



Importance of sustainability in construction studies based on project ADD_ON_SKILLS

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Photo by Jw. on Unsplash





THE ROLE OF SUSTAINABLE DESIGN IN ECO-FRIENDLY BUILDINGS

- Sustainability in construction sector
- Ecological and sustainable building design
- The Role of ecological design and its benefits
- The future of ecological design in sustainable construction







https://www.earchitect.com/wpcontent/uploads/2017/02/expo-2017-astana-city-kazakhstan-6.jpg#main

Sustainable development goals, and the construction industry

- SDG 6: clean water and sanitation
- SDG 7: affordable and clean energy
- SDG 9 : industry, innovation and infrastructure
- SDG 11: sustainable cities and communities
- SDG 12: responsible consumption and production
- SDG 13: climate action





SDG 6: clean water and sanitation



Bakeng Clean Water Treatment Plant in Phase, France https://construction-property.com/france-provides-us100-million-for-clean-water-treatment-plant-construction-in-bakeng-phase-ii/



Niroth water treatment plant, Combodia https://www.vinci-construction-projets.com/es/realisations/niroth-water-treatment-plant/





3.5 MW Solar Installation, GMG Trilogi Warehouse, Dubai. Consistent Engineering Consultants



Using parametric design, the Institute for Advanced Architecture of Catalonia designed the Endesa Pavilion's angular facade to maximize the integrated solar panels' performance: <u>https://www.fastcompany.com/3059298/10-buildings-that-prove-solar-can-be-beautiful</u>

Goal 7: affordable and clean energy



Sundial Building Dezhou, China







Erasmus+



Eiffel Tower Paris, France



O drea

The W





Goal 9: Industry, Innovation and Infrastructure

BIM, the Internet of Things, 3D laser scanning and component printing, big data analytics, augmented reality, drones etc.



3D printed building in Copenhagen, Denmark

A roof canopy's network of steel for the office building 6 Bevis Marks in the City of London (complex nylon sleeves 3D printed





3D printed footbridge in Madrid, Spain

Hilo Project in Dübendorf, Switzerland









15 minutes city concept: Paris

Goal 11: sustainable cities and communities

https://www.15minutecity.com/blog/hello

- **Proximity**: Things must be close.
- **Diversity**: Land uses must be mixed to provide a wide variety of urban amenities nearby.
- **Density**: There must be enough people to support a diversity of businesses in a compact land area. Note that Manhattan-level density is not needed, as many low-rise neighborhoods in San Francisco and other U.S. cities prove.
- **Ubiquity**: These neighborhoods must be so common that they are available and affordable to anyone who wants to live in one.







Goal 12: responsible consumption and production





Sustainable Waste Management in the Con.

How to stop 20m tons of construction industry ...







Construction and demolition waste: challenges an.

Construction waste: The importance of r





Construction & Demolition Waste



5 Tips for Recycling Your Construction Waste blog.capterra.com

How does product certification help construction and

thefifthestate.com.au

A® Fuels - Construction a ...

Construction Wastes: Types, Causes, and Recycling St...

Best Practices for Cost-Saving Construction Wast...

Construction waste - Designing Buildings designingbuildings.co.uk

esearchgate.net









Pile of construction waste in front of an unfinis













































Wooden apartment building, Lithuania



Multi-storey wooden Puukuokka housing block, Finland







Houses from clay, Lithuania

Goal 13: climate action





Lithuania's green buildings council: Sustainability rating

8 citerias, 29 indicators







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