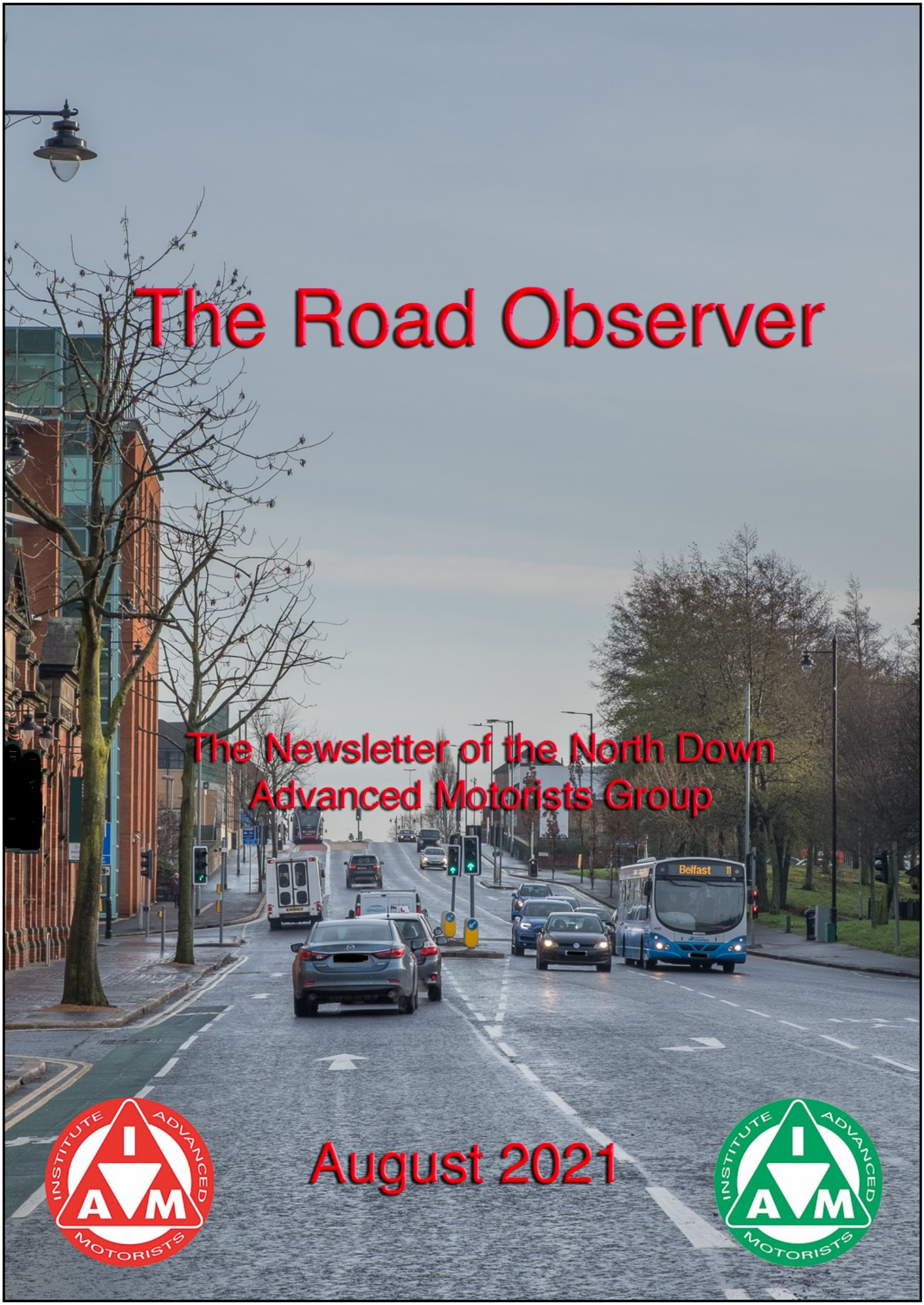

The Road Observer

The Newsletter of the North Down Advanced Motorists Group

August 2021

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The Newsletter of the North Down Advanced Motorists Group (Group 8199)

Helping to Improve the Standard of Driving on the Roads in Northern Ireland and the advancement of road safety

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https://www.facebook.com/NorthDownGroupIAM

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Test passes

With the ongoing restrictions due to Covid-19 we have no test passes to report.

Summer 2021 cover picture

The cover picture in the summer 2021 issue was the railway bridge over Bridge Road at Helen's Bay looking towards the entrance to Crawfordsburn Country Park.

Congratulations (in order of receipt) to Norman Shearer, Ivan Greenfield, David Harcourt, and David Hughes for identifying this one.

Back to an urban scene for this month. Do you know where it is? No prizes, just the satisfaction of good observation and, of course, a mention in the next Road Observer. Submit your answers to: secretaryndam@gmail.com

Covid -19 update

Unfortunately there is no change to the restrictions since the last issue (see page 3 of http://www.amni.org.uk/resources/pdf/dcms/1033/21.06%20revised.pdf). We are still prevented from doing observed drives in cars because of the guidance that a passenger (ie the Observer) should sit in the rear seat on the passenger side of the car.

This has implications for the Short Term Associate Course (STAC) for car drivers. We were due to start with observed drives on 7 September but can no longer do this. Instead we will have a talk on what advanced driving is about and we will follow this up with demonstration drives with Associates who will have to be in the rear passenger seat. While this is not ideal we hope it will give a flavour of what we do and the sort of drive we expect Associates to be able to achieve.

The NI Executive is reviewing the restriction again in the first week of September but current infection rates in NI are far from encouraging in terms of further easing of restrictions and this will have implications for running the next STAC.

For the September Group night on 14 September we are forsaking the Boathouse and will be taking a drive for a social get-together and tea/coffee to the Saltwater Brig between Kircubbin and Portaferry. Further details will be emailed to all Members.

Dates for your diary

Subject to restrictions being eased to enable car observed drives.

7 September - Advanced driving introduction, demonstration drives, Groomsport Boathouse 7.15pm

14 September - Social drive/bike run to Saltwater Brig - details to follow by email

28 September - STAC session 1 Groomsport Boathouse 7.15pm

12 October - Group Night - AGM

9 November - Group Night TBA

14 December - Group Night - Christmas dinner - venue TBA

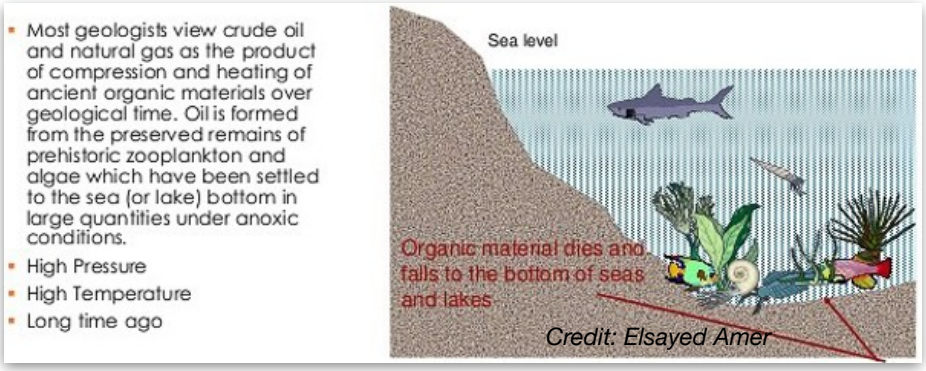
The STAC programme for the remainder of the year will appear in the next issue, subject to the current restrictions being relaxed.

The standard fuel at the pump is changing from 1st September, but don't panic.

Cars, until recently, have been powered by fossil fuels derived from crude oil. Crude oil is by no means a simple substance. Sometimes jokingly referred to as dinosaur juice, it's more accurately the product of algae and pond sludge from millions of years ago which has been trapped underground and rendered by time, temperature and pressure into a filthy, sticky mix of useful chemicals. The various components are composed of long chains of carbon atoms with hydrogen attached. The shorter chains form lighter molecules, with methane, ethane, propane and butane being volatile gases. Petrol is predominantly octanes (chains of 8 carbon atoms), diesel is a mix of longer oilier molecules, and various grades of lubricating oil are tapped off at progressively higher molecule lengths. Even within the grade for petrol, it is not a pure liquid composed of identical molecules, as the fraction which has been separated will have various compounds and contaminants with around the same molecular weight and boiling point. You may see a Research Octane Number on the fuel pump which is an indication of the quality of the fuel, with regular fuel typically being 95 RON, and

premium 97 or 98 RON. The higher RON numbers are more resistant to premature ignition and are associated with performance cars, but most everyday family cars run fine on standard petrol.

In a petrol car, the air / fuel mixture is ignited by a spark plug at just the right instant to generate power inside the engine. Older cars were prone to premature ignition where, under certain circumstances, typically at low rpm and heavy engine load, the fuel could spontaneously ignite before the spark, causing a loss of power and a distinctive pinking sound. Almost a century ago Thomas Midgely demonstrated that tetraethyl lead as a fuel additive could inhibit pinking, effectively increasing the RON number and apparent quality of the fuel. For most of the 20th century petrol engines were designed to run on leaded fuel, and actually relied on the internals and valve seats receiving a microscopic coating of lead, which is a soft, nonabrasive metal. The fuel grades at that time were typically 2 or 4 star, though I do remember seeing 3 star blended at the pump, and occasionally I saw a 5 star pump. By the 1970s atmospheric lead was a significant health concern in



large cities, but it still took until 1999 for the UK to ban the sale of leaded fuel. There was a lead-in time to this throughout the 80s and 90s to allow manufacturers to design engines which did not rely on lead, but nonetheless some vehicles either had to be converted to lead-free via expensive mechanical work, or for classic cars various lead substitute additives were available.

I said above that most cars will run fine on standard fuel, and in most cases there will be minimal improvement in performance or economy by using a higher grade fuel, though in rare instances you

may even see a degradation. The manufacturers are global and their engines are designed to tolerate the lowest grade fuel available in the most remote and inhospitable locations, so the UK standard fuel is relatively high quality by those standards. However, check what the handbook recommends, particularly if you are driving a prestige or performance model. Some fussier cars will give a definite improvement on the higher grade fuel, but they are the minority. Many drivers prefer supermarket fuel to branded, simply for convenience and price. Fundamentally the petrol all comes from the same refineries with the standard RONs and is delivered in the same tankers, but branded fuel has additives to clean and protect the fuel delivery system and injectors, so my preference is to ensure that at least every third or fourth fill is branded.

As we are becoming more aware of the environmental impact of everyday life, there is increasing regulation and more incentives toward less damaging consumption. A recent addition to this is the regrading of standard fuel to E10 from September this year. Standard fuel has progressively had a little bit of bio-ethanol added, and the current standard is E5, with 5% ethanol content. This is described as a blend which reduces CO_2 emissions, but it's not quite that simple. It primarily reduces the emissions from fossil fuels which have locked up carbon for millions of years, and the carbon from the bio-ethanol is considered sustainable. That is, the CO_2 in the air is captured by plants, which are harvested and processed into bio-ethanol, used in vehicles and released back to the atmosphere with no net increase in the amount of carbon in circulation. The revised grade, E10, raises this to 10% ethanol. For the vast majority of motorists, it will make no difference whatsoever. The manufacturers have been preparing for this for years, and most vehicles manufactured since around 2004 will cope admirably. Once again, it's the prestige and performance cars which are the fussy eaters. You may check compatibility and get additional information at the following link.

https://www.gov.uk/guidance/e10-petrol-explained

This 1969 MGB is an example of a car which will run into problems with E10 fuel.

Where it may make a difference is with seasonal vehicles. That is lawnmowers, boats, classics, and to an extent motorcycles – any vehicle which may be stored for several months without running. Ordinary petrol degrades and goes stale over time, becoming difficult to start. The ethanol component is probably more prone to degradation and will turn to ethanoic acid (vinegar), which may inhibit starting, absorb atmospheric water vapour, and promote corrosion and degradation of seals. There are additives available to slow this process, which may be worth the investment if your vehicle sits idle over the winter.

I have focused on petrol engines to this point. Diesels actually rely on compression ignition, that very process which is so harsh and undesirable in a petrol. Diesel is thicker and oilier than petrol, to the extent that modern fuel pumps and injectors use the fuel as a lubricant. This is one of the reasons it

can be so damaging to fill up on the wrong fuel. Regular diesel contains up to 5% biodiesel. This is not quite plant oil but is derived from used, or occasionally fresh, cooking oil, and like the petrol equivalent it reduces the environmental impact. A number of forecourts already sell 100% biodiesel, and it's possible to cook it at home if you've got a bit of space in your garage, but some of the sludge which needs to be filtered out is a bit nasty. However, if you've got the determination, it's possible to run a diesel on a wholly sustainable, home-brew carbon neutral bio-diesel.

On the topic of adding the wrong fuel, mistakes happen. If you've pumped less than a quarter of a tank, you can probably recover by filling up on the correct fuel and driving gently until the next fill-up. If you have poured more than a quarter of a tank, do not even start the car as serious damage may be incurred. However a light mix of petrol is often mentioned in a diesel handbook as a legitimate means of countering diesel gelling in low temperatures, and I've been advised by a mechanic that a litre of engine oil in the fuel tank will restore lubrication to diluted diesel, though I urge you to consult your own mechanic before trying the same. Diesel in a petrol car will generate smoke, which will not do your catalytic converter any favours, but it will not cause any mechanical damage. Again, I urge you to consult a mechanic if in this unfortunate situation, or avail of one of the rescue services which will fix it for a fee, and bear in mind that the simpler family cars will be more tolerant of a fuel error than the prestige vehicles.

Back to school

Each year the risk of an accident becomes significantly greater as the school run brings with it a 20 per cent growth in rush hour traffic.

While much has been said about watching out for youngsters on their way to school, the IAM warns that a greater risk comes on the way home from school – where under 16's are more likely to be distracted by playing with their friends, listening to music or interacting on social media on their phones.

Technology has moved on at such a pace, it is clear that youngsters are being distracted by the myriad of portable entertainment devices available to them.

Research has shown that while there were naturally peaks in casualties between 7 and 9am (15% of child pedestrian casualties being in this two hour period), there was an even greater peak between 3 and 5pm (nearly 23% during these times) suggesting that while children may be driven to school, they make their own way home in the afternoon – making this a more crucial time for drivers to be aware of young pedestrians.

The IAM also urged drivers to be more vigilant in rural or remote areas, as the findings showed 70% of child casualties were injured on sections of road not at or near a pedestrian crossing.

The IAM has offered a series of tips towards ensuring everyone remains safe during rush hour as the schools return.

- Don't compromise your concentration and the safety of other road users by being in a hurry. Leaving the house five minutes earlier changes the nature of how you make the journey.

- Take extra care to compensate for the fact that children won't always be paying attention, especially when approaching the school gate.

- Never stop on the yellow “zig zags” by the school gate, and always ensure you let your passengers out on the pavement side.

- Roads surrounding schools are often 20 mph - it’s essential that you slow down and keep an eye out for children crossing the road and emerging from between parked cars.
- New starters in reception class are unlikely to understand the dangers that the road outside their school presents – bear this in mind when driving nearby and keep your eyes peeled for children wandering into the road alone.
- If your children are walking to school on their own, make sure they are aware of potential hazards such as crossing busy roads – encourage them to always use the pedestrian crossing if there is one.

And finally…… That should do the trick!
(thanks to Colin Hay for the picture - not one of his cars!)