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Pathways for Progress

Unlocking the benefits of the most sustainable form of private motorised transport.

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Introduction

The Motorcycle Action Group (MAG) promotes motorcycles as a sustainable mode of transport, vital in addressing all three pillars of sustainability: economic, environmental, and social. The term motorcycle refers to moped, motorcycle, scooter, sidecar outfit or trike, regardless of powertrain.



Despite the considerable benefits that motorcycles provide, it is clear that their role in transport policy is almost universally ignored. We have deliberately chosen to avoid the use of the term Powered Two Wheeler (PTW) as we believe that this term is partly causing some confusion and lack of understanding of this modal choice. Many riders are not themselves familiar with the PTW term, so it is therefore unreasonable to expect the non-riding policy-makers and public to recognise the terminology.

The mode represents a hitherto untapped potential to address most transport issues that face the UK:

- economically - from congestion to growth;
- environmentally - from air quality to greenhouse gas emissions; and
- socially - from inclusion to well-being.

The scale of the blind-spot for the mode is demonstrated in attempts to invent a mode of transport – micromobility - with the assumption that it does not already exist in a tried and tested and entirely regulated vehicle group that is currently on the road, and has been for over a century and a half.

This document looks to supply actionable, low cost routes to enable policy-makers to unlock the benefits of motorcycles for the advantage of all members of society.

Outline of the benefits of motorcycles

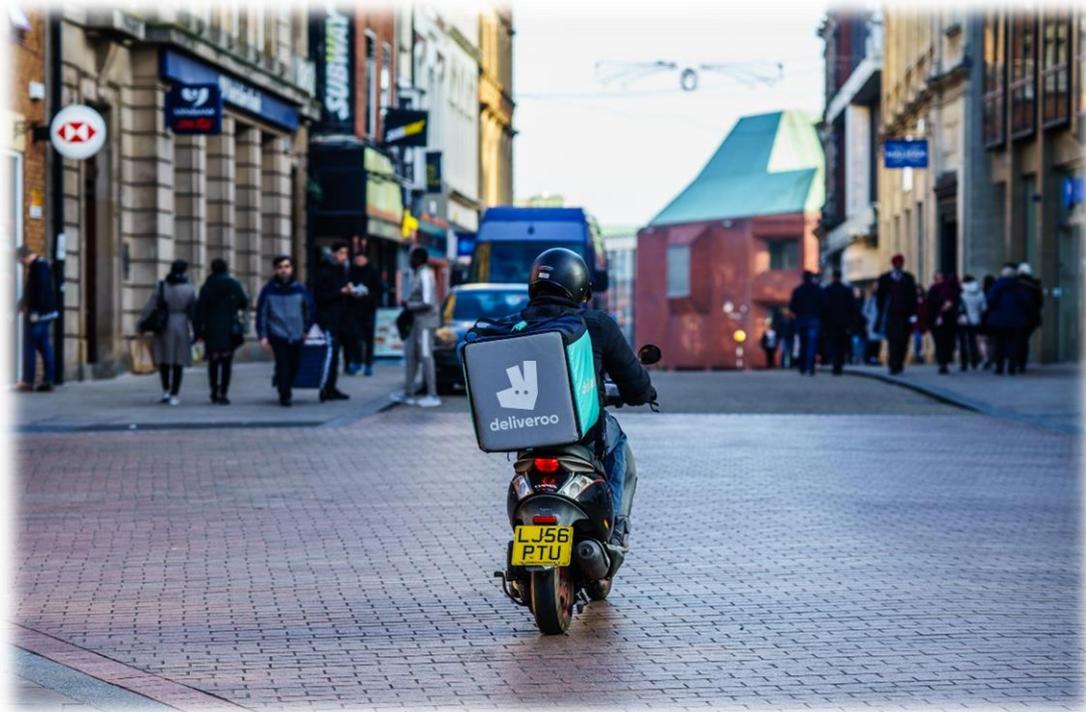
Economic

Studies have shown that modal shift from single-occupancy cars to motorcycles significantly reduces congestion. The Eddington Transport Study of 2006 stated “a 5 per cent reduction in travel time for all business travel on the roads could generate around £2.5 billion of cost savings – some 0.2 per cent of GDP.”

In an environment where there is an undeniable trend towards larger and heavier vehicles, a trend that will accelerate with the move towards electrification (Battery Electric Vehicles are, on average, 30% heavier than equivalent Internal Combustion Engine models), the maintenance of the UK road network is becoming ever more burdensome. Motorcycles are lightweight and have minimal impact on infrastructure. Their use, therefore, contributes to a net reduction in maintenance costs.

With space at a premium in urban areas, the fact that a minimum of four motorcycles can be comfortably parked in the space required for one car also opens up the possibility of releasing valuable real-estate for more productive uses if the number of cars is not merely reduced, but to some degree the remaining essential motorised vehicles are replaced with space-efficient motorcycles.

The motorcycle industry contributes to the UK economy in terms of manufacture, supply chain and retail sectors. With a healthy base in manufacture, and ambitions for the UK to be leaders in electrification, the UK motorcycle industry represents significant potential for growth.



Environmental

Conventional internal combustion engine (ICE) motorcycles present an opportunity to reduce emissions immediately with existing vehicle stock. On a mile-for-mile basis the current motorcycle stock produces less NO₂ than the current private car stock, and with emissions regulations ensuring progress in this field, the emissions benefit between motorcycles and cars shows no sign of closing.

As the move to electrification progresses, ICE motorcycles still produce lower levels of particulate matter than electric cars by virtue of the difference in brake and tyre wear and, naturally, electric motorcycles show an even greater benefit.

Motorcycles allow efficient use of fossil fuels in the interim and potentially for a greatly extended period until electrification or other means of zero emission propulsion are developed and delivered as a viable solution for the entire UK motorised transport fleet. Given environmental concerns about the overall impact of battery technology with respect to the scarcity of rare earth metals and environmental impacts of their extraction and also disposal of used batteries, it would be unwise to push for the promotion of any one future powertrain. A sensible policy would allow use of multiple types of powertrain (including ICE) for the foreseeable future. As with the drive for use of diesel over petrol, there may be undesirable consequences to over-zealous promotion of battery technology.

*** IN DEPTH ***

See MAG's paper
["Motorcycle Carbon Emissions"](#)



Given their small size and weight, motorcycles are the most energy-efficient transportation mode regardless of powertrain. Less power is required to propel a motorcycle than a car, thus lowering the demand for power generation and reducing the scale of requirement for petrol and batteries, which require scarce and limited resources in their production.

Social

The motorcycle represents a cheap, flexible transport mode and, as such, is the most widely accessible mode of private motorised transport. Where mass transit is not viable, and active travel is impractical, motorcycles are the most sustainable method of providing private motorised transport. By keeping access to services, retail and social centres viable for the broadest range of the population, motorcycles can provide a sustainable means of expanding social inclusion in the UK.



Motorcycles provide both a transport option to access leisure activities and, for many, a leisure activity in themselves. The positive benefit in terms of mental well-being from inclusivity and recreation is self-evident.

Motorcycles also provide a mode of transport that is less sedentary than cars, and studies have shown that they offer a less stressful commuting experience than cars. Motorcycles thus provide an element of the espoused health and wellbeing benefits of active travel.

Proposed Pathways to unlocking the benefits

We have arranged the proposed Pathways into three broad groups: Attitudes, Infrastructure and Behaviours, though there is clearly much crossover between the benefits of each proposal.

Attitudes

Changing attitudes towards motorcycling do not need to be cost intensive in terms of monetary input, but they will require both consistency and time.



Integrate motorcycles in all communications about sustainable transport.

Key to changing attitudes towards motorcycles is not singling them out for special treatment, but rather embracing and integrating them in all thought and communications with regard to sustainable transport. This needs to happen both internally within local and national government, but equally in all external communications and discourse.

Motorcycles should not be promoted as a replacement for or competition to any other form of sustainable transport, but rather as a natural and logical choice to fill any space left by cycling, walking and public transport. The concept of free, unbiased choice, guided by the need for sustainability in its broad definition, is key. This allows the individual to select the most appropriate mode of transport for each journey's purpose.

Introduce motorcycling officer to all Local Transport Authorities

To ensure the integration of motorcycles into all sustainable transport thought and discourse, a role needs to be introduced that has a remit to promote safety and encourage take-up of the transport mode.

Currently, every LTA in the UK has a Walking and Cycling officer with a remit to promote safety and encourage adoption of those travel options. Very few have an officer with specific responsibility for motorcycle riding, despite the fact that riders are one of the three Vulnerable Road User groups, and that motorcycles constitute a sustainable transport mode.

It is vital that the individual that takes on this remit is qualified to an advanced level and is a current and experienced user of the transport mode, as an understanding of the differences between this and other modes is far from universal.

This role can, and perhaps should, be combined with that of Walking and Cycling Officer and badged as Sustainable Transport Officer, but the qualification and range of experience in all three modes is essential.

Integrate motorcycle use into planning policy and travel plans

In order to achieve the integration of motorcycles into the sustainability of transport, provision must necessarily be made for the transport mode in wider planning policy. Consideration for the needs of motorcycles and motorcyclists as well as the benefits must not be overlooked. Assuming that motorised transport factors are universal and apply equally to all forms of motorised transport is a mistake. From parking provision to the need for charging if electrification is to progress, the needs for motorcycles and cars are substantively different.

Guidance should also be provided for inclusion of motorcycling in travel plans. Just as with other forms of sustainable transport, motorcycling needs to be fully integrated into the planning process and considerations for travel to and from any new development.

Promote and support leisure riding health and wellbeing benefits

Just as with cycling, the activity of motorcycling is a leisure activity for many. Whilst most policy leans toward the utilitarian transport aspect of motorcycling, we should not be embarrassed by or resistant to promoting the wider social benefits of motorcycling as a leisure activity.

By developing and celebrating the role of riding for leisure, there will be a natural translation to the benefits of modal shift to motorcycling for commuting. The health and wellbeing benefits that arise from riding will translate into the daily commute, where currently the car is the only option available to those for whom walking, cycling or public transport are not viable.

Infrastructure

Infrastructure changes to promote motorcycling are small in comparison to current spending on cycling infrastructure. Revolving more around access to existing infrastructure than the introduction of new, these proposals are not cost prohibitive.



Access to Segregated Road Space

Motorcyclists will naturally display both a will and ability to access all parts of available road space. This should be both normalised and encouraged, as a means to increase the congestion-busting aspect of motorcycling and its inherent benefits, and also to increase safety for riders.

The segregation of road space in the form of bus lanes, cycle lanes and advanced stop lines brings benefits to those permitted access to that space. The inclusion of motorcycles in the list of permitted vehicles is, in all cases, beneficial to riders without impacting other user groups or diminishing the intended benefit to those groups.

Exclusion of riders from these segregated areas pushes riders into increased conflict with cars and other heavy vehicles whilst simultaneously diminishing the benefits yielded from the filtering capability of motorcycles in congested locations.

*** IN DEPTH ***

See MAG's paper "[PTW ACCESS TO BUS LANES](#)"

For this reason we propose that all current segregated road space is opened up to riders of motorcycles and any form of hard or light segregation device is rejected.

Road furniture review

Motorcyclists are undeniably more vulnerable than drivers in the event of a collision. As can be demonstrated from the experience of motorcycle sport, the act of falling from a motorcycle, even at great speed, is unlikely to lead to serious injury if the rider wears a level of protective gear including crash helmet, gloves, boots and leather/armoured textile clothing. Serious injury and indeed fatalities occur as a result of riders colliding with solid, immovable objects.

In a road network setting, the immovable objects are often those deliberately placed to increase safety for other vehicles, from signage to Armco barriers. The positioning and design of this road furniture needs to be carefully reviewed with a view to removing unnecessary road furniture and, where the furniture is necessary, repositioning and considering the design of such furniture from a riders' safety perspective.

Inclusion of motorcycles in planning policy and guidance

In order for remedial costs to be avoided, all planning policy must by definition include comprehensive consideration of motorcyclists, their needs and requirements. By embedding this consideration at initial stages, synergies between cycling and motorcycling can be introduced to deliver infrastructure that delivers for both modes at considerably less cost.

The ability to deliver private motorised transport in a more sustainable way will equally influence spatial planning decisions by removing the restrictions imposed due to relying solely on active travel and public transport. These considerations do not remove the need to consider these factors, but rather complement and enhance the choices available to planners.

Provision of plentiful, fit-for-purpose motorcycle parking facilities

Parking facilities for motorcycles are currently one of the most overlooked areas in terms of infrastructure, both public and private.

Requirements for motorcycle parking cannot be considered equivalent to that for cars. The reduced space requirement is a natural and obvious differentiator which works strongly in favour of motorcycles. A minimum of four motorcycles can be comfortably parked in the same space as a small single car parking bay.

*** IN DEPTH ***

See MAG's paper "[A Guide to the Design and Provision of SECURE PARKING FOR MOTORCYCLES](#)"

Motorcycles have almost identical requirements to pedal cycles for parking, yet the obvious synergy is neglected and wasted, often as the result of poor siting of cycle parking infrastructure. Cycle parking is often sited in pedestrian areas and thus cannot be legally accessed by motorcycles.

Security provision is as important for motorcycles as for pedal cycles. With the theft of motorcycles nationally seven times more likely than theft of cars, the need for secure anchor points at all parking bays is essential.

Provision of secure storage for crash helmets and other PPE at parking bays matches similar expectations for pedal cycle bays, as does the provision of changing and shower facilities at places of employment and other public destinations. Such facilities, where provided for cyclists, should be openly and freely available to motorcyclists.

Provision of adequate motorcycle-relevant charging Infrastructure

Given the current priority placed on promoting electric vehicles, the provision of charging infrastructure that meets the needs of motorcyclists is essential. When it comes to electrification of the fleet, it can be easily seen that similar space savings to those for parking are relevant when it comes to designing charging infrastructure.

The power requirements for motorcycles are far lower than for cars and, indeed, motorcycles are being developed with portable batteries that can be easily charged away from the motorcycle, and that allow for interchange with pre-charged batteries. This provides a benefit to promotion of electric motorcycles that is unlikely to ever be replicated in the case of electric cars.

Technological advances will inevitably lead to changing demands from a charging infrastructure. The role of motorcycles must be at the centre of considerations when designing and delivering charging infrastructure.



Behaviours

Ultimately, to reap the potential benefits that motorcycles can deliver requires behaviour change amongst the population. Changing attitudes towards riding and providing better infrastructure for riders will not result in benefits without a behaviour change resulting in a greater proportion of motorcycles in the transport mix.



Promote modal shift to motorcycles

Multiple studies point to the fact that modal shift from single-occupancy cars to motorcycles reduces both congestion and emissions. This simple fact is overlooked by every transport authority in the UK with the notable exception of Northamptonshire County Council. It is fair to argue that a number of other transport authorities do have one or more policies that demonstrate an understanding of the benefits. Many strategy documents formally recognise the benefits of motorcycles but fail to deliver any policy to promote the modal shift to motorcycles.

The first step in achieving a modal shift to motorcycles is to plainly and publicly declare support for this behaviour change. The motorcycle is not a natural choice for commuting, even amongst the majority of existing riders. Far too many riders leave their motorcycles in the garage in favour of their cars when it comes to the daily commute. There is equally no encouragement for non-riders to consider motorcycling as an alternative. The concept is simply ignored.

Plainly and openly stating that the use of motorcycles is encouraged as a solution to congestion and pollution, and social inclusion must be the first act of any authority that has genuine ambition to improve its transport solution.

Exempt motorcycles from all charging schemes

Motorcycles of all ages and all powertrains should be exempted from any charge aimed at reducing congestion or improving air quality. In London, motorcycles were sensibly exempted from the Congestion Charging Zone, a policy that led to an increase in the use of motorcycles in central London.

In Birmingham, the Class D Clean Air Zone to be introduced in 2020 will exempt all motorcycles. In Nottingham, the introduction of the Workplace Parking Levy in 2012 saw spaces for motorcycle parking exempted from the charge.

*** IN DEPTH ***

See MAG's paper
["Powered Two Wheelers: An Air Quality Solution"](#)

Once these policies are in place, the fact that motorcycles are exempt should be well advertised and promoted. In London the benefit of exemption from the Congestion Charge has been contradicted by the charging of older motorcycles in the Ultra Low Emissions Zone, the policies to exempt motorcycles from the Birmingham CAZ has been barely acknowledged, and unreported in press releases and media coverage. Similarly the exemption of motorcycles in Nottingham's Workplace Parking Levy has never been advertised.

Motorcycles must be exempted from charges, and the exemption promoted as a positive policy to encourage drivers to switch to motorcycles.

Actively and publicly seek to remove barriers to modal shift to motorcycles

There are a number of barriers to modal shift to motorcycles, even amongst those that would be willing to make this behavioural change. These include theft, parking, safety and stigma.

To be effective in promoting modal shift to motorcycles, these barriers must be established, examined and removed.

Theft is closely related to parking. Many existing riders will be discouraged from riding into major metropolitan areas as a result of the levels of motorcycle theft in those areas. One immediate solution to this theft issue is the provision of fit-for-purpose secure parking facilities. There is, however, more that can be done by local authorities to engage with police and riders and to work in close partnership to tackle the crime issue.

Parking facilities need to be plentiful, well designed, secure, and include storage options for helmets and other protective gear.

Road casualty statistics are often quoted as a reason to discourage motorcycling. This attitude needs to be challenged. Studies have shown that the simple act of increasing the prevalence of motorcycles on the roads will in itself reduce the risk of collisions occurring. The concept of safety in numbers is widely accepted for the

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See MAG's paper
["Safety in Numbers"](#)

cycling community, but needs to be applied to the motorcycle transport mode. A fresh approach to motorcycle road safety needs to expand from very tight bias towards increased training for riders to increased training and awareness of motorcyclists' needs and vulnerabilities for other road users.

Finally the stigma often attached to motorcyclists needs to be effectively challenged. There is no suggestion that these policies are aimed at promoting anything other than responsible use of a transport mode that provides many benefits. The image of riders needs to be promoted and reinforced in positive terms at all times.

Promote Wheels To Work schemes

Wheels To Work schemes that offer affordable rental of motorcycles to young riders in order to access education, apprenticeships and employment are a proven benefit for social inclusion and mobility. Wheels To Work Schemes can become self-funding but often require good will and funding assistance to get off the ground.



Schemes such as this provide a valuable introduction to riding and, with the correct policies and involvement from local authorities, can lead to continued and lifelong use of the transport mode rather than just a stepping stone to car ownership. The provision of motorcycles can be varied in terms of its offering, dependant on rural or urban environments. This can assist with familiarity and acceptance of electric motorcycles in urban areas, but without pushing electrification where charging infrastructure or product capabilities are not ready.

Schemes can be promoted through Job Centres, colleges and employers providing an excellent method to raise awareness of the transport mode, and to include motorcycling as a legitimate transport choice for the majority.

Align motorcycling and cycling

The synergies and common ground between cycling and motorcycling are amply demonstrated in the area of e-bikes. This synergy needs to be exploited and promoted.

The alignment of cycling and motorcycling in the public consciousness can be achieved by promotion of the use of two wheels. All activity to promote motorcycling should be combined with activity and work to promote cycling.

All benefits and promotions extended to cyclists should include motorcyclists. Sharing road space and promoting empathy between motorised and human-powered propulsion should be a natural progression. Harmonisation of treatment and regulation for all two wheelers is a goal that must be promoted and brought into mainstream thinking.



To discuss any of the proposals listed in this document please contact MAG Central Office or your local Regional MAG Representative.

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