# 3D-printed homes offer hurricane-proof, energy-efficient solution amid housing crisis



As the pressing challenges of climate change loom large, innovative construction methods are emerging to provide durable, energy-efficient housing solutions. Jason Ballard, co-founder of the 3D printing startup ICON, is at the forefront of this movement, asserting that 3D-printed homes can not only withstand the ravages of extreme weather but also revolutionise the construction industry.

According to Ballard, the design of these homes, made from advanced concrete materials, significantly enhances their resilience. ICON’s structures are reported to be 2.5 times more energy-efficient and capable of withstanding winds of up to 200 miles per hour while resisting fire for up to two hours. Furthermore, these concrete walls are constructed to be impervious to pests like termites and are evaluated for thermal performance, swelling resilience, and strength during extreme weather conditions. Ballard argues that this transformative construction approach is crucial for meeting the growing global housing demands, especially in areas prone to natural disasters.

Continuing their ambitious plans, ICON is building the world’s largest 3D-printed neighbourhood in Wolf Ranch, Georgetown, Texas. This remarkable project will see the construction of 100 homes using a cutting-edge robotic printer that can print an entire home in about three weeks. Each single-story dwelling, which features three to four bedrooms, includes a traditional foundation and metal roof for added stability. The pricing for homes in this ‘Genesis Collection’ ranges from $450,000 to $600,000, with over a quarter already sold, indicating a robust demand for innovative housing solutions.

Weighing in on the potential benefits of 3D printing, Ballard points out its ability to address the global housing crisis effectively. In a similar initiative, a 100-home community is slated for development in Austin, Texas, utilising ICON's advanced printing technology. The aim is to deliver high-quality, resilient homes quickly, reflecting a broader ambition of providing affordable housing solutions that align with modern sustainability standards.

As urban areas continue to grapple with the consequences of climate change, the transformation of traditional construction methods may be vital for future resilience. Ballard advocates for the widespread adoption of 3D printing technology in home building, seeing it as a key player in both alleviating housing shortages and enhancing the resilience of communities facing an uncertain climate future.

This comprehensive approach to housing through innovative construction underscores a significant shift towards integrating technology in sustainable living, raising hopes that such efforts will help mitigate the ongoing impacts of climate change.

### 📌 Reference Map:

* Paragraph 1 – [[1]](https://www.cbsnews.com/video/can-3d-printed-homes-withstand-a-changing-climate/), [[5]](https://www.cbsnews.com/video/can-3d-printed-homes-withstand-a-changing-climate/)
* Paragraph 2 – [[2]](https://www.cbsnews.com/news/3d-printed-homes-withstand-climate-change-jason-ballard-icon-60-minutes/), [[6]](https://www.cbsnews.com/news/3d-printed-homes-withstand-climate-change-jason-ballard-icon-60-minutes/)
* Paragraph 3 – [[3]](https://www.reuters.com/world/us/worlds-largest-3d-printed-neighborhood-nears-completion-texas-2024-08-08/), [[4]](https://www.axios.com/local/austin/2021/10/27/3d-printed-home-community-austin)

Source: [Noah Wire Services](https://www.noahwire.com)

## Bibliography

1. <https://www.cbsnews.com/video/can-3d-printed-homes-withstand-a-changing-climate/> - Please view link - unable to able to access data
2. <https://www.cbsnews.com/news/3d-printed-homes-withstand-climate-change-jason-ballard-icon-60-minutes/> - In this CBS News article, Jason Ballard, co-founder of 3D printing startup ICON, discusses how 3D-printed homes are designed to withstand extreme weather events associated with climate change. Ballard highlights that ICON's concrete walls have been evaluated for strength, thermal performance, and resilience against flooding and seismic forces. The homes are reported to be 2.5 times more energy-efficient and 3.5 times stronger than Texas building code standards, capable of withstanding 200-mile-an-hour winds, resisting fire for two hours, and being impervious to termites. Ballard advocates for the widespread adoption of this construction method to address housing needs and climate resilience.
3. <https://www.reuters.com/world/us/worlds-largest-3d-printed-neighborhood-nears-completion-texas-2024-08-08/> - Reuters reports on the nearing completion of the world's largest 3D-printed neighborhood in Wolf Ranch, Georgetown, Texas. The project, led by ICON, involves constructing 100 homes using a 45-foot wide, 4.75-ton robotic printer. Each single-story home, taking about three weeks to print, features three to four bedrooms with a traditionally installed foundation and metal roof. The concrete walls offer resilience against water, mold, termites, extreme weather, and strong insulation. Homes in this innovative neighborhood, named the 'Genesis Collection,' are priced between $450,000 and $600,000, with over a quarter already sold.
4. <https://www.axios.com/local/austin/2021/10/27/3d-printed-home-community-austin> - Axios reports on a 100-home 3D-printed community set to break ground in Austin, Texas, using ICON robots and advanced materials. ICON, an Austin-based company, has previously built four 3D-printed homes in the area, two of which sold for around $800,000 each. The initiative aims to provide resilient and energy-efficient homes as a response to the global housing crisis. ICON's co-founder and CEO Jason Ballard emphasizes that 3D printing technology can deliver high-quality, affordable homes quickly and transform the construction of entire communities.
5. <https://www.cbsnews.com/video/can-3d-printed-homes-withstand-a-changing-climate/> - In this CBS News video, Jason Ballard, co-founder of 3D printing startup ICON, discusses how 3D-printed houses are designed to transform construction jobs and resist the effects of climate change. The video highlights the potential of 3D printing technology to revolutionize the construction industry by providing resilient and energy-efficient housing solutions in the face of climate challenges.
6. <https://www.cbsnews.com/news/3d-printed-homes-withstand-climate-change-jason-ballard-icon-60-minutes/> - In this CBS News article, Jason Ballard, co-founder of 3D printing startup ICON, discusses how 3D-printed homes are designed to withstand extreme weather events associated with climate change. Ballard highlights that ICON's concrete walls have been evaluated for strength, thermal performance, and resilience against flooding and seismic forces. The homes are reported to be 2.5 times more energy-efficient and 3.5 times stronger than Texas building code standards, capable of withstanding 200-mile-an-hour winds, resisting fire for two hours, and being impervious to termites. Ballard advocates for the widespread adoption of this construction method to address housing needs and climate resilience.
7. <https://www.cbsnews.com/video/can-3d-printed-homes-withstand-a-changing-climate/> - In this CBS News video, Jason Ballard, co-founder of 3D printing startup ICON, discusses how 3D-printed houses are designed to transform construction jobs and resist the effects of climate change. The video highlights the potential of 3D printing technology to revolutionize the construction industry by providing resilient and energy-efficient housing solutions in the face of climate challenges.