

August 2021

# National Highways Graffiti Competition 2021

Cohort Brochure

**CATAPULT**  
Connected Places

 national  
highways



## National Highways Graffiti Competition 2021 Recipients

In association with National Highways (formerly Highways England), Connected Places Catapult is proud to launch the National Highways Graffiti Competition.

This funding will advance promising new products and services that have the potential to significantly improve technologies, tools, and approaches in delivering benefits to the national road network.

Delivered by Connected Places Catapult, Innovation Funding Programmes are tailored initiatives designed to help innovators test new technologies and innovative solutions around real-world sectoral challenges alongside industry leading partners. With the support of Connected Places Catapult, the Innovation Funding Programmes offer the opportunity for successful innovators to receive tailored business support to ensure their innovative solutions successfully reach the market following the programme.



<https://hausbots.com/>



<https://www.innovfactory.com/>



<https://www.nanoecogroup.com/>



<https://www.powerlase-limited.com/>



<https://sensingfeeling.io/>

## HausBots Ltd



### Wall Climbing Robotics for The Application of Graffiti Preventative Paints

HausBots LTD, based in Birmingham is focused on developing transformative wall-climbing, paint applicator technology, that disrupts project delivery within the painting industry. Their current model, HBI, is in active trials for exterior paint projects in the housing industry.

Painting is the 5th most dangerous job in the UK, with risk of falling from height and experiencing health conditions, including repetitive strain and exposure to hazardous materials.

This project accelerates the development of their world-first solution, to adapt the use case from exterior paint in housing, to applying graffiti prevention paints.

## Innovation Factory Ltd



### Graffiti Detection and Prevention (GrDP)

We have developed a low-cost battery-powered graffiti detection sensor that uses AI acoustic algorithms to detect graffiti spray sounds on any surface to alert authorities and trigger multiple alarms sirens and flashing lights with different loudness/intensity, frequencies and patterns, to stop graffiti, the sensors will record the response of triggering different alarms on the graffiti people to understand which alerts prevent them to continue and later the sensor will decide the best. The sensor is using Lora communication to send all alerts including sensor location and timestamp.

## Nano Eco Group Limited



### HE Graffiti Prevention Scheme

Nano Eco Groups project will be a modern technology process to reduce the graffiti on HE's road networks and infrastructure by way of a chemical coating. The project will entail the application of Nano Eco Groups commercial coating to prevent the adhesion of graffiti to infrastructure, information signs, warning signs and road furniture. The coatings will be applied by hand, airless spray gun or by mini roller dependant on the surface in question. Coated substrates will be monitored overtime on location to allow Nano Eco Group and HE to realise the benefits of the coatings.

## Powerlase Limited



### Graffiti Ablation from highways and public Structures (Graffiti Ab-Struct)

The Graffiti Ab-Struct project aims at reviving surfaces of public services structures across highways, public roads, parking spaces and service stations as well as other public infrastructure. Graffiti Ab-Struct will use a novel technology based on laser ablation of surface coatings and films to remove contamination layers such as Graffiti, artificially and naturally adhering layers from surfaces of such structures. It will thus revive their finish and intended appearance whether this is designed architecturally or functionally.



## Sensing Feeling Limited

### Graffiti Prevention through Smart Sensing & Deterrence (GRAPS)

Our proposed innovation will deliver an effective graffiti deterrence solution in the form of an active data-driven and AI-powered IoT sensing device with automatic graffiti-related human behaviour detection at graffiti hotspots, providing the ability to deter perpetrators through a combination of escalating audio and lighting activation and supplying alerts for operators of the Strategic Road Network and its contractors. Our sensing solution is designed to be affordable and practical design and packaged to work anywhere on the SRN with flexible deployment options including on and off-grid (with renewable energy harvesting). The innovation will not only align with National Highway's strategic objectives for enhanced Operations and Customer Service on the SRN but will dramatically reduce expenditure, in particular where relatively high costs associated with graffiti removal activities requiring complex risk-assessments and methods and high-burden traffic management at high-risk locations.

If you are interested in finding out more information about innovation funding programmes or have any queries, please contact us by emailing [Info@cp.catapult.org.uk](mailto:Info@cp.catapult.org.uk)  
**National Highways Graffiti Competition - Connected Places Catapult**

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