

SENT TO LSU AGCENTER/LOUISIANA FOREST PRODUCTS DEVELOPMENT CENTER - FOREST SECTOR / FORESTY PRODUCTS INTEREST GROUP

**To all you cyclists out there, Regards, Rich**



## **Would you feel safer wearing a cycle helmet made from paper?**

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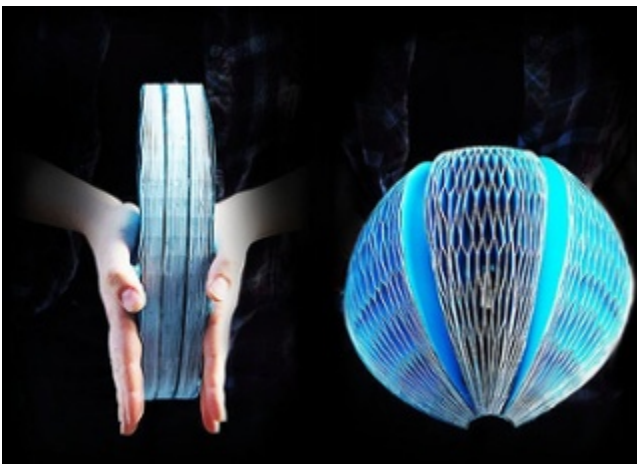


There are more than a billion bicycles used on roads worldwide. Over the past few years the popularity of cycling has soared, now becoming a faster and cheaper way to get around busy commuter cities. According to the UK's Department for Transport, there were more than 3,200 serious injuries to cyclists on the roads in 2015, but helmets are said to reduce any risk of fatality by 85%. However, a new start-up for alternative recyclable helmets EcoHelmet, reports that nearly 90% of bike users choose not to wear one. For many people, the traditional polystyrene bike helmets are heavy, awkward and bad for storage. The New York designer Isis Shiffer, an enthusiast for design and cycling developed EcoHelmet so that more bicycle users could feel confident to travel safely in cities. Now the design innovation has won the interest of James Dyson, Inventor of Dyson Vacuum Cleaners who announced this month that he would be giving his prestigious James Dyson award to Eco Helmet.

"EcoHelmet solves an obvious problem in an incredibly elegant way. But its simplicity belies an impressive amount of research and development. I look forward to seeing EcoHelmets used in bike shares across the world," said James Dyson as reported by [The Guardian](#). Manufactured from water-resistant recycled paper, the EcoHelmet folds flat and one size fits all. They have a biodegradable coating that makes it waterproof for up to three hours. It is hoped that the convenience of buying and storing the helmet will encourage more cyclists to buy them. Shiffer explains that "I want to see these used all around the world so people can ride with confidence, whilst making cities greener and more ecologically sound, as well as safer." The innovation came to Shiffer after her experience travelling around various cities using bike hire schemes, but she had not packed a helmet. After feeling unsafe and anxious cycling around the cities, she decided there needed to be a cheaper alternative helmet that could be created with the same safety precautions as a traditional polystyrene one.

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Shiffer intends for the EcoHelmet ( [@EcoHelmet](#) ) to be purchased alongside bike rentals and with low material costs (recycled paper, biodegradable coating and adhesive) units could be sold for £4/\$5. After use, the product is also fully recyclable. EcoHelmet intends to provide a specific disposal container at bike rental stations to reduce waste and make them into new units.

So far the helmet has been through several development processes to work out what will provide it with extra strength and support as well as looking good. At the beginning of the design process, whilst the honeycomb technology worked, it failed on the design element after Shiffer described it as a pineapple. The next revised development looked appealing but fell apart during wear. However, the latest winning design was created with three main sections to withstand the weight pressure induced by weights in a crash test. Prototypes have been trialed at London's Imperial College University where they passed European standards. Now Shiffer's next ambition is to "see these in cities all around the world."



The entrepreneur will receive £30,000 for winning the competition and has announced that more research will need to be conducted to make EcoHelmet stronger, more water resistant and ready to be sold in commercial markets. The radical honeycomb technique has never been used before so the start-up will need to manufacture a unique design tool to make it possible to produce the units on a mass scale. James Dyson has announced that he is currently exploring the prototypes and getting the product ready for third party testing and ready for sale. He also said in a statement for the [James Dyson Foundation](#): "I am also working to develop a longer lasting, customisable model for repeated use." However, there have been no official deadlines to launch the product and make EcoHelmet available to consumers.

### **Are we convinced? (I thought I'd include these comments-Rich).**

Bio-Based World News gathered a range of opinions about the EcoHelmet from regular cyclists:

**Liam, Sales Manager and Keen Cyclist said:** "I would not buy one - how can you feel safer wearing something made from paper? This a fundamental flaw in its design and you would have to keep buying new ones. I would prefer to buy a helmet made from carbon fibre to ensure my safety and save me from buying a new helmet every time I ride my bike when it rains."



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**Ellen, Law Student, Road Cyclist:** "I think it's a clever concept and definitely useful for commuters using share bikes like the Boris Bikes in London. Anything that encourages people to wear a helmet is a step forward."

**James, Support Engineer, Road Racer and Commuter:** I'd be interested to see how it would perform against official testing regulations. It looks like it would be useful against something with a large surface area, but against a corner of a wall or objects with a smaller impact surface it might not stand up to much. It also lacks the retention system many modern helmets offer so it's unlikely to be anywhere near as safe. I wouldn't wear it for those reasons - it seems ridiculous to be taking such a huge backwards step in safety for the sake of foldability and recyclability."

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Richard P. Vlosky, Ph.D.  
*Director, Louisiana Forest Products Development Center*  
*Crosby Land & Resources Endowed Professor of Forest Sector Business Development*  
Room 227, School of Renewable Natural Resources  
Louisiana State University, Baton Rouge, LA 70803  
Phone (office): (225) 578-4527; Fax: (225) 578-4251; Mobile Phone: (225) 223-1931  
Web Site: [www.LFPDC.lsu.edu](http://www.LFPDC.lsu.edu)



**President, Forest Products Society; President, WoodEMA i.a.**

