



The village's buildings are built using recycled construction waste | Photo source [ECONsult](#)

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ENERGY-EFFICIENT DESIGNS COOL DESERT HOMES AND OFFICES IN EGYPT

 ARCHITECTURE & DESIGN

Layered structures and recycled materials make low-carbon cooling an affordable alternative to air conditioners

Spotted: Temperatures frequently reach 50 degrees Celsius in Egypt's desert oases, making outdoor labour prohibitively difficult. Now, thanks to the low-carbon cooling designs of Cairo-based sustainability architects ECONsult, desert farm teams stay warm in the winter and cooler in the summer. Built using a range of techniques and designs focused on reducing water usage and reliance on air conditioners, the new, multi-layered Bahariya Village provides homes, offices, medical facilities, a mosque, cafeteria and communal social spaces.

The village's buildings are built using recycled construction waste, and designs are based on century-old cooling techniques such as raising foundations off the ground. Lead architect Sarah El Battouty spent time on-site studying the rhythms and patterns of light and air in order to design specifically for the elements throughout the entire day. Limestone from a nearby quarry clads the structures, helping keep interiors cool. Solar panels provide power, and dark colours and covered walkways reduce the amount of heat absorbed into the buildings.

Architecture has the opportunity to significantly change urban planning and living for the better by creating true sustainability through a combination of improved materials, uses and designs. Recent examples spotted by Springwise include [water-filled windows](#) that hugely reduce a building's energy use and a [multi-use sustainable high-rise](#) that provides communal gardens and rainwater irrigation.

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Takeaway:

Many urban locations now design for cross-generational, communal interactions and are repositioning pedestrians and eco-friendly modes of transport at the heart of new layouts. Using post-consumer waste in construction and other projects is also becoming more popular, helping to bring local, circular economies to life amongst communities living much closer together socially than they have for years. At the same time, many city dwellers are swapping downtown for the countryside as home-working and accompanying innovations rapidly develop. Such flux provides significant opportunities for innovators rethinking housing plans and providing sustainable solutions to long-term social challenges that include rough sleeping and food deserts.