the Childrens' Forest Park form an immaculate 'city forest' within a dense urban setting.

Project Details: The various parks are developed along a 1.2 km stretch of the Irla Nullah. The total length of the nullah itself is around 7-km with both ends meeting the sea at Moragaon in the north and Khardanda in the south. The driving principle behind the development of these parks was to promote smaller, linear and more decentralised open spaces throughout the fabric of the city, instead of advocating large, central parks which are difficult to access and require some form of transport. These parks are within 5-10 min walking distance from any part of the neighbourhood and hundreds of people across all age groups visit them daily.

Process: The designs for the park acknowledge the heavy tree plantation and modulated walking tracks within the forest to provide a largely unmanicured, natural environment for walkers. The design of

several open-winged pavilions within this forest acts as moments of pause and shelter for people to appropriate as they deem fit – yoga, exercises or simply a break in between a walk.

Highlights: A Promoting Cultural Space: The Vijay Tendulkar Rang Manch amphitheatre, named after one of the greatest Indian playwrights, encourages cultural events for the neighbourhood. But on a daily basis, it often becomes a place to meet, discuss and relax. The space gets appropriated by all age groups. The location of the amphitheatre – between Kaifi Azmi and Kishore Kumar parks prompted a two-sided stepped design with a central stage. Green mounds take walkers to the highest level of the amphitheatre from within each park. This space creates a successful pivot for users of both the spaces.

Challenges: The land where the chain of public parks stand today has been the site of intense protest and struggle by local area citizens against the nexus of developers and authorities who undermine the value of public spaces within the city.

Outcomes: In the case of Kishore Kumar Baug and Vijay Tendulkar Rang Manch, MP Javed Akhtar pledged his MPLAD funds in the year 2014 for these parks as well as the larger vision Juhu plan that included the pilot project of Rejuvenation of Irla Nullah. PK Das and Associates along with the Gulmohar Area Societies Welfare Group have been at the forefront of this movement to reclaim these public spaces in Juhu.



1. Flying roof pavilions as rest spaces in the park
2. Entrance pavilion at Kaifi Azmi Park
3. Amphitheatre
4. Amphitheatre for cultural events
5. Vijay Tendulkar Rangmanch Amphitheatre connecting Kaifi Azmi Park and Kishore Kumar Baug

Kunnara Park

Kochi, Kerala

Status: Completed in December, 2021

Site Area: 2,023.4 sq. m.

Location: Kochi, Kerala

Client: Kochi Metro Rail Corporation

Consultants: Studio Aranya, Aranco Infrastructure (Contractor)

Aim: Kunnara Park was envisioned to strengthen the communities to come together and engage in various activities. The project was conceived since the previous park was taken up for metro rail construction activities. It was an opportunity to relook and redefine the way public parks are seen.

Project Overview: This is a universally accessible urban park designed for all age groups with facilities like a children's play area, open gym, designated walking/jogging pathways, open-air theatre, seating areas and restrooms.

Project Details: The park layout is conceptualised based on the existing site conditions with a welcoming entrance gateway leading to the installations in the central plaza. The installations are inspired by the surrounding trees edging the waterbody. The walking/jogging curvilinear pathways are designed based on children's psychology as they tend to walk less on straight lines. The landscaped open-air theatre is subtly placed on one end with an open stage for public events. The children's play areas are placed on sand pits to trigger playfulness. The universally accessible restrooms are also well integrated with the existing landscape with fenestrations casting a play of light and shadow.

Process: There were multiple stakeholder meetings for finalising the design and executing the same on-ground. Some onsite decisions were also accommodated into the design. The design decisions and material selection were also based on long term durability and maintenance.

Highlights: The design encourages people to walk and explore the park and by ensuring activities for all age groups, it makes the space more vibrant by providing a reason for people to use and experience the park. The welcoming central plaza installation evokes an urge to access the park and improve the visibility from an onlooker's perspective. Thus, it acts as a reminder of what public spaces can be and what they can become.

Challenges: For any public project to happen as envisioned, it's important to bring in all stakeholders together and maintenance is the key for any public space in the long run.

Outcomes: Even though this project has a maintenance contract for the short term, it is important to also devise a plan for maintaining these public spaces and look out for funding agencies, so that this park remains usable, accessible and provides a memorable experience to all.



1. Before: Derelict space under the metro viaduct
2. After
3. Kids play area
4. Walking track



Kurinji Garden Park

Coimbatore, Tamil Nadu

Status: Completed in April, 2019

Area: 2,107 sq. m.

Location: Selvapuram South, Coimbatore, Tamil Nadu

Client: JS Associate Development India

Consultants: Jasmine Gardens (Landscape Architects and Site Planners)

Aim: Since there was a lack of proper outdoor space, this smart city project came into place so that children and their caregivers are able to spend quality time outside their homes.

Project Overview: People needed recreational spaces like parks and playgrounds that were suitable for all age groups.

Project Details: The accessibility features include – walking and jogging tracks, children's play equipment, outdoor gym, indoor gym, fountains, seaters, etc. Features like rainwater harvesting and LED lighting have been incorporated in an environmentally conscious perspective to save water and energy. All these features not only improved the social well-being but also further improved the physical and mental well-being of the visitors

Process: The project was completed successfully within the given time frame and had a welcoming impact and outreach on the neighbourhood.

Highlights: This garden has unique features that include senior citizen/women exercise equipment with floor platform, yoga platform, rainwater harvesting structure, drinking water RO plant, LED lighting across the park, CCTV cameras, etc.

Challenges: The facilities were built at a cost of Rs 99 lakh.

Outcomes: By completing this project, it was understood that the neighbourhood should contain all the amenities to improve their social bond among neighbours and family members, and also between humans and nature.



1. Open gym
2. Children's play area
3. Fun stuff for kids
4. Sculpture in the garden

Lotus Garden

Mumbai, Maharashtra

Status: 2012 to 2014, Completed

Area: 1300 sq. m. serving a population of 200 to 300 thousand people.

Location: Govandi, Mumbai, Maharashtra

Client: Local Residents

Consultants: Mumbai Environmental Social Network (MESNN), UN-Habitat, Mumbai Metropolitan Region Development Authority (MMRDA)

Types of Users: Women, Children, aged, people with disabilities, mothers

Aim: Mumbai Environmental Social Network (MESNN), a local NGO, took up the challenge to convert the open space that was being used as a dumping ground, into a quality space with community participation to instil a sense of collective responsibility for its positive use and upkeep.

Project Overview: In slums, people live in very small houses without much outdoor breathing space. Despite scarcity, the open space was being used as a dumping ground with anti-social activities happening within the area, making it a very unsafe place. Residents, administration and local representatives underestimated the importance of this precious space for the well-being of the neighbourhood.

Project Details: The municipal corporation was not ready to invest in its development fearing vandalism by the local miscreants. Now, this project exemplifies how the collective responsibility of the local community can help in protecting and maintaining this precious public space from miscreants. The local community, which had complete apathy towards this garden for years and was using it as a dump yard, today takes pride in showing and using it. Though community engagement is a very slow process, the investment becomes more meaningful and sustainable.

Process: To work with the community to develop the public space it was important to build trust and thus initiatives like Solid Waste Management, a clean campaign was taken up, which was more important for the locals. During these interactions, many key members of the community came forward and the social and political dynamics became apparent.

Involving residents of all age groups and gender in the development process was the key for creating a sense of collective ownership and responsibility.

Highlights: After the completion of the garden, at any given point, at least 300 to 400 children and other people use this garden. This was an expected outcome considering the high density and needs. But in a neighbourhood with a lot of gender inequality and restricted access of women in public space, women using the open gym facility within the garden, was the biggest unexpected innovation.

Challenges: Residents lack trust in the government, political representatives and also NGOs working in the area. For MESNN, mobilising local people for the development of the public space, helping them to create civil pressure to demand for common good and restore their lost faith in the democratic process was a very bold planning approach. This project took two years and was completed in 2014. Now, due to the years of good care by the locals, trees have grown well, creating a green oasis in this grey neighbourhood that had almost no trees. All age groups, males and females use the garden feeling extremely safe. This public space has been maintained well and has become a proud landmark of the area. It has given a very positive identity to the neighbourhood.

Outcomes: Earlier the local community did not think that they had the power to influence the local representative or administration, but now the thought process is changing and residents have learnt to demand for the common good. Considering local demand, the municipal corporation has developed a few other open spaces in the neighbourhood.



1. Before
2. Involving residents in the development
3. Open gym
4. After



Neela Hauz Biodiversity Park

Delhi

Status: Initiated in 2012

Site Area: 3.9 Hectares

Location: Vasant Kunj, Delhi

Client: Delhi Development Authority

Consultant: DDA Landscape Team

Aim: Since much of the catchment of the Neela Hauz freshwater lake has been taken up by institutions, the flow of rainwater into the lake was substantially reduced and the natural drains were blocked by the encroachments. The aim was to revive the source of water into the degraded lake.

Project Overview: Neela Hauz was a natural freshwater lake in the shallow valley depression of the South-Central Ridge. The lake, occupying an area of more than 10 hectares, was recharged by the wider dense forests of Sanjay Van and its overflow draining into the Yamuna was the main source of water supply for the Rajput city of Qila Rai Pithora and later South Delhi. The lake was de-silted to restore it to its original state.

Project Details: The lake was de-silted up to a depth of 4-m and the excavated material was used for making the embankment. The solid waste dumps were removed and the material was used for the creation of mounds. The mounds have been developed into recreational areas and a greenway with a walkway has been developed along the embankment. Waste water from surrounding colonies is being treated through constructed wetland system (CWS) with zero energy.

Process: An in-situ constructed wetland system has been developed to treat 1-mld raw sewage that enters the lake. This is the only source of water for the lake. Water supply was restored with the treated water from the Wastewater Treatment Plant. The designed wetland system consists of 2 oxidation ponds, 3 physical treatment tanks and one constructed wetland. The system works with zero energy and within less than 20 hours the sewage water is made into water that has the same quality as that of river water.

Highlights: Rejuvenated Lake Ecosystem: The restored lake, the greenway with a walkway, the manicured lawns of the mounds, the Phoenix grove, butterfly corner and constructed wetland system have made Neela Hauz Biodiversity Park a destination for the public and tourists for recreation.

Butterfly Conservatory: Many flowering and other host plants have been planted here for their larvae. More than 40 species of butterflies can be spotted during the breeding season.

Scented Garden: A scented garden has been established near the constructed wetlands in the Biodiversity Park.

Challenges: The wetland was covered with water hyacinth and the ridge was infested with the invasive species of *Prosopis Juliflora* (Vilayati Kikar). The silted-up lake was further encroached upon reducing its size to 3 hectares and raw sewage from the surrounding colonies drained into it. Previously, with the construction of the Aruna Asaf Ali Bridge across Neela Hauz, the lake was further filled, degraded and turned into a dump for waste.

Outcomes: Six forest communities ranging from grassland, shrubland, riparian forest, slope community, and dry deciduous forest have been established. About 15,000 trees and shrubs belonging to 100 native species characteristic of the Aravallis have been ecologically assembled.

The constructed wetland system is not energy driven. This clean treated sewage water transformed a dead Neela Hauz Lake into a natural lake for in-situ biological remediation of drains converting one million litres of sewage water per day into clean water comparable to tap water having less than BOD 4mg/litre per day.



1. Nature Education & Recreation
2. Waterfowl communities of the forest fringing the lake
3. After restoration
4. Neela Hauz – The Blue Tank



Noida Biodiversity Park

Noida, Uttar Pradesh

Status: Completed in 2021

Site Area: 30.3 Hectares

Location: Sector-91, Noida, Uttar Pradesh

Client: Noida Authority

Consultants: Shaheer Associates, S.J.A. Consultants

Aim: The Noida Authority had a parcel of land measuring about 75 acres in Sector 91, Noida. The Authority mandated it to be developed as "Noida Biodiversity Park" as per the Master Plan.

Project Overview: The Noida Biodiversity Park was envisaged to play an important role in imparting nature education particularly to school and college students besides the ecological researchers and nature lovers. It was also meant to be an ecological resource not only for the people of neighbouring sectors but also for residents and children from Noida, Greater Noida and beyond.

Project Details: Over 80 native and naturalised tree species, as well as more than 120 shrubs, herbs, and other saplings were planted in the park. A rich wetland environment was developed, along with a rich reservoir of native and naturalised flora. As a result, plants, small creatures, insects, birds, and butterflies form a distinct ecosystem here.

Process: The different components of the Biodiversity Park are illustrated through the various parts of the Flower, which every school-child knows and relates to from a young age. The 'Receptacle' denotes the Entrance and the Parking. The outer 'Sepals' signify the Public Areas – amphitheatre, exhibition spaces and picnic gardens. The Biomes (forest ecosystems) in their miniature form are recreated in the six 'petals' of the Palash flower. The 'Bee flight' or the peripheral path (about 3-km long) passing through the various valleys is the golf-cart track, permitting movement across the various biomes. A winding path representing the helix of the 'DNA' is laid about the main central path, aligned across the various biomes in a series of 7-m wide straight path

segments with shifting axes and pavilions (resting place) in between. The low-lying linear stretches of seasonal ponds signify the swathes of 'Nectar' or the elixir of life (water). There is a peripheral jogging path and a cycle track, each roughly 6-km long, meandering through the various biomes.

Highlights: There has been a significant increase in evapotranspiration due to the planting of over 8000 big trees, 100,000 shrubs, and 4.5 lakh ground coverings. Massive amounts of carbon sequestration and oxygen generation, as well as biomass production, are possible due to the amount of planting and afforestation that has been done. This park serves to manage water scarcity by attaining 100% groundwater recharge from the 110 acres of available land area, with 85% of the intended wooded Green Area.

Challenges: Noida Biodiversity Park is planned as an exposition of the biodiversity that may be possible to exist in the various biomes that could be suitably recreated in the soil type and climate of Delhi NCR, particularly the four natural divisions (namely, Kohi, Bangar, Khadar and Dabar) observed in the region besides grasslands, wetlands and other subsidiary plantations like groves of culturally significant plants and trees, fruit-bearing tree orchards, bambusetum and medicinal and herbal plants.

Outcomes: The park with its proposed ecosystems is envisaged to provide an opportunity to learn about species of plants, seed germination, bioremediation, ecosystem redevelopment and food webs through indoor and outdoor exhibition spaces.



1. Arbour in the floral garden & machaan in the backdrop
2. Celestial garden
3. (Navgraha Vatika)
4. View of entrance
5. Entrance court

Prakasham and Padmavati Park

Tirupati, Andhra Pradesh

Status: Completed in January, 2020 and December, 2019 respectively

Site Area: 4.65 Hectares for 2 parks

Location: Tirupati, Andhra Pradesh

Client: Tirupati Smart City Corporation Ltd (TSCCL)

Consultants: AECOM India Pvt. Ltd.

Aim: The motive was to increase active and passive recreation spaces for citizens and pilgrims and to create greater opportunity for all to interact with nature and learn through play on how to enhance health and well-being of the residents and reduce life-style diseases. The aim was also to create universally accessible and child-friendly public parks and provide revenue-generating amenities to off-set maintenance costs.

Project Overview: The proposal included refurbishing of two existing municipal parks with emphasis on creating functional open spaces for all age groups and genders; citizens and pilgrims alike. It included the Prakasham Park (44434.484 sq m) - a city level park, and the Padmavati Park (1659.21 sq m) the neighbourhood park.

Project Details: The city-level park (Prakasham Park) has been provided with amenities catering to the entire ABD (Area Based Development) population and beyond, with a catchment area of 2-km. The neighbourhood park (Padmavati Park) provides amenities catering to the surrounding residents, with a catchment area of 5-10 minute walking distance. This project caters to an ABD population of 1.2 lakh and also around 10,000-15,000 pilgrims visiting Tirumala daily for Darshan.

Process: The analysis and comparison of the existing facilities with national/international benchmarking of parks show that the facilities offered in them are falling short in meeting the demands of the present and the forecast population. Based on citizen engagement workshops, Tirupati envisioned a city ecosystem where parks are 100% universally

accessible and to provide functional spaces to improve urban life. It focuses on integrated and phased improvements in existing green spaces to attain better air quality, social inclusion and healthy lifestyles.

Highlights: Enhancing the ecology and micro-climate, the existing green cover has been preserved and addition of trees inculcates learning through play; Child-friendly design and universal accessibility has been included in the design creating active and gender neutral outdoor spaces for a wide range of sports and recreation; creating quadrants of activities within the park and linking each quadrant through walking/jogging tracks; increase in footfalls during weekdays and weekends; introduction of revenue-generating amenities and lowering maintenance cost burden on Municipal Corporation of Tirupati (MCT).

Challenges: Revenue generated through this project shall cover the maintenance costs for long term sustainability while child-friendly and gender-neutral design components can be implemented in other parks. Such projects can create high functional open spaces in the city for active and passive recreational needs of citizens and pilgrims.

Outcomes: A successful pilot project can be scaled up city-wide. This project lies within the ABD area and impacts the residents and visitors. Context-sensitive design and use of locally available materials have increased the park's functionality/usage. Adjoining residents take pride in locating the next upgraded parks that have necessary amenities which were previously missing. The city spends around 4.5 lakh/annum on maintenance.



1. Padmavati park – aerial view
2. Padmavati park
3. Prakasham park
4. Prakasham park
5. Aerial view of Prakasham park - after

Ravine Park

Manjari, Maharashtra

Status: 2019 to 2021, Completed

Site Area: 164 Hectares

Location: Rivergreens Township, Manjari, Maharashtra

Client: Godrej Properties Limited

Consultants: StudioPOD Design, EnviroScape, GPL Studio, Ashoka Structural Consultants, Unicorn MEP Consultants, AIMS (Lighting Experts), Landor and Fitch (Signage), Kaustubh Moghe (Biodiversity Expert)

Aim: A unique residential community centred around the principles of Landscape Urbanism, where people can live, work, play and learn by forming a compact, walkable, self-sufficient neighbourhood.

Project Overview: Godrej River-Greens is an Integrated Township Project based in Manjari, Maharashtra. The master plan boasts of a rich mix of land use with residential, office spaces, school, civic amenities, retail spaces and a throbbing Town Centre. These high-density walkable neighbourhoods are designed to promote walking and cycling through the creation of a 10-acre contiguous linear park that forms the central spine of the township. The Ravine Park is part of this linear park that conserves the ecology of the existing water system on the site. The linear park is envisioned to be a great public space in Pune with emphasis on local ecology and biodiversity.

Project Details: The entry deck is a collection space that allows people to experience the origin of the ravine. The planting palette mimics the ravine species and creates a rustic landscape that plans to enhance the existing biodiversity on site.

The Canopy Walk allows the visitors to walk along the tree canopies. The lower pathway is dotted with programs in the forest environment like adventure play area, camping area, natural water bodies and xerophyte gardens.

The viewing tower named "Machaan" connects the entire landscape visually to the river Mula-Mutha creating awareness among visitors about the sensitive connected ecosystems. The entire park including the canopy walk is designed to be a universally accessible space for visitors of all age groups.

Process: This linear park is designed to preserve the existing watershed and aims to restore and celebrate an already thriving ravine ecosystem. The master plan originates with the creation of a bio-loop that connects the sensitive ecosystem of the Mula-Mutha river to the ravine systems on-site.

Highlights: The Ravine Park can be experienced through an elevated canopy walk that allows the residents to walk among the dense tree canopy on site. The park contours wherein the planting and materials have been carefully crafted to increase and respect the ecology and the biodiversity in mind.

Challenges: The challenges were to convince the developer to create Eco-sensitive spaces that allow all species to thrive within the space, which eventually became the unique selling point of the township.

Outcomes: The park is a significant step in proving that private developers can participate in creating sensitive developments.



1.



2.



3.

1. The planting palette mimics the ravine species and creates a rustic landscape
2. Canopy walk
3. The entry deck is a collection space that allows people to experience the origin of the ravine
4. Lower pathway



4.

River Hills

Pune, Maharashtra

Status: 2017 to 2021, Completed

Location: River Hills, Pune, Maharashtra

Area: 242 Hectares

Client: Godrej Properties Limited

Consultants: GPL Design Studio, StudioPOD (Landscape Urbanism), Enviroscape (Landscape Architecture), DADA (MasterPlan), Unicorn Consultants (MEP), Ashoka Structural Consultants (Structures), Lighting Concept (Lighting), Lopez Design (Signage).

Aim: The landscape urbanism design aims to transform through a series of different experiential landscapes, a greenfield peri-urban site into a township that celebrates its open spaces and public realm to create a destination for visitors and a good residential area.

Project Overview: The project plans to provide multiple ecosystem services, including storm-water management, and recovery of native habitats, as well as the creation of a cherished public space for gatherings and aesthetic enjoyment. A biophilic landscape urbanism and design approach has been employed that builds on the unique natural setting. Emphasis is placed on blending ecology with function to create a variety of spaces that children and adults of all ages can enjoy.

Project Details: The landscape palate with more than 900 trees in the 6-acre central park includes 27 native tree species, 15 rare species, multiple fruits and flowering shrubs and trees that attract the different migratory and native birds. The seasonal colours of the trees are used as identity elements for different spaces.

This area is designed to have all the active sports and recreational areas. This park is designed to cater to all age groups and users. Almost 130 acre of the park is dedicated to active sports like basketball, tennis and a multi-functional playground. Different programmatic rooms within the park are designed for different recreational uses like an amphitheatre, yoga lawn, hammock park, belvedere lawn and pet park to name a few.

Process: Riverhills Park is conceptualised to build a balanced environment for leisure activities. A constant attempt to use natural topography of the site while planning the civic activities, storm water strategy.

Promoting Health and Sports: The project is designed for daily fitness and sports with 2.5-km health loops with 2000 and 6000 calorie circuits, open gymnasiums, yoga and meditation zones and sports fields/courts.

Connectivity: Pedestrian paths and bicycle routes are overlaid on the green spaces along the waterways and form a circuit around the park. Resting platforms with abundant seats and yoga pavilions, bicycle parking and a bridge to cross the retention pond are integrated into the designed natural system for universal access to offer multiple recreational and aesthetic landscape experience.

Highlights: This 6-acre park is the active landscape heart of the township. Shaded humane spaces, rest points for conversations, social gathering spaces for functions, play spaces, seasonal floodable spaces and natural storm water systems have been embedded in the design.

Challenges: Through this project, the design team created multiple strategies to navigate different edge conditions between the built form and the landscape, retail and street, public and private without creating large compound walls. The process taught us to balance economics, landscape design, biodiversity and architecture through dialogue and collaboration.

Outcomes: The design hopes to create one ecologically sensitive, social, interactive and fun space that will be enjoyed not just by people but by all other living beings in nature.



1. Park entrance view
2. Bridge
3. Children's play area
4. Multi-use pathway
5. Aerial pictures of ongoing construction of #RiverHills Park

Riverfront Flower Park

Ahmedabad, Gujarat

Status: Completed in January, 2017

Site Area: 6.19 Hectares

Location: Ahmedabad, Gujarat

Client: Sabarmati River Front Development Corporation Ltd. (SRFDCL)

Consultants: Oasis Designs Inc. (Landscape Consultants), JESC Group (MEP Consultants), Advance Engineering (Structural Consultants), Kamal Managal Das and Karthikeya Shodhan (Local Architects)

Aim: The Flower Garden Park is the first themed flower garden of the city of Ahmedabad along the Sabarmati Riverfront. The garden is envisaged to showcase different flower-based plant species in different themed areas all over the park.

Project Overview: The Riverfront Flower Park is one of the five parks designated in the overall masterplan of the Sabarmati riverfront development. The site is located on the west bank of the Sabarmati River, between two bridges namely Ellis bridge and Sardar bridge.

Project Details: The central area of the park was divided into different zones for each theme. Some of the areas are the Flower Terraces, Flower Valley, Tricone Vatika, Lake valley, Rose Garden and a greenhouse showcasing shade-loving and exotic plants. The entire site was designed to incorporate the lower-level promenade along the river with fixed exit points.

The flower park towards the riverside has four access points to the lower promenade and on the road side it has three punctures to access the site from the road. All built elements like toilets, food stalls, vendor stalls etc were kept at the existing ground level so that they are visible prominently from the outside. All the different levels were connected with universally accessible ramps to achieve a barrier-free environment.

Process: The park was constrained by the presence of two existing walls on either side. Due to the location of the park next to the Sabarmati River, the visibility of the river from the park was of utmost importance. Therefore, the level of the park was raised next to the walls to be such that areas beyond the park were visible from both sides.

Highlights: The zoning of spaces was done linearly one after another because of the linear form of the park. The two main entries were placed at the two extremities of the site. A service entry was provided at the existing wall puncture at the centre of the site. Two elevated promenades were placed on either side of the park, overlooking the internal plaza that has been created between the event ground and the flower park. This common entry plaza houses the food court as well.

Challenges: The overall area was a relatively flat piece of land. The intent was to avoid too much filling in the region. The filling was done only on the sides and the central area was left at the existing level. This allowed for an elevated view of the internal areas from the upper-level peripheral promenades. The upper promenade created an elevated view plane for the internal as well as the external view of the park.

Outcomes: This project managed to achieve the objectives of creating a high-quality theme-based park as well as an integrated urban space that addressed the physical and psychological needs of the people and helped to create a cohesive visual language acknowledging and respecting the overall context.



1. Overview of the entry to riverfront flower park
2. Different theme flower parks
3. Night view with visual markers along the pathway
4. Aerial night view of the park

Sabarmati Riverfront Park

Ahmedabad, Gujarat

Status: Completed in December, 2014

Site Area: 6.19 Hectares

Location: Ahmedabad, Gujarat

Client: Sabarmati River Front Development Corporation Ltd. (SRFDCL)

Consultants: Oasis Designs Inc. (Landscape Consultants), JESC Group (MEP Consultants), Advance Engineering (Structural Consultants), Kamal Managal Das (Local Architects)

Aim: The Riverfront Park is located along the Sabarmati River in Ahmedabad, India. The design of this riverfront destination park was focused on using the reclaimed land to create a city level park for the people and incorporate the best practices for storm water management. The park design aimed to create different zones like active areas, passive areas and congregation spaces for celebration.

Project Overview: The zoning of the park has been done in such a way that once inside the park, a visitor can forget the noise and dust of the city and enjoy the landscape, beauty and tranquillity of the park. The levels of the park are modulated to provide an uninterrupted view of the river. The site selected for the first Sabarmati Riverfront Park is located opposite the Gandhi Ashram across the river.

Project Details: The Spatial organisation of the park allows a number of linearly placed themed areas within it, catering to different activities and age groups. These include a Lotus Pond, children's play areas, amphitheatre and various small pocket parks. The design also acknowledged the strong context of the Gandhi Ashram (located at the opposite bank) for the visitors to the park. The Lotus Pond on one end is an attraction for visitors and has become a popular photo point.

Process: A continuous Riverside Promenade was designed, and its levels were carefully planned, keeping the view aspects in mind. Large wide mounds have also been provided to create panoramic views. An elaborate food court with a shopping street was designed next to the park. The space was created to make the park more vibrant and bring commercial value to it as well.

Highlights: The main highlights of the project include a Thought Garden that is a contemplation garden which has been designed within this park. This allows people to connect to individual thoughts of the Mahatma as well as other great thinkers. The other highlight of the project is the Sundial Court. It captures the movement of the sun. The sundial clock is a representation of the constant movement in life - the movement of the earth around the sun and the daily rotation of the earth causing night and day.

Challenges: The park had to be connected with the riverfront promenade at the lower level. For this purpose, the park's three main entrances and each entrance plaza were provided with a direct link to the existing steps/ramp to the lower promenade. These entry numbers were decided in keeping with the existing connections. The challenge was to allow visitors to disconnect from the busy roadside and enjoy the beauty of the park.

Outcomes: This site offers fabulous riverside views of the Gandhi Ashram and the design concept acknowledged this strong context to be appreciated by the visitors to the park. Mahatma Gandhi had said 'My life is my message', so the park was designed to reflect Gandhi's life events and philosophy.



1.



3.



2.

1. Kids enjoying the landscape plaza
2. Aerial view of the park
3. Amphitheatre plaza with water fountain
4. The central entry plaza in the riverfront park



4.

Vanasthali Park

Lucknow, Uttar Pradesh

Status: Completed in 2011

Site Area: 4.45 Hectares

Location: Lucknow, Uttar Pradesh

Client: Lucknow Development Authority

Consultants: Oracles (Landscape Architects), Onais Associates (QS and Structural Engineers),

Techno Engineering Consultants (Plumbing Services), Escon (Electrical Engineering Services)

Aim: The aim was to design a public park primarily catering to the residential sectors around the Qila Bijli Pasi. The primary objective and intent was defined through participative engagement with the Development Authority and it was decided to look at it as a forest-park, to be called Vanasthali.

Project Overview: Qila Bijli Pasi in Lucknow is a lesser-known fortress. Its non-descript surroundings have a plotted residential area called Ashiyana. Diagonally opposite to the main road in front of the Qila, to its northwest, lay a patch of land comprising two triangular pieces, joined through a narrow vertex which were planned for redevelopment.

Project Details: The teak plantation of the area has been retained as an asset and a trail along a winding dry-stream through existing trees, symbolising a river and its tributaries, connects the gated entrance to the second triangular patch. The trail has a soft gravel surface and ensures minimum impact on the shallow root system of the existing vegetation. A raised machan sits in the forested setting.

Upon traversing through the forest, one arrives at the parkland, with a sprawling lake, shaped creatively to emulate a widening within a small brook. One of its edges are developed as ghats to evoke historical association and over the neck of the lake sits a stone bridge. Pavilions, play zones and rolling grassland surround the lake as an idyllic setting.

Process: The landscape reclamation exercise started with detailed surveys and reconnaissance to understand the lay of the land and issues of drainage. Preliminary analysis led to a design brief and it looked evident that the run-off could be easily channelized and the low-lying water-logged patch could be reclaimed into a lake.

Highlights: The perimeter and particularly the entrance, has been designed to evoke the emotion of giving back the lost land to its rightful users, thereby a symbol of victory for the community. The random rubble stone wall derived out of the historical context of fortifications and ramparts is punctuated with two tall towers looking skywards and forming an iconic landmark speaking the story of human triumph. Planting with vibrant and stark colours of red and green built up a joyful pattern of contrast.

Challenges: The land available for the park was fragmented and locked on several edges with dense plotted development. While one of the triangular pieces had teak plantations, the other was a low-lying land, often waterlogged. Garbage was strewn by the local community and the land was a true picture of neglect and urban apathy.

The challenge was not only to physically rehabilitate the area, but also to change the urban mindset towards the disregarded piece of land, to which the neighbourhoods had turned their backs. The outcome has been an extremely pleasant green haven, adored and intensively used by the surrounding population.

Outcomes: The city in its masterplan leaves pockets designated as greens. A foray into the distinctiveness of each land parcel must make it relevant and unique to its given context and peculiarities. Today, Vanasthali forms an ecological and functional landscape with associative values evoking history and culture in a stylised, contemporary language.



1. Machan overlooking the park connects two land parcels through a visual cone.
2. Victory totems juxtaposed with an irregular wall rampart symbolize regeneration.
3. Side view and colored plantation.
4. Bright and contrasted planting carpet foreground to robust architectural features.

Vasant Udyan (Bagh-E-Bahaar)

Delhi

Status: 2017 to 2019, Completed

Site Area: 18 Hectares

Location: Vasant Vihar, Delhi

Client: Delhi Development Authority

Consultants: DDA Landscape Team

Aim: The aim was to tap the potential of the character of spaces to generate a rich and meaningful quality urban open space. The core idea is based on tracing a journey of reading the site through the overlaps of various identities at the urban, historical, and community levels where it was a part of a larger open space structure. This arrangement was harmoniously linked with the present-day context of a district park.

Project Overview: District Park Vasant Udyan, also known as 'Bagh-e-Bahaar' (literally, The Garden of Spring) is situated in Vasant Vihar where it was among the 1500 gardens (baghs) laid out by Feroz Shah Tughlaq in the 14th century in Delhi and its close vicinity with a Baradari, mosque, and a water channel. This is the last surviving garden of those baghs.

The project traces a sense of place for this garden by laying a narration around the existing monuments and building a socially cohesive urban green belt that also acts as an ecological repository. Besides the spectacular lawns around the monuments, the park holds spaces that cater to all age groups and across all groups with physical disabilities.

Project Details: The entire edge of the green area was studied to relocate the entrances to be universally accessible and strategically to give maximum reach to the public. The circulation was re-laid to achieve maximum footfalls. The boundary walls were lowered to give natural surveillance and a sense of safety to all genders and age groups. The middle storey planting was removed to improve the visual expanse and avoid shadow areas for anti-social elements.

Process: The site was analysed and treated keeping in mind three major identities it carries - urban level open space, monument garden

and ecological repository. The attempt was to address and bind each of these layers in a conducive manner, by intervening just enough, to trace a sense of place and generate a holistic system.

Highlights: To generate a sense of ownership, interaction sessions were held from time-to-time with the surrounding Resident Welfare Associations (RWAs). For the first time, automated irrigation system to save water, special lights were designed and installed. Eco friendly materials used to erect bridge and shelters, provision of STP water to irrigate the park. Special design for stone work in benches, chhatris and special type of writing on stone sourced from Rajasthan and chiselled in Mehrauli. A lot of multi agency coordination was done with various departments including State dept of Archaeology for maintaining and lighting of historic structures.

Information boards with beeping devices, QR code text converter, and braille tablets have also been installed to provide information for people with all abilities. An interpretation centre is also being set up to provide more information about the park.

Challenges: To increase the reach of the park to maximise the number of people visiting it, third party collaborations have been signed to organise events and regular updates on the website.

Outcomes: Public open spaces like these are a good example of resonance in a linear system. The overlapped layers of time and culture, bound together with one landscape vocabulary act holistically as singular and yet have possibilities to evolve into a further system. Well-designed green systems amplify the social health of a neighbourhood.



1. Poetry garden
2. Entry to the monument
3. Mound & stone seaters
4. Amaltas court
5. Amphitheatre
6. Bamboo bridge

Vesu Linear Park

Surat, Gujarat

Status: Completed in November, 2020

Site Area: 166 Hectares

Location: Vesu, Surat, Gujarat

Client: Surat Municipal Corporation

Consultants: CEPT Research and Development Foundation, Earthscapes Consultancy (Landscape Consultant)

Aim: An agricultural canal, earlier on the outskirts of Surat, was now a part of the bustling city, defunct and unused. As roads developed on both edges, the canal ended up as a dumping ground with no functional use other than to drain rainwater from the neighbourhood. The space presented a unique opportunity to create a 3-km long public park in the centre of a street – a linear park that would activate the street at all hours. Along with the Surat Municipal Corporation and CEPT Research and Development Foundation (CRDF), Earthscapes, a landscape architecture practice, created a vision for a multi-functional park.

Project Overview: Vesu Linear Park is a unique street park in the centre of a busy arterial street in the new suburb of Vesu, Surat. This is a rare project which blends public spaces into a transit space that dissects a neighbourhood, providing it with a new identity.

Project Details: An old and defunct agricultural canal is repurposed into a wide street as well as a public space consisting of parks, sports areas, gardens and food zones. The entire park is barrier-free and allows easy movement of people and kids on bicycles.

Process: A linear park with breaks needs a uniform language that can bind its identity. A simple and vandalism proof material palette was selected. A unique paving pattern continues throughout the park, expanding or contracting to the space that holds the datum line. All buildings and vertical surfaces are finished with stonecrete for a longer maintenance-free lifespan. Simple and resilient details are used for edges and joinery.

Highlights: The project's success depends on its intensive design resolution. A part of it aims to create a natural woodland in the middle of a busy arterial street. The design responds by developing meandering movements amongst densely planted areas, which create a sense of oasis and disconnect the park from its busy surroundings. Another important aspect is to create a sense of place in the street, rather than project it as a busy thoroughfare. The design responds by creating transparent views into activity areas like sports courts and play areas. This edge condition provides life to the street and slows down the traffic due to adjacency.

Challenges: The design and execution required close coordination between various agencies and teams – for street development and park development. The challenge was to create an integrated design that provided a unique experience for the entire neighbourhood, and not separately for the street and the park.

Outcomes: To develop a unique experience for the city, certain junctions were closed. In other locations, the park program was changed to accommodate the discontinuous movement. The complex programming responds to the immediate surrounding while catering to a city level requirement for a recreational space.



1. Primary walkway with a trellis frame
2. Canal crossing bridge at night
3. Canal crossing bridge used as selfie-spot
4. The park extending on both edges of the canal
5. Entrance gateway as a prominent feature for orientation

Wazirabad Bundh

Gurugram, Haryana

Status: 2015 to 2018, Completed

Site Area: 14.2 Hectares (5.2 km Corridor)

Location: Wazirabad Bundh - Chhakarpur, Gurugram, Haryana

Client: iamgurgaon (NGO) and State Forest Department, Haryana

Consultants: VSPB Associates

Aim: The primary objective of the initiative was to develop a greener city for future generations. The project aimed to create a public place and self-sustaining eco-mobility corridor in the form of a 'Linear Park', providing non-motorised linkages through the city and also creating a 'green lung' for Gurugram. The purpose was to rebuild the derelict bundh as an ecological network and transform the urban backyard into an alternative mobility corridor and rejuvenate it as a vibrant urban public space.

Project Overview: The bundh was historically built as an earthen check dam to serve as an efficient water retention system for the city. Over the years, this had been encroached upon and reduced to a garbage dumping ground and open defecation area. The Bundh Eco-restoration Project was conceived as a pioneering citizen-driven, urban regeneration, initiative to rejuvenate the neglected corridor as a barrier-free nature park.

Project Details: A highly effective rainwater harvesting system was established with the help of French drains, subsurface piping and recharge pits. A good solid waste management system was created with compost pits, for the collection of biodegradable waste, to enable on-site generation of plant manure and use of renewable energy for lighting solutions through solar lights.

Process: The Chhakarpur-Wazirabad Bundh project was a collaborative initiative between the Department of Forest, Haryana government, a citizens' group called iamgurgaon, Corporate-sponsors (CSR) and the Design Consultants. The land came under the jurisdiction of the forest department of the government of Haryana. The proposal looked into aspects related to the existing land uses of accessibility and mobility around the site, existing sectional profile of the bundh and its relation

to the nullah and suggested design possibilities for a pilot stretch, 200-m long, on how to improve the quality of the area and bring this lost space back into the urban landscape of Gurugram.

Highlights: Mobility and universal accessibility were the key parameters of the proposal. Regenerating public space through Revitalisation of Derelict Urban Spaces and revival of the forest and ecosystem with native plant species.

To conserve the natural resources and reduce project costs, divergent ways of recycling materials have been carried out and 35000 cubic meters of construction debris, from landfills and construction sites in Gurugram, have been utilised for earth-fill operations.

Challenges: The site was originally a solid waste dumping ground and an open defecation area, which made it a home-ground for a large number of pigs. Thorny scrub vegetation made most of the areas inaccessible. The key hurdle during the initiatives was the illegal occupation of the bundh at several locations, at access points along the roads. These needed to be removed after appeasing the discontent and hostility of the unauthorised occupants with consultations with stakeholders.

Outcomes: The enormous vehicular congestion in the NCR, dependence on private vehicles due to the lack of better commuting options, and the alarming levels of pollution were motivation to find greener solutions to the city's mobility problems. Once deemed as a derelict, unusable area, the rejuvenated bundh is now a landmark public place. It has given the vulnerable user groups a much-required sense of dignity of movement and a feeling of social equality.



1. School children taking a short route through the Bundh corridor
2. Nature trail for morning walker
3. Public place in a natural setting for leisure activities
4. Dedicated tracks for cyclists
5. Universal accessibility

Yamuna Biodiversity Park

Wazirabad, Delhi

Status: Project Initiated in 2001

Site Area: 1,845 sq. Km

Location: Wazirabad, Delhi

Client: Delhi Development Authority

Consultant: Centre for Environmental Management of Degraded Ecosystems (CEMDE)

Aim: The idea was to evoke environmental security through ecosystem building, groundwater recharge and improvement of the micro-climate of the region. Also, to create an abode for environmental education, research and eco-tourism, by replicating various ecosystems thriving along the river from its inception till its merger with the river Ganga. Re-establishment of some of these forest systems along with wetlands that would serve as nurseries by storing a diversity of life forms.

Project Overview: Yamuna Biodiversity Park is a pilot project for the development of biodiversity parks across the city that dreams of giving back to Mother Earth by joining hands with the local community.

Emerging as the capital's most visited public place and prominent centre for learning and understanding the environment, the Yamuna Biodiversity Park has become a home for diverse forest communities, biologically rich wetlands, grassland communities, a wide variety of fruit yielding species and an abundance of medicinal herbs.

Project Details: The project is divided into two phases featuring two major zones- the visitor zone and the nature reserve zone. The visitor zone has a nature interpretation centre with touch screen panels that depict various biodiversity levels along with visual aids that provide an insight into the basic concepts of biodiversity. A total of 434 species of medicinal plants including 120 species of trees, 280 species of shrubs and herbs, 26 species of climbers and 8 species of grasses have been planted. A butterfly conservatory with trees within the beds of the butterfly-attracting plants and two wetlands that are now home to hundreds of migratory birds as well as native bird species form a part of this zone.

In the nature reserve zone, where fewer visitors are allowed, different forest communities interspersed with sprawling grasslands have been planted.

Process: Initiated in the year 2002, various restoration strategies and principles for the reconstruction of ecosystems and ecological succession were utilised to restore the pristine glory of the Yamuna River basin. Different forest types, wetlands, grasslands and marshes were developed and formed into ecological communities.

Highlights: The project comprises of Bambusetum, a symbol of endurance and resilience that allows specialists to study the wide diversity of bamboo species; a herbal garden that is a green oasis with a diversity of medicinal plants; a butterfly conservatory where four small ponds have been developed to add humidity to the surroundings and provide moisture to the butterflies; two wetlands, to simulate the natural water bodies; a Nature Reserve Zone, where animals can live freely, move and boom in numbers; and focus on Nature Education that has been envisaged to play an important role in Imparting awareness towards nature conservation, particularly to school and college students.

Challenges: The site was highly alkaline with extremely saline underground water and high electrical conductivity with only a few species of halophytes (salt-loving bushes) and common weeds.

Outcomes: The process not only helped to revive the lost ecosystems, and restore the ecological system but has also recharged the groundwater, improved the microclimate and created public awareness around the conservation of nature.



1. Fauna diversity
2. Before (year 2002)
3. Shallow wetland
4. Leopard sighted in the year 2016
5. Aerial view



3 *Tactical Urbanism*

Tactical Urbanism is all about action, be it events and festivals or short-term, low-cost, and scalable interventions to catalyse long-term change.

These measures transform urban spaces into vibrant public realm for a short period or can successfully improve small traffic junctions, prioritise public transport through bus lanes, or create playgrounds for children living in dense urban sections of the city. These can be led by citizens, neighbourhoods, NGOs, private organisations or the city municipality.

Annual events like the Coimbatore Vizha, Surajkund Mela in Faridabad, Kala Ghoda Arts Festival in Mumbai are hosted in popular public places that add not only to social and cultural but also economic richness. Sometimes entire cities are built for a religious event like the Kumbh, that is created just for a few months for millions of people. These types of spaces interlink politics, urban planning, the human body, and historic memory.

The projects in this section include many examples across India that are documented as part of the Smart City initiatives like Cycles4Change, Streets4People, and Transport4All.

- Art Trail | Bhubaneswar
- Bhubaneswar Rewind Play | Bhubaneswar
- Cross-cut Road | Coimbatore
- MR Palli Vaikuntha Puram Park | Tirupati
- Pago - Public Art | Brahmapur
- Public Space in Informal Settlements | Bhubaneswar
- Raahgiri Day | Delhi-NCR

Art Trail

Bhubaneswar, Odisha

Status: Completed in November, 2018

Site Area: 1.3 Km

Location: Old Town, Bhubaneswar, Odisha

Client: Bhubaneswar Development Authority (BDA)

Consultants: Bhubaneswar Urban Knowledge Centre (PgMC managed by IBI Group India Private Limited), UTSHA Foundation

Aim: The main intention behind introducing the Bhubaneswar Art Trail in the city was to acknowledge the importance of living heritage of Bhubaneswar by using art as a tool to initiate a dialogue of inclusivity and environmental sustainability. The aim was to provide a platform for artists to showcase their work in major public spaces of the temple city and facilitate improvements within these public spaces for the anticipated visitor footfalls.

Project Overview: Bhubaneswar Art Festival is a one-of-its-kind programmatic intervention that not only promotes the heritage and local art but also involves the community in its process, a large reason for its success. To accommodate art and ensure higher footfalls, the city needed to improve the public spaces on the trail and the basic infrastructure for residents and visitors. This helped in realising the importance of place making with cost-effective solutions for fast impact and communication.

Project Details: Along with support from Bhubaneswar Development Authority (BDA) and Odisha Tourism, the Odisha-based trust, Utsha Foundation invited 24 artists from around the world to enable the community to see the same city in a new light. The Bhubaneswar Art Trail (BAT) is a unique art initiative in the country that aims to create a space around the Old Town (often described as 'a treasure trove of time since the 6th century CE'), and introduce art to the public in a mystic setting and maverick air.

Process: The process began with on-boarding curators to prepare the trail and finalise the dedicated spaces for art installations. The involvement of the community, their houses and open spaces opened up the art trail with improvement of basic infrastructure to facilitate higher footfalls, ensure cleanliness, safety and universal accessibility. It also included refurbishing and blending the local shops along the trail to enhance local business. Local, national and international artists were invited to work on installations celebrating the heritage and culture of the city.

Highlights: The entire process was participatory with city authorities working hand-in-hand with the local community increasing an overall sense of ownership and belonging. The local arts community received a significant boost of encouragement. Local businesses and shop owners benefited through programmatic interventions. Realising the importance of art in reviving dilapidated or under-managed public spaces is a critical takeaway from the project. This also helped in increasing tourist footfalls in the old city of Bhubaneswar. A uniform colour palette throughout the trail represented a clean Bhubaneswar and retrieved the lost identity of the area.

Challenges: Some of the challenges faced during the course of the project included introducing a programmatic intervention to improve public spaces and basic amenities in the old city of Bhubaneswar; the process of identifying and on-boarding artists to showcase their work in the public realm; identification of relevant spaces to plan the entire trail; creating awareness and sensitivity among the community and decision-makers on how art can be used as a reformative tool to initiate infrastructure improvements in a short time frame.

Outcomes: Art can act as an essential tool to reclaim and revive the city while promoting tangible and intangible heritage. Encouraging art in public spaces through involvement of the community can be effective in increasing the sense of pride and ownership. The importance of adapting cleaner practices and management of public spaces is another lesson learnt through the Bhubaneswar Art Trail.



1. Junction design
2. Kothitirtheswar lane end before renovation
3. In-front of Mukteswar temple
4. Kothitirtheswar lane end after renovation
5. Kothitirtheswar lane after renovation

Bhubaneswar Rewind Play

Bhubaneswar, Orissa

Status: September, 2019 to January, 2020; Completed 5 Sites

Site area: Multiple Sites (0.2 Acres +)

Location: Bhubaneswar, Odisha

Client: Bhubaneswar Development Authority

Consultants: Bhubaneswar Urban Knowledge Centre and Anthill Creations

Aim: Bhubaneswar is one of the first cities in India to have established a city-wide Child Friendly Smart City Centre. In this journey one of the key learnings was the importance of public spaces to promote early childhood development through design and programming. To ensure that underprivileged children don't miss out on play, the city administration converted a few neglected sites into colourful playgrounds.

The project Rewind Play, aimed at providing varied play and recreation opportunities to all children in Bhubaneswar, especially those living in areas with lack of or no access to playgrounds.

Project Overview: Due to lack of data on vacant public spaces, an extensive city-wide survey was undertaken by Bhubaneswar Urban Knowledge Centre (BUKC) to scout for relevant spaces which could be developed as playgrounds. The local government was unable to fund the project due to material restrictions in the schedule of rates and the innovative, state-of-the-art nature of the project. Designing of play equipment to ensure early childhood development in children was undertaken by experts. The residents and other stakeholders were empowered to manage and maintain the public space.

Project Details: Under the project, discarded tyres from cars, trucks and tractors got a makeover for fun and colourful play equipment to create innovative, low-cost playgrounds. The aim was to provide children with enough opportunities for outdoor activities in an age of rapid urbanisation and shrinking open spaces.

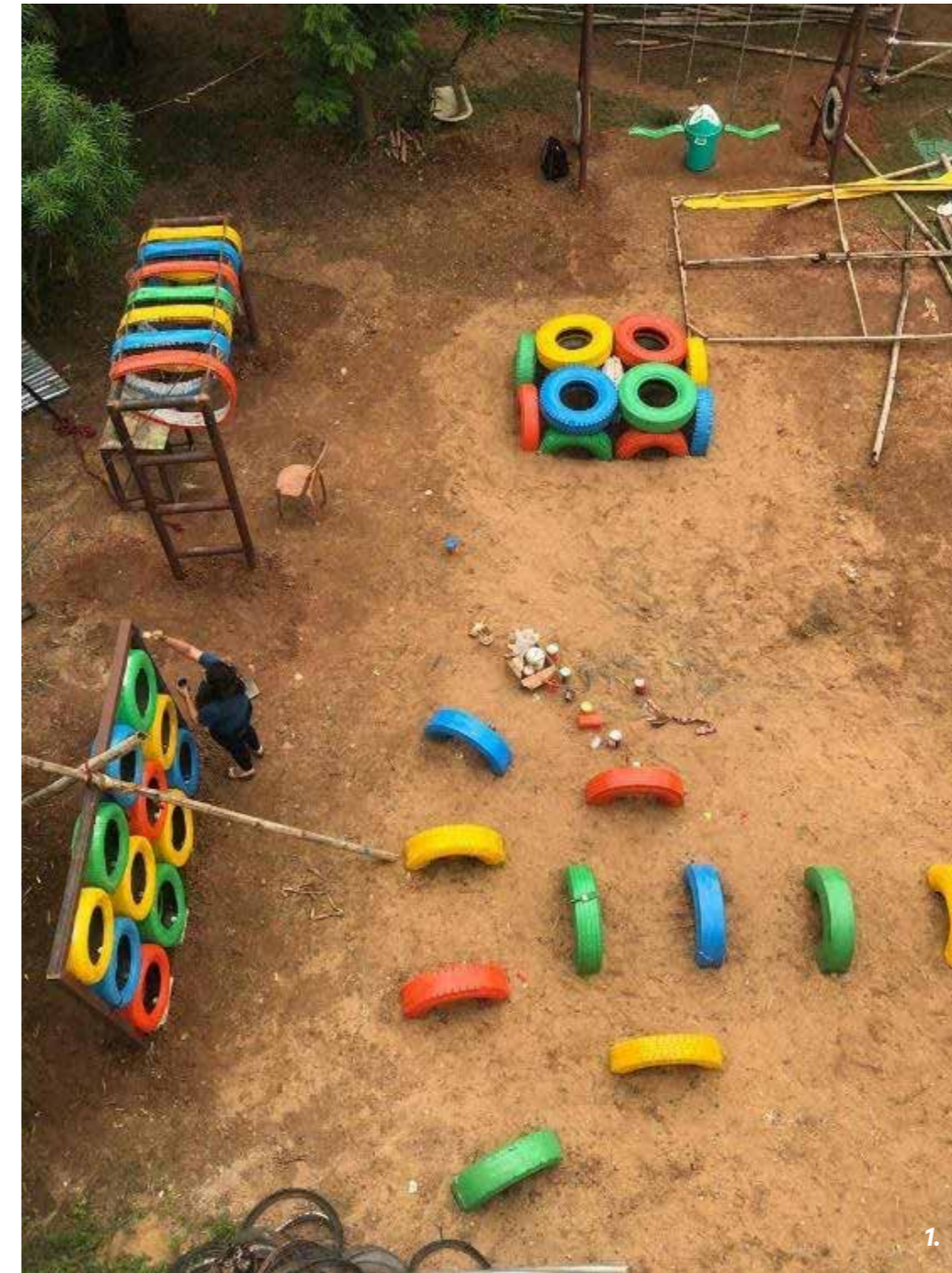
Process: To provide formal play spaces in a quicker and economical manner the method of Tactical Urbanism was adopted. The approach was to form a successful collaboration with experts and organisations

in the form of knowledge sharing and professional partnerships to bring in the global best practices. A non-profit organisation, Anthill Creation was roped in for their innovative play space ideas. The entire process from concept to implementation for five playgrounds took six months to finish. For each step, stakeholders were involved in getting and giving information, hands-on implementation, painting and knowledge sharing.

Highlights: Rewind Play was a successful collaboration between urban knowledge and technical expertise to transform underutilised spaces into play spaces giving every child a chance to have a joyful childhood. This unique take on developing play spaces that instils the habit of recycling and gives a sense of ownership through co-creation was successful in seeking funding support from Odisha Mining Corporation (OMC) and administrative support from Bhubaneswar Development Authority (BDA) and Bhubaneswar Municipal Corporation (BMC).

Challenges: To identify the need for formal play spaces for kids, the BUKC started scouting for localities where kids were not getting enough play opportunities and were forced to play in an unsafe manner. Spaces identified included several informal communities, government schools, neighbourhood open spaces and underutilised vacant land parcels.

Outcomes: Tactical Urbanism is an efficient tool to convert an underutilised piece of land into a thriving public space, at the same time allowing active participation of stakeholders to ensure increased sense of ownership and belonging. Collaborating with locals and other professionals is important so is to be innovative with funding sources. These five playgrounds were funded by Odisha Mining Corporation under their CSR funding.



1. Tactical playground for underprivileged children
2. Children enjoying in the playground from the neighbourhood
- 3&4. Using tyres for building play structures
5. Before : unused space before the playground

Cross Cut Road

Coimbatore, Tamil Nadu

Status: Completed in April, 2021

Site Area: 1 km

Location: Cross Cut Road, Coimbatore, Tamil Nadu

Client: Coimbatore City Municipal Corporation (CCMC)

Consultants: IBI Group India Private Limited and Design Co.Lab

Aim: The aim of this street design proposal was to revamp the 994-m long stretch of Cross Cut Road as the Retail Destination of the City and make it a safe, vibrant and attractive street for all user groups.

Project Overview: The Coimbatore City Municipal Corporation (CCMC) prepared a city-wide Non-Motorized Transport Network (NMT) Plan in 2020 which helped to identify 26 prime pedestrian hotspots and 290 km network of roads for implementation of facilities to promote safe walking and cycling. The city recognised the importance of translating this vision into a reality in phases by adopting a systemic process which could be tested through a pilot project. CCMC chose Cross Cut Road as the pilot street for preparation of a comprehensive street design proposal encompassing the features of a 'complete streets' design approach.

Project Details: The CCMC, along with the German development agency Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), has re-designed approximately 1-km stretch of Cross Cut Road to make it pedestrian friendly. Many shoppers, while enjoying the facilities take a stroll along the pedestrian path, the total area of which is 2.5m to 4.5m wide and painted in yellow. A seating area equipped with tyres and other recycled materials has been set up along the track.

Process: The implementation of the tactical demonstration on the entire stretch measuring 994-m spanned over 15 nights due to restrictions during the day arising from continuous traffic movements and street-side activities. A core team of six people along with eight to fifteen painting personnel accomplished the task within the allotted time frame through the support of traffic police personnel for enforcement and management such as lane closures. Street marking

for alignment and placement of various temporary elements was carried out simultaneously in order to cover the entire stretch in a fortnight's time.

Highlights: A total of 564 pedestrians, 274 vehicle users, and 37 shopkeepers were interviewed on their public space preferences and opinion about the transformed street. Post implementation, these were carried out for six consecutive days including the weekend. The activity revealed that 80% users rated in favour of the increased pedestrian safety while walking on the street post-installation; 80% users rated in favour of the overall look, feel and vibrancy of the street; 84% users had positive feedback about the efficient usage of street space between its different user groups; and, 67% users were willing to sacrifice on-site long-term parking facilities to accommodate more pedestrian amenities.

Challenges: The challenges faced during the execution of the project included lack of clarity on permissions since there was only a tentative confirmation/go-ahead for the implementation of tactical measures from the actual owners (State Highways Dept) of the street; Uncertainty on the completion time of the implementation period as it was extended due to various challenges in procurement of materials and shortage of manpower; Street furniture and landscape elements were displaced by users due to lack of enforcement; and Limited assistance from CCMC in cleaning, maintaining and enforcing of the design on ground from city agencies.

Outcomes: The street design activity was envisaged to serve as a learning template for all concerned stakeholders by highlighting the process driven planning and design intervention.



1. Before: street view before intervention
2. Using paint, potted plants and tyres for tactical urbanism
3. Painting the cycle track
4. Under process at night : marking out on street for the cycle lane and pedestrian zones
5. Overview of the tactical intervention with paint



MR Palli Vaikuntha Puram Park

Tirupati, Andhra Pradesh

Status: Completed

Site Area: 2 water tanks in a 2428.11 sq. m. Park + 15,000 sq. ft. of Blank walls

Location: Tirupati, Andhra Pradesh

Client: Tirupati Smart City Corporation Ltd (TSCCL)

Consultants: AECOM India Pvt. Ltd.

Aim: The project focuses on re-thinking the role of water tanks from mere storage structures to city markers, which not only re-define the identity of a city and its under-utilised back-of-the-house services but also act as sustainable community-level activity nodes. It also focuses on re-imagining blank walls through public art.

Project Overview: A successful pilot project can be scaled up throughout the city. The project lies within the city limits and impacts the residents and the visitors. Context-sensitive public art has been created on two overhead water tanks and blank walls along a highly travelled street. High visibility city markers have been placed for residents and visitors. An interface with the community and a place for social congregation has also been built. The sustainability of the project is mostly focused on the visual experiences of viewers. The themes used to design the public art ("KURMA and ARCHANA" and "DEITY and DEVOTEE") have a strong sustainability and spiritual message.

Project Details: This project amplifies Tirupati's spiritual heritage, reflects the temple city's environmental significance using abstract art form. The project is an example when artistic work is utilised in an environmental-focused educational capacity, particularly when installed in the public realm.

Process: The water tanks are 60-feet high and visible from a distance, creating high visibility city markers for residents and visitors. They also help in promoting arts and culture by creating space for artists to display their work, by building an interface with the community and by establishing a unique place for social congregation that visitors to

the city can use to take selfies as well. It also creates a benchmark for other parts of the city and other cities around the country to replicate. The project is implemented under convergence: Cleaning of tanks and walls and waterproofing of overhead tanks.

Highlights: This is an example of implementing a place making project through convergence where it was conceived under the smart city mission, funded through the city's own funds/TUDA funds in a park site that is being upgraded under AMRUT.

A project like this reflects a new trend in the government's patronage of public art in India; artworks meant for a larger audience and not just limited to the metropolitan cities.

Challenges: As part of AMRUT, water tanks are being constructed in various sites including public open spaces and parks, that is not only generating under-utilised pockets in active community parks but also raising aesthetic concerns. Water tanks are high-visibility infrastructure components that are under-utilised spaces, but are the lifelines of a city. They encroach onto the green space, but are built with a monotonous design and are high potential visual markers.

Outcomes: No littering has been observed since the implementation works have concluded. No urination on blank walls has either been noticed. The scalability of such projects in other areas to enhance the city's skyline is now widely accepted amongst citizens/stakeholders. Keeping the spiritual sensitivity of the city in mind, an abstract form of artwork was used. This echoes the omnipotence of Lord Venkateshwara.



1. Blank wall before
 2. Artwork on wall echoing the omnipotence of Lord Venkateshwara at a highly traveled street
 3. OH Water Tank 1 before
 4. OH Water Tank 1 after art painting
 5. OH Water Tank 2 after art painting
 6. Wall after art painting

PAGO - Public Art

Gopalpur, Odisha

Status: 2017 to 2018, Completed

Site Area: 15 km

Location: Gopalpur Beach, Odisha

Client Name: Brahmapur Development Authority (BeDA)

Consultants: IBI Group India Private Limited, Bakul Foundation, Detour Odisha

Aim: The PAGO Fest is a stepping stone towards the aspiration of transforming Gopalpur into an Art Town and Eco-Retreat Hub of Odisha. It focuses on the heritage and rich cultural traditions of Gopalpur and Ganjam to re-invent and re-present them in a contemporary idiom.

The fisherfolk family of Gopalpur look at the sea as their life and livelihood. Pratap Chandra Jena makes the original settlers of Gopalpur stand over the ruins for men may come and men may go, but they, man, woman, child and fish, go on forever. And the sculptures made of straw symbolise the inevitability of death and decay as an important statement by the artist, who wants to create with local materials.

Project Overview: The localities, visitors' children and adults were actively involved in the arts festival. Many school children, visitors and students from the Khallikote Art and Handicraft College actively took part in drawing murals on the walls of Gopalpur. Children were very keen in learning the art of pottery and clay modelling. The festival helped to revive the historic ruins and cultural values of Gopalpur fort and other historic destinations along the beach.

Project Details: With a unique concept of making the past meet the present through art, the PAGO festival organised by Berhampur Development Authority (BeDA) in association with departments of Tourism and Handlooms, Textiles & Handicrafts and curated by Bhubaneswar based Bakul Foundation saw visitors coming in large numbers annually to enjoy art at its best.

Process: Local artists were approached to display their art works and organise workshops to train locals and visitors in different art forms

and other creative arts. After the first year, the festival created a buzz and the locals demanded that the festival be conducted the next year as well and even supported that it be conducted on a larger scale.

Highlights: After the program there has been increased tourism footfalls along with promotion of local art, craft and culture. The PAGO festival helped the Berhampur Development Authority (BeDA) to receive the First Runner-up Award for the Best Beach Category in the India Today Tourism Awards 2017, supported by Incredible India. An interactive session named "Vision for Gopalpur" was also conducted which discussed various potentials, issues and opportunities for developing the destination as a new hub of wellness tourism.

Challenges: The main challenge faced was raising funds for the festival for which public and private organisations were approached. Another task was the interagency coordination for implementation of basic civil works and cleaning of spaces for installing art works and paintings. The coordination and management of the artists for display of their art works was yet another challenge. The safety, security and maintenance of the art works is an ongoing concern.

Outcomes: Public Art is a strong tactical tool to revive the image of a place, if used and curated well. The presence of skilled and local artists and cultural scholars is very important to connect to the local people and portray the true value of any place. Stakeholders buy-in is very important for any project whether physical, social or any other type. Interactive activities are important to consider while planning such events. This engages the users and excites them to get a hands-on experience.



1. Art work installation
2. The eye of the cyclone
3. The past, the present and the future and the cultural life of Ganjam
4. The invisible big red crab: Promote the rich local textile tradition
5. Warehouse of culture

Public Spaces in Informal Settlements

Bhubaneswar, Odisha

Status: Completed in January, 2021

Site Area: Multiple Sites (0.70 Acres +)

Location: Bhubaneswar, Odisha

Client: Bhubaneswar Municipal Corporation (BMC)

Consultants: Bhubaneswar Urban Knowledge Centre (PgMC managed by IBI Group India), Bhubaneswar Municipal Corporation

Aim: The key aim was to develop universally accessible community spaces within informal settlements of Bhubaneswar, by improving the existing infrastructure, making them child-friendly and creating utilitarian art/facilities that relate with their culture and improve their quality of life.

Project Overview: Public spaces designed and developed with the local community (especially if it is an informal settlement) evolve as the best social interactive spaces as opposed to public spaces designed as per the whims of designers. The design for these public spaces was based on the adaptation of tactical tools for implementation to ensure faster results.

Project Details: The municipal corporation of the city procured locally the materials for the project, and the residents were involved to be a part of the implementation process. Once the public spaces were developed, the social media team from Bhubaneswar Urban Knowledge Centre (BUKC) shared the process and its outcome with the city to initiate a dialogue between the residents and the local authorities.

Process: The entire project (4 public spaces), from concept to implementation, took 15 years. This included the identification of vacant land parcels with the potential to develop into a public space. Under the Jaga Mission, the Bhubaneswar Municipal Corporation (BMC) had prepared an extensive list of informal settlements in the city. BMC conducted several surveys, photo tours and interviews of the residents to document their culture, social character, needs and necessities. The concept designs and ideas prepared by Bhubaneswar Urban Knowledge Centre (BUKC), an extended technical wing of Bhubaneswar Development Authority (BDA), were shared with the residents to get them interested in the process of developing a public space. The importance of each element in the design was explained to them and their feedback was taken.

Highlights: The residents of the community especially children, were enthusiastic about the possible development of public spaces in their area. The entire process was participatory in nature which ensured increased sense of responsibility and pride among the people residing there. The presence of a technical body such as BUKC within the local government bodies allowed the city to explore innovative techniques such as tactical urbanism as well as seamless communication with the stakeholders.

Challenges: There was lack of data to identify vacant spaces within the settlements which had the potential to be developed into public spaces. Also, there was no documentation of the social character, demography, culture etc of the area. The locals and the residents were unaware of public spaces, its importance and basic infrastructure that was required to ensure universal accessibility and varied recreational opportunities. Inter-agency coordination and communication hampered the time line of the project. Due to restrictions on the materials allowed in the Schedule of Rates and limited availability of funds, there was hardly any room for innovation in design of the public spaces. The public spaces developed within the informal settlements are not recognised under any statutory documents or plans which makes it difficult for the city to manage and maintain it regularly. This reduces the longevity of the interventions.

Outcomes: Public spaces irrelevant to any socio-economic background demand only five things - easily accessible by all, protected from high-speed vehicles (safe), well-lit and easily recognisable (legible), clean and shaded seating spaces (soothing environment) and being rewarded with revisit propensity (local landmark or thought provoking). One doesn't need humongous amount of funds for creating/strengthening public spaces. Informal settlements thrive on such spaces and demand vibrant/activated public spaces.



1. Before: The vacant land parcel, in front of the community houses, which was underutilized and lacked maintenance
2. Before: The land was used for religious and cultural ceremonies and daily prayers. There was a dilapidated Yagna Kund / Havan Kund which was of great importance to the community
3. Before: Vacant space utilized by the community during festivals, play space, evening activities such as social gatherings, sitting space etc.
4. After: The entire space was levelled and paved with permeable materials. The space was designed keeping in mind the multi-functionality of the space which could allow the community to use the space as they deem fit.
5. After: By retaining the function of the space, the design included landscaping and better seating arrangement to enhance the role of the space as a public space.



Raahgiri Day

Delhi NCR

Status: Every Sunday since 2013

Site Area: 1 km to 4 km, Started in Gurugram, Haryana but now spread over 75 cities across the country

Location: Delhi NCR (and 75 other cities in India)

Client: Municipal Corporation of Gurgaon

Consultants: Raahgiri Foundation, WRI India

Aim: The aim of the project was to promote walking, cycling and use of public transport as envisaged in the National Urban Transport Policy. This would also help in creating awareness around road safety and re-state and remind its citizens that the streets belong to all.

Project Overview: Public space is an area or a place that is open and accessible to all kinds of people regardless of race, gender, age, ethnicity and socio-economic groups. There are various public places in the urban and rural areas such as streets, parks, plazas and intersections, and these are core to the social life of a city. They provide opportunities for social interaction, multicultural dialogue, civic participation, sustainable mobility, recreation, and ownership. For over eight years in India, Raahgiri Day, an open street event, has been reclaiming multiple public spaces for people and has contributed to the conversation of active mobility across the country.

Project Details: The street closures encourage people to walk, cycle, exercise and reclaim their streets for safer roads, cleaner air, increased physical activity and community building. The event has attracted over a million participants in Gurugram and has helped change the perception of public spaces in India. Following the success of Raahgiri Day, other cities have replicated the event with the help of the Raahgiri toolkit and capacity building workshops. The event is supported by the public administration and traffic police, who use the event to launch their own initiatives on road safety.

Process: A day is dedicated to inviting people to those streets that are overpowered by cars and make them experience their streets with activities like cycling, walking, and performing arts. Since 2013, Raahgiri Day has been an open street event carrying the dialogue of reclaiming

streets for people. It has been organised daily, fortnightly, monthly and occasionally, where vehicles are restricted, allowing only pedestrians and cyclists to safely use the space. It all started in Gurugram, Haryana but has now spread to over 75 cities across the country.

Highlights: The event has successfully created awareness of inclusive and safer streets for women, children, the elderly and the specially-abled. Over time, it has become the pioneer of conversation aiming to transform these urban streets into sustainable public spaces by adopting active mobility and public transport solutions.

People from various strata and cultural backgrounds participate in the public arena. Innovative activities that build curiosity and interest in citizens are offered to engage them. It is necessary to stimulate ideas involving physical strength, team participation and involvement with the built environment.

Challenges: The event has majorly adopted this concept of cordoning off 1-km to 4-km stretch in a city and activate it for people to walk, cycle and do all kinds of activities, promoting a healthy lifestyle on the streets across multiple cities. Thus, the event even targeted arterial and sub-arterial roads, which have high vehicular movement during regular days.

Outcomes: Through this event, cities have been able to reclaim various types of public spaces and have organised multiple models of the Raahgiri Day event to contextualise the concept. The event has received participation from over 13 million people. Thus, Raahgiri Day has implemented place making and created inclusive spaces for people.



1. Raahgiri Day, an open street event, has been re-claiming multiple public spaces for people
2. An event organized daily, fortnightly, monthly and occasionally, where vehicles are restricted, allowing only pedestrians and cyclists to safely using the space
3. Open street event carrying the dialogue of reclaiming streets for people
4. Street enjoyed by people of all age groups
5. Re-state and remind its citizens that the streets belong to all.
6. Raahgiri Day - An open street event led to public spaces transformation



Urban conservation and adaptive reuse keep the ecology of the region intact while at the same time adapting to the current needs of the people. It is critical to adapt heritage spaces to become multi-use, adding to the public spaces available in a city.

Through adaptive reuse, buildings can be maintained as part of the historic process and function in today's time, instead of making the entire city a museum in a glass box. Cultural heritage contributes to the unique character of each city, differentiating it from other cities, towns, and regions. Apart from offering a unique cultural experience, with built, natural and intangible heritage, each city also has its unique geographical, topographical, and climatic context making the experience different from any other.

This section showcases the initiatives that lend a heritage flavour to its public spaces through conservation, adaptive reuse or a project juxtaposed to a heritage building.

4 Adaptive Reuse and Conservation

- Chandni Chowk | Delhi
- Freedom Park | Bengaluru
- Government Higher Secondary School | Karaparamba
- Humayun Tomb Garden Complex | Delhi
- Lakshmi Mills Urban Centre | Coimbatore
- Land's End Precinct | Mumbai
- Rambagh Gate and Chowk | Amritsar
- Subhash Udayan | Ajmer
- Sunder Nursery | Delhi

Chandni Chowk

Shahjahanabad, Delhi

Status: Completed in 2021

Site Area: 1.3 km

Location: Shahjahanabad, Delhi

Client: Shahjahanabad Redevelopment Corporation (SRDC) and Delhi's Public Works Department (PWD)

Consultants: Pradeep Sachdeva Associates (PSDA), Arvind Gupta Consultants (Structure), Krim Engineering (MEP)

Aim: The aim of the redevelopment plan for Chandni Chowk was intended to make it a 'Great Street' once again, providing facilities to meet current and future requirements while simultaneously showcasing its rich heritage and culture.

Project Overview: Chandni Chowk is one of the most important streets in the historical city of Shahjahanabad (Old Delhi) in Delhi. It is India's best example of an iconic street in terms of historical, commercial, and communal aspects. The stretch of road from Red Fort to Fatehpuri Masjid has been developed as a pedestrian priority street where motor vehicles will be restricted during the day and allowed only at night.

Project Overview: Over 30 stakeholders came together to plan and coordinate the execution of this redevelopment of Chandni Chowk. These included underground services to traffic management. The design language for all the elements were drawn from the vicinity of the area.

Process: To start with test pits were dug at various places along the entire stretch to understand what was happening at the sub-surface level. After this, all the new service lines were carefully placed on a section. The intent of the design was to make it completely pedestrianised during the day which needed the street to have a kerb-less design with the carriageway and footpath at the same level.

Highlights: The main highlight of the redevelopment was the inclusion of India's first scramble crossing at the Red Fort-Chandni Chowk junction.

Challenges: One of the main challenges during this project was to address the issues brought up by multiple stakeholders while remaining true to the original intent of the project. Chandni Chowk is a live street with many shops and the phasing of the construction had to be carefully articulated so as not to disrupt the business of these shops.

Outcomes: Chandni Chowk is one of the most complex streets in the country if not the world. It is a hub for economic, cultural, and social activities. Its development impacts all strata of the society by improving the quality of life. Most of all it improves the user experience of walking down Chandni Chowk by providing comfort, safety, and beauty.



1. In front of Lal Jain Mandir
2. NMV lane during day
3. View of Chandni Chowk street after redevelopment
4. Median with planters and seaters
5. Proposed view of the pedestrianized street

Freedom Park

Bengaluru, Karnataka

Status: Completed in 2011

Site Area: 667 Hectares

Location: Bengaluru, Karnataka

Client: Bruhat Bengaluru Mahanagara Palike

Consultants Structural: Mathew and Ghosh Architects, Arun
Structurals, Yash Consultants (Electrical)

Aim: The project aimed at enhancing the beauty of the ruins in the city of Bengaluru while inducing freedom between neutral spatial possibilities.

Project Overview: The whole purpose of the project was to transform the Old Central Jail into an urban park of possibilities. This landscape apparatus was meant to dissolve, dematerialise and propose new foci. To enhance the area, the interventions, negotiations and interactions of man revealed the essential yearnings for activities, gatherings, solitude, and nature.

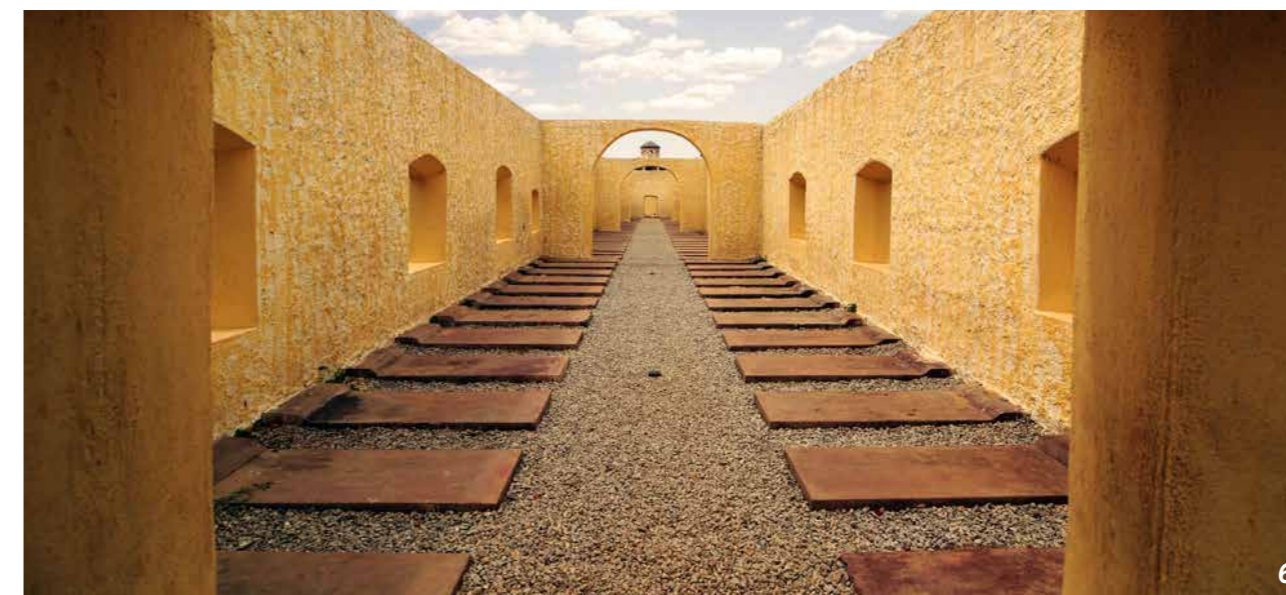
Project Details: The Old Central Jail site acted as a peripheral to the old city and the new cantonment, lying on the main north-south axis, from the Old Fort to the Palace. The urban landscape along the old axial street is one wherein the old fragment is a marker in the newly built landscape. The markers enabled reconstruction by the memory of the underlying order of the city.

Process: The Central Jail had an existing configuration inspired by the Panopticon prison design - a concept of punishment as a means of social reform through discipline and isolation. New sculptural markers were introduced to anchor the old structure.

Highlights: The existing buildings which included the barracks, the quarantine dormitory, the gallows etc. were seen as an opportunity for adaptive reuse. The primary elements have been maintained, like the walls with fenestrations, the plinth, the roof truss and the roof.

Challenges: The strategy for revitalisation of the area was through instructive recreation to strengthen points along the north-south axis. These points were to become a point of reference for the historic Bengaluru city and would represent a shift from the power invested in monarchy to democracy.

Outcomes: The introduction of the new structural markers was choreographed to reveal the spatial memory of the Panopticon pattern of the prison where the past appears and disappears as fragments in a dream.



1. Landscape amphitheatre
2. Aerial view of watch tower
3. View of people's court and central watch tower
4. Parallel walls leading to central watch tower
5. People's court from children's play mound
6. View of the renovated barrack

Government Higher Secondary School

Karaparamba, Kerala

Status: Completed in 2019

Site Area: 5,437 sq. m.

Location: Karaparamba, Kerala

Client: Public Works Department, Government of Kerala and PRISM

Consultants: DAC Global Architects, Uralungal Labour Contract Cooperative Society, Ansam Constructions

Aim: A large majority of people opt for private schools, leaving better teachers and opportunities in the government schools devoid of attention or participation. This bias had to be eradicated for a healthy society, and the modification for it was required at the grassroot level, i.e. primary education centres.

Project Overview: Architecture is the medium with which the imbalance in the society can be addressed. This arises due to the inefficient functioning of public schools and the resultant growth of private schools. Societies are built on the foundations of schools. This 112-year-old school, which was on the verge of closing down, was renovated under the aegis of an initiative called PRISM, (Promoting Regional Schools to International Standards through Multiple Interventions). The renovation was taken as a pro-bono project under the Corporate Social Responsibility (CSR) initiative of the Indian Institute of Architects.

Project Details: As one enters the campus of Karaparamba GHSS, an experience of a scaled down neighbourhood or city beckons. With the aim of doing away with the typically imagined government schools in India, the spatial design and form pointed the way for community involvement in schools. The configuration of various blocks was placed in such a way so as to connect and promote various activities. Specific design decisions were made envisioning the school as a community space. The paved setbacks peripheral to the compound were embraced by the public for morning and evening walks and jogs. The multiple outdoor and indoor open spaces - from the entrance courtyard, amphitheatre, flexible dining space to even the basketball court, all can be easily adapted to a variety of events and purposes.

Process: The renovation design of the school involved modifying certain structures and demolishing and rebuilding others. The master plan was composed holistically considering the interests and the individual responsibility of all users of the space. The government school is well equipped with smart classrooms, a two-storey library, indoor courts, basketball court, reception lounge, amphitheatre, multi-purpose hall, open stage, modern labs, an industrial kitchen, and a new toilet complex.

Highlights: Incinerators have been provided for the prompt disposal of soiled sanitary pads and the girls' washroom section is specially provided with an aesthetic courtyard.

Challenges: The Karaparamba GHSS emphasises freedom for students to learn and grow by providing an open distinctive educational system. The intertwining of nature into and in between the built spaces opens up the closed frames of a typical school. It encourages students to have a relationship with their environment and claim ownership for the same.

Outcomes: An alternative perspective towards an educational space in which the opposing voids and valid spaces come together to bring about a sense of place, independence, and uniqueness; by replicating the program in specific forms, the educational building has been spread out and elaborated as an educational neighbourhood, including various views and landscapes, green spaces, playgrounds, and rest spaces.



1. Noughts and crosses at DAC School
2. Basketball court
3. Open-air classes
4. Main block

Humayun Tomb Garden Complex

Delhi

Status: Completed in 2013

Site Area: 10.5 Hectares

Location: Delhi

Client: Archaeological Survey of India, Central Public Works Department, South Delhi Municipal Corporation

Consultants: Aga Khan Trust for Culture, Shaheer Associates (Landscape Architects)

Aim: The effort and successful restoration and conservation of the Humayun's Tomb Garden complex had led in 2016, to UNESCO accepting an expansion of the World Heritage Site boundaries which would include the entire complex, thus, fulfilling a major objective of this project and establishing a model for conservation in India.

Project Overview: In 1993, the 26-acre Humayun's Tomb Garden enclosure was inscribed as a UNESCO World Heritage Site. To fulfil the UNESCO/ICOMOS conditions for this designation, in 1997, on India's 50th Independence anniversary, His Highness Aga Khan, the founder and chairman of the Aga Khan Development Network (AKDN), gifted India the garden restoration of Humayun's Tomb. Completed in 2003, this was the first-ever scientifically carried out garden restoration and privately undertaken conservation of any of India's national monuments. A follow-up MoU was signed in 2007, enabling conservation of the monuments within the complex and associated garden restorations at Nila Gumbad, Isa Khan's tomb, Bu Halima's tomb, amongst others.

Project Details: For the successful implementation of the project a number of activities were undertaken. These included the planting of native trees and plant species, installing of over 128 rainwater recharge pits, de-silting nearly half a dozen historic wells and one baoli which significantly enhanced the ecological value of the site. Today, over 95% of the complex is also accessible by people with disabilities. In 2019, almost three lakh school children had visited the Humayun's Tomb complex.

Process: In 1999, the MoU to commence the garden restoration was signed between the Archaeological Survey of India (ASI) and the Aga Khan Trust for Culture. The garden restoration at Humayun's Tomb was preceded by several years of archival research, archaeological excavations and study of the Mughal chronicles. This led to a landscape plan requiring the removal of over 3000 truckloads of earth to restore to the original levels. Furthermore, planting of species in patterns used by the Mughals and repair of pathways and flowing water was also conducted.

Highlights: The Aga Khan Trust for Culture established a model for the conservation of India's national monuments and led, in 2014, to a revised national policy on conservation. Significant employment was created for master craftsmen with a substantial increase in visitor numbers – for those associated with tourism.

Challenges: The two decades of effort at the Humayun's Tomb remains the only instance of a private agency undertaking conservation work on any of India's protected monuments. The project not only achieved long-term preservation within the precinct but also an enhanced understanding of the architectural and cultural significance of the Nizamuddin area.

Outcomes: The successful implementation of conservation work has demonstrated the need for an inter-disciplinary approach in undertaking any effort towards national monuments. Employing a non-profit public-private partnership approach to fulfil the national objectives demonstrated that the preservation of national heritage is not the responsibility of the government alone.



1. Conservation & revival of traditional craftsmanship
2.&3. Garden water feature plays a very important role in form of tanks, channels & octagonal pools
4. Night view
5. Humayun's tomb world heritage site

Lakshmi Mills Urban Centre

Coimbatore, Tamil Nadu

Status: 2019 to 2020, Completed

Site Area: Phase 1 - 11 Hectares

Location: Coimbatore, Tamil Nadu

Client: The Lakshmi Mills Company, Coimbatore

Consultants: Design Consortium (Architecture and Urban Design), Petal Home (Concept, Design and Development), Lavik Estates (PMC), ST+ART (Art Installation)

Aim: The aim of this project was the adaptive reuse of a defunct textile mill compound with a rich heritage from the early 1900s into an urban plaza and retail centre situated in a well-connected node of the city.

Project Overview: The Lakshmi Mills on Avinashi Road, Coimbatore is one of the oldest textile mills in India. It was established in 1910 and lay defunct for the past 25-30 years. The brief was to transform the mill structure typology into an urban retail without changing the footprint while highlighting the heritage value in its regional context. The dialogue on the materials used in the intervention enhanced the character of the industrial memory: brick-clad walls, exposed concrete columns, concrete flooring, metal windows, doors, roof frames painted in black and the wired mesh glass panes in the windows.

Project Details: There are communities across the site based upon the effectiveness of each building and allow efficient movement and utility from different points at the site. The project enabled the idle urban artefact to return to the public by creating retail spaces, relief spaces for shoppers, parking, food courts, pop-up streets, amphitheatre, fountains, pedestrian squares, and public amenities. The intervention connects the fragmented building blocks into a continuous urban space, with new entry and exit points using its edge conditions.

Process: The existing buildings stood rejected from the unsure future on land that has witnessed one of the great urban transformations of the city in the last 100 years. The site is an important landmark in the

city of Coimbatore. The buildings have simple architectural elements with evidence of early industrial and art deco architecture of the 1900s.

Highlights: The utilisation of defunct services like the underground diesel tanks, underground thermal cooling tanks into water storage tanks and ground recessed amphitheatre for groundwater recharge was the main highlight of the project.

Challenges: The challenge was to reinvigorate the urban landmark within the city of Coimbatore, to transform the role of the landmark into an inclusive urban space with public spaces, and a retail shopping experience. The heritage value of the industrial architecture was adapted for the continual transformation of space.

Outcomes: Public participation was encouraged by providing a plaza and enhancing the heritage value of the space through materials and forms of industrial architecture to create a landmark. The industrial architecture forms and details have been retained by re-purposing existing windows, roof forms and building footprints. A mural depicting the history and heritage of the mills was designed. Keeping the original structure of the mills intact with reinforcements wherever required, helped in reducing the carbon footprint of the project.



1. Children's play area
2. Entrance to Lakshmi Mills Urban Centre
3. Stepped plaza
4. Retail space
5. Urban Centre with Retail shopping experience
6. Outside view of the plaza

Land's End Precinct

Mumbai, Maharashtra

Status: Completed in 2002

Site Area: 1,672.25 sq. m.

Location: Bandra, Mumbai, Maharashtra

Client: Bandra Bandstand Residents' Trust

Consultants: Dhanashree Sawant (Landscape Design), Siddharth Das (Signage/Graphics), Arup Sarbadhikary (Structure)

Aim: The project's objective was to reclaim various forts and precincts by turning them into public spaces. This integration would help in the protection and maintenance of historic sites and monuments.

Project Overview: Land's End is a peninsular strip of land that juts into the sea, with a fort, a declared heritage precinct. At a height of 20 to 35 metres, bounded by the Mahim Bay and the Arabian Sea, it commands a sweeping view of the coast. Most of the sloping stretch had been extensively excavated and destroyed to make way for private gardens of adjacent hotels, leaving a clutch of trees, some overgrown ruins and untended patches. Like all other common assets of the city, this too had been severely misused and lacked public access.

Project Details: The project restored the hill slope and its contours, originally dug up by a hotel to create a garden lacking relevance to the immediate natural and historical environment. It planned to conserve, restore and develop the existing ruins appropriately while establishing the palm forest that once stretched over its slopes. Such forestation, including medicinal plants identified by the World Wildlife Fund, were used to arrest soil erosion and restore the original environmental character of the hill. To expand the association with the area, the project envisaged a gallery of steps and a stage amid the palm trees for regular cultural and art shows.

Process: The project attempted to retain and enhance the site, both as a historical precinct and an active public space with lighting, signage, seating, landscaping and pathways, all executed with minimal intrusion. Built on the slopes of the hill, stone edging and grass steps ensure that the gallery befits a forest-like environment.

Highlights: The residents of Bandra have not only reclaimed the fort and its precinct but have also developed the contiguous area into a significant cultural space, including an amphitheatre on the hill slope.

Challenges: The citizen's efforts in the implementation of the project also ensured restoration of the fort walls by the state government.

Outcomes: It is necessary to not only develop similar fort ruins through conservation but also to plan the area around as public space and protected fort precincts. Connecting them to neighbourhoods can prevent isolation and abuse, making history a part of everyday life.



1.



3.



4.



2.



5.

1. Amphitheatre
2. Cultural event at amphitheatre
3. Entry lane to amphitheatre
4. Stepped seating in front of amphitheatre
5. Bandra fort - before

Rambagh Gate and Chowk

Amritsar, Punjab

Status: Complete in October, 2021

Site Area: 1.20 hectares

Location: Amritsar, Punjab

Client: Punjab Heritage & Tourism Promotion Board under the Department of Tourism, Government of Punjab (Phase I) - Municipal Corporation of Amritsar (Phase II)

Consultants: Cultural Resource Conservation Initiative (CRCI India)

Aim: The aim of the project was to conserve and reclaim the historic and popular Rambagh Gate for use as an urban space of the city.

Project Overview: Rambagh Gate is reflective of a deep historic fabric, interlaced with layers of culture and juxtaposed to urban challenges like lack of maintenance and economic investment, compounded by unmitigated pressures of urban growth. The only surviving gate of the 19th century, it demonstrates a distinctive architecture of the Sikh and British periods. A reminder of the refugee community inhabiting the heritage precinct, the adjacent market has become one of the largest mixed goods markets in Amritsar, presenting a fertile ground for creative experimentation in urban place-making.

Project Details: Phase I of the project undertook the recovery of the heritage structure through relocation of the police interrogation centre, thus, reclaiming the building. While Phase II attempted to conserve and revitalise the historic precinct using a 'dialogical process' to restore it for the community.

Process: A paradigm shift in urban place-making it was anchored to bring together a range of co-actors to cross-pollinate alternative ways of addressing heritage in civic spaces. It began with extensive documentation of community voices to generate new cultural maps and oral history, injecting a deeper understanding of the people's connect with heritage. Followed by enhancement of the physical and social infrastructure of the heritage precinct, aiding the quality and dignity of life of the host community. As a consequence, conservation too was seen as a tangible step in the physical recovery of the historic precinct.

Highlights: The significant highlight was identifying local constituencies and activating dialogue with the host community which included shopkeepers, residents, municipal press staff, government school students and teachers and employees at the police post, and other potential co-actors such as craftsmen, artists, heritage start-ups and civil society, expanding the scope of apparatus required to make heritage visible and accessible. It created traction to enable conditions for a larger interpretive intervention using arts, media and creativity.

Challenges: Convergence between a central government-funded urban renewal scheme – HRIDAY, with Arts and Humanities Research Council (UK), resulting in a co-designed portfolio of community events. Extensive stakeholder mapping, addressing health and safety standards, retaining and aiding the contemporary use of the physical space enabled dignity to work and learn. Co-creating and utilising the agency for local constituencies in opening opportunities via student workshops, public arts, façade beautification, and re-purposing a dilapidated historic monument into a people's museum, demonstrated how marginalised groups can be integrated within the developmental plans.

Outcomes: The host community saw the engagement with the recovery of heritage as a potential boost for livelihoods through enhanced tourism; the grassroots creative community saw themselves as new heritage actors with an agency to address heritage revitalisation in their city; the civic body saw possibilities in expanding the heritage network by engaging new actors; funding agencies saw the generation of a new people-centred model for policy decisions and urban planning; while for the people of Amritsar, it has become a cultural asset that provides new tools of interacting with the city.



1. Rambagh gate before conservation - 2007
2. Govt. School conserved
3. Govt. School before conservation
4. Cultural event
5. Inaugural event at the Rambagh Lok Virsa museum

Subhash Udayan

Ajmer, Rajasthan

Status: 2015 to 2017, Completed

Site Area: 16 km Lakefront and 9 Hectares Park

Location: Ajmer, Rajasthan

Client: Ajmer Municipal Corporation and Ministry of Housing and Urban Affairs

Consultants: DRONAH

Aim: The project aimed at improving the recreational facilities with linkage to natural and cultural heritage assets of Ajmer. The objective was to create a public space for the locals and tourists with jogging and cycling facilities adjacent to a natural feature.

Project Overview: The 12th-century Anasagar Lake in Ajmer holds tremendous significance with heavy footfalls due to its central location. Parts of the lakefront include the Mughal Baradari under the Archaeological Survey of India (ASI), extending into a public garden, and the historic Daulat Bagh converted into the Subhash Udayan in the early 20th century.

Project Details: The project covers the improvement of the lakefront from a garbage ground with inadequate infrastructure into a public promenade. It also transformed and linked the unused and neglected Subhash Udayan to the lakefront promenade with multiple cultural and recreational activities for children, families and the elderly.

Process: The design process was inclusive and participatory through consultations with all stakeholders and residents of the city.

Highlights: Besides the popularity of the designed public spaces for daily use, a key sustainable aspect includes operation and maintenance. It was successfully tendered by the Ajmer Municipal Corporation showcasing a viable revenue model for similar public spaces.

Challenges: A few of the challenges in developing the lakefront and the Subhash Udayan included permissions from ASI as the area falls within 300 metres of the historic lakefront Baradari. Another challenge was designing a part of the lakefront requiring residential participation. On-site execution due to previous neglect of the historic garden and park was a challenge.

Outcomes: The outcome of the project has been rewarding in terms of the extensive use of the designed spaces by both, the locals and the tourists.



1. Udayan entry
2. Night view
3. Udayan entry gate
4. Aerial view



Sunder Nursery

Delhi

Status: Completed in 2018

Site Area: 364 Hectares (90 acres)

Location: Delhi

Client: Archaeological Survey of India, Central Public Works Department, South Delhi Municipal Corporation

Consultants: Aga Khan Trust for Culture, Shaheer Associates (Landscape Architects)

Aim: Sunder Nursery, as a part of the larger Nizamuddin Urban Renewal Initiative, aimed to create a heritage park for a diverse city populace and visitors to the Humayun's Tomb.

Project Overview: In 2005, the Aga Khan Trust for Culture had conveyed to the Government of India its preference for undertaking an urban conservation project in the Humayun's Tomb – Sunder Nursery – Nizamuddin Basti area of Delhi. This led to an MoU between the Archaeological Survey of India (ASI), Central Public Works Department (CPWD), South Delhi Municipal Corporation (SDMC), and the Aga Khan Trust for Culture. Following exhaustive surveys, a list of existing vegetations, archival research, ground-penetrating radar surveys, the landscape master plan was approved by the Delhi Urban Art Commission (DUAC) in January 2009.

Project Details: The landscape master plan enabled the creation of a diverse range of spaces from the formal Gardens of Delight with a central water body to the created wilderness. Removal of vehicular roads from across the park and the creation of a peripheral access allowed the nursery to prosper and allow for accessibility from all parts of the park. Removal of encroachments after a persistent effort by the Aga Khan Trust for Culture allowed restoration of the Mughal gardens and the return of 20 acres to the public.

Process: The conservation of the monuments and landscaping of the 90-acre city park around the Humayun's Tomb progressed in phases to ensure the plant nursery sales continued uninterrupted. The Sunder Nursery was opened to the public in 2018.

Highlights: Since 2018, considerable efforts ensuring financial sustainability without receiving government funds for its upkeep has allowed Sunder Nursery to host a diverse range of environmental and cultural programmes. A weekend organic market provides a much-needed space for Self Help Groups (SHGs) and farmers.

In 2016, six monuments were included within the expanded Humayun's Tomb World Heritage Site after their conservation. In 2020, Sunder Nursery was awarded the twin UNESCO awards – Excellence in Conservation and the Inaugural Sustainability Award.

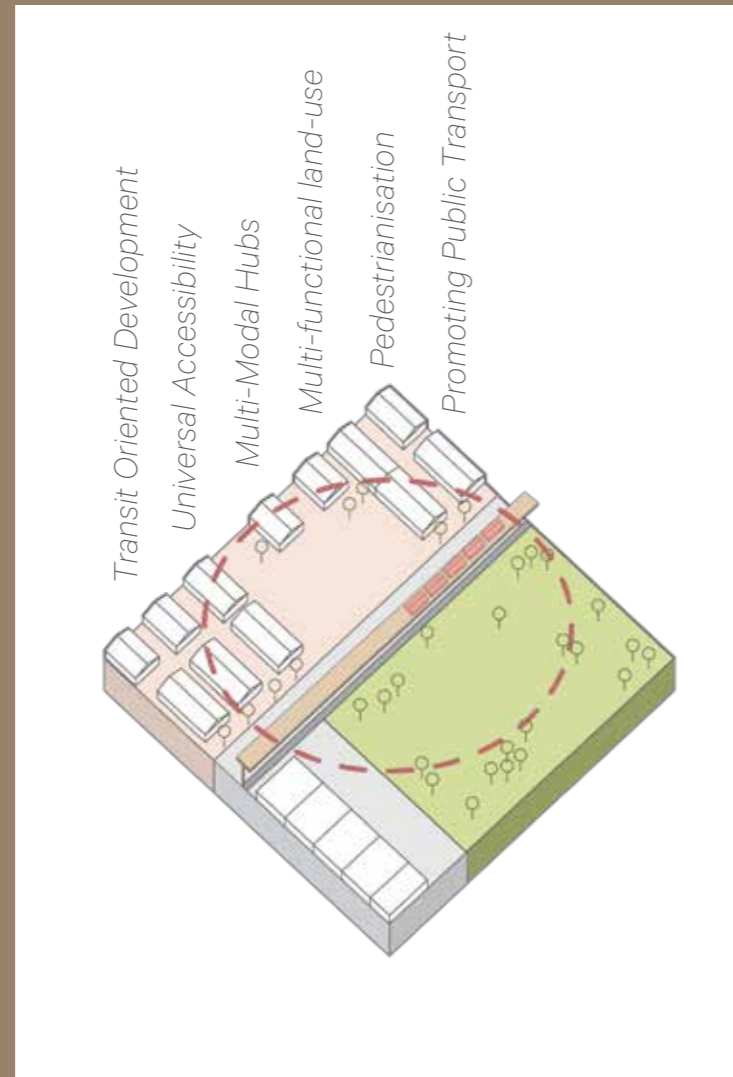
Challenges: Over a decade long effort has been required to landscape the 90 acres, remove encroachments, plant over 18,000 tree saplings, create diverse open spaces, and conserve each of the 20 monuments within the area. This was followed by the Aga Khan Trust for Culture taking responsibility for the management to ensure its use as per the park's landscape master plan.

Outcomes: The landscape design of Sunder Nursery, a Delhi master plan designated district park, has demonstrated how diverse attractions within a single public space can be integrated seamlessly. Here, large parts of the garden, originally used to dump construction rubble, is now a created wilderness that aims to inform school children of Delhi's past ecology and geology. Performance spaces aim to provide a platform for musicians, artists, and sculptors to reach a large audience.



1. Tranquility in the landscape with seating space for visitors
2. Aerial view of the garden of delight
3. Garden of delight - the central spine of the park forms a key visitor attraction
4. Garden amphitheatre - venue for cultural and educational events





Transit nodes are a city's public places with large pedestrian footfall. They present an opportunity for the spaces around these transit hubs to be re-programmed with pedestrian plazas, food courts, shopping malls, offices, and even residential buildings, to create experiential public spaces.

Transit nodes are now being re-imagined as gateways to a city, celebrating its vibrance and culture. Transit-Oriented Development (TOD) creates lifestyle opportunities with offices, homes, and clubs within proximity while simultaneously promoting public transportation. A metro station can suddenly change the market value of a place and trigger urban transformation by offering potential growth areas.

The projects in this section detail some of the methods of designing and implementing incisions around transit nodes to increase accessibility, play, interaction and opportunities for economic growth.

5 *Transit Nodes*

- Chattarpur Metro Station | Delhi
- Epicuria: Nehru Place Metro Station | Delhi
- MG Road Boulevard | Bengaluru
- Thane Streetscape | Thane
- Unity One Plaza | Delhi

Chattarpur Metro Station

Chattarpur, Delhi

Status: Completed in November, 2016

Site Area: 2.33 Hectares

Location: Chattarpur, Delhi

Client: Delhi Metro Rail Corporation (DMRC)

Consultants: Oasis Designs Inc. (Lead Consultants), Mozakkir Qaddir (Structural Consultants), Uma Shankar Sanoria (Plumbing Consultants)

Aim: The pilot project for multi-modal integration at the Chattarpur metro station aimed to develop a convenient, modern, safe and universally accessible environment. The focus was on designing the entire facility as a 'pedestrian-first' zone and improving last mile connectivity.

Project Overview: The initiative for the first multi-modal integration at the Chattarpur metro station was taken up by the architects and executed based on the Unified Traffic and Transportation Infrastructure (Planning & Engineering) Centre (UTTIPEC) Street Design Guidelines. The objective of the Station Area Development Plan for Chattarpur was to achieve better accessibility by creating a safe pedestrian and cycling environment. The project was approved by the Lt Governor, National Capital Territory (NCT) of Delhi in September 2012 to be taken up as a pilot project for implementation.

Project Details: The urban landscape plan of the Chhatarpur metro station created an urban plaza with street furniture like seating/dustbins, solar shade structures, directional signage, lighting and developing storm water and solid-waste management plans. The public transport and important junctions provide for seamless connections between different modes of transport like buses, feeder cabs, shuttle services, auto-rickshaws, private cabs and cycle rickshaws.

Process: The 800-m study area was centered around the metro station and the main access corridor. The scope of this exercise was to analyse the urban street network of the entire area to specify the bus routing, auto-rickshaw movement, pedestrians' clear movement, e-rickshaw and cycle rickshaw movements.

Highlights: The space was optimised by replacing car parking and prioritising pedestrian movement with a footfall of more than 58,000 pedestrians by building walkways and promenades for direct access. The entire landscape was designed to provide a safe, universally accessible, barrier-free environment for people to connect to different modes of transport like public buses, feeder buses, non-motorised transportation and other para-transit modes.

Challenges: The 300-m zone around the metro station was a chaotic space with excessive car parking and haphazard movement of autos, buses and no dedicated space for pedestrian movement. Due to lack of proper facilities for transit pick-up and drop-off, there was a lot of confusion. There were no proper auto bays or a pedestrian pathway cycling track on the other side due to lack of space and inadequate design considerations. The removal of car parking for creating a pedestrian promenade and seamless integration of all transit modes was achieved after long discussions with all stakeholders and approval from the government authorities.

Outcomes: Chattarpur metro station's catchment extends up to approximately 7-km with a daily footfall of approximately 58,000 people. This has become one of the main transportation hubs surrounded by major arterial roads. The seamless integration of transit modes with the metro station attracts thousands of users every day to use the public transport and promote a more vibrant transit culture.

This pilot project of multi-modal integration helped to optimise travel trips by making them cheaper, faster and more convenient for public transport users.



1.



2.



3.

1. Vehicle-free domain for pedestrians entering the metro station precinct

2. Aerial view of the metro station plaza

3. Seating area and pedestrian lane

4. Amphitheatre for informal events and shade structures for commuters waiting at the metro station



4.

Epicuria: Nehru Place Metro Station

Nehru Place, Delhi

Status: Completed in 2015

Site Area: 1.41 Hectares

Location: Nehru Place Metro Station, Delhi

Client: V-Cubed Private Limited

Consultants: S.J.A. Consultants (Landscape and Urban Design)

Aim: The Delhi Metro Rail Corporation (DMRC) had proposed to develop its properties at major metro stations to offset the running cost of the metro services. The Nehru Place metro station in Delhi was also leased out in accordance with the same policy.

Project Overview: Nehru Place developed in the 70s and in commercial terms, it is arguably one of the most successful district centres. The emergence of the metro network has further enhanced the connectivity of the district centre with the city. Further, proximity to the Bahai House of Worship and the Ring Road (a major arterial road) has made the metro station one of the more important transit nodes. The site is located opposite the district centre along the southern edge of the district park. It is the main arrival point for the district centre as well.

Project Details: The design of the open spaces and the proposed system of terraces was evolved on the basis of the existing topography and the landform with a minimum cut and fill. More than 50% of the tree species that were planted are timber species which provide shade and are low on water requirement. Sunken courts provide a spill-out space in addition to an active recreational and gathering space for the public. A small amphitheatre has also been provided for cultural activities. The metro entry doubles up as an interactive urban plaza. The semi-circular steps nestle a multipurpose interactive space for recreation, gatherings, promotions and street plays.

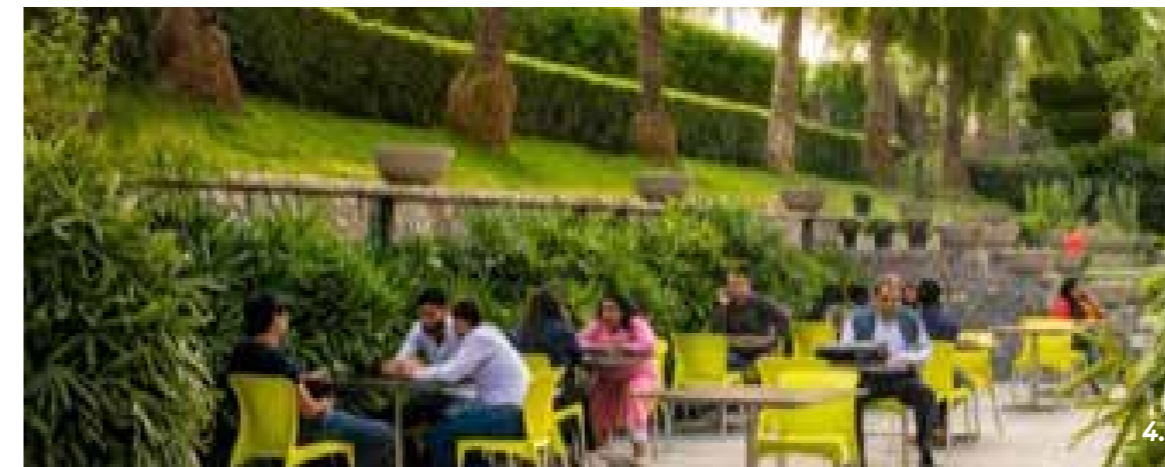
Process: What should be the design approach for such an important node? There were two options: to develop the property for commercial gains, as had already been done at several locations such as Shahdara,

ISBT, Inderlok, which have struggled to take off, Or, to create a landscape with focus on urban open space as part of the public domain which offers multiple choice to users.

Highlights: There is zero rain water outflow from the site. It is harvested with recharge wells in both the courts, terraces and the west of the rear entry. Friendly access has been provided for people with disabilities with focus on safety. The entry experience has been enhanced through the landscape treatment. LED lighting has been used throughout the area. Grey sewage treatment plant (STP) water is used for landscape maintenance.

Challenges: Since it is an important commercial hub and a major connectivity point, the concept had to be utilitarian and functional besides giving visibility to the metro station as being not just a transit node but also a major activity hub cashing in on the already available footfalls.

Outcomes: The intervention exploits the urban potential of the transit node. This could easily have been developed as a commercial entity on a Mall Model, however, the possibilities created utilising the existing open spaces for 'place making' offers multiple choices which has not only been appreciated but is also visible through the vibrancy created by the users. The project exhibits enough flexibility to accommodate necessary incremental transformations over a period of time as is evident from the chronological pictures. It also opened up possibilities of cultural activities and outdoor art exhibitions in a vibrant urban environment.



1. Stepped sunken plaza
2. Water feature in the plaza
3. View from metro entry bridge looking towards east
4. Open-air seating area
5. View from metro entry bridge looking towards west

MG Road Boulevard

Bengaluru, Karnataka

Status: Completed in 2016

Site Area: 1.31 Hectares

Location: Bengaluru, Karnataka

Client: Bengaluru Metro Rail Corporation

Consultants: Gayathri and Namith Architects (GNA)

Aim: Designed as an urban art space for the city, the primary objective was providing cultural, recreational and aesthetic value to commuters and cultural specialists alike by bringing them onto the same platform.

Project Overview: When the metro was first proposed on the MG Road stretch abutting the boulevard, there was concern that the beautiful walkway dotted with bougainvillea with seating spaces, a sight and experience all too familiar to the local residents, may be lost. Therefore, the biggest challenge was to create an inclusive space where citizens, artists and theatre personnel alike were invited to be a part of an inclusive cultural workshop.

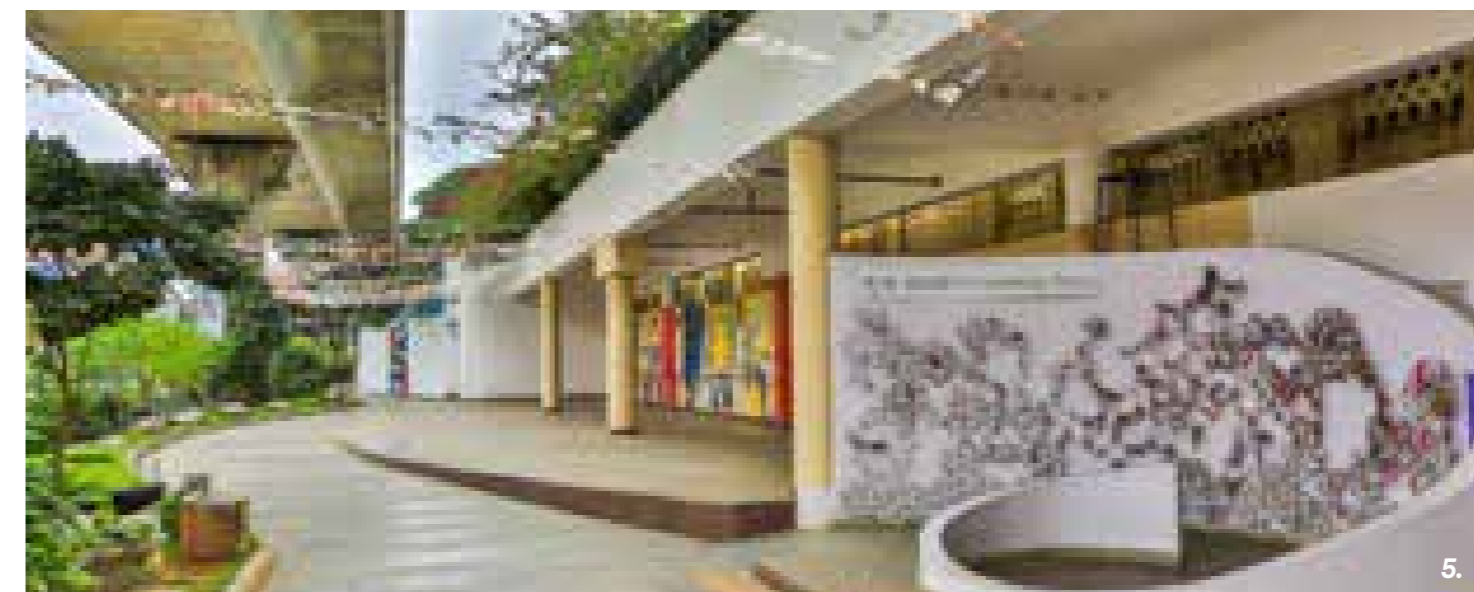
Project Details: MG Road is an arterial road that links several major landmarks in the heart of the city. Infrastructure development in direct response to congestion and exponentially growing population made MG Road a prime location for a metro makeover. However, this meant the demolition of the locally beloved walkway, a colonial monument turned public space. The challenge was to create an area that could be used throughout the year, ensuring the space was accessible to people from all walks of life which was an important facet of the design approach. The other challenge was to reduce the negative effects of the adjacent main road. This was done by elevating the walkway by 10' thereby, reducing the effects of noise and dust from the main road. The 'Nagara Pete' created a space to host the traditional Santhe markets, giving back the city something it had seemingly lost in the transformation.

Process: The intricacies and implications of an urban design project of this scale can seldom be understood without a public forum. The people's needs shaped and moulded the design process and thereby, the brief of the project. This gave way to subsequent designs for shops, a small theatre, a performance arena, a few galleries for display and a children's play area. The space was designed for people with disabilities, and with tactile feedback for demarcating the transition of spaces.

Highlights: Spaces for artistic activities and workshops; A friendship point; An open area for outdoor performances; The upper walkway decorated with bougainvillea that hosts a restaurant and a green initiation of exotic plants are some of the highlights of this project.

Challenges: It was discerned quite early that something had to be given back to the city that it had lost, but this time with what it needed the most—a public space accessible by all. The new structure had to be reminiscent of the old, something that the people would relate to and at the same time, it had to be more than merely a transition space, it had to be an activity hub. Today the space plays host to a diverse variety of cultural events across occupational lines hosting music, art displays and design events throughout the year for the public to engage in.

Outcomes: People from different walks of society across all fields were brought on board. This collaboration resulted in a plethora of ideas and inclusiveness. The layering of all the stakeholders, end users, designers and artists led to a well-fitted design brief.



1. Placemaking under the metro viaduct
2. Outdoor interactive arts and exhibition space
3. Cultural destination in the heart of the city
4. A wide green boulevard space below the metro line
5. The space is utilized for exhibition and various outdoor arts and crafts events

Thane Streetscape

Thane, Maharashtra

Status: 2019 to 2021, Completed

Area: 6,960 sq. m.

Location: Thane, Maharashtra

Client: Thane Smart City Limited

Consultants: CRISIL Infrastructure and Risk Solutions, StudioPOD

Design (Architect)

Aim: The Thane Streetscape project was envisioned to create a pedestrian-friendly station precinct with focus on multi-modal integration to alleviate the poor walking conditions around the congested station area.

Project Overview: The project had to go through several rounds of engagement with traffic police, utility agencies as well as local auto-rickshaw unions and politicians. One of the compromises made was retaining the blue railing along the sidewalks even though it worked against the design language.

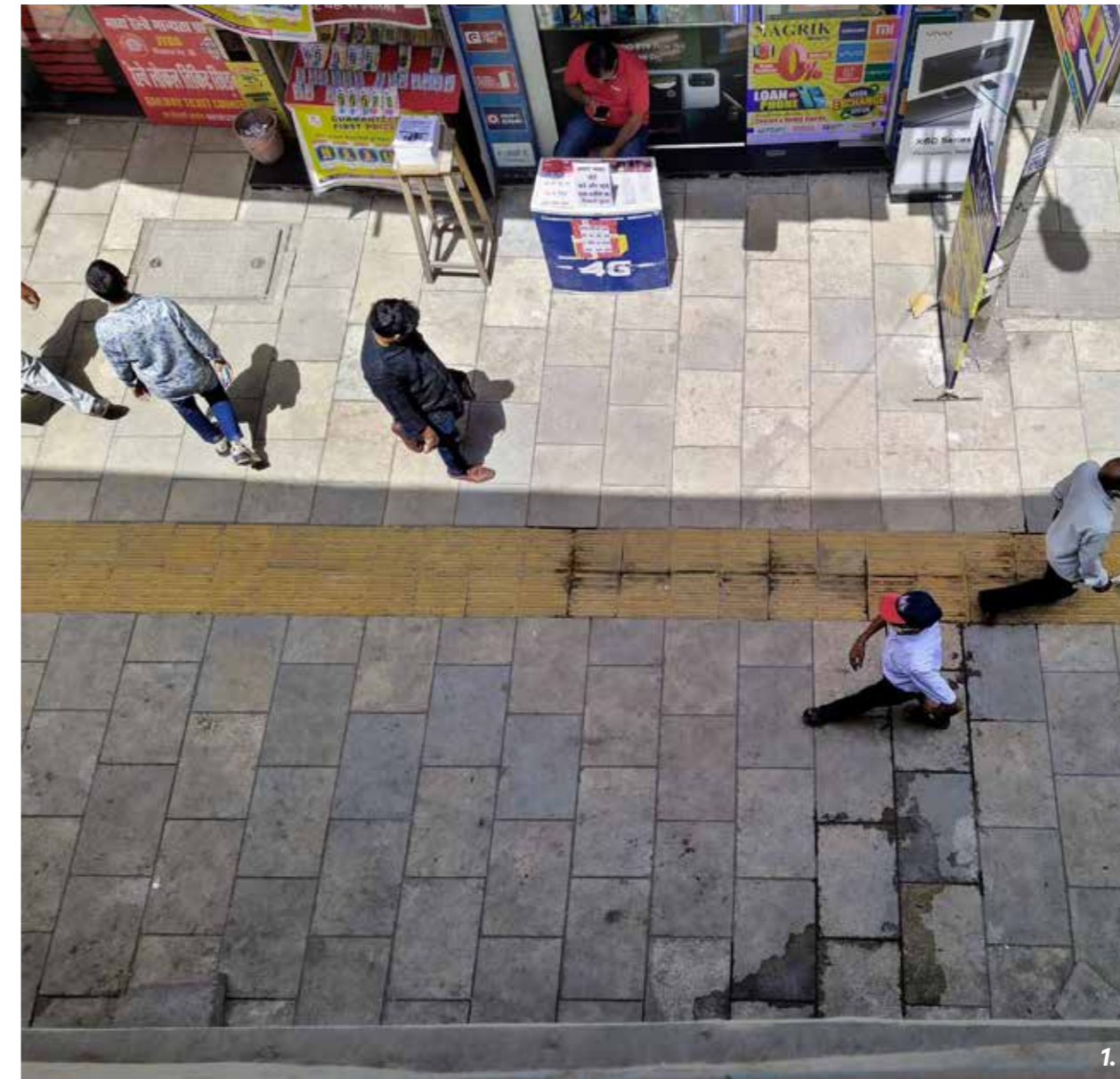
Project Details: In the overall 13 km of street in Thane, a substantial area of 11.32 acres of pedestrian realm was introduced, which included walking and cycling space. In addition to this, 1236 new trees, 468 acres of newly landscaped areas within the streets, 512 seating areas, a new 1-acre contiguous park along the lakefront had been proposed. All this has been achieved purely by reconfiguring the right-of-way of the existing streets.

Process: Reclaiming the public space on these streets remained the core essence of the street re-design. The Thane Smart City Limited started with the implementation of streets, which resulted in significant transformation of the Thane station precinct.

Highlights: The project gives universal accessibility as the streets have been designed to be safe and accessible for senior citizens, physically challenged, women and children. The intersections were made safe by introducing traffic signs and road markings along with traffic-calming infrastructure to streamline and reduce vehicle speeds. Contiguous non-interrupted footpaths were introduced in the tight right-of-way, with designated pick-up and drop-off areas outside the station.

Challenges: The project has been highly challenging in terms of the interdepartmental co-ordination and convincing the various stakeholders involved. Being such a high visibility project required a delicate balancing act between all stakeholders.

Outcomes: The major outcome was the reorganisation of auto-rickshaw drop-off point and the creation of a clear movement space and a major plaza within the station area.



1. The newly reclaimed sidewalk space provides the much needed room for the retail and commuter the required breathing room, making spaces inclusive, safe and convenient.
2. & 3. The intersections are raised with bollards and warning tactile paving for a smooth and contiguous pedestrian commute.
4. Before Image - Majority of the right of way is dedicated to auto rickshaws that comprise of only 15% of commuters. However bulk of the commuters walk to the station area constituting almost 50% of the modal split. 1.2 m wide sidewalks along retail were grossly insufficient and resulted in pedestrians spilling onto the travel lanes.
5. After Image - The proposal created an additional space of 6m dedicated space for pedestrians outside the station area. This resulted in commuters having access to upper level and lower levels to the station with a comfortable and safe walking space. This areas was paved with stone to withstand the peak loads and heavy wear and tear that the area experiences.



Unity One Plaza

Janakpuri West Metro Station, Delhi

Status: Completed in June, 2016

Site Area: 9,105 sq. m.

Location: Janakpuri West Metro Station, Delhi

Client: Unity Group

Consultants: Dalip Thareja Associates (Landscape), VSPB Associates

Aim: It was designed to activate the built edges and energise park and ride facility at the transit node.

Project Overview: This project comprises a multilevel car parking, shopping arcade, and eateries in the precinct of a west Delhi metro station. It is a place-making exercise through landscape urbanism interventions.

Project Details: The site edge alongside an extremely busy road was kept without a conventional fencing/boundary wall and the area under the metro line was landscaped to create a green buffer/road-side edge and a barrier-free, shaded pedestrian street with outdoor food-courts, seating areas and a lively interactive space for diverse user groups.

Process: The design for Unity One Plaza began with the client proposing a shopping street on the lines of the Orchard Road, a famous tourist attraction and upscale shopping street in Central Singapore. The multi storey car-parking structure was proposed with three lowermost shopping floors, with a raised plaza. Considering the limited site width available, the shopping arcade was seamlessly connected to the outdoor plaza, which serves as a great spill-over space for shoppers, with seating areas, interaction spaces and a food court at the metro station end.

Highlights: An interesting feature of the project is the wind-tunnel effect caused by the proximity of the metro viaduct to the adjacent building. This causes a breeze through the outdoor plaza, which coupled with the shade of the overhead metro corridor, creates a comfortable ambient temperature even during the hottest summer months. This makes the outdoor plaza vibrant throughout the day and serves as a seamless extension for the shopping arcade, spanning the complete length of the building.

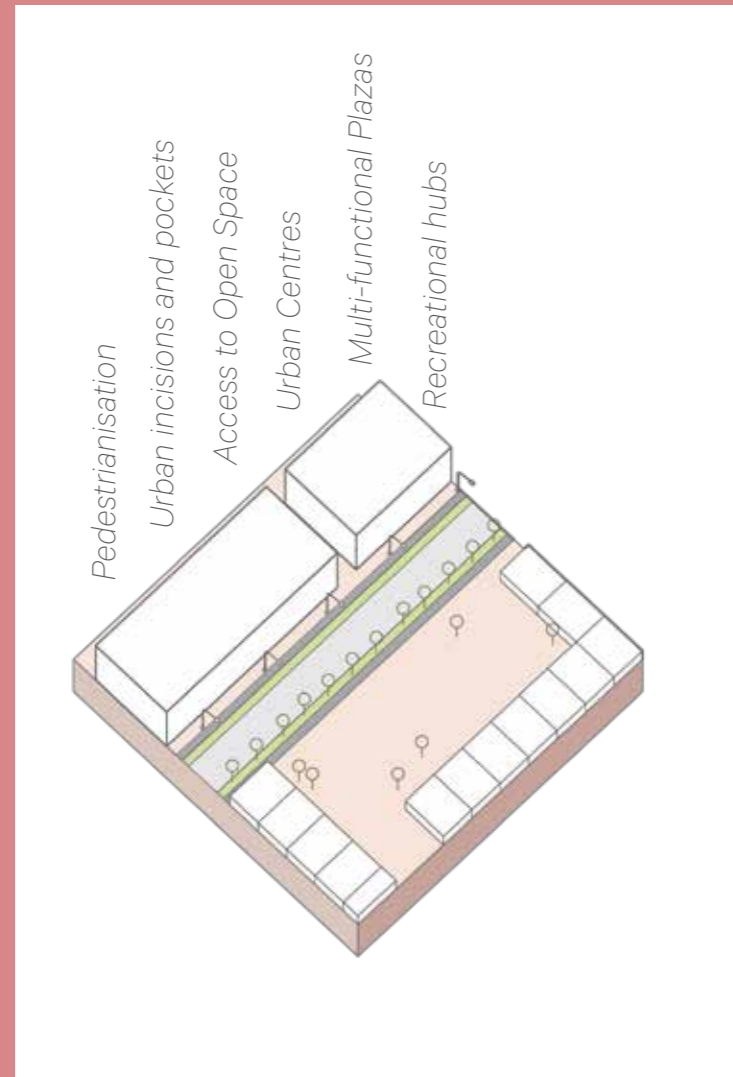
The roadside edge was designed with stepped planters instead of the more commonly seen fencing/boundary walls, creating a lush green edge that also serves as an effective buffer from traffic noise and pollution. This also created a physical barrier with designed entry points that have been provided with ramps for universal accessibility.

Challenges: The greatest challenge was to design with the limitations offered by the narrow linear site sandwiched between the multi-storey car-parking structure and a metro viaduct running at a distance of barely nine meters from the structure.

Outcomes: In a city where vehicular traffic dominates, with few pedestrian-friendly spaces, a people-centric space of this nature, well connected to the city's Transit Oriented Development (TOD) corridor, makes the Unity One Plaza a useful, welcome urban project.



1. Views before and after project implementation
2. Wide pedestrian pathway space during festivities and celebration
3. Vibrant pedestrian street with outdoor food courts and shaded seating areas
4. Place-making under the metro viaduct
5. Public plaza with defined enclosures for seating



Historically, plazas and promenades were open spaces designed for public use, delineated by surrounding buildings and/or streets have been fundamental to the development of urban centres. They afford citizens places to meet, trade and celebrate.

In a modern evolving city, it is also essential that these are not merely leftover areas between buildings but have a purpose. They must be designed to offer delight, surprise, relief and relaxation, enlightenment and amusement for all sections of the population, every day, every week, across the year.

Through the projects in this section, cities reimagine their public realm themed around selfie-spots, food-plazas, art places, pedestrian markets, skating parks, amphitheatres, small green spaces, tactical play areas, and gyms.

6 Plaza + Markets

- Aerocity | Delhi
- BKS Marg Hanuman Mandir Plaza | Delhi
- Carter Road Skate Park | Mumbai
- Chappan Dukaan | Indore
- Crossings Republik | Ghaziabad
- Dilli Haat - INA | Delhi
- DLF Cyber City - Skywalk | Gurugram
- Jaipur Chaupati | Jaipur
- Pondy Bazaar - Pedestrian Plaza | Chennai
- St. Stephen's Steps | Mumbai

Aerocity

IGI Airport, Delhi

Status: Completed in 2018

Site Area: 57.8 Hectares (143 acres)

Location: Delhi

Client: GMR-DIAL

Consultant: Kuipper Compagnons, Oracles (Landscape Architects), SK Das (Architects), Plural Design Consultants (Architects), Design Matrix (Lighting Designers), Version Absolute Design Studio (Signage and Graphics Consultants), MK Gupta Consultants (MEP Services), IM Cost Management (QS Consultant), BMSF (Structure Engineers)

Aim: Aerocity at the Indira Gandhi International Airport was envisaged as a multi-use precinct within the city.

Project Overview: The project was planned on capitalising the synergies between the international connectivity hub, multi-modal transit and commercial real estate, each serving to drive the other. The hospitality district within Aerocity constitutes one of the earliest developments in the ever-evolving airport and its adjacencies. The geometry of the layout relies heavily on its understanding of movement patterns, lines of vision, static points, and natural lines.

Project Details: The streetscape around the hotels have been remodelled to incorporate best practices of pedestrian priority, universal access, limited off-street parking, emergency vehicular movement, soft landscape strips housing tree avenues, shrubs and ground-covers following considerations of climate, orientation and sight lines. Appropriate and subtle use of material, texture, and colour is employed to achieve an aesthetically pleasing and safe streetscape to inform urban behaviour.

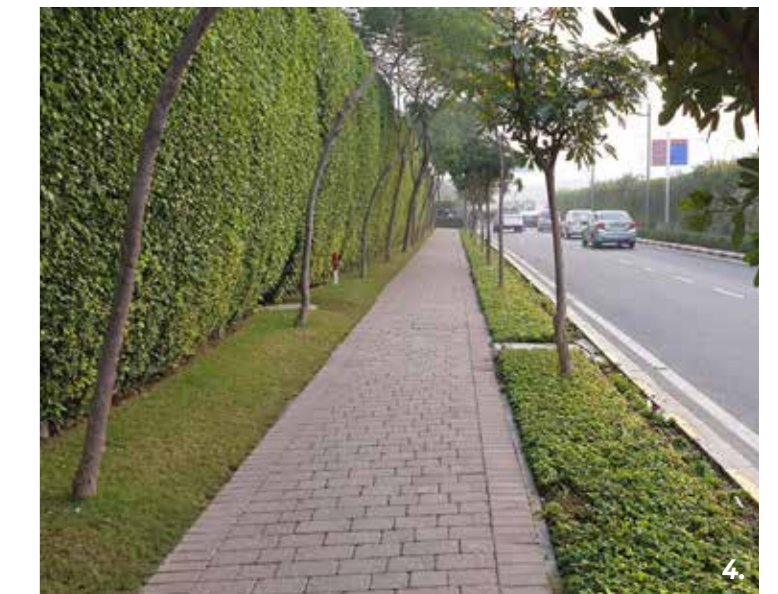
Process: The north-south pedestrian promenade constitutes the primary urban open space stretching from the northern plaza, a vehicular rotary, envisaged with a gigantic fountain, going right up to the Aerocity DMRC Station. The linear stretch constitutes a multi-level active street flanked by restaurants, retail, and interactive sitting and relaxation spaces. Carefully planned vegetation and water features are the stylised slices of nature that weave through the street.

Highlights: The road landscape has been a large constituent of the design area. The underground tunnel connecting Terminals 1 and 3 under the runway is a lively experience with subtle wall-art and lighting. The retaining walls of the open approach section towards the tunnel on either side have dense planting offering a riot of colours.

One of the focal points along the street is the subterranean food court planned under a road crossing. Columns supporting the road are transformed through landscape installations that house seats.

Challenges: After construction and operationalisation of the hotels and retail projects within the original grid, promoters felt the lack of uniqueness and identity within the precinct was a dampener. Further, with hotels sitting within each of their gated plots and their security protocols, there was little that the development offered as an engaging public realm. The GMR Group with Delhi International Airport Limited (GMR-DIAL), the promoter of the district, decided to assess the possibilities offered by shared public space and regain the lost opportunity by floating an international competition to reimagine and create an iconic development, offering cutting-edge infrastructure, urban open space and streetscape.

Outcomes: Grade separation has been used creatively to allow for pedestrian-vehicular interfaces. The northern access road has been dealt with considering moderate vehicular speed and aesthetics. The Central Spine Road leading to Terminal 3 has been designed to combine the joy of a parkway and a boulevard with lush gardens, iconic grass-mounds, and tree-lined pathways.



1. Sunken retail street punctuated with focal landscape features
2. Idyllic sun-decks, launchpads, performance and seating opportunities
3. Pedestrian underpass is transformed into a vibrant space with tree-like columns, indoor planting, vending kiosks and a mighty water-wall at the peripheries.
4. Slick and well-appointed road-landscape with strategically located planted strips for pedestrian safety.
5. Iconic, mood-changing fountain at the arrival junction

BKS Marg Hanuman Mandir Plaza

Baba Kharak Singh Marg, New Delhi

Status: Completed in October, 2010

Site Area: 9,510 sq. m.

Location: Baba Kharak Singh Marg, New Delhi

Client: New Delhi Municipal Corporation

Consultants: Oasis Designs Inc. (Landscape Architects), Techno Engineering (PHE Consultants), Jaitly Associates (Structural Consultants)

Aim: The Pracheen Hanuman Mandir situated in Connaught Place is one of the oldest temples of Delhi and is thronged by numerous devotees daily. The streetscape design for Baba Kharak Singh (BKS) Marg, a busy arterial road within the New Delhi Municipal Corporation (NDMC) area aimed at integrating the immediate context and creating an urban experience around the popular destination.

Project Overview: The overall improvement of the plaza included the use of wear-resistant hard stone and tamper-proof materials. The design of the complex incorporated all existing trees and added new canopy of trees to ensure a good shade factor to reduce the urban heat island effect. The streetscape design combined rainwater harvesting tanks with the reuse of treated sewage water for irrigation.

Project Details: The design strategy for the Hanuman Mandir precinct aimed at connecting the subways holistically with a series of stepped plazas, creating a multilevel space. At the upper level, bridge connections were created defining the formal entry axis for the temple. All the ancillary functions associated with the temple earlier were now planned at different levels as segregated spaces.

Process: The entire plaza was designed after a detailed study of the existing usage pattern to determine the space allocation, shape, and configuration of each activity in the new plaza. Extra care was taken to make the entire area barrier-free and universally accessible with special signages and toilet blocks.

Highlights: It was decided after several meetings with the authorities that a new multilevel parking lot was to be constructed near the complex. The existing parking inside the complex would be shifted and reclaimed for various temple-related activities.

Challenges: The challenge was to integrate this important and popular destination in the scope of streetscape design and integrate it holistically. There was a need to convince the authorities that integrating this temple precinct with the street design can transform the space into a large pedestrian plaza.

Outcomes: The design of the BKS Marg and Hanuman Mandir precinct as an integrated plaza along the main arterial road was the first project of its kind in Delhi. This was the first time in Delhi that the design prioritised pedestrian space and was later replicated in similar ways in other parts of the city.



1& 2. Series of stepped plaza
3. Designated place for mehndi/henna vendors
4. Entrance to BKS Marg Hanuman Mandir
5. Sitting area

Carter Road Skate Park

Mumbai, Maharashtra

Status: Completed in 2020

Site Area: 668.9 sq. m.

Location: Mumbai, Maharashtra

Client: Mumbai Maritime Board (MMB), Bandra West Residents Association (BWRA), Bombay SB

Consultants: Bandra Collective, Abraham John Architects

Aim: The Carter Road Skate Park was set to be an example of how public spaces contribute and enhance the lives of citizens. It was intended to be the first of many dynamic, easily accessible open spaces in the city promoting collaborations to bring together different design sensibilities.

Project Overview: The skate park in Mumbai on the Carter Road promenade is the result of an exciting collaboration between the designers Bandra Collective, creators Bombay SB and artists Sanskaar Sawant of Homework Book Studio. Together with the MMB (Mumbai Maritime Board), the BWRA (Bandra West Residents Association) and Altamash Sayed for Bombay SB, the Bandra Collective worked hard to make this skate park a reality.

Project Details: The starting point of this project was the conversion of an unused stretch of the promenade into Mumbai's first skate park. To make sure the skate park was accessible to all, architects designed it to double up as an amphitheatre that could be used for small performances. Additionally, it has multiple access points that allow citizens to take a short detour while walking through the park, flanked by lush mangroves before walking back out onto the promenade.

Process: While re-designing the Carter Road promenade, the members of the Bandra Collective ensured that the promenade and its featured activity spots become spaces that encourage citizens to engage. Having worked with Bombay SB in the past, the team was aware of the lack of skate parks in Mumbai for the small but growing skating community.

Highlights: Previously the Carter Road promenade was predominantly a place for a quiet evening stroll or a run attracting the elderly and middle-aged residents of the wealthy neighbourhood of Bandra. The skate park has changed this. Now small kids, young men, and women from both underprivileged communities as well as the well to do, join in a sport that binds them together, breaking down cultural barriers. The elderly also enjoy the new addition to the promenade, watching the stunts and vibrant activity at the skate park from the side-lines.

Challenges: Skateboarding acts as a force of "social disruption". Not surprisingly, the skate park at Carter Road quickly became a meeting place not only for enthusiasts, but also a place where people of different backgrounds interacted.

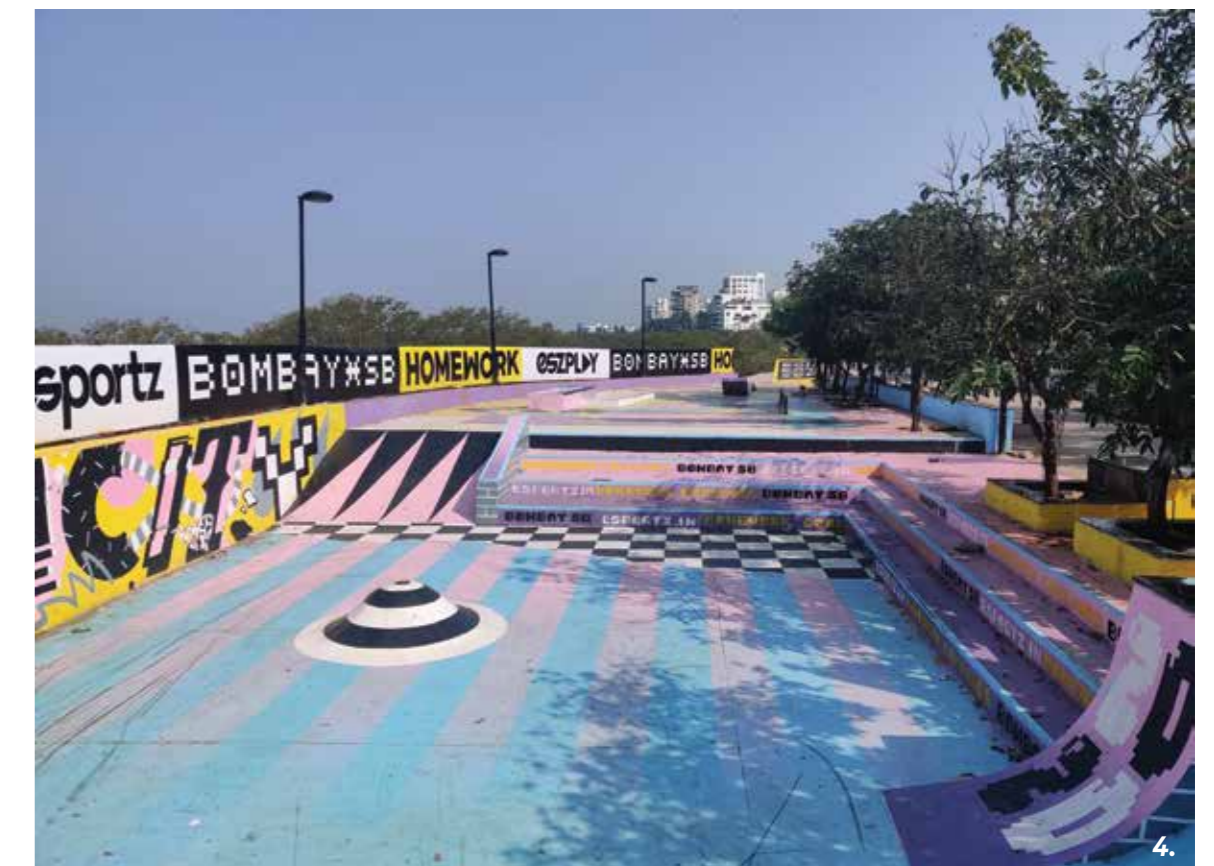
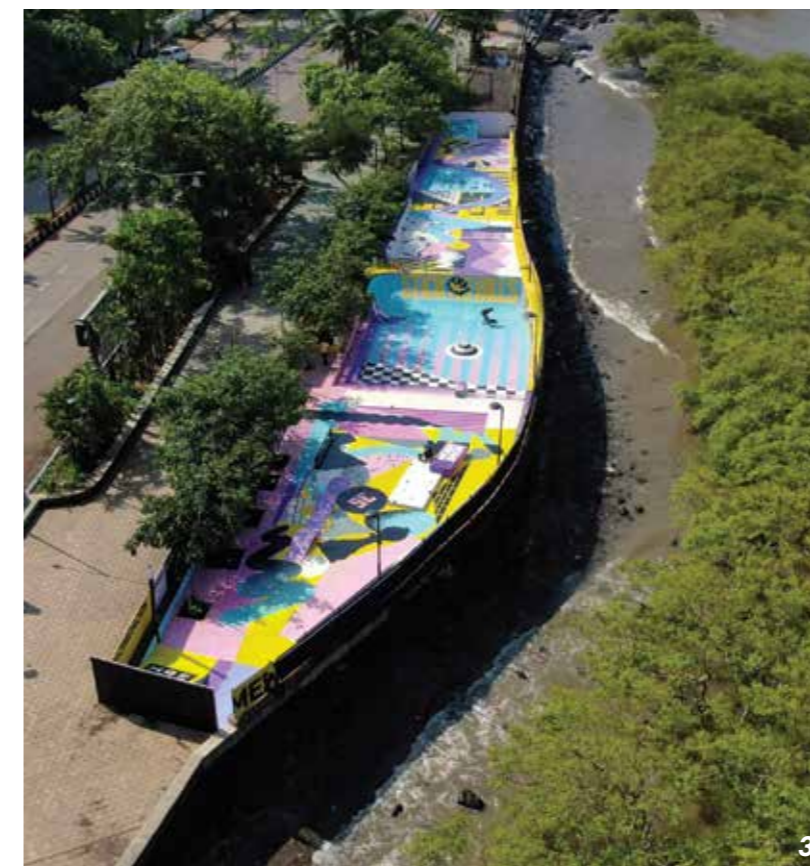
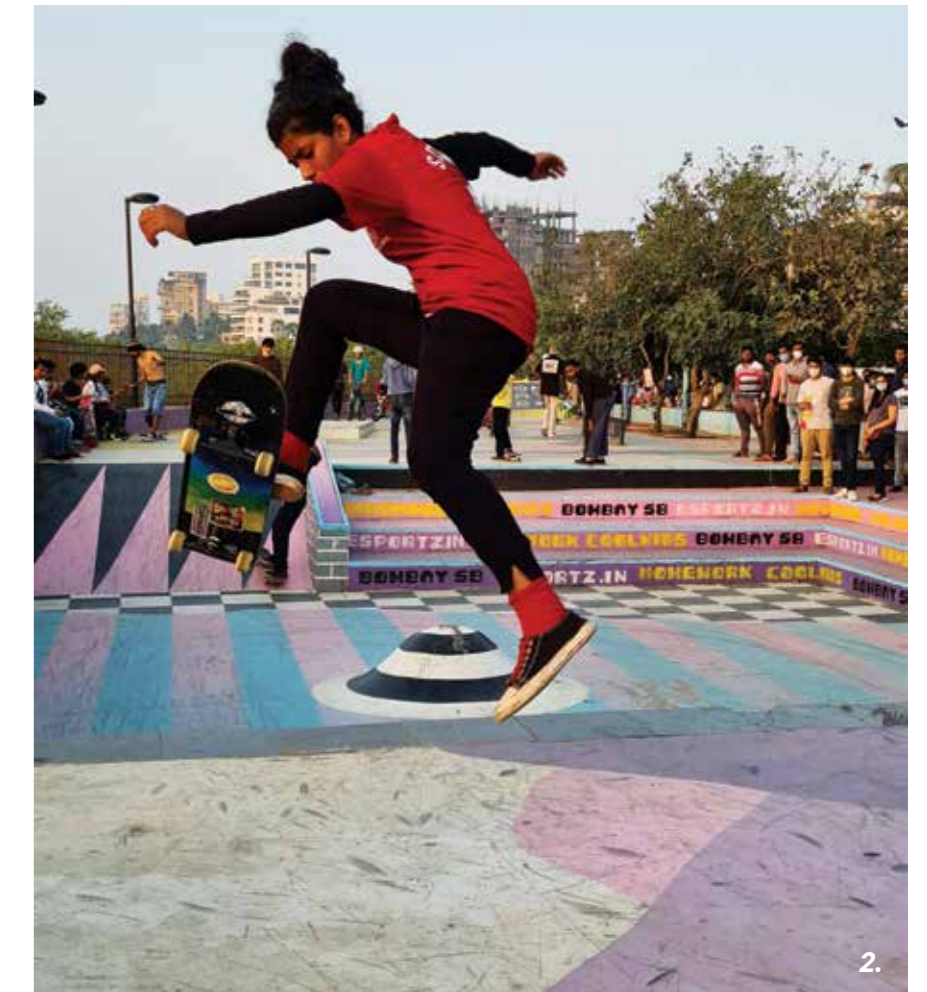
Outcomes: The skate park is an extension of the promenade and not a separate individual activity. One can walk through the skate park instead of the usual route along the paved promenade. It is accessible via ramps at the two ends and by steps between the trees. By integrating it with the promenade, it welcomes citizens to enjoy the sea front and view the mangroves from this elevated space. The skate park adds vibrancy and is a refreshing new public space for Bombay. It has brought together the old and young, beginners and experienced skaters alike.



1&2. Skating at the park

3. Drone shot of skate park at carter road-Bandra Mumbai

4. Post-painting skate park at carter road-Bandra Mumbai



Chappan Dukaan

Indore, Madhya Pradesh

Status: Completed in March, 2020

Site Area: 6,750 sq. m.

Location: Indore, Madhya Pradesh

Client: Indore Smart City Development Limited

Consultants: 9 Square (Architects)

Aim: Chappan was a crowded place with parking issues leading to traffic congestion. People used to throw plates and plastic bags which led to uncleanliness. There was improper pedestrian movement and no shaded area was available. Due to lack of greenery the appearance of Chappan was not attractive. Since there was no street furniture, visitors brought their personal vehicles which worsened the traffic congestion. Electric cables hung overhead which ruined the view. This project was initiated to overcome these challenges.

Project Overview: “56”, every foodie’s favourite hub, is a group of 56 shops that have been there forever. Chappan Dukaan, is the second certified street food-hub as per the benchmark set by the Food Safety and Standards Authority of India (FSSAI).

Project Details: Indore Smart City Development Limited (ISCDL) revamped the entire area as ‘smart food street’. The plan was implemented in 53 days. The work commenced from 14 January and to facilitate smooth work, the area was turned into a ‘No Vehicle’ zone. A foot-over-bridge (FOB) was also planned near the Dolphin Hospital to provide connectivity from the RS Bhandari Marg. The food spot “Chappan” had not just gone under the smart makeover but also under process of being all Digital.

Providing flora has created a green and beautiful environment. Stainless steel bollards are provided in a zig-zag way so that vehicles cannot enter the restricted zone. An open-air theatre has also been developed for hosting public events and gatherings.

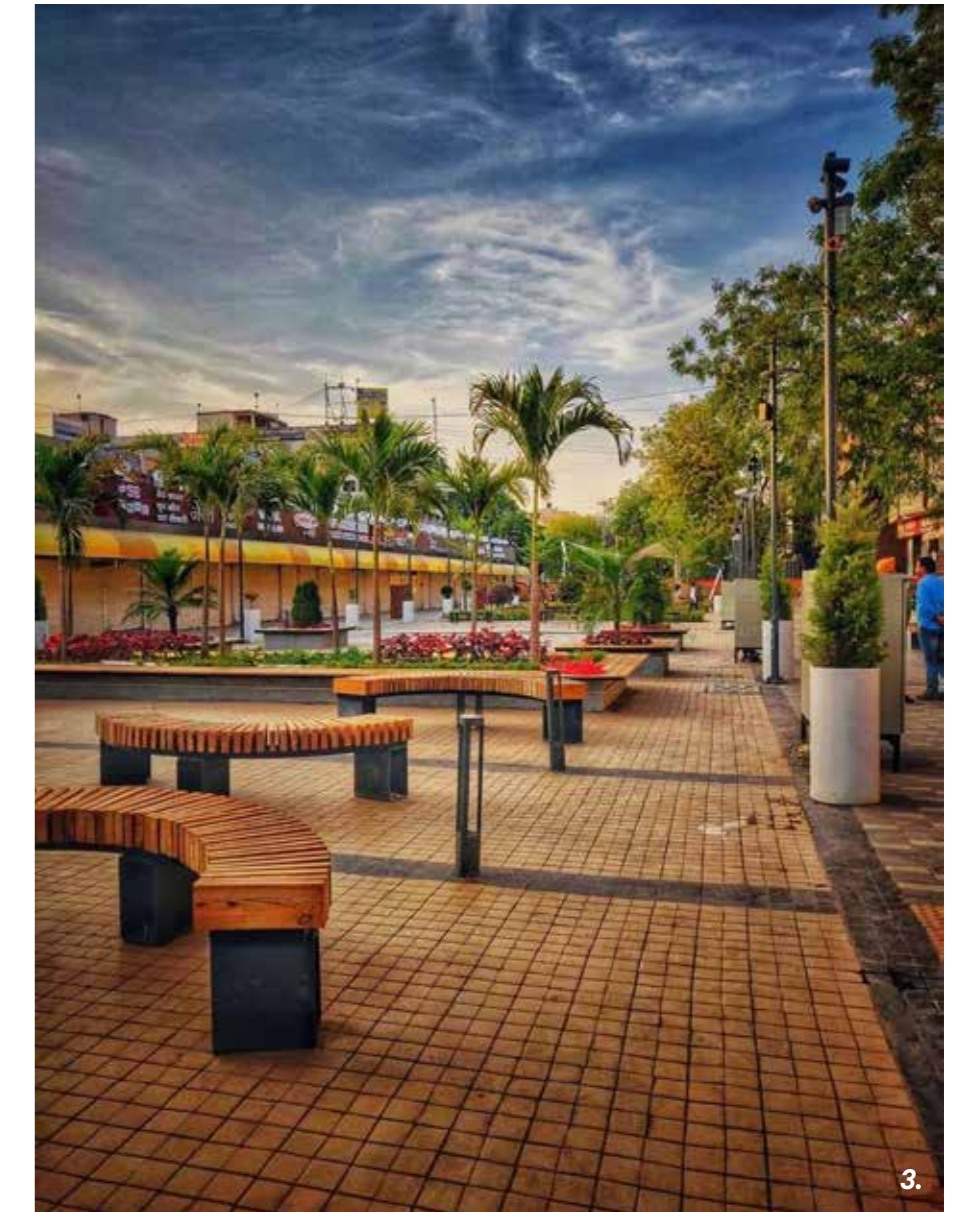
Process: On a trial basis, entry of vehicles was restricted between MG Road and Chandni Chowk from 14 January onwards. To restrain from causing inconvenience to citizens, a mechanised parking facility with a capacity for at least 200 two-wheelers and 80 four-wheelers was planned, and visitors were given alternative parking space at Vivekanand School and the garden near Gadi Adda.

Highlights: Since the implementation of the project, the market cap has increased 5 to 7 times of the initial value. A she-kunj has been developed for women to feed infants. The LEDs on the facades are used for advertising which generates capital income. Since the ‘no parking zone’ has been created, noise and air pollution have reduced drastically.

Water dispensers for safety and fire exits have been developed. Due to proper parking available, the waiting time has reduced. Sitting areas have been provided so people don’t have to wait in queues anymore, they can use the benches to enjoy their meals. This has reduced crowd gathering and subsequently, time is saved.

Challenges: The aesthetic appeal of the area had to be such that it would gain the attention of tourists. For this electric lines, gas lines and sewer lines have been moved underground so the view is not blocked.

Outcomes: The renovation of Chappan Dukaan helped majorly in the simplification of doing many works for people be it customers, shopkeepers, etc. People have started using dustbins and have also started contributing in the Swachh Bharat Mission as a result of which Indore was awarded the Cleanest City of India fifth time in a row.



1 & 2. Overview of Chappan Dukaan after renovation
3. The plaza along the street food hub
4. Pedestrian walkway
5. People enjoying street food hub

Crossings Republik

Ghaziabad, Uttar Pradesh

Status: Completed in January, 2014

Site Area: 6,070.2 sq. m.

Location: Ghaziabad, Uttar Pradesh

Client: Crossings Republik

Consultants: Oasis Designs Inc. (Landscape Architects), Optimum Design (Structural Consultants), Consummate Engineering Services (MEP Consultants)

Aim: The project aimed to create new “walkable communities” where the pedestrians, kids and cyclists were to be provided with their own segregated public realm.

Project Overview: The design of the project to create walkable communities improved street-based social opportunities, community life, access, and mobility for all residents of Crossings Republik, regardless of cultural identity, income group, neighbourhood identity, or mobility level.

Project Details: Along with creating a walkable community space for visitors, the project also included the round-about wherein active recreational activities, public areas, connectivity to the lakefront promenade and multi-level cultural plaza were also planned. In addition, the central node has state-of-the-art signage, modern weather shade structures and cycle-rickshaw e-recharge stations for last mile connectivity. The roads and the roundabout were designed to accommodate proper cycle lanes, pedestrian lanes, seating areas, cycle parking, bus stops, proper lighting and signage facilities.

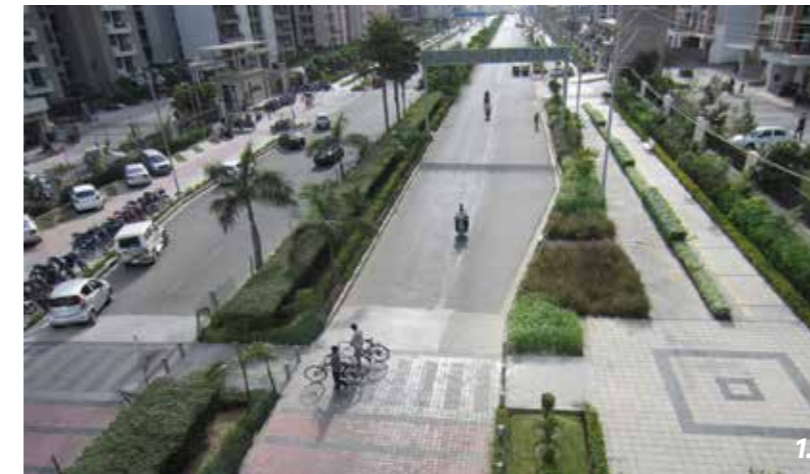
Process: The design focuses on the improvement of pedestrian connections and linkages from this node to the important hubs, transit systems, and major land-use centres. This resulted in a green network that enhances the area’s long-term ecological functioning and peoples’ connection to the natural environment.

Highlights: One of the main highlights of the project was eco-mobility network. The entire township is within a 10-minutes walking distance from the roundabout. Segregated, dedicated, continuous, uninterrupted walkway with continuous trees has been provided along this node connecting all main roads. The common green areas within the township are seamlessly connected at a different level so that pedestrians can enjoy a vehicular-free domain. Para transit facilities, bus stops, and cycle stand locations are within a 3-minute walking radius of this roundabout.

The second important highlight is the pedestrian prioritised street design. The roundabout was designed for people by connecting to the lakeside promenade and promoting the concept of eco-mobility with segregated dedicated continuous wide walkways and tree lines on both sides of the vehicular road.

Challenges: The challenge was to reimagine a vehicular roundabout in the heart of the township as a new public space for the neighbourhood. Along with this, the main feature is the sustainable storm water management system which was to be incorporated in the roadside greens and median green areas.

Outcomes: The central roundabout design resulted in a system to promote human needs and people-centric public realm design. It prioritised the needs of walking, bicycling, transit use, and the use of streets as public spaces for social interaction and community life. The design showcases areas where people can walk and spend time out of choice and not just as a necessity.



1. Vehicle-free domain for pedestrians
2. Seating area and pedestrian lane
3. Drone shot of the roundabout
4. Water fountain at roundabout

Dilli Haat - INA

INA Market, Delhi

Status: Completed in 1994

Site Area: 2.4 Hectares (6 Acres)

Location: INA Market, Delhi

Client: Delhi Tourism and Transportation Development Corporation

Consultants: Pradeep Sachdeva Associates (PSDA), Arvind Gupta Consultants (Structure), Krim Engineering (MEP)

Aim: To design an indigenous market place/recreational public space where artisans from all over India can display and sell their uniquely crafted goods. The aim was to design a 'bazaar' style market place instead of the then trending malls.

Project Overview: The 'Dilli Haat', a food and crafts bazaar has emerged as one of Delhi's most loved urban leisure spaces. Designed to be a public space, it is a platform for showcasing regional crafts and foods of India. It is a place of celebration, an ever-changing kaleidoscope of crafts and cuisines from different parts of India.

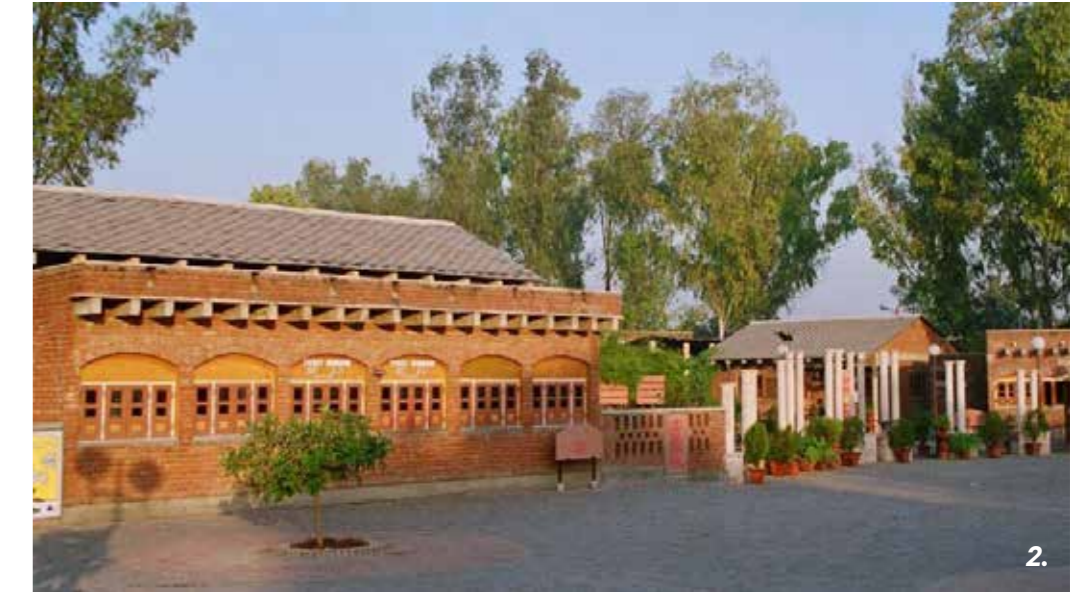
Project Details: In 2003, Dilli Haat became one of the first public places in the country to be retrofitted and made completely barrier-free. The design brief provided by Delhi Tourism was developed by interacting with experts of crafts such as Jaya Jaitley and others.

Process: The constraint of the drain running in the central part of the site and the existing trees played a major role in the design of the project. Dilli haat is, therefore, built in a linear layout where the central part is mostly for circulation with the shops on the periphery of the site.

Highlights: Over two decades later, Dilli Haat still remains a craft and social hub that attracts people from all parts of the world.

Challenges: The site was reclaimed by covering a storm water drain – the 'Kushak Nallah' with a slab. Building was not possible over this slab.

Outcomes: This is a pioneering project whose success has led to other food and crafts Haats in Delhi and around the country.



1. Crafts exhibited from all over the country
2. Entrance to Delhi Haat at the time of inauguration
3. Performances and street theatre
4. Entrance to Delhi Haat during a festival



DLF Cyber City - Skywalk

Gurugram, Haryana

Status: Completed in 2017

Site Area: Fragments of DLF Cyber City

Location: DLF Cyber City, Gurugram, Haryana

Client: DLF

Consultants: DLF, Oracles (Landscape Architects and Urbanists), Manish Consultants (Structural Engineers), AECOM (MEP Services, QS and Project Management)

Aim: How could land, water and vegetation manifest themselves by creating distinctive landscape patterns to connect and bring people together? The initial brief was to come up with a prototypical design to be built with minor variations over three locations and possibly expand to cover more stretches in future.

Project Overview: The DLF Cyber City is a mixed-use precinct in Gurugram constituting a large majority of IT offices, retail, group housing and support infrastructure. The development was pierced into two parts by an arterial sector-road connecting the National Highway to Sikanderpur crossing. At its inception and functioning over the years, each office building or a complex of buildings functioned independently, with minimum dependencies, each having its own retail and food arenas, straddling the lower floors. These served the needs of office-goers while also attracting drive-in customers.

Project Details: The elevated connections developed as active public spaces, replete with movement spines, interaction and seating areas, shade structures, lush vegetation and water features. The central segment of each skywalk has been designed as a wider structure to offer repose and viewing decks. These 'Gardens in the Sky' have been designed and built as bridges where people can also interact and get connected. People also visit them as a destination to enjoy the elevated vantage.

Process: Landscape comprises of three constituents: Land or built, water and vegetation. The design process led to three distinctive designs - linear, angular and curvaceous. The landscape construction system has been evolved to counter dynamic movement within the steel structure. Following the analytical study and recommendations,

the project focused on the design of elevated skywalks at three locations and areas near the landings on either side.

Highlights: A bold statement of a 'techno-landscape' in a contextual urban setting became an effective tool for place-making. DLF, obligated to restore safe pedestrian movement appointed Oracles to design the first phase of the elevated skywalks, while also looked at the possibility to reorient and improve the existing pedestrian networks with a view to consolidate fragments of open spaces and bring these into active use.

Challenges: Three developments changed the functioning of the precinct over the last decade. First, the development of Cyber-Hub, a food-oriented retail complex which saw all food chains make a bee-line to have their presence in the highly sought-after destination, thereby, vacating most buildings within the Cyber City. Second, the metro rail services became the most preferred public transport serving the Cyber City. Connectivity of the metro stations to the office complexes remained a challenge in a precinct originally planned for automobiles and with a severely compromised pedestrian network. Third, the widening of the sector-road into a 16-lane high-speed traffic artery further dealt a blow to the pedestrian connectivity.

Outcomes: The Cyber City is a 'Tech-Driven Urban Space' relying upon 'Cyber Waves' and 'Networks' to connect and create bridges that link youthful and aspirational workforce. A philosophical foray into the theme and experience of the project led to key words and phrases that became drivers to infuse a metaphorical meaning and defined the aesthetic outcome of the skywalks.



1. Trellises, lighting and planting towards a coordinated streetscape
2. Creative geometry and alignments in response to brown-field setting
3. Incidental seating opportunities, interactive spaces and a sense of placemaking.
4. Curvilinear patterns of ground and overhead plane guiding a directional walk

Jaipur Chaupati

Jaipur, Rajasthan

Status: Completed in November, 2021

Site Area: 4,500 sq. m.

Location: Mansarovar, Jaipur, Rajasthan

Client: Rajasthan Housing Board

Consultants: Satatv Design Consultants

Aim: This public food court and plaza with street promenade was designed to meet the needs of the surrounding land use which is primarily residential and institutional.

Project Overview: The project is located amidst a dense residential fabric dotted with educational institutions. The site is located on the main B2 Bypass Road adjoining Dwarka Das Udyan in Mansarovar. This project acts as a magnetic experience and gives opportunity to the local residents and students to enjoy the hygienic street food by multiple food vendors in a common open area with delightful ambience. Apart from delicious foods and drinks, there are live band performances to set the ambience.

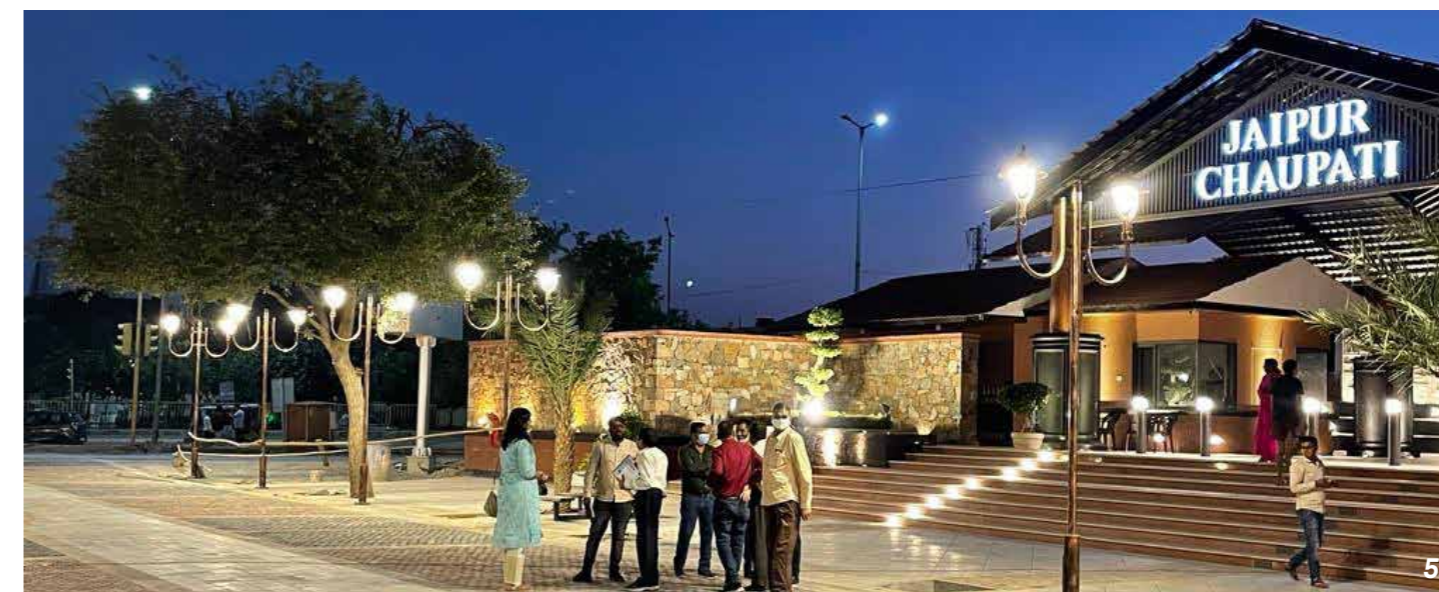
Project Details: There is a nominal entry ticket to confirm the authenticity of the incoming crowd. The entire area is under CCTV surveillance to maintain security. Garbage disposal is carried out at frequent intervals to the dedicated garbage disposal areas and the service area is designed keeping in mind all utilities including male-female toilets, utensil wash area, chimney exhausts, etc.

Process: The Chaupati is designed as a self-sustained economic module, wherein shops are given on lease to the selected vendors according to their quality skills and reputation.

Highlights: The project caters to a child-friendly as well as a people-centric design. There is a dedicated play area within the food court where kids can play while enjoying mouth-watering delicacies. Also, the central water fountain attracts the attention of all.

Challenges: The major challenge faced during the execution of the public sector project was coordination between the government agency, the assigned contractor (which is mostly the lowest bid value) and the architecture's office. But eventually it smoothed out because of the efficiency shown by all the agencies involved. Finally, the outcome was appreciated by the public at large.

Outcomes: This space is designed for the public. Keeping in mind the human scale, the design has been tailored according to the specifics and preferences and a more user friendly and intuitive experience. The Chaupati lets you taste the famous foods of the country and abroad including Jaipur.



1. Seating plaza
2. Hand crafted selfie wall
3. Family seating gazebos
4. Sheltered eating spot
5. Entrance to Jaipur Chaupati

Pondy Bazaar - Pedestrian Plaza

Chennai, Tamil Nadu

Status: Completed and Opened on November, 2019

Site Area: 1.5 Km length

Location: T. Nagar, Chennai, Tamil Nadu

Client: Chennai Smart City Limited and Greater Chennai Corporation

Consultants: Studio R+R

Aim: The Pedestrian Plaza project was conceived with the intent of enhancing the unique shopping experience that Pondy Bazaar offers, by reclaiming the public space for shoppers. For the first time, Chennai was looking at a street as not just a mobility corridor, but as a social, public space for everyone, be it families, kids, elderly, etc.

Project Overview: Pondy Bazaar, located in the heart of the city, is known for being a famous shopping destination with both small stores and big brands lining the stretch. This shopping promenade is best experienced on foot, giving one the opportunity to stop-and-shop to one's content. To further this, a Pedestrian Plaza has been created along the Sir Thyagaraya Road with the intent to transform one of Chennai's prime shopping hubs into a haven for its residents and visitors.

Project Details: The 700-m stretch is on the Sir Thyagaraya Road, between Thanikachalam Road junction and Panagal Park, allowing one-way traffic with the rest of the road space dedicated to pedestrians and cyclists. The 700-m stretch between Thanikachalam Road junction and Anna Salai has wide and continuous footpaths, safe pedestrian crossings and organised parking, following the theme of the pedestrian plaza.

Process: ITDP India Programme conducted a survey of over 500 shoppers to understand their travel patterns. The survey highlighted that only 50% of shoppers reach Pondy Bazaar using their private motor vehicles. Of these only 50% vehicle-users park on the main stretch. The rest mostly park their vehicles away from Thyagaraya Road and proceed towards the plaza on foot. In a nutshell, only 25% of the shoppers at Pondy Bazaar park on the main road.

Highlights: A multi-level car parking has been created by the Greater Chennai Corporation to meet the parking demands during festive seasons.

Challenges: Two main concerns of the shopkeepers were shutting off Thyagaraya Road to vehicles and the removal of parking from the main road, both of which, they claimed, would affect their business.

Outcomes: The Greater Chennai Corporation has rolled out a parking management system in Pondy Bazaar to organise on-street parking.



- 1&2. Before Pondy Bazaar redevelopment with unorganised on street parking
3. During construction phase
4. Optimized carriageway(one way) to accommodate a wide pedestrian pathway
5. Continuous wide shopping promenade and organized street parking
6. Shuttle service for visitors to the shopping street

St. Stephen's Steps

Bandra, Mumbai, Maharashtra

Status: Completed in 2017

Site Area: 1,530 sq. m.

Location: Bandra, Mumbai, Maharashtra

Client: Bombay Greenway, Brihanmumbai Municipal Corporation (BMC)

Consultants: Abraham John Architects, Asif Zakaria

Aim: St. Stephen's Church is a historic landmark of Bandra. The Steps are directly aligned with the gate of the St. Stephen's Church and design strategies were proposed in accordance with the surroundings. The proposal included a 15.3-m high, 88-m long and 12-m wide concrete staircase with a ramp to allow easy access to pedestrians and also compose a barrier-free public space.

Project Overview: The regenerated public space, was once a derelict, neglected and narrow staircase. After identifying this 30-year-old dump-yard frequented only by drug addicts, the local councillor was approached to turn it into a multi-use space for the community. The local municipal corporation took up the project to uplift this mismanaged area.

Project Details: The flight of stairs breaks at its mid landing into a central gathering area. An open-air theatre along with a children's play area have been introduced to encourage various communal events and recreational activities. The design also manages the addition of a zebra crossing, a raised platform on both sides and bollards for the demarcated area lying parallel to the road. The project created an efficient multi-use place, encouraging alternative modes of transport (by foot/cycle), as well as re-creating a cultural and community fabric.

Process: Key people were located who were willing to push for change and fight the naysayers. Three years after the proposal, a lot of ups and downs and the support of multiple collaborators, The Steps Bandra was finally completed in 2019, giving close to 2000 sq m space back to the city: 5 storeys high, 100-m long, 12-m wide. Additional space was acquired by taking in part of the street and getting rid of illegal parking.

To celebrate the transformation, an open call was put out for mural artists to bring colour to The Steps with volunteers from all backgrounds pitching in, including children from the adjoining slums. An art and community festival was co-organised: Five weekends of curated programming.

Highlights: The space proved its value by housing photo exhibitions, book donation drives, daily kids' cycling, and installation art. The people-friendly design ticked off all the requirements for an ideal public space, open 24/7, and accessible to all. The Steps became a melting pot, and the crowds grew every weekend. People from the community brought their enthusiasm, skills and passions.

Challenges: Finding key collaborators in the community was essential to support the vision and outnumber the naysayers. This is what one hopes and strives to see more of in the public spaces of our city.

Outcomes: The learning was that people are willing to accept change (pets in public spaces, food, cycling, play equipment, music, prams) when they are having a good time, so it's essential to celebrate and not be afraid to push the limits.

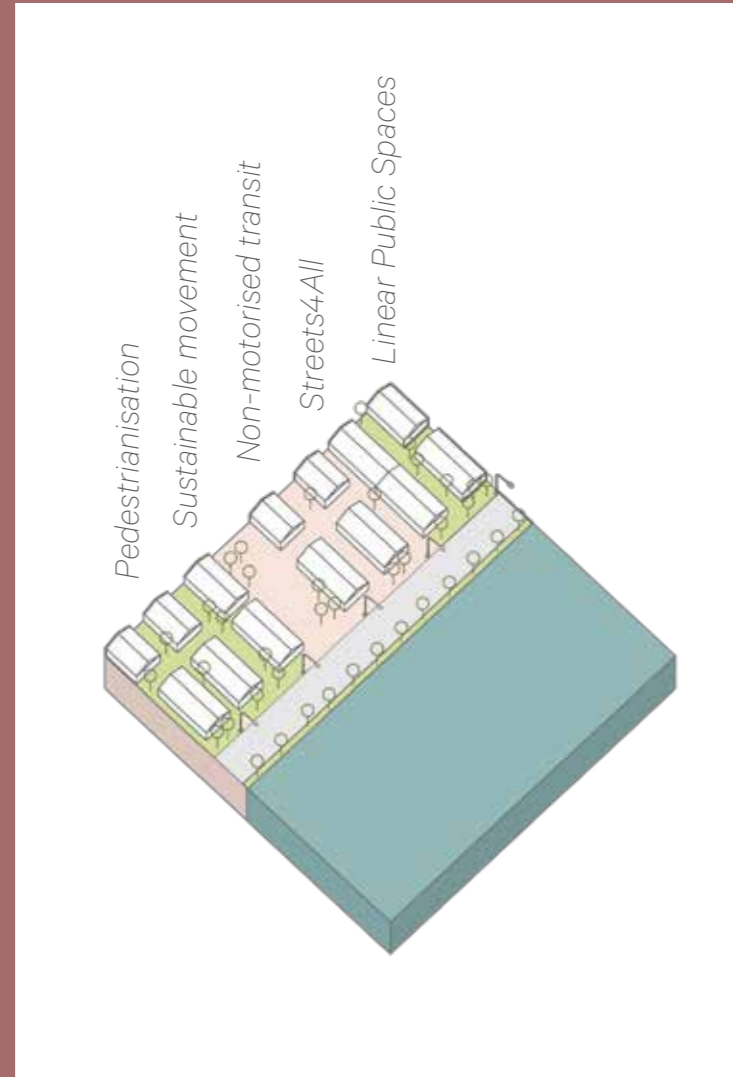
It has enhanced the quality of life for the local families. Every day they can be seen cycling, playing badminton and other sports, and taking part in community events. People of all ages and social-economic backgrounds are seen enjoying the cycle-friendly short cut. During community events, the affluent and the poor sit together and share viewing space: From local to international dance art forms, rousing music performances, film screenings and workshops for all ages - all free of cost.



1&2. Cultural activities at the steps

3. Front view of the st. Stephen's steps





Streets often occupy nearly a quarter of the city's geographical area. To improve liveability, cities are redesigning streets as barrier-free, climate-sensitive people-friendly spaces that ensure space for walking, cycling and other pedestrian activities. They also promote equitability, safety, resilience, and vibrance.

In line with the national transport policy, a shift in focus from individual vehicles to group transport has taken place. It also caters to the new sustainable, resilient aspirations to combat climate change challenges.

The projects in this section detail methods of prioritising accessibility and movement while creating linear public spaces along streets and promenades.

7 Streetscapes

- Badshahpur Forest Corridor | Gurugram
- Bibvewadi Road | Pune
- Chimanlal Girdharlal Road | Ahmedabad
- Church Street | Bengaluru
- Irla Nullah | Mumbai
- Jangali Maharaj Road | Pune
- Race Course Road | Coimbatore
- Satara Road | Pune
- Smart Janpath | Bhubaneswar
- Tender SURE | Bengaluru
- The Pedestrian Street | Delhi

Badshahpur Forest Corridor

Gurugram, Haryana

Status: Ongoing since 2018

Site Area: 5.6km Long Corridor

Location: Gurugram, Haryana

Client: Project by NGO iamgurgaon for GMDA, MCG, Gurugram

Consultants: Nidhi Madan and Nupur Prothi Khanna (Landscape Architects), Beyond Built (Design Team),

Vijay Dhasmana (Planting)

Aim: Badshahpur Forest Corridor was envisioned as an accessible and equitable public open space, an urban greenway corridor for the residents of Gurugram. This actively used, innovative, resource-conscious, and ecologically rich community space has been designed to offer safe and healthy open spaces to all sections of the society including elderly women and children.

Project Overview: The Badshahpur Forest Corridor is an eco-restoration of a wasteland that was once part of the natural waterway network of Delhi-NCR, but more recently had become a dumping ground for construction debris over a city drain. The 5.6-km long corridor from the Southern Peripheral Road (SPR) to NH-8, connects community, recreation, play and rest spaces through walking and cycling trails. It has been designed to be an ecologically sustainable landscape by limiting construction on the drain footprint, creating extensive water recharge capacity through nature-based solutions, reusing and reinventing waste materials and planting 100% native plant species.

Project Details: Both a safe mobility corridor and a recreational hub for the city, the Badshahpur Forest Corridor has community spaces for cultural events, play areas and corridor trails. Creative reuse of construction waste and debris in earthwork, site elements and paving reduced waste disposal made the construction cost-effective. Varied strategies for groundwater recharge and overflow through shallow infiltration, water retention and storage systems connected through natural swales or water channels have been showcased.

Process: The unique yet supportive collaboration between the government agencies and citizen groups facilitated the project, with funding by corporates and design by landscape architects.

Highlights: Best practices of creative waste reuse, restoration of native plant species and biodiversity habitat, comprehensive stormwater management and creation of an ecological learning lab were made possible through hands-on site-specific interventions.

Challenges: Lack of clarity of the site extents, encroachments and indiscernible site conditions were the primary challenges faced. Excessive compaction, lack of water recharge and excessive flooding during peak rains despite falling groundwater levels, lack of skill or motivation to work with waste were others.

Outcomes: The landscape design based on reinvention of waste materials enabled capacity building and adoption of waste reuse as standard practice. It has also promoted nature-based flood mitigation Initiatives across the city. And provided safe, accessible, equitable access for all sections of society.



1. Before
2. After - Khelo Court material reuse along with space for rest and recreation
3. Tehel Lo (walkway) - depict the reuse of construction debris to define spaces
4&5. Aerial view - The native forest corridor - showcases nature based water management

Bibvewadi Road

Pune, Maharashtra

Status: Completed 2 km in November, 2021

Site Area: 4.5 km Length

Location: Swami Vivekanand Road, Pune, Maharashtra

Client: Pune Municipal Corporation

Consultants: IBI Group India

Aim: The aim of the project was to transform 2-km of Bibvewadi Road serving connections to multiple residential and commercial pockets, into a complete street with a major focus on streamlining the traffic flow and providing a better public realm for all users.

Project Overview: The primary intent of the project was to showcase the potential transformation within the limited Right of Way (RoW) by providing a better balance of space allocation between the fast- and slow-moving functions of the street in addition to enhancing safety.

Project Details: The project was one among the several priority streets selected under the pioneer Pune Streetscape program of the Pune Municipal Corporation in 2016 which aimed at creating a walkable environment using the principles of complete streets. The pedestrian realm facilities were developed using exposed brickworks for seating, porous pavers, stamped concrete finish for cycle tracks and enhanced with decorative lighting.

Process: Reconnaissance survey and verification of topographic surveys on-site was undertaken for early and informed decision making. Stakeholder workshops and consultations were conducted with agencies as well as elected representatives at various stages of the project from visioning to implementation.

Highlights: Participatory design solutions can bring long term improvement leading to healthier environments and socially

integrated spaces. The sublime character of the street defined by the dense tree foliage was retained in the redevelopment process without compromising on the widths.

Challenges: The project execution faced numerous physical, operational and institutional challenges. Major sections of the road had built encroachments which limited the potential to widen the RoW as per the width stipulated in the Development Plan. The street had a huge demand for on-street parking, a high density of trees that were to be retained and unorganised street vending. Inter-agency coordination to resolve design implementation issues, as well as outreach for consensus with elected representatives, were bottlenecks in the transformation process.

Outcomes: Prioritising land acquisition at critical junctures within the project site before execution enhanced the integration of public spaces in the limited Right of Way and also helped to reduce delays during execution. Induction of project management consultants during the tendering stage of the project helped to overcome inconsistencies and gaps observed during execution. Constant engagement with contractors and client stakeholders during execution ensured quicker and more precise delivery. The Design Build Operate and Maintain (DBOM) tenders ensured quality checks and continued maintenance post-execution.



1. Undefined carriageway extending up to the edge of the Street
2. Defined NMT realm and streamlined carriageway
3. Brick seating cum planter/tree guards used as social gathering spaces
4. Bollards used for restricting motor vehicle entry serve as resting spaces
5. Well defined street edges with walkways, cycle track and bollards

Chimanlal Girdharlal Road

Ahmedabad, Gujarat

Status: Completed in 2020

Site Area: 2.6 km length

Location: Ahmedabad, Gujarat

Client: Ahmedabad Municipal Corporation

Consultants: HCP Design, Planning and Management Pvt Ltd

Aim: To create a street that would work equally well for pedestrian experience as well as a thoroughfare, and it would stand out as an example of good urban design practices in India.

Project Overview: Chimanlal Girdharlal Road, popularly known as CG Road, was an important arterial road of Ahmedabad. It emerged as the prime retail street of the city in the late 1980s, with high property prices. In 1994, the Ahmedabad Municipal Corporation (AMC) appointed HCP Interior Design Pvt Ltd to comprehensively design CG Road to make it efficient and safe, while accommodating the conflicting demands of the street.

Project Details: The design of the arterial road included well-aligned central verges, wider lanes and an extra lane of the carriageway at intersections. It also featured synchronised signal systems and surveillance cameras, to ease traffic and pedestrian movement. Railings were added atop the central verge to prevent pedestrians from disrupting fast moving through traffic by crossing the street outside the designated crossings provided.

Pedestrians have been provided with 4.6-m wide paved sidewalks, supplemented with benches and dustbins to ensure a comfortable walking experience, with places to pause and sit and provisions to reduce littering. Strategically placed bollards prevent motor vehicles from taking over the sidewalk and threatening pedestrian safety. The design also incorporated designated bays for bus stops that do not encroach upon the width of the pathway. All the existing trees were retained and protected, while additional semi-grown trees were added on both sides, to provide pedestrians with some respite from the harsh Ahmedabad sun and to improve the character of the street as a pedestrian boulevard.

Process: To stand out as an example of good urban design practice elements such as curb blocks, paver blocks, planters and bollards were custom designed and pre-cast using high-quality materials. These were designed and detailed as robust elements, to last long while withstanding heavy public use.

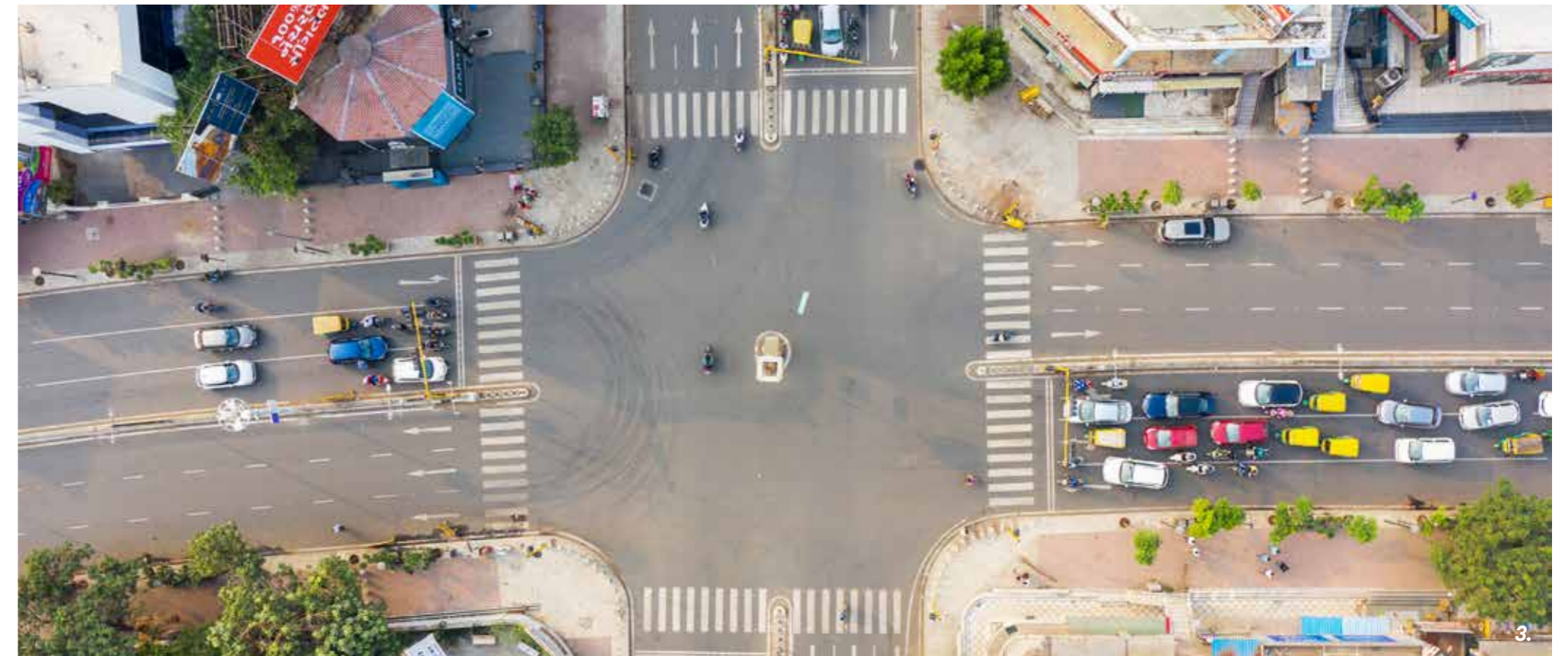
Highlights: The design of the project provided parking for 400 cars and 1200 scooters, two-lane carriageways for thoroughfare and boulevard-style pedestrian walkways on both sides of the road. Twenty-five years later, by 2019, the city had once again outgrown the now-central arterial street. HCP Interior Design Pvt Ltd was reappointed to refurbish and renovate the street, to cater to rising densification, footfalls and traffic congestion on the 2.6-km stretch.

Challenges: The challenge was to address five primary objectives through the design of the street: To ensure it served as an efficient arterial road for thoroughfare; Improve pedestrian experience of the street; Ensure it functioned well as a retail street; Demonstrate robust and high-quality construction; and make it easy to operate and maintain. The design comprehensively addressed all these objectives, retaining and enhancing CG Road's value as a retail destination for residents and visitors alike, while keeping its distinct and memorable character intact.

Outcomes: The project served as a part of HCP's wider attempt to make Indian cities more liveable and pedestrian-friendly. The project received critical acclaim for its design as well as its innovative self-financing mechanism.



1. Parking before/after
2. Complete street design principles with bollards, seaters and table top ramp
3. Intersection



Church Street

Bengaluru, Karnataka

Status: Completed in 2018

Site Area: 715 m. Length

Location: Bengaluru, Karnataka

Client: Bruhat Bengaluru Mahanagara Pallike

Consultants: Venkataraman Associates (VA) Group, MOD Institute

Aim: To redevelop the Church Street of Bengaluru into a pedestrian-centric street.

Project Overview: Church Street, one of the busiest and top revenue generating streets of the city of Bengaluru houses several entertainment establishments, businesses and residences. The street was once a part of the cantonment, dotted with single dwelling units. With time, many such streets turned into busy commercial hubs and their infrastructure became woefully inadequate.

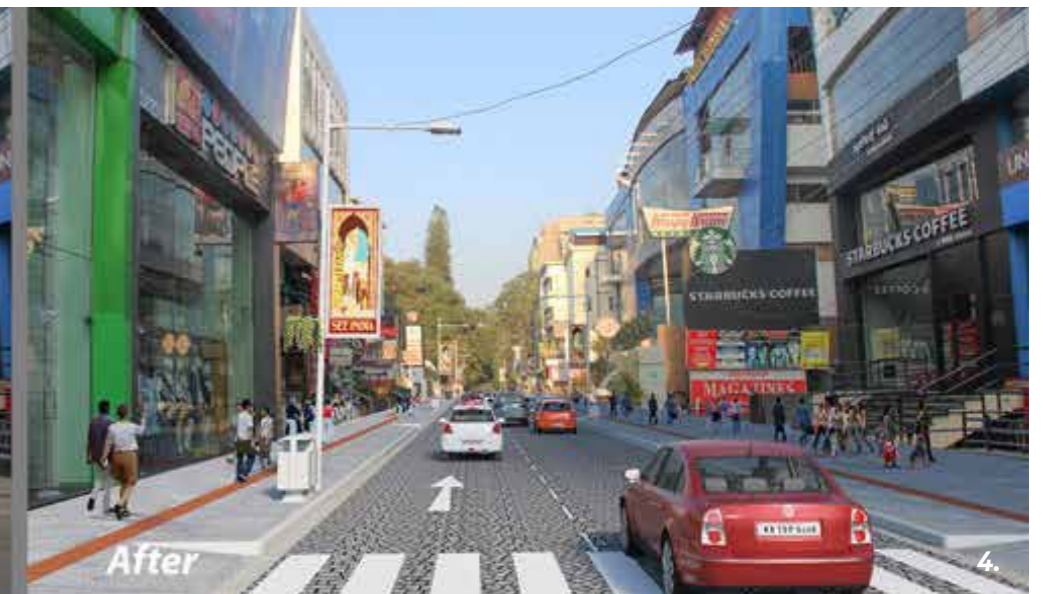
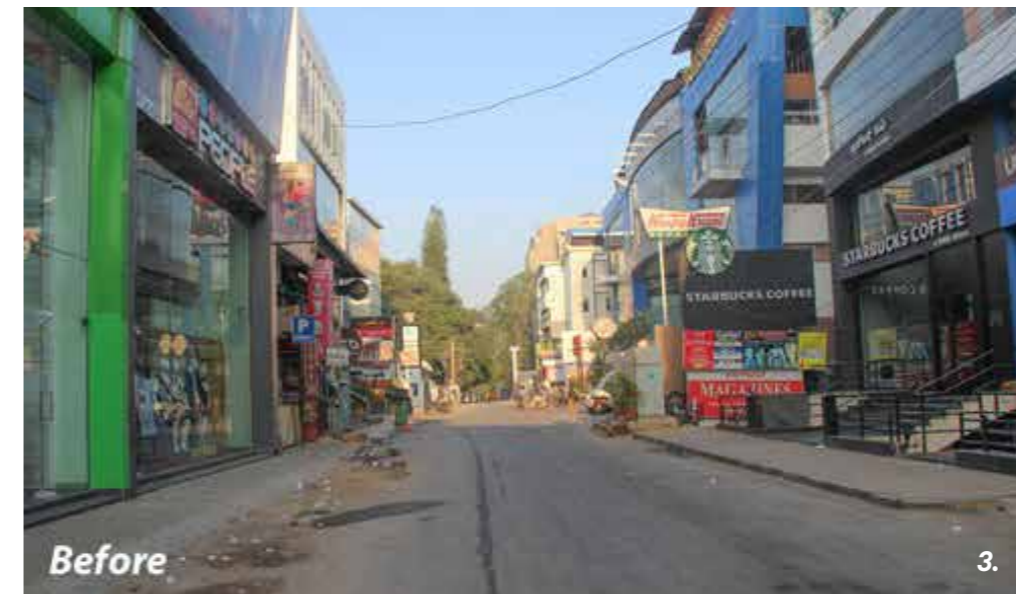
Project Details: With this project, the high street in a heavily motor dependent central business district, frequented by a diverse demographic has been turned into a cobbled pedestrian-friendly street that has caused a stark change in the behaviour of both motorists and pedestrians. The focus was on a slow shared street with the design allowing users to linger and enjoy the space. Pedestrians and users of the street were given more importance in the design, by rationalising the carriageway and designating more space for pedestrians. An introduction of a cobbled carriageway, landscaping, street furniture, and optimum lighting allowed users to relax and use the space of the street rather than act as a thoroughfare. The cobbled carriageway further prioritised the pedestrians by slowing down vehicular traffic.

Process: The need for urban intervention emerged from a basic assessment of this street that reeked of civic apathy; with potholes, broken footpaths, leaking pipes and uneven pavements. The design and construction process involved negotiations and communications with all stakeholders including residents, users, commercial and cultural establishments and multiple governmental and non-governmental agencies.

Highlights: The motif in the cobble stone pattern has been inspired by the 'Kasuti' which is an intricate form of embroidery practiced in Karnataka. Replicating the well-recognised motif through granite cobbles helped to establish a unique identity of the street. Care was taken during the design detailing and construction that best practices were adhered to that will help in less maintenance and upkeep of the street. This project paved the way for a people-friendly city, that was designed for users and not their vehicles.

Challenges: The design emphasised the local context by using the local Sadarahalli stone and a 'kasuti' pattern on the cobbles reminiscent of the region's rich history and culture of embroidery. Additionally, by factoring in the street usage patterns, movement and building use, the design allowed safe and easy access to all. Unlike the archetypal Indian street design, all utilities and services were clearly designated and directly accessible from the footpath discouraging any disturbance to the carriageway in the future.

Outcomes: A pedestrian-friendly street that has inspired and been the location for the government's Church Street. This is one of the first initiatives to promote pedestrianised streets as public spaces in the city. It changed the behaviour of motorists and pedestrians alike in the usage of the street. The quality of construction and design proved to be a great benchmark for other city streets as seen by the maintenance and upkeep required.



1&2. Pedestrian friendly street design with patterned inlay in cobble flooring

3&4: existing and proposed street view of the church street

5. Church street after redevelopment

Irla Nullah

Mumbai, Maharashtra

Status: 2013 to ongoing

Site Area: 4 sq. km

Location: Juhu, Mumbai, Maharashtra

Client: Residents of Juhu

Consultants: NEERI, P.K. Das Associates

Aim: The Vision Juhu Plan included conserving reserved open spaces and creating new ones, pedestrianisation, significant solutions to flooding in Juhu, development of the Irla Nullah, protecting the natural environment, increasing commercial viability, encouraging tourist and leisure facilities, protecting and supporting communities, creating social inclusion, providing people with a voice in landscapes of rapid change and designing urban places and spaces for them.

Project Overview: The initiative addressed the abuse and exclusion of over 300-km of watercourses, including four rivers that had been turned into nullahs or drains. It brought to light the continuing degradation of 140 sq km of natural areas in the city, including mangroves, wetlands, creeks, salt pans, rivers, lakes, beaches, hills and forests, and the need to restore the symbiotic relationship among them. City authorities have been apathetic towards the protection of both natural and open spaces, and have neglected their integration with the city's Development Plan. Vision Juhu, a part of a larger citizens movement evolved keeping the larger issues of development, ecology and sustainability of the city in mind.

Project Details: One of the focal points of the project and one that was key to the success of the re-appropriation and reinvigoration of the nullah itself was the challenge of cleaning the water. The design team worked closely with the National Environmental Engineering Research Institute (NEERI) to develop a system for cleaning the water. This system comprises several elements that include a floating matter filtration gate, silt trap beds, compact treatment units and floating beds of phytoid plants.

Process: The project was executed through the participation of local citizens, elected representatives, officials of the government, celebrities, educational and commercial institutions, the Municipal Corporation of Greater Mumbai (MCGM) and certain state and national government agencies. The project exemplified the need to involve diverse stakeholders in the people's "Right to the City", and their role in scripting urban growth.

Highlights: The project included the conservation of vital natural assets; their integration with the neighbourhood and the city; expanding public spaces, both in physical and democratic terms, primarily affecting a paradigm shift in the understanding of sustainable ecology and building with nature and its benefits to the quality of life and environment.

Challenges: The challenges were significant and included the conservation and integration of natural assets with the urban landscape along with expanding the tree cover, demystifying the planning process, and promoting the idea of a bottom-up neighbourhood-based city planning. The Juhu Vision plan successfully addressed these challenges.

Outcomes: The project exemplified the need to involve diverse stakeholders in the people's "Right to the City", and their role in scripting urban growth, particularly evolving urban governance models. This required systemic change in city institutions, and how people participate in the democratic process.



1. Reclaiming the space for pedestrian and cyclists
2&3. 10 kms tree lined, flood free walkway and cycle track
4&5. Plantation along the cycle track
6. The cycling & walking tracks alongside Irla Nullah complete with landscaping & lighting design

Jangali Maharaj Road

Pune, Maharashtra

Status: Completed in 2018

Site Area: 167 Km length, 36m Right of Way

Location: Pune, Maharashtra

Client: Pune Municipal Corporation

Consultants: Oasis Designs Inc. (Lead Consultants), Koshish Dhoot & Megha Sharma (Local Architects), Nagesh Chitari (Structural Consultant)

Aim: Jangali Maharaj Road better known as JM Road, is named after Sadguru Jangali Maharaj whose Math lies on this road. This street was intended to be designed as an active new Public Space for the city.

Project Overview: The Jangali Maharaj (JM) Road is catalysing a quick change for the city of Pune as it has created a kind of sustainable project which promotes cycling, walking and use of public transport. It is known for its majestic rain trees, which covers almost the entire street, forming a comfortable and cool outdoor room. A large public garden called Sambhaji Park abuts the road.

Project Details: The design outcome for the project was a legible, continuous and wide pedestrian spine, which optimised the vehicular carriageway and parking space. The pedestrian spine was interlaced with multi-utility zones which housed parallel parking, seating areas and vendor zones. These spaces also reflected the contextual identity of their immediate location. One of these nodes was the Sambhaji Garden stretch, where roadside parking was removed and a wide multi-utility zone was created along the line of the existing trees. This zone housed seating areas, play equipment for kids and planting pockets.

Process: The road starts from Sancheti Hospital intersection straight up to the Deccan Gymkhana where it ends at the Garware Bridge. When the design team started analysing the project, they focused on three positive aspects - retail, trees, young vibe - and worked on resolving the other issues plaguing the street, namely, haphazard parking, narrow, broken and discontinuous pedestrian connections and no viable public realm for the users of the street.

Highlights: The project has equitably divided the street space into different linear zones, creating various types of multi-utility zones which

are contextual to the abutting land use. It is a very active commercial street and the area around is dotted with lots of schools and colleges, which brings a very young and vibrant feel to it.

Challenges: The earlier Right of Way (ROW) was 30-m and the recently changed Development Plan (DP) for this road has been revised to 36-m. This required buy-in from the shop owners to give away their front setback to allow for seamless access from the path to the shops. This was a slow and ongoing process.

The first step to designing the road was to convert all perpendicular 4-wheeler parking along the street to parallel parking. The rationalisation of on-street parking was done after analysing the existing off-street parking supply. The road was earlier two way and after it became one way there was a lot of leftover tar space which was just lying unused leading to its misuse. So, it led to excessive parking space with no extra space given to pedestrians and cyclists. The footpath was in parts and disappeared suddenly at many patches. This led to most of the people using the carriageway to walk, increasing their risk for accidents.

Outcomes: The street defines the image of the city. Cities are investing in huge car-centric flyovers, but in this rush, we often forget the humane aspects of our urban spaces. In this case, it has become imperative for all of us to focus on this aspect of the public realm, which in a way binds the city together.

The walkable street of JM Road, Pune has adequate space, continuity, legibility, seamlessness, pleasant experience and dignity for the users, safety and freedom from chaos.



1. Informal seating for students
2. The continuous cycle track along the street
3. The pedestrian pathway, cycle track with green buffer zones
4. The outdoor room: People enjoying pedestrian walkway & informal seating zones



Race Course Road

Coimbatore, Tamil Nadu

Status: Completed in 2021

Site Area: 5.5 km Length

Location: Coimbatore, Tamil Nadu

Client: Coimbatore City Municipal Corporation (CCMC)

Consultants: Oasis Designs Inc. (Lead Consultants), Jaitly Associates (Structural Consultants), TNS Consultants (Electrical Consultants), Vinayak Engineering (Plumbing Consultants)

Aim: The aim of the project was to demonstrate a complete street that was universally accessible with one level walking plaza, all entries to properties negotiated through ramps, bollards and all dipped crossovers to ensure a complete barrier-free design.

Project Overview: The Racecourse Road, a 5.5-km loop, was optimised for carriageway with a painted cycle lane, continuous loop all around the pedestrian inner ring with special provisions at the junctions. All the junctions were redesigned for unhindered pedestrian crossings.

Project Details: Different tracks were created along the pedestrian inner ring for walking, cycling, jogging and in between spaces were carved for public conveniences, street furniture, open gyms, kids play areas, art installations etc transforming the whole plaza into a destination space for pedestrians to enjoy throughout the day.

Process: The project demonstrated nature-based solutions for managing storm water with the help of bioswales in the road edge landscape along with pedestrian infrastructure, modern lighting, smart street furniture and universally accessible public conveniences.

Highlights: The overall holistic design ensured an all-inclusive, vibrant and accessible public realm for the city.

Challenges: The entire elliptical loop of Racecourse Road was a heavy vehicular road with active commercial frontage on the outer side and a public park, jogging track etc on the inner side of the loop. The area had heavy pedestrian footfall but not enough space for pedestrians to enjoy the walking experience. The biggest challenge was to explain to the resident community the need to create a destination place for pedestrians while optimising the spaces allocated for private cars and roadside parking.

Outcomes: The place making opportunity through public art, light columns, selfie spot backdrop zone was commended by all. The streets contribute to the 'quality of life' in the city by incorporating public art and smart city installations. Streets can be thought of as outdoor rooms that allow people to enjoy a walk, exercise, play or just sit and enjoy the urban landscape.



1. Selfie point



2. The pedestrian walkway with green buffer, seating for elders



3. Pedestrian walkway & seater

4. Race Course signage landmark



Satara Road

Pune, Maharashtra

Status: Completed in November, 2021

Site Area: 6 km

Location: Satara Road, Pune, Maharashtra

Client: Pune Municipal Corporation

Consultants: IBI Group India Private Limited

Aim: To elevate and transform the mobility and accessibility functions on Satara Road, a 6-km long BRT corridor, that serves critical connections to numerous neighbourhoods in South Pune. The project aimed to create a safer mobility corridor by redefining the functions of the street, optimising the redundant spaces and enhancing the public transport access experience.

Project Overview: The project was one among the several priority streets selected under the pioneer Pune Streetscape program of the Pune Municipal Corporation in 2016, which aimed at creating a walkable environment using the principles of complete streets.

Project Details: The redesign focussed on transforming the BRT corridor with curb side bus stops to enclosed central median stations having passenger amenities and compact junctions to improve the efficiency of operations. The pedestrian realm facilities were enhanced with the provisions of seating suited for various ages at intermittent locations, porous pavers for better runoff, concrete continuous cycle tracks and enhanced street lighting.

Process: Reconnaissance survey and verification of topographic surveys were undertaken on-site for early-on and informed decision making. Stakeholder workshops and consultations were conducted with agencies as well as elected representatives at various stages of the project from visioning to implementation.

Highlights: Come 2021, the corridor has been made operational with redefined bus operations, new enclosed stations, better public realms, compact junctions and safer crossings. Known to be accident-prone in the past, the identity of Satara Road has now undergone a phenomenal change.

Challenges: Satara Road has overcome numerous political and operational challenges ever since its inception as the first bus priority corridor in the country, in 2008. The construction of numerous grade-separated flyovers on the corridor created operational challenges due to varying widths amidst high levels of encroachments. The decision to modify the corridor and rebuild the Right of Way was taken in 2016 in order to transform the BRT system, taking examples from the successes in Ahmedabad and Surat. The execution process of the corridor was flanked with frequent interruptions due to political and administrative changes as well as inter-agency coordination. Additional decisions to modify underground utilities and construction of culverts were taken during the execution process which has increased costs and delays in execution.

Outcomes: Prioritising land acquisition at critical junctures within the project site before execution enhances the integration of public spaces in the limited Right of Way and helps reduce delays during execution. Implementation of design on a high-profile corridor requires continuous political and administrative support from the concept till execution.

Constant engagement with Contractors and Client stakeholders during execution ensures quicker and more precise delivery. Induction of project management consultants during the tendering stage of the project helps overcome inconsistencies and gaps observed during execution. The lack of maintenance post-construction highlights the need for adopting Build Operate and Maintain (BOM) tenders.



1. Before: Excess carriageway and underutilized service lane space
2. Redefined street edge with public spaces, landscaping
3. After: Streamlined carriageway with well defined spaces for walking, cycling and other amenities
4. Safe and clean walkway
5. Conversion of Underutilized Vehicle Centric Spaces into People Friendly Spaces

Smart Janpath

Janpath, Bhubaneswar, Odisha

Status: On-going since January, 2017

Site Area: 6 km

Location: Janpath, Bhubaneswar, Odisha

Client: Bhubaneswar Smart City Limited (BSCL)

Consultants: Bhubaneswar Urban Knowledge Centre (PgMC managed by IBI Group India Pvt. Ltd.)

Aim: The aim was to transform Bhubaneswar's one of the busiest commercial spines into "people's path – Janpath", using concepts of the complete street providing safety and mobility to people of all ages and abilities backed with vibrant retail facing edge and active on-street vending. And also, to implement the first project under Urban Revitalisation through Bhubaneswar Streets (URBS) Programme using Draft Bhubaneswar Street Design Guidelines.

Project Overview: To design the street using concepts of the complete street as presented in the Draft Bhubaneswar Street Design Guidelines. The design promoted the equitable distribution of spaces for all users, tabletop crossings, shaded 5m+ footpaths and 2m+ dedicated cycle tracks, safe crossings, refuge islands, smart parking facility, public pause points and plazas and integration of utilities and amenities.

Project Details: All business owners were provided proper frontage with parking facilities and the street vendors were provided with state-of-the-art vending kiosks within 50-m from their actual vending zones. Along with these the street was equipped with Smart Parking sensors and 24x7 CCTV surveillance, being monitored through the Integrated Command and Control Centre under Bhubaneswar Smart City Limited (BSCL).

Process: Design Charrette was organised by BSCL to finalise the design. Stakeholders from different departments and locals were called upon for discussions. An overall concept was finalised to develop the complete street using the Draft Bhubaneswar Street Design Guidelines prepared by Bhubaneswar Development Authority (BDA).

Highlights: Designing and implementing a reduced carriageway (as per the traffic analysis and forecast) along with expanded walkways and cycle tracks was a great challenge. Today, the city has a 56-km street developed with the concept of the complete street having equitably allocated space for all users.

Challenges: It was a mammoth task to coordinate with more than 10 city agencies such as Bhubaneswar Development Authority, Bhubaneswar Municipal Corporation, Odisha Power Transmission Corporation Limited, Grid Corporation of Odisha, Public Health Engineering Organisation, Work Department, Capital Region Urban Transport, Bhubaneswar Smart City Limited, Gas Authority of India Limited, Water Corporation of Odisha, Residential and Business Owners, Vendors and many others.

Convincing authorities to use the Draft Bhubaneswar Street Design Guidelines which promotes equitable allocation of space for all users of the street was another major challenge.

Outcomes: Public participation before implementation initiation makes execution easier and quicker. The smartness in a public space design is efficient utilisation of available resources and not unnecessarily adding hundreds of technological solutions - the 60m RoW earlier serving 3-3.5 lanes on either side is now catering to three vehicular lanes, street parking, street vendors, dedicated cycle tracks on either side along with huge public realm adorned with beautiful artistic local landmarks. Contractor capacity building is the highest concern to experience state-of-the-art public spaces, especially streets in India. Maybe a separate category of contractors needs to be thought of in addition to class A, B and C, etc categories - Public spaces, streets, etc.



1. Dedicated parking facility to avoid haphazard parking creating traffic congestion and conflict points
2. Aerial view
3. Dedicated shaded footpath and cycle track
4. Integration of street vendors



Tender SURE Phase-01

Bengaluru, Karnataka

Status: Completed in 2017

Site Area: 10 km

Location: Bengaluru, Karnataka

Client: Bruhat Bengaluru Mahanagara Pallike

Collaborators: JANA Urban Space Foundation, NAPC (Contractor), Wadia Consultants (PMC)

Aim: The project aimed to fix urban roads once and for all – at above and below grade. An equitable re-division of the Right of Way (RoW) provides for unhindered and safe mobility for all users with organised underground utilities below footpaths that prevent the continuous cutting and re-cutting of the roads, improving life cycle costs.

Project Overview: Between 2014–2017, 10-km of Tender SURE roads were designed and executed in the central business district of Bangalore as proof of concept for the government at a cost of INR 128 crore. Based on their success there are close to 60-km of Tender SURE roads in the city today. These have also been replicated in other cities and states across the country.

Tender SURE roads have transformed the quality of life with robust well-designed streets and intersections that have catalysed urban rejuvenation, attracted investments and allowed for NMT to be a convenient and safe choice for all – improving public health and air quality.

Project Details: Jana USP published Tender SURE (Specification for Urban Road Execution) in 2011, for urban road design, redevelopment, and procurement for execution. Tender SURE focused on fixing the road in its entirety with uniform travel lanes, safe intersections, continuous footpaths, designated cycle tracks, landscape, public space inclusion and most importantly organised utilities contained under the footpaths providing for individual property and network connections.

Process: Tender SURE has transformed the way people use and build roads in Bengaluru. The reversing of priority from car to people was

initially contested by elected representatives, opinion leaders, media houses and the general public. Construction work was often impeded by government agencies, residents and shop owners. With the completion of the first Tender SURE Road in 2015, there has been a sea change in opinion and continued budgetary allocation for Tender SURE roads across political parties.

Highlights: The completed Tender SURE roads connect to over 15 educational institutes providing safe movement via continuous paved footpaths, designated crossings and refuge areas. An equitable division of the right is inclusive, people choose to walk/cycle and use public transport on Tender SURE roads because they can, and want to, and not have to cross economic classes.

Challenges: Laying the underground utilities without disrupting the existing ones while providing individual property connections and maintaining levels to connect with the city's networked infrastructure was the most challenging part of the project.

Outcomes: Tender SURE guidelines are intrinsically scalable and easily replicable. They provide solutions for urban street design in India both in terms of design and execution. The guidelines are structured to adapt to context based on design capabilities, budgetary allocations and political will. The pilot roads in Bangalore served as proof of concept for replication of the guidelines across the country, and are a forerunner in exemplary inter-agency coordination. The collateral benefit has been the up-gradation of engineering and design of roads in different parts of the city.



1. Residency Road -After Tender SURE
2. Residency Road -Before Tender SURE
3&4. St. Marks Plaza – Reclaimed public space on St. Marks Road
5. St. Marks road after Tender SURE
6. St. Marks Plaza – Reclaimed public space on St. Marks Rd



The Pedestrian Street

Karol Bagh, Delhi

Status: Completed in 2018

Site Area: 600 m

Location: Karol Bagh, Delhi

Client: Municipal Corporation of Delhi & UTTIPEC

Consultants: NilaA Architecture and Urban Design

Aim: Delhi has witnessed significant infrastructural development of highways and metro network that has brought far-flung suburbs and satellite cities closer. However, some core urban areas need better connectivity within. This project proposed pedestrian friendly initiatives and local level upgradation in Karol Bagh and Paharganj (adjacent to Old Delhi) which are among the densest areas of Delhi.

Project Overview: The project focused on increasing pedestrian circulation through dense areas of the old city via revival of chowks and reclaiming space of the streets from parked cars for pedestrian movement. The proposal was a part of a larger traffic circulation project initiated by Delhi Inter-modal Transit System (DIMTS), an urban agency who runs the BRT system and is involved in increasing public transit.

Project Details: Karol Bagh area is mostly populated with Punjabi migrants who were displaced during the partition of 1947. With very strong cultural traits, it is a unique repository of Delhi's urban history and diaspora. The Municipal Corporation of Delhi (MCD) was involved and the proposed project at Karol Bagh was categorised as a Pilot project for pedestrianisation in Delhi. Community stakeholders were involved in local discussions and accordingly new sites for parking cars was found in the periphery of the district.

Paharganj is a historic precinct outside the walled city and due to its proximity to the railway station, it is a back-packers haven. It has one

of the highest density of guest houses and with its neon signages the alleys have been captured in many Bollywood noire. With a transient population (One lakh people daily from the railway station), the proposed intervention of reviving old chowks and unused parks on the Main Bazaar Road created a people-friendly pedestrian infrastructure.

Process: Delhi has the dubious distinction of having as many cars as the other three big metros in India combined. The pedestrian friendly initiatives backed by Delhi Transit and metro created an alternative to cars.

Highlights: A Non-Motorized Vehicle (NMV) lane and circuit has been prepared to augment rickshaw use. The intervention areas are heavy trade and tourist zones in Delhi and peak time events like Dussehra festival in October and wedding seasons can see a million footfalls a week.

Challenges: Conservation of older chowks as contemporary public spaces portrayed a ground-up urban transformation in a city which is largely dependent on greenfield developments.

Outcomes: With much of shopping now in formal malls, an upgradation of pedestrian facilities in these areas sustain more local shops and vendors and brings about a surge in the informal economy that supports these areas.



1. Before : a busy congested shopping street along Ajmal Khan road
2. Non-Motorized Vehicle (NMV) lane and circuit has been prepared to augment rickshaw use.
3. The Karol Bagh market, a contested space for pedestrians
4. An upgradation of pedestrian facilities in these areas sustain more local shops and vendors, bringing about a surge in the informal economy
5. Creating a safe junction under the metro station





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