

The Yardstick

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Imperial Dawn

In his new role as Minister for Brexit Opportunities and Government Efficiency, Jacob Rees-Mogg MP wrote in *The Sun* on 9 February: “I implore you all to write to me with the regulations you want abolished - those which make life harder for small businesses, which shut out competition, or simply increase the cost of operating. Through thousands of small changes, we can enact real economic change - which means The Sun’s readers will feel a real Brexit bonus in their pockets and in their lives, every day”.

Jacob Rees-Mogg MP may be reached at the House of Commons, London SW1A 0AA, email jacob.reesmogg.mp@parliament.uk

Parliamentary Question

Also on 9 February 2021, Paul Scully MP Parliamentary Under-Secretary (Department for Business, Energy and Industrial Strategy) gave a written reply to Sarah Olney MP (LibDem), who asked, “What assessment his Department has made of the potential economic value and impact on GDP of reviewing the EU ban on markings and sales in imperial units?”

Mr Scully replied, “We are reviewing the EU ban on the use of imperial units for markings so that businesses have more choice over the measures they use. This is an important step in taking back control of our national rules, and we will consult to ensure that we have the best evidence available on which to make changes. An assessment of the economic impact on businesses will be carried out in due course”.

“Imperial Measurements for Crumbliedies”

Readers may recall the advertisement in *Yardstick* 58 for Peter Sherratt's light-hearted booklet on Britain's ancient weights and measures, *Imperial Measurements for Crumbles - 3 Ounces, 4 Inches and 5 Farthings*. Peter has since died, but his wife Jean tells us the booklet remains available in kindle format from Amazon for 99 pence. Or visit Peter's website (search psherratt.uk) where his novels are also available.

Hon Membership - Margaretha Linacre

[illegible]

John Gardner, Director

BWMA is a non-profit body that exists to promote parity in law between British and metric units. It enjoys support from across Britain's political spectrum, all manner of businesses and the general public.

BWMA is financed by subscriptions and donations. Membership is £12 per year. Sort code 20-68-79, Account 60547255. Cheques/POs payable to "BWMA", 29 Chart House Road, Ash Vale, Surrey GU12 5LS

A corner of Britain reclaimed

Seb Gibson spotted a seemingly ancient metric sign one mile from Old Sodbury, South Gloucestershire and reported it to Active Resistance to Metrication, which sent the following letter to Gloucestershire County Council, 25 January 2021.

Below you should see a photograph of a sign that does not conform to the Traffic Signs Regulations and General Directions (TSRGD) under the Road Traffic Act. The relevant law and diagrams are in the TSRGD regulations and in Part 2, Schedule 12, Part 2.

We believe that this sign was likely erected some time ago by Gloucestershire County Council Highways Department, but in case local councils may have more knowledge of the circumstances surrounding the erection of this sign, I am sending this letter also to South Gloucestershire District Council and to Sodbury Town Council.

The sign gives the distance '1.5km'. However, by virtue of TSRGD, all distance signs in the UK, including footpath signs, must be in miles and yards. In this case, the sign should read '1 mile' and not 1.5km.

I should be grateful if this sign would now be amended, so as to comply with the law, within the next 28 days. If the law is not complied with in that period, we reserve the right under Section 131 Highways Act to amend the sign to make it compliant with TSRGD, or remove it and return it to your offices for amendment.

Furthermore, under the Freedom of Information Act 2000, please supply the following information: (1) The date on which this sign was approved (2) The date on which it was erected (3) Particulars of the location of all footpath signs erected by or on behalf of the County Council since 1 January 2015.

Anthony Bennett, Enforcement Officer, Active Resistance to Metrication



Reply from South Gloucestershire Council, 28 January 2021

Thank you for your email ... I have located the sign and agree that it should not have km but refer to distance in miles. We will arrange for this sign to be refreshed and the 0.5 & km to be painted out in favour of it showing 1 m. It is a very old sign that I believe would date back to at least pre-South Glos. Council (1996) or probably to the days when it was pre-Avon County and the Rural District Council which was pre-1974. All footpath signs that have been erected on behalf of South Gloucestershire Council (unitary authority) have been a standard plastic laminated walking sign and rarely placing distances to destinations, unless for special projects like the Cotswold Way National Trail and then it is shown in miles.

Nicola Chidley, Senior Public Rights of Way Officer, South Gloucestershire Council

Below: a *Daily Telegraph* article from BWMA's archive, dated 29 May 1970, reporting the installation of the signs. Also, available online is a BBC 3-minute feature from 21 October 1971; search the internet for "Stanway goes metric 1971".



The Common Market might still seem miles away, but it is just around the corner down in Gloucestershire where members of the Cotswolds Warden Service were busy putting Winchcombe and Farmcote on the metric map at Hailes Abbey, near Cheltenham.

Lord Justice Laws: An addendum to the final word

In *Yardstick* 73, it was noted that Lord Justice Laws cited one of his own cases as authority in his *Metric Martyrs* judgement of 18 February 2002. In this previous case, Lord Justice Laws said there was “no hierarchy of rights” in English law, a view that would appear to fly in the face of his judgement in *Metric Martyrs*.

The case in question was *R v Lord Chancellor ex Parte John Witham*, heard by Lord Justice Rose and (then) Justice Laws at the Royal Courts of Justice on 5 March 1997; judgement was delivered two days later. In his part of the judgement, Justice Laws wrote (our emphasis):¹

12. The common law does not generally speak in the language of constitutional rights, for the good reason that in the absence of any sovereign text, a written constitution which is logically and legally prior to the power of legislature, executive and judiciary alike, there is on the face of it no hierarchy of rights such that any one of them is more entrenched by the law than any other. And if the concept of a constitutional right is to have any meaning, it must surely sound in the protection which the law affords to it. Where a written constitution guarantees a right, there is no conceptual difficulty. The State authorities must give way to it, save to the extent that the constitution allows them to deny it. There may of course be other difficulties, such as whether on the constitution's true interpretation the right claimed exists at all ... But they are not in the same category as the question: do we have constitutional rights at all?

13. In the unwritten legal order of the British State, at a time when the common law continues to accord a legislative supremacy to Parliament, the notion of a constitutional right can in my judgment inhere only in this proposition, that the right in question cannot be abrogated by the State save by specific provision in an Act of Parliament, or by regulations whose vires in main legislation specifically confers the power to abrogate. General words will not suffice. And any such rights will be creatures of the common law, since their existence would not be the consequence of the democratic political process but would be logically prior to it...

In the above passages, Justice Laws: acknowledges there is no hierarchy of rights; but implies ambiguity (“on the face of it”); introduces constitutional rights as a “notion”; and offers what is presumably a hypothetical distinction between constitutional and non-constitutional acts (that is, a constitutional act cannot be abrogated other than by express wording in a subsequent act). He is, in effect, laying the groundwork for the Hierarchy of Acts that later manifests itself in *Metric Martyrs*.

In fact, prior to hearing *Metric Martyrs*, Lord Justice Laws had developed something of a reputation for developing constitutional ideas. In March 2000, *Modern Law Review* published an 18-page article entitled, “The Brave New World of Sir John Laws” which commenced,

“Between spring 1993 ... and summer 1998, Sir John Laws published seven major articles in which, sequentially, he developed the exposition of his political philosophy. The first article was on fundamental rights ... Sir John argued ... there is a category of rights distinguishable as ‘fundamental’ [and] that judges are the proper persons to decide which rights fall within this category”.²

The question that *Yardstick* readers might want to ponder is not necessarily whether Lord Justice Laws was right or wrong in his constitutional ideas but - rather - whether Lord Justice Laws was *selected* to hear the Thoburn appeal in light of his evident legal creativity.

Shortly after releasing the *Metric Martyrs* judgement, Lord Justice Laws gave a ruling in the case of International Transport Roth GmbH v Secretary of State, heard 15-22 January 2002:³

70. Not very long ago, the British system was one of parliamentary supremacy pure and simple. Then, the very assertion of constitutional rights as such would have been something of a misnomer, for there was in general no hierarchy of rights, no distinction between ‘constitutional’ and other rights. Every Act of Parliament had the same standing in law as every other, and so far as rights were given by judge-made law, they could offer no competition to the status of statutes. The courts evolved rules of interpretation which favoured the protection of certain basic freedoms, but in essence Parliament legislated uninhibited by claims of fundamental rights.

71. In its present state of evolution, the British system may be said to stand at an intermediate stage between parliamentary supremacy and constitutional supremacy, to use the language of the Canadian case. Parliament remains the sovereign legislature; there is no superior text to which it must defer (I leave aside the refinements flowing from our membership of the European Union); there is no statute which by law it cannot make. But at the same time, the common law has come to recognise and endorse the notion of constitutional, or fundamental rights. These are broadly the rights given expression in the European Convention on Human Rights and Fundamental Freedoms, but their recognition in the common law is autonomous...

Lord Justice Laws delivered the above judgement on Friday 22 February, just four days after his judgement in *Metric Martyrs* on Monday 18 February, so his comment “Not very long ago” could have read “Earlier this week”.

In summary: in 1997, Lord Justice Laws acknowledges that there is no hierarchy of rights, but does not like it; in his *Metric Martyrs* judgement in February 2002, he declares the existence of the hierarchy of rights; and in his next judgment, four days later, he refers to the prior constitutional arrangement as a piece of history – without mentioning that it was he that did away with it.

¹ www.bailii.org/ew/cases/EWHC/Admin/1997/237.html

² <https://www.jstor.org/stable/1097481>

³ <http://www.bailii.org/ew/cases/EWCA/Civ/2002/158.html>

This Metric Madness

by A.J.P. Taylor

The Sunday Express, 1970.

NEXT February [1971] we shall be plunged willy-nilly into decimal coinage. We shall lose the shilling which divides conveniently into two, three, four, and six. Instead we shall have 5p which does not divide at all.

All sixpenny and ninepenny charges will go up to a shilling, as the fares of London's Underground have already done. The rise in the cost of living will be fantastic. We shall have no unit between the new penny and the pound, an intolerable arrangement.

And all for what? All to please a few faddists who packed a committee and persuaded the late Government that decimal coinage was somehow more modern. Now, we are told, there can be no going back.

But there is still time to fight against a far crazier change. We are threatened with metrication of everything. The Labour Government accepted this. The Tory Government has not repudiated it. Our only hope is a promised parliamentary debate in the autumn. Now is the time to protest and to ensure that the debate throws out metrication before it starts. For consider what is involved:

All our linear measure will be changed. The centimetre will take the place of the inch. The metre will take the place of the yard. The kilometre will take the place of the mile. The foot, a most useful measure, will simply disappear.

Every map showing miles will be out of date. Eight million motorists will have to buy new maps. The Ordnance Survey will have to start afresh. Every road sign and every milestone will have to be changed. Speedometers which show only miles an hour will be useless.

Every furnishing shop and every tailor's establishment will have to be re-equipped. The carpenter and the plumber will have to change his tools. The cost will be beyond all reckoning, and all for the whim of a few unknown cranks. We are told that foreign tourists are used to kilometres. But the Americans are our most profitable visitors, and they use miles. Instead of feeling at home, they will be bewildered.

This is only the beginning. Our liquid measures are to be changed also. The pint, the quart, and the gallon will be replaced by a single unit, the litre.

Now the litre is a useless measure for any practical purpose. A nineteenth-century duke said of the goose: "A silly bird. Too much for one, and not enough for two." We can say exactly the same about the litre.

Take our two commonest liquids on sale, milk and beer. The pint bottle of milk meets all domestic needs. Everywhere on the Continent milk has to be sold in two alternative bottles - half-litre and litre. So it will be here.

Again the pint and half-pint are perfect measures of beer. No one except the Germans wants to drink a litre of beer (which is nearly a quart) at a go, yet a half litre is too little. As to a quarter-litre, it is too small for the most modest thirst. In Continental countries they replace it by the third of a litre glass which makes nonsense of the metric system. And the French bottle of wine does not relate to the metric system at all.

So here we are, abandoning a measure which has satisfied generations of beer drinkers for one which is largely disregarded even in metric countries. Think once more of the cost. Every milk bottle in the country withdrawn, and two manufactured for each one in use now. Every glass, mug and tankard of beer scrapped and replaced by three, all unsatisfactory, for the two used now.

Most beer drinkers and milk users will switch from the pint to the half-litre. But the half-litre is not a pint, it is only four-fifths of a pint. But you can be certain that we shall pay the pint price. In other words, the cost of beer and milk will go up by a quarter, and in order to pay for the new measures probably more. Every pump in the country will have to be changed. Many of them will have to be scrapped. Once more this will not please the Americans. They use gallons just as we do, even if theirs are not quite the same as ours.

Turn finally to weights. Here too we have an admirable and most flexible system - ounces, pounds, hundredweights, tons. The metric system offers us nothing except the gram and the kilogram. The gram is minute - a thousand to a kilogram. The kilogram, which is something over two pounds, too large for ordinary use and ridiculously small to take the place of the hundredweight or the ton.

As a result the kilogram is disregarded even on the continent. Go into any grocer's shop in France. And what do you hear? Housewives buying butter or cheese, by the pound or half-pound, even though these are treated as 500 and 250 grammes.

The metric system has been in use in France for nearly 200 years. Yet the commonsense of ordinary people still rejects it, and they go on using weights which were supposedly abolished two centuries ago. Yet there is to be no escape for us. The scales will have to changed in every food shop. All existing weighing machines will have to go. Now here is a gigantic change of habits and equipment imposed on the entire nation without either warning or discussion. No one wants it, except the obscure members of a forgotten committee.

Scientists and engineers do not want it. They can use the metric system in their technical work without disturbing the lives of ordinary people - and their own. I have certainly never met the most abstruse scientist or the most aloof mathematician who refused a pint of beer.

The only argument in favour of the decimal system is that we have ten fingers. But we do not count on our fingers after we leave primary school. For any other purpose ten is a very bad number, dividing only into five and two. Twelve is a good number. Sixteen is a good number. We have them both and we should stick to them.

Of course, if we want to be really scientific we should go over to two as the top number. Scientists do in their most advanced work. But it is an impossible system for ordinary purposes. We are now being driven into a system of weights and measures which has no advantages except perhaps for printers who will have to set lots of noughts. It has innumerable disadvantages and will cost hundreds of millions of pounds.

Democracy has a last chance to work in this matter. Our MPs are just as much in the dark as we are. Few of them are enthusiasts for metrication, but they will all vote as the Whips tell them, unless a more powerful voice is raised on the other side. There is such a voice. It is the voice of the people. We want our pints and our miles. Write to your MP and tell him to vote against metrication when it comes up for debate. If you fail to write, then don't complain when you get less beer and pay more for it.

Alan John Percivale Taylor (1906–1990) was an English historian and broadcaster who specialised in diplomatic history, becoming famous through his television lectures; he is featured in a 1995 documentary "An Unusual Kind of Star", available on Youtube. In addition to the article above, AJP Taylor wrote again on metrication for the *Sunday Express* in February 1976 ("What a Load of Metric Nonsense!") and did a piece on decimalisation in February 1971 ("The Folly of Tomorrow"). These will be reproduced in *The Yardstick* in due course.

Why Does Aviation Use Nautical Miles?

Linnea Ahlgren, simpleflying.com, 22 March 2021

Apart from pilots and sea captains, most of us use either the Imperial or the metric system when calculating how far we need to get to. However, aviation navigation has adopted the ways of its marine counterpart, as it also travels across distances great enough to cross several latitudinal lines.

One sixtieth of a latitudinal degree. As the term 'nautical' would imply, the usage is a crossover from seafaring navigation. The NM is based on the circumference of the Earth because, when traveling long great circle distances, you want to use a unit that is directly related to latitude and longitude.

Historically, one nautical mile was defined as one minute arc of latitude along any line of longitude. One latitude arc is, in turn, divided into 60 minutes, so one NM equals 1/60 of a latitudinal degree. However, at the First International Extraordinary Hydrographic Conference in Monaco, in 1929, the international nautical mile was set to exactly 1,852 meters or 1.151 miles.

No set date to phase out non-SI units. In 1947, the International Civil Aviation Organisation (ICAO) adopted a resolution to standardize the unit system across aviation. This introduced the International System of Units, known as SI from the 'Système International d'Unités', and was to be based on the metric system. Meanwhile, the ICAO recognised that shifting measurements too quickly could mean chaos in the skies. And so it said that some non SI-units (such as the nautical mile and the knot) should be kept until the organisation could set a date for their termination. Such a date is yet to be set.

Even though aviation uses NM, you will still see aircraft speed presented in miles or kilometers per hour by their manufactures. When aircraft changed their speed measurements to knots, manufacturers felt this made their planes seem slower. Knots are measurements on nautical miles per hour – one knot = one NM/h, giving a significantly lower number than miles or kilometers.

Three ways of measuring speed. Meanwhile, the aircraft's actual speed when flying is measured in knots. *Indicated Airspeed* (IAS) is read directly from the airspeed indication instruments in the cockpit, connected to a pitot-static system. This measures the dynamic pressure of the air outside entering a pitot-tube. *True Airspeed* (TAS), on the other hand, is the plane's speed in relation to undisturbed air. Meanwhile, *Groundspeed* is the speed of an aircraft relative to the ground. However, NM is not the distance measurement in aviation across the board. Cloud clearance is measured in statute miles or KM, and visibility can be measured in miles, or in meters.

Let Consumers Decide What Units to Use

Thomas Walker, March 2019, first published by Consumer Choice Center, Arlington, VA.

Advocates of metrication in the USA will often tell you that America is the only developed country in the world that still uses traditional units of measurement. The reality, however, is quite different. Imperial or customary units like feet, inches, pounds and ounces remain in common use throughout the English-speaking world and beyond it, despite decades of government efforts to force metrication on people living in these countries.

In the United Kingdom, efforts to convert to metric units to bring Britain into line with European legislation hit massive resistance from local people. This has resulted in a mixed system today where most products are sold in metric units while all manner of things like people's heights and weights, road speeds and distances, and sales of products like milk and beer continue to be measured in the imperial system.

Part of the reason for this resistance is the effect that this forced transition had on consumers. As products were converted from imperial to metric, they were downsized, while the prices remained the same. 1lb of peas became 454g, which then became 400g at the same price. This happened across the board as once and pound weights got rounded down to the nearest 100g increment.

However, this is only one small element of why metrication is opposed. There's a deeper issue at play, which is one of convenience and ease of understanding. That stems from the fact that the metric system is one designed for scientific applications. Its ease of multiplication, division and conversion across hugely different sizes is ideal for mathematics, physics and chemistry. Unfortunately, those same properties make it very ill-suited to everyday human use. Human beings don't think in multiples of a thousand. Human minds operate on the level they can perceive; small, simple units of sizes that occur in everyday life. Units like the inch, foot, ounce and pound are relatable, and their ease of division into quarters and eighths is much better suited to human thinking than units which scale by 10, 100 or 1000.

The upshot of this is that consumers much prefer to buy and sell in quantities they can easily understand. The difference between a 5-foot fence and a 6-foot fence is much easier to understand than that between a 1.7m one and a 2m one. A pint of milk or two pints of milk is much more relatable than 400ml or 800ml. Likewise, consumers are far more likely to want to divide something into quarters than they are to divide it by 10. It's unsurprising, then, that when com-

pulsory metrication came to Britain, traders continued to trade in the traditional units their customers preferred. What was the government's response? They prosecuted and criminalised those traders in what, after the sad passing of prominent convicted trader Steve Thoburn from a heart attack, became known as the Metric Martyrs controversy.

This is what happens when government's political motives get prioritised over what people actually want. In the name of political priorities the public was forced to use a less intuitive and less user-friendly system than the one they preferred. The result was higher prices, confusion, protests and prosecutions.

Political priorities have no place in the market. If, as its advocates claim, the metric system is easier to use, that change should happen naturally in a free market. The fact it hasn't in the US, where 'voluntary metric conversion' has been a government agenda since the 1970s, and the fact that the UK government switched from voluntary to mandatory in the 1980s, suggests otherwise. Even in an age where schoolchildren are taught exclusively in metric, young people still come out speaking in traditional units.

As Thoburn himself said, "All I wanted to do was give my customers what they wanted ... If [customers] wanted me to sell fruit in kilos, I'd sell fruit in kilos. In my world, what the customer wants, the customer gets". This is how trade works: the provider that gives customers what they want is the one that succeeds. Governments aren't protecting consumers when they meddle in that process, they're disadvantaging them.

This kind of state intervention in markets hurts consumers and vendors alike. It's time for governments in the UK, the US and around the world to take a step back and let the market decide how it wants to trade. Hopefully, in the case of the UK, Brexit may present an opportunity to free consumers from this and many other harmful EU-instituted restrictions on trade and commerce. For too long government has hidden behind the notion of protecting consumers' rights to advance a political agenda to the detriment of consumers and businesses alike.

There's a sad irony to the fact that the same British regulators that prosecute traders for selling fruit and vegetables by the pound also prosecute pubs for selling beer by the litre. How is the customer protected by that? How is any business ever going to hurt its customers by selling products in the units those customers prefer? No business is going to get very far selling in a unit nobody knows. Let consumers decide what units they want to use, let businesses give them what they want, and everyone will be better off for it.

In 2015, BWMA published *Ministers' Metrication Conspiracy*, detailing government correspondence on the relationship between Britain's entry into the European Community and the 1972 White Paper on metrication. In July 2015, BWMA wrote to the last surviving minister Sir John Eden, MP for Bournemouth West from 1954 to 1983, but did not receive a reply. Sir John died 23 May 2020, aged 95; we now publish our letter to him, for the record.

Dear Sir John

Metrication White Paper 1972

... We are researching the history of metrication in the UK, particularly the 1970-1972 period. We are especially interested in the relationship between the two strands of metrication: the UK's domestic policy of *voluntary* metrication, announced in 1965; and the EC's policy of *compulsory* metrication, described in its Directive of 1970. As Minister of State for Industry for that period, are you able to offer any memories, insights or anecdotes? For example:

- How did the government manage the conflict between the voluntary and compulsory elements?
- Do you believe that the voluntary element announced in 1965 was sacrificed to comply with Britain's obligations to the EC?
- Did you expect, in 1970-72, that the EC would later make the sale of loose foods in pounds and ounces unlawful?
- Is there anything that, in retrospect, you wish the government did differently?

We look forward to your comments. We shall comply strictly with whatever directions you may give as to confidentiality and anonymity.

Yours sincerely, etc.

* * *

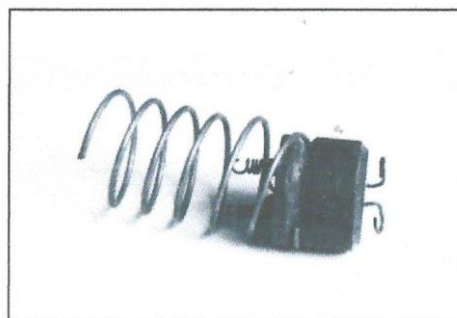
Decimal Watch, "Ask the Doctors", *Times-Standard*, California, 19 October 2021: Regarding a column that discussed melatonin as a sleep aid, a reader asked about dosage. "The column states the recommended beginning dose is .05 milligrams, but the pills don't come in that small dosage," she wrote. "Did you actually mean 0.5 milligrams?" The answer is yes, the lower end of the recommended dosage is indeed 0.5 milligrams. We're grateful to you for pointing out that misplaced decimal point.

Brixton Markets; Ian McKay writes, 20 January 2021: The fishmongers at Brixton Markets, South London, are now displaying the prices of wet fish in cost per pound as prominent, with the metric equivalent in secondary, smaller text. Brixton Market is a very busy, very cosmopolitan market, and I think the 'Imperial Pioneers' deserve a good shout out.

Old Time Radio: our Australian colleague Paul Gilbert, NSW, gave an interview last year with his local radio station 2RRR; they were discussing 1940s radio serials, and Paul said: "[An aspect I like] is that 1940s radio serials were recorded when there were imperial measurements in Australia, and that's how dimensions given in the plays; this is a subject that is very close to my heart, because I'm a baby boomer, and imperial measurements are my culture and my language".

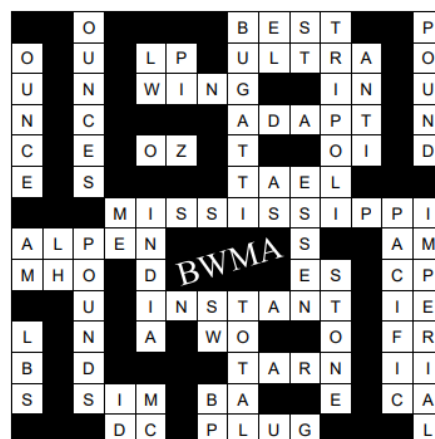
Letter to the *Sunday Telegraph*, 16 May 2021: The abandonment of twelfths, sixteenths, eights and – most importantly – thirds for a system that favours only multiples of 10 has resulted directly in the barren brutality that now passes for architecture. Bob Stebbings, Chorleywood, Hertfordshire.

Ray Tye writes, 29 December 2021: I enclose pages of my reference book on incandescent electric lamps. The book illustrates over 200 bulbs with captions all giving dimensions in inches. If our governments had not been so cowardly with EU politicians and had retained our rights to use imperial units, I would gladly have included metric dimensions in addition. Thank you for your continued efforts, may I add my regret and sadness regarding the death of Vivian Linacre. Best wishes for your continued work and pressure on government to restore our ancient and customary measures.



Unknown maker. Simple wooden body, spring supports to lamp contact hooks which have direct contact with power circuit. 7/8" x 2 1/4"

Answers to last Yardstick's crossword:



Letter from John Bentham, Benoil Services Ltd, Newbury, November 2006, to his MEP regarding the European Commission's proposal to ban non-metric supplementary indications from January 2010

I am horrified at the intention to phase out the description of units in imperial measures. It is a very good way of closing down a substantial part of our country's businesses. We at Benoil are a small business. We design and deal parts for the oilfields and sell about 70% on export. Five of our main customers are American and one is French.

Vast amounts of installed equipment all over the world is based on imperial measurements. For example, people in the business know what is meant by 2-7/8" coil tubing. A Canadian once asked if we had a dart to fit 73mm tubing - to which my first reaction was that that would be a special make and therefore expensive. Then I converted it and recognised that it was close to 2-7/8" - it is in fact 1 thou (0.025mm) smaller than 2-7/8". When asked whether it was special coiled tubing, because we take into account tolerances of 1 thou, he said no, it was standard; so we sold him some 2-7/8" darts. I do not see us selling 73.025mm darts successfully round the world.

This is a small but representative example of the industry. We feed our products into Aberdeen and the world on the basis of imperial measurements. Accordingly, I ask my sub-suppliers to make to imperial measurements; these are companies in Poole, Whitchurch, Gosport, Newbury, Wantage and Didcot. If Aberdeen is forced into metrication, the effect will be to disadvantage all the EU, but especially the UK which has the biggest number of suppliers. The Americans are not going to operate teams of unit converters and tolerance checkers just because we are not allowed to say that our 73.025mm dart is suitable for their 2-7/8" tubing. They will buy from those who sell them.

The oilfield tools made in Aberdeen have to integrate with parts made all over the world and with equipment installed years ago. Equipment used offshore Great Yarmouth one year can be found in the Arabian/Persian Gulf the next, and still later in Indonesia. What we supply from Newbury goes to all these and is fully compatible. It is a truly global and integrated business, perhaps more than any other hardware business. But the standards are in imperial units, set by the American Petroleum Institute. He who is obliged to convince a buyer of 4-5/8" tubing with an 8tpi (threads per inch) that his offering of 117.475mm tubing with 0.31796 t/mm unions is just the ticket is on a hiding to nothing.

There is also a secondary effect on local businesses, whose equipment is still earning its keep in imperial. If forced to replace that equipment, many older hands will retire; they cannot justify new equipment when their payback period may be only a few years. The UK is already in danger of losing a level of skill and experience over the next few years, which is not being replaced due to lack of apprenticeships, and such EC rules will drive others in the same retirement direction. As I said at the beginning, it is a very good way of closing down a substantial part of our country's businesses.

BWMA gratefully records the Patronage of the late The Hon. Mrs Gwyneth Dunwoody, MP, Lord Shore, Vice-Admiral Sir Louis Le Bailly, KBE, CB, Lord Monson and Sir Patrick Moore, CBE

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