**SUSTAINABILITY PRACTICE IN ARCHITECTURE: from Assessment to Design**

**1st HOLCIM FORUM FOR SUSTAINABLE CONSTRUCTION - SEPTEMBER 2004**

**Conventional Building Life-Cycle Assessment Tools:**

- **Purpose:** Identifying environmental impact at various development stages.

**Key Attributes:**

- **Low Cost, Easy to use, Non-deteriorating, Sustainable, User-friendly, Easy to implement.**

**Conventional Building Project Cycle:**

- **Design:** Development of the project concept and design, with consideration for sustainability and environmental impact.
- **Construction:** Building construction and installation of sustainable materials and systems. This stage may also involve the use of renewable energy sources and the implementation of green building practices.
- **Operations:** The ongoing management and maintenance of the building, including energy consumption, water usage, and waste management. This stage may also involve the implementation of sustainability and green building practices.
- **Deconstruction:** The disassembly and removal of the building at the end of its useful life. This stage may involve the use of sustainable deconstruction practices and the recycling or repurposing of building materials.

**Sustainable Construction:**

- **Concept:** Determining the environmental impact of the project at various development stages.
- **Design:** Development of the project concept and design, with consideration for sustainability and environmental impact.
- **Construction:** Building construction and installation of sustainable materials and systems. This stage may also involve the use of renewable energy sources and the implementation of green building practices.
- **Operations:** The ongoing management and maintenance of the building, including energy consumption, water usage, and waste management. This stage may also involve the implementation of sustainability and green building practices.
- **Deconstruction:** The disassembly and removal of the building at the end of its useful life. This stage may involve the use of sustainable deconstruction practices and the recycling or repurposing of building materials.

**Design Decision-Making Tools:**

- **Input:** Use of sustainability and green building practices at various development stages.
- **Output:** Identification of environmental impact at various development stages.

**Assessment Tools:**

- **Purpose:** Identifying environmental impact at various development stages.

**DEVELOPMENT TEAM:**

- MJ Jani Loots, Wits - Architecture
- Dr D. K. Iruah, Wits - Planning
- N. Smith, Wits - Architecture
- N. D. N. Nkoyana, Wits - Architecture
- D. K. Iruah, Wits - Planning
- J. Loots, Wits - Architecture
- T. Loots, Wits - Architecture
- S. Loots, Wits - Architecture
- A. Loots, Wits - Architecture
- M. Loots, Wits - Architecture

**CASE STUDIES:**

- **Description and Location:**
  - **Project:** Sustainable Building Project Cycle
  - **Location:** Various locations throughout the world

**GREENHOUSE PROJECT:**

- **Purpose:** Identifying environmental impact at various development stages.

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**APPLICATIONS:**

- **Purpose:** Identifying environmental impact at various development stages.

**REFERENCES:**

- **Purpose:** Identifying environmental impact at various development stages.

**Acknowledgements:**

- **Purpose:** Identifying environmental impact at various development stages.

**Funding:**

- **Purpose:** Identifying environmental impact at various development stages.

**Conclusion:**

- **Purpose:** Identifying environmental impact at various development stages.

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