Yes. Urban development can be a generator of sustainability

Monday 1 June, 2020

New book and digital design tool show how buildings can go beyond zero

Who would have thought that construction, which causes so much environmental destruction, could save nature and deliver social and environmental justice?

According to Dr Janis Birkeland, a leading author in sustainable development, while ‘sustainable buildings’ are making great strides, they still do more damage than no building at all.

“Each green building increases the problem,” she says. “Even though there are numerous sustainable building initiatives and processes that purport to contribute to sustainability, the industry is still analysing and assessing all the wrong things in all wrong ways.

“True sustainability is possible and affordable, but not if we use the same strategies.”

Dr Birkeland’s new book, *Net-Positive Design and Sustainable Urban Development*, offers an alternative view on why current solutions are not effective. It systematically dissects these failings and reverses their underlying concepts.

The book builds on this critique to show how urban development can give back more than it takes over its lifecycle. It provides examples to show that development can increase - rather than just repair, restore or regenerate - overall social, ecological and economic sustainability.

“Technically speaking, in a net-positive city, nature's ‘positive’ ecological footprint would exceed humanity's ‘negative’ ecological footprint, relative to pre-urban conditions.

“Positive Development theory has led to new methods, strategies and tools that enable professionals and students to design (and assess) net-positive buildings and environments that give back more to the ecological base and public estate than they take,” said Dr Birkeland.

Net-Positive Design
presents game-changing sustainable planning analyses, a collaborative design process and the free STARfish digital tool. This tool/app defines new criteria and benchmarks based on fixed, objective biophysical conditions, rather than relative to conventional (unsustainable) buildings or current conditions.

Accompanying *Net-Positive Design* is a free digital tool/app called the STARfish that enables designers to go beyond zero (or recycling systems) to create designs that yield net-positive environments.

“The new approach not only up-ends building assessment tools, it integrates assessment and measurement with design. It synthesises the ‘hard’ technical and ‘soft’ creative dimensions in planning, decision making and design.”

Creating and measuring ‘beyond zero’ cumulative impacts is no easy task but, thanks to Dr Birkeland’s insights and dedication to sustainable development, it has now been done and is available around the world for educators and professionals alike.

https://netpositivedesign.org/

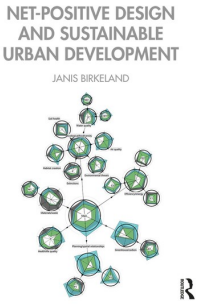
ends

Authoritative comments about *Net-Positive Design:*

"From the author who developed Positive Development theory comes another tour de force - a delightful guide for those of us disappointed with the direction of conventional approaches to wicked problems." Mirek Dymitrow, Lund University and University of Gothenburg, Sweden.

"Janis uniquely synthesizes the vast ground of interdisciplinary practices required to transform the world of both physical and institutional design and assessment - and thoroughly details the what, why and how

Media:



Related Sectors:

Construction & Property :: Government :: Manufacturing, Engineering & Energy ::

Related Keywords:

Net Positive Design :: Urban Development :: Sustainable Design :: Sustainability :: Janis Birkeland :: STARfish :: Sustainable Buildings ::

Scan Me:

of it." Peter James, engineer and director of Gatchi Pty Ltd.

"By re-engineering our approach to urban development, Birkeland reveals how cities could become our most powerful resource in reversing the trends associated with climate change…Essential reading for all decision makers." Dr Kathi Holt, architect and strategic urban designer.

Book availability & links: Routledge Publishers. RRP from £19.49 for eBook:

Paperback: ISBN 9780367258566 **Hardback**: ISBN 9780367258559

https://en.wikipedia.org/wiki/Positive_Development

https://netpositivedesign.org/

About the author: Dr Janis Birkeland was an architect, city planner and attorney in San Francisco before entering academia. Dr Birkeland has devoted her working life to sustainable development, originating many increasingly familiar sustainable design concepts. She is presently an Honorary Professorial Fellow at the University of Melbourne, having been a Professor of sustainable architecture in Australia and New Zealand. Her books include *Design for Sustainability* (2002) and *Positive Development* (2008).

Media enquiries:

Issued on behalf of Dr Janis Birkeland by WMC Public Relations Pty Limited. Contact Janis Birkeland at janis.lynn.birkeland@gmail.com or contact Wendy McWilliams at WMC PR at wendy@wmcpr.com.au (both based in Melbourne, Australia - +9hrs GMT)

HIGH RES IMAGE AVAILABLE OF BOOK COVER

Examples of Positive Development Design Concepts

EXAMPLE 1

'Playgardens' were constructed by the author in the 1980s. These are 'botanical exploratoriums' where play spaces (cubbies) and physical challenges are fully integrated with nature. Playgardens support ecological functions, biodiversity and ecosystem services while exposing children and parents to biophilic ('nature loving') experiences and stimulating creativity, imagination and social interaction.

Playgardens provide more developmental benefits, play value and landscaping at less cost than sterile, single-function equipment, while increasing safety. Vegetative groundcover provides soft landings, is renewable, and slows children down where they might collide or fall. Children must negotiate the low-scale support structures instead of passively riding on dangerous equipment.

EXAMPLE 2

Energy retrofitting has been shown to be profitable for owners while saving substantial environmental and public health costs. However, it is usually only done with energy and water savings in mind and seldom supports biodiversity. The book gives examples of original eco-positive retrofitting concepts that can provide multiple socio-ecological benefits.

One among many such ideas is to preserve existing neighbourhoods while doubling their occupancy. Units built above homes can 'solarise' both dwellings, using passive and renewable energy and green roofs. Owners can house elderly parents, struggling adult children, or rent-paying tenants, without losing their gardens or ever having to move.

EXAMPLE 3

Existing cities are responsible for a substantial portion of carbon emissions. Yet most efforts at reducing atmospheric carbon are still focused on emissions rather than sequestration. The author's collaborators proved scientifically that buildings with substantial 'permanent' building-integrated vegetation could sequester more carbon than emitted throughout their lifecycle - within years.

Many green buildings use indoor plants to clean the air and improve worker productivity, but only ‘tokenistically’. Since these buildings are not really designed for interior landscapes, dead plants are regularly replaced, involving costs and transport emissions. Most buildings could instead be retrofitted to support substantial vegetation and natural daylighting.

EXAMPLE 4

The author’s Green Scaffolding is an ecological envelope around buildings or parts thereof. It supports ecosystem services, passive solar energy and other natural systems that provide environmental and building benefits, such as urban air cleaning. This adaptable skeletal frame can accommodate diverse micro-climates and create biodiversity habitats or ‘living views’.

Green Scaffolding can form the wall structure itself or be used to retrofit homes, buildings, infrastructure, or free-standing park features such as band stands. In impoverished regions, it can fortify structurally-weak homes to reduce flood, hurricane or earthquake damage and support food production, water collection and purification, among other functions.

# # # # #

Company Contact:

WMC Public Relations Pty Ltd

T. +61398032588
E. wendy@wmcpr.com.au
W. https://wmcpr.com.au/

Additional Contact(s):
Wendy McWilliams at: wendy@wmcpr.com.au

View Online

Additional Assets:
Net-Positive Design and Sustainable Urban Development by Dr Janis Birkeland media release

Newsroom: Visit our Newsroom for all the latest stories:
https://www.wmcpr.pressat.co.uk