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Cawangan Perak



# **BUILDCON2023**

**COMPILATION OF PROJECT INNOVATION IDEAS  
SEMESTER MARCH – AUGUST 2023**

*EMBRACING SMART CONSTRUCTION TRANSFORMATION*

## **BUILDERS' CONVENTION DAY 2023**

**Department of Built Environment Studies and Technology  
College of Built Environment  
Universiti Teknologi MARA Perak Branch**

**BUILDCON 2023**  
**COMPILATION OF PROJECT INNOVATION IDEAS**  
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**Organised by**  
Department of Built Environment Studies and Technology  
College of Built Environment  
Universiti Teknologi MARA Perak Branch  
Malaysia

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## **INNOVATION OF GLOW-IN-THE-DARK ROADSIDE LINES IN RURAL AREA**

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Innovation Of Glow-In-The-Dark Roadside Lines In Rural Area

### **Innovation Idea:**

Road safety in rural areas is a pressing concern due to high rates of motor vehicle mortality, increased fatality risk with limited access to hospitals, and high severity of injuries. Additionally, accidents caused by poorly lit roads, making its users to have limited visibility, will increase the challenges for emergency vehicles on narrow roads, and inadequate street lighting will further exacerbate the issue. To overcome the road safety issues in rural areas, it requires improving the existing road infrastructure, implementing sustainable road lighting solutions, enhancing electricity accessibility, and promoting road safety education and enforcement. Therefore, this research is aimed to develop glow-in-the-dark roadside lines in rural areas to reduce the number of road accidents. To achieve the aim, four objectives have been established which are to develop innovative design ideas for glow-in-the-dark roadside lines in rural areas, assemble a mock-up model based on the improved designs, assess its performance, and demonstrate entrepreneurial skills in proposing a marketable solution. The study involves several methods such as document review, design thinking process, literature review, and experiment. By analysing several reviews of existing road paint materials used for roadside lines; the innovation idea was derived to overcome the identified issues. The results revealed that the ideal painting material option that can be used is Strontium Aluminate. This road paint material helps address the issue of poorly lit roads in rural areas by utilising a variety of luminescent colours to create a glow-in-the-dark paint.

Surat kami : 700-KPK (PRP.UP.1/20/1)

Tarikh : 20 Januari 2023

Prof. Madya Dr. Nur Hisham Ibrahim  
Rektor  
Universiti Teknologi MARA  
Cawangan Perak



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Sekian, terima kasih.

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**SITI BASRIYAH SHAIK BAHARUDIN**  
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*nar*

*Setuju.*

*27.1.2023*

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