

kirloskar
Pneumatic

# Biodiversity Management
# Building an Ecosystem
# in
# Factory Premises

**8th Oct, 2026**

# Team Introduction
# Kirloskar Pneumatic Company Limited



**Prakash Kulkarni**
DGM – Estate & Environment



**Suresh Ambadkar**
DGM – Plant Engineering



**Nishant Wasatkar**
DGM - HR



**Kushal Kulkarni**

# Biodiversity Management
# Building an Ecosystem in Factory Premises



## "The Largest Green Wall in ASIA"

### Recognised by Asia Book of Records & India Book of Records

**Top Management's Objective** to transform the factory premises into a **green, peaceful and biodiverse ecosystem.**

Transformed a barren concrete wall into a living habitat of Ficus repens, native trees, and fruit-bearing plants hosting birds and butterflies.

**Our Approach**

**Native Trees** | **Flowering Plants** | **Fruit-Bearing Trees**
→ Food & habitat → **Birds • Butterflies • Insects** → Natural ecosystem development

**Project Roadmap**

**2019 → 2026 → Beyond**

A long-term, continuous initiative focused on progressively developing biodiversity within the industrial premises.

**Uniqueness: Largest Green Wall in ASIA.**

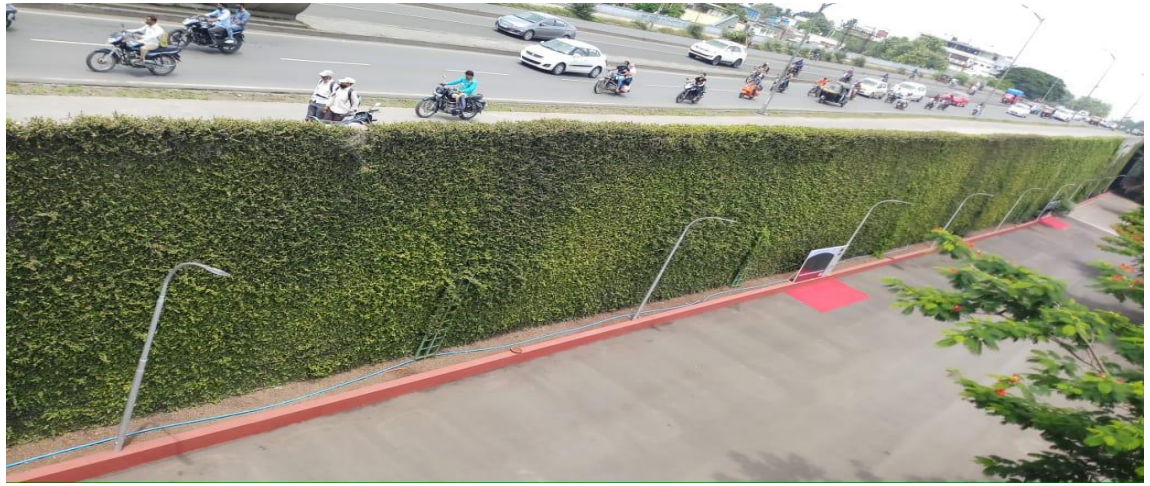
***Ficus repens* Green Wall** transformed a large concrete surface into a living green habitat.

# PMC Development – Flyover Constructed



Barren concrete wall of PMC flyover

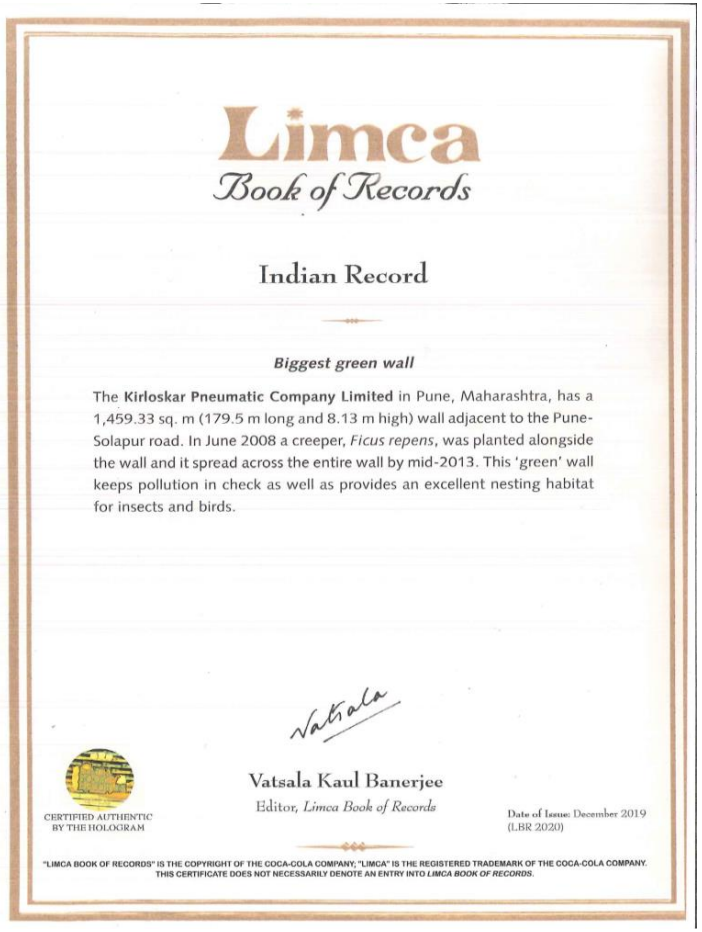
Unique Feature –
Largest Green Wall in India



KPCL Team identified this
as an opportunity for creativity

# Uniqueness of the project

## Limca Book of Records



Limca
Book of Records

Indian Record

*Biggest green wall*

The **Kirloskar Pneumatic Company Limited** in Pune, Maharashtra, has a 1,459.33 sq. m (179.5 m long and 8.13 m high) wall adjacent to the Pune-Solapur road. In June 2008 a creeper, *Ficus repens*, was planted alongside the wall and it spread across the entire wall by mid-2013. This 'green' wall keeps pollution in check as well as provides an excellent nesting habitat for insects and birds.

Vatsala Kaul Banerjee
Editor, *Limca Book of Records*

CERTIFIED AUTHENTIC BY THE HOLOGRAM

Date of Issue: December 2019 (LBR 2020)

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## Asia Book of Records



ASIA BOOK OF RECORDS

CERTIFICATE

**Kirloskar Pneumatic Company Ltd., Maharashtra, India, set a record for creating the biggest natural green wall on their premises. A popular creeper known as 'Ficus Repens' has completely covered the wall measuring 1,485.91 sq. metres to form a beautiful wall cover. The tall and luxuriant creeper plant is maintained and cultivated by the staff of the company, as confirmed on July 10, 2021.**

**Date:** September 09, 2021

Dr. Biswaroop Roy Chowdhury, Editor-in-Chief, India Book of Records
Le Tran Truong An, Editor-in-Chief, Vietnam Book of Records
Dr. Deepak Chandra Sen, Editor-in-Chief, Nepal Book of Records
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## Paryavaran Gaurav Purskar



महाराष्ट्र प्रदूषण नियंत्रण मंडळ

ENVIRONMENTAL CLUB OF INDIA
in association with
MAHARASHTRA POLLUTION CONTROL BOARD

Paryavaran Gaurav

Awarded to

Kirloskar Pneumatic Co. Ltd., Pune

on 19th June 2023
For Their Significant Contribution Towards
Protection of Environment on the Occasion of

World Environment Day
2023

Adv. Aniruddha Kulkarni
Secretary, ECI

Nitin Gore
President, ECI

# Vertical Green Wall

## 2024



Area – 16,000 Sq.ft

## Expansion of vertical green wall -2026



Expanded Area – 5,164 Sq.ft

## Tangible Benefits

- Carbon sequestration – 50.99 tons (2026 year) of carbon stored by trees in campus and sequestering 1.01 tons every year.
- There is a increase in the amount of stored carbon by 11% from 2019 to 2026. (Details in the next slide)

## Intangible Benefits

- GREEN WALL – Home for various insects, butterflies and Birds.
- Protects Companies Premise from Dust and Pollution by absorbing it.
- Heat from the direct solar radiation is reduced during the hot summer days, thereby maintaining a conducive atmosphere.
- Requires very less maintenance i.e water, trimming and manpower.
- Healthier and Peaceful Workplace Environment
- Improved Biodiversity – Flora and Fauna in the campus.(Details in the subsequent slide)



Brahminy Starling



Jungle Myna



Whiskered Bulbul



Green Keelback



Indian Rat Snake



Flying Fox



Budding Butterfly

# Carbon Sequestration Study

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## Carbon foot-print Reports




**Carbon sequestration – 50.99 tons of carbon stored by trees in campus and sequestering 1.01 tons every year**

**TANGIBLE ASSET**

## Area Wise carbon sequestration capacity of sampled trees 2026 Data

| Sr. no. | Area | Tot Biomass (kg/m3) | Stored Carbon (Tons) | C-seq (Ton)/yr |
|---|---|---|---|---|
| 1 | Canteen road | 2893.39 | 1.447 | 0.0289 |
| 2 | Estate Office Garden | 827.1 | 0.414 | 0.0083 |
| 3 | Excise Area | 7720.34 | 3.860 | 0.0772 |
| 4 | Furnace street | 11790.08 | 5.895 | 0.1179 |
| 5 | HR-Canteen | 9568.09 | 4.784 | 0.0957 |
| 6 | Main gate | 5533.44 | 2.767 | 0.0553 |
| 7 | Main gate parking | 3999.41 | 2.000 | 0.0400 |
| 8 | Memory garden | 5416.58 | 2.708 | 0.0542 |
| 9 | Scrap Area | 3633.2 | 1.817 | 0.0363 |
| 10 | Statue Garden | 28839.65 | 14.420 | 0.2884 |
| 11 | Towards 2-wheeler parking | 7613.74 | 3.807 | 0.0761 |
| 12 | Two-wheeler parking | 9535.78 | 4.768 | 0.0954 |
| 13 | Zenda Garden | 4613.7 | 2.307 | 0.0461 |
| **Total** | | **101984.5** | **50.99** | **1.0198** |

### Year wise stored carbon (Tons) capacity

| Assessment years | 2019 | 2023 | 2026 | % increase (With reference to base year 2019) |
|---|---|---|---|---|
| Stored Carbon (Tons) | 45.7 | 46.6 | 50.99 | 11.58 |

## Tree Plantation Drive

**Each year tree plantation Drive is undertaken & ONLY NATIVE saplings are given to all employees for Plantation.**

**In last five years more than 1500 trees are planted in the campus in a scientific way under experts guidance.**

**A gradual rise is observed between 2019 and 2023, followed by a more noticeable increase by 2026, indicating improved carbon sequestration over time.**

# Bio-Diversity Survey – Overview

## BIODIVERSITY COMPARISON (2019–2026)

Progress in Species Diversity Over the Years

| Sr No | Species | 2019 Data | 2023 Data | 2026 Data | Trend (2019–2026) |
|---|---|---|---|---|---|
| 1 | Plants and Trees | 89 types | 102 types after replantation | 112 species on some additional plantation. | Increasing |
| 2 | Birds | 39 species | 43 species | 44 species | Increasing |
| 3 | Insects and Butterflies | 7 species | 14 species | 14 species | No Change |
| 4 | Reptiles | 4 Species | 9 species | 11 species | Increasing |
| 4 | Mammals | 5 species | 5 Species, no changes | 5 species no change | No Change |

2019 Data  2023 Data  2026 Data

**Overall Trend (2019–2026):** Positive Improvement in Biodiversity

Continuous plantation activities, habitat enhancement, and conservation efforts have contributed to increased biodiversity and improved environmental quality in the region.

The biodiversity assessment from 2019 to 2026 shows a positive ecological trend due to continuous plantation and habitat improvement efforts.

**Bio-diversity Survey – 3 Days per Season**

**KPCL hosts**

- 44 species of birds
- more than 112 species of native trees.
- 14 species of insects and butterflies
- 11 species of reptiles while
- 5 species of mammal diversity

**Bird Water Baths – Supporting Urban Biodiversity**

The company has installed **multiple water baths at suitable locations across the campus** to provide a reliable source of drinking and bathing water for birds, particularly during the **hot summer months**.

# Replication Potential – Scalable Across Industries

## A Simple & Scalable Model

The KPCL biodiversity model can be **replicated across industries of different sizes and sectors**, provided there is appropriate guidance on biodiversity, plantation planning and resource conservation.

### Why Replication is Possible?

- **Doesn't need complex infrastructure**.
- Native species of trees are easily available for plantation.
- Drip irrigation can be easily implemented at low cost.
- Even **SME's** can create meaningful biodiversity projects.
- For building a Green Wall –

  *Ficus repens* climber can be easily available in the market.
- Manual holes in the walls can be dug for nesting of birds in the wall.

### Key Enablers

1. Top Management Support
2. Biodiversity Assessment & Planning
3. Selection of Native / Fruiting / Flowering Species
4. Water-Conscious Irrigation & Reuse
5. Habitat Development
6. Continuous Monitoring & Improvement

# Some of our Replication Projects



## KPCL Saswad Plant

Initial phase of plantation of *Ficus repens*



## Society- Villas/ Bungalows

# Challenges Faced & Countermeasures

## Long Gestation Period

**Challenge:**

Biodiversity development is a gradual process.

- 1-2 years for preliminary changes to be seen and then 2-3 years for visible changes.

**Countermeasure:**

- Convincing Top Management about the actual time frame of the project. .
- Set realistic short-, medium- and long-term expectations.
- Monitor progressive changes & use periodic photographs

## Creating a Conservation Mindset

**Challenge:**

Awareness to everyone including **gardeners, cleaning staff, maintenance personnel and other workers**.

- **Countermeasure:**
  - Regular awareness of personnel and explaining the ecological importance of flora and fauna.
  - Encourage responsible maintenance without disturbing biodiversity.
  - Develop a **sense of ownership and conservation** among ground-level teams.

## Sustaining the Initiative

**Challenge:**

Biodiversity requires continuous care, monitoring and protection rather than a one-time plantation activity.

- **Countermeasure:**
  **Awareness → Ownership → Proper Maintenance → Monitoring → Continuous Improvement.**

# Best practices adopted during project implementation phase

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Drip Irrigation & 100% use of recycled water



Minimum use of Energy



Native Tree Plantation



Easy access to drinking water for fauna



Very less Capital Investment



Less Maintenance Cost



Sense of Ownership among all employees

# Bird Eye View: Present Status of our Premise



# Panoramic View Green Wall



**Thank You**

**Presented by: KPCL Team**

# Video Clip

