



Making the planet greener

one plate at a time





Introduction

Sustainability is now at the forefront of our world, and as one of the largest contributors to carbon emissions, the automotive industry has a responsibility to reduce its environmental impact.

Progress has been made in the last few decades, and according to the Society of Motor Manufacturers and Traders (SMMT), the average new car tailpipe emissions have been slashed by 31% over 15 years.

But there are growing conversations around vehicle's environmental impact beyond the tailpipe – namely, the materials and processes used in manufacturing.

Take number plates as an example – we have estimated that a minimum of 2,000 tonnes of unrecyclable plastic – and as many as 4,000 tonnes – are needlessly wasted every year by OEMs and car dealerships opting to use plastic number plate components. To put this into context, when the Government introduced the banning of plastic straws in the UK in 2020, it was estimated that 2,000 tonnes of plastic straws had built up around the world's beaches. By offering an aluminium number plate alternative, we could do the same for the number plate industry.

As an industry, it is important we look at the entire lifecycle of a vehicle – and not just its carbon footprint while it is on the roads.

In this paper, Hills Numberplates Ltd, the market leader in the UK number plate manufacturing industry, will explore the environmental concerns surrounding the industry and discuss how Hills is innovating to combat the issue. An exclusive Q&A will also feature with the Managing Director of Hills Numberplates Ltd, Rob Laugharne.

Beyond the tailpipe

The last decade has seen a shift in the automotive industry with its approach to sustainability – most notably, the large-scale adoption of electric vehicles (EVs).

EVs function by plugging into a charge point and taking electricity from the grid to power the car battery, meaning there are zero tailpipe emissions. This is in stark contrast to typical petrol or diesel vehicles which release all sorts of dangerous substances, such as carbon monoxide, carbon dioxide, methane, nitrous oxide and particulates. In fact, emissions from EVs have emissions up to 43% lower than diesel vehicles.

But that does not mean EVs are the only answer to reducing sustainability in the automotive industry. While EVs do not produce tailpipe emissions, there is a growing concern with the indirect environmental impact caused by the manufacturing of electric vehicles.

However, we can view this as a wider industry issue: how sustainable are the components we use to create automotive vehicles in general? Rubber tyres, plastic dashboards, paint and so on – it is likely that each of these components themselves is not manufactured sustainably, and coupled with that is the fact they need to be transported all around the world.

Assessing tailpipe emissions simply is not enough; the whole lifecycle of a vehicle needs to be examined to uncover how carbon-friendly it really is. It means we can capitalise on the emission-free benefits of EVs but supercharge their overall sustainability by using more environmentally-friendly parts and materials.



The plate problem

Every part matters when it comes to reducing the carbon impact of vehicle manufacturing, and a component that is often overlooked by both vehicle manufacturers and dealers when looking through their sustainability findings is the number plate, an essential part of a vehicle that has long relied on plastic for its production.

The problem with plastic number plates lies within both the manufacturing and disposal process. Plastics are made from natural materials such as cellulose, coal, natural gas, salt and crude oil which are all harmful to the planet and more importantly for our journey, plastic (PMMA) is notoriously difficult to recycle.


Plastic number plates are typically made from acrylic (PMMA) – this material requires a specialist recycling centre. Acrylic (PMMA) also needs to be cleaned when it is recycled and the parts used in the construction of the plate have to be separated which makes the recycling process even more complex and carbon-intensive. This means the process is very expensive. In fact, we have been unable to find any instances of plastic number plates being recycled back into usable PMMA.

What is more, plastic is not a regenerative resource – the material (PMMA) that does end up in recycling plants gets chewed up into pellets and is used either as fuel for power stations or asphalt for roads. But ultimately, very few plastic number plates get converted into other forms – making them extremely damaging to the environment.

However, this is a good news story. There is a sustainable solution to the plastic plate problem: aluminium.

Aluminium uses a cheaper and cleaner process to produce vehicle number plates and reduce the overall carbon footprint of a vehicle. In fact, 85% of the world uses it, so why is it not in the UK? Thanks to Hills Numberplates Ltd's commitment to innovation, this is now an available option to vehicle manufacturers and dealers across the UK.





Making the planet greener **ONE** plate at a time

Hills Numberplates' innovation has produced the only environmentally-friendly number plates on the market today: MetaTek and the newly released EcoTek.

Developed and manufactured in the UK by Hills, these number plate components are made of aluminium, which is stronger, lighter and more durable than acrylic number plates. Most importantly, they have unlimited recycling capabilities, contributing to a reduction in a vehicle's overall carbon footprint.

To uncover the sustainable potential that both MetaTek and EcoTek have in the industry, Hills Numberplates Ltd studied the DVLA's and SMMT 2021 vehicle licencing statistics.

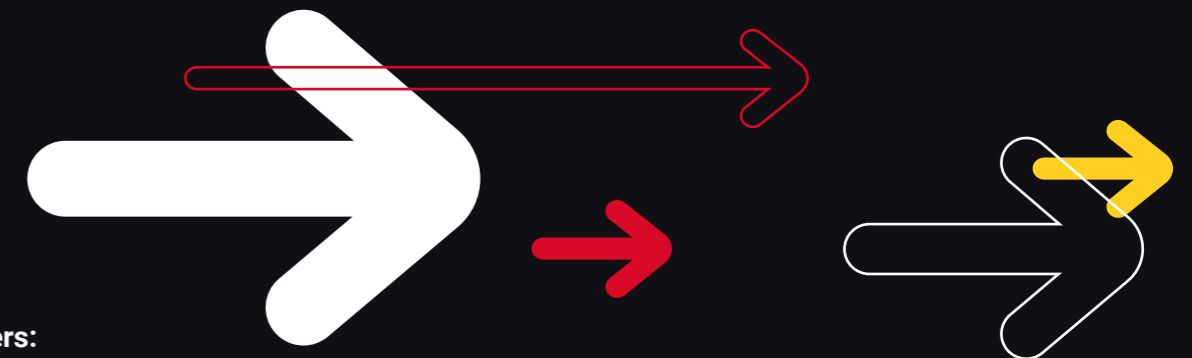
By applying some considered assumptions around the weight of PMMA used per vehicles plated, and some conservative estimates of the numbers of used vehicles re-plated in 2021 we came up with some staggering conclusions. They are as follows.

1. In 2021, a minimum of over 2,000 tons of "difficult to recycle" PMMA was used in number plate components alone.
2. Around 57 tons of "difficult to recycle" PMMA was used on zero-emission electric vehicles.

Our Partners:

MetaTek and EcoTek will help vehicle manufacturers and dealers contribute to a cleaner, greener world "one plate at a time". Some of the UK's motor industry leaders have already benefitted from the shift to aluminium plates, including Arnold Clark, Inchcape, Jardine Motors Group and Pendragon.


Craig McCracken, Group Factor Manager at Arnold Clark, said: "It is important that we opt for more sustainable products when looking to extend the longevity of a vehicle. Metallic number plates go a considerable way to reduce the amount of waste when applying new registration plates, with the standard acrylic one often unable to be recycled."



Our partners:

Arnold Clark

 **Inchcape**

 **Jardine Motors Group**

PENDRAGON 

Under the bonnet with Rob Laugharne, Managing Director of Hills Numberplates Ltd

→ What makes MetaTek and EcoTek stand out from other number plates?

The number plate industry has historically lacked in products available, and we found there to be a gap in the market. We listened to our customer feedback and realised the only way to improve on the customer experience was for us at Hills to differ from the industry norms and offer something completely different and more sustainable, which was completely unheard of at the time. But the pluses are not limited to the environment as the number plates also drastically reduce wastage in the plate production phase, and the manufacturing process is significantly speedier than with plastic number plates.

→ What is the recycling process of aluminium materials like?

Compared to the recycling process, or lack thereof, of plastic (PMMA), our aluminium is easily recycled. The aluminium number plate is melted down for repurposing and any waste and gasses are cleaned before being released. In fact, our aluminium is already composed of 40% recycled metal. According to the International Aluminium Institute, as of 2019, 75% of all the aluminium ever produced is still in productive use.

→ What role does Hills Numberplates Ltd play in sustainability and tackling climate change?

We have tried and often succeeded in making important improvements for our customers. Their feedback guided our aluminium MetaTek product and made us the only producer of an ethically sourced number plate in the UK. It was designed with an improved environmental impact in mind, as well as improving the plate-making process as a whole.

We have made it a priority to weave sustainability throughout the business, too. Initiatives include providing all Area Sales Managers with EVs, moving some logistics and distribution operations to Ireland to reduce carbon emissions, changing our packaging to be more sustainable, and gaining a Silver EcoVadis rating last year, the world's most trusted business sustainability rating. We are working with our aluminium supplier to provide us with 100% recycled aluminium by 2025.

→ What has the reception been like for MetaTek and EcoTek aluminium plates?

We are really proud of the role we play in transforming the automotive industry a little greener one number plate at a time. However, even though we have received some buzz from environmental charities and organisations such as Friends of the Earth, there still remains a lot to be done in terms of educating the industry that there are plastic-free alternatives available.

→ Where is the industry headed?

We are heading in a direction of more sustainability and more security, in order to catch up with the rest of the world. The ethical alternative to plastic plates has been about since 2012; however, the automotive industry seems to have woken up to the need for more environmental solutions in order to cut back on greenhouse gas emissions. Making a switch to aluminium number plates is an easy way to make a difference and get us one step closer to a greener world.





Find out more

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