



Paper / On the Rocks has developed a tree-free twist on the paper notebook | Photo source [Pixabay](#)

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TREE-FREE PAPER MADE FROM MINING AND AGRICULTURAL WASTE



The paper is infinitely recyclable and no water is used in its production

Spotted: Ecologically friendly stationery usually means recycled paper or paper made from alternative cellulose-based materials. While less resource-intensive than paper made from virgin pulp, recycled paper still uses a significant amount of water and electricity. Now, the solution to the conundrum of how to enjoy paper without using up the world's water could be tree-free paper.

Using a process developed in Taiwan, Netherlands-based startup 'Paper / On The Rocks' turns agricultural and mining waste products into a new type of paper. It looks the same and feels the same as traditional paper, but doesn't use the same volume of resources. Known as 'Stonepaper' the tree-free paper alternative is made from waste rock left over from various mining processes. Calcium carbonate stones are crushed into a fine dust that is mixed with a small amount of partially recycled high-density polyethylene (HDPE).

When heated, the material feels and acts much like a balloon and is extremely stretchable, allowing it to be pulled very thin. Once cooled, the sheets are rollable and cuttable just like pulp-based papers. The papers can be recycled via current plastic recycling processes because HDPE is a commonly used additive in many products. A stonepaper recycling stream is something Paper / On The Rocks would like to help develop.

Other paper replacement innovations that Springwise has spotted recently include edible [seaweed food packaging](#) and [bamboo toilet roll](#).

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Takeaway:

The feel of paper in the hand is one of the many things that booklovers love about books. Despite pessimistic predictions, the paper industry did not decline as steeply as expected following the introduction of e-readers and other digital devices. And with increased attention on plastic waste as online shopping became more popular, paper and board use in shipping is more popular than ever. Paper and pulp use is expected to **double** between 2010 and 2060, meaning that innovations like Paper / On The Rocks are needed urgently to avoid further degradation of the environment through water use and deforestation.