

The Yardstick

Journal of the British Weights and Measures Association

Number 67

ISSN 1361-7435

August 2018

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Teaspoons versus grams

Readers will recall BWMA's letter to the Department of Health in June 2014 (Yardstick 56); "... according to its wrapper, a Snickers bar contains '21.7g' of sugar. We question how many people can visualise this quantity of sugar, or know whether it is a high or low amount. If, however, the wrapper said that a Snickers bar contains 'five teaspoons of sugar', everyone would know what that is, since this is a common household amount to which anyone can relate". Needless to say, the government did not take BWMA's advice.

In May 2018, however, a report by three specialists in nutritional science, based in the UK, USA and New Zealand, made eight proposals to reverse diabetes; the following proposal was at the top of the list: "*Industry should be forced to label added and free sugars on food products in teaspoons rather than grams, which will make it easier to understand*".

BWMA has no expertise in nutritional science, but we do understand that for information to be effective, it must be conveyed in terms that people understand. All disciplines, whether science, services or industry, are compromised if they do not follow this simple point.

European Union

The European Union (Withdrawal) Bill received royal assent on 26 June 2018, meaning Britain will leave the EU on 29 March 2019. However, the Prime Minister said on 6 July 2018 that, "*The UK and the EU would maintain a common rulebook for all goods ... with the UK making an upfront choice to commit by treaty to ongoing harmonisation with EU rules ... [and] maintain high regulatory standards for the environment, climate change, social and employment, and consumer protection – meaning we would not let standards fall below their current levels*".

So, while the country is to become nominally independent of the EU, it appears the government has yet to develop independence of mind or action. Given that metrication is covered by "consumer protection", it seems we have a long way to go to restoring Britain's weights and measures.

Sir Patrick Moore

BWMA's late Patron Patrick Moore was not only an astronomer and a supporter of British weights and measures, but a composer and xylophonist. On Saturday, 6th October 2018, 7pm, at St Clement Church in Hastings, the local church and home town of BWMA's Chairman Mike Plumble, one Christopher Beaumont will be playing the xylophone, to include works by Sir Patrick. Tickets £10. Mike is a Steward at the Church and would be delighted for nearby BWMA supporters to attend the evening. For further information, Mike's number is 01424 713737, or visit www.chrisbeaumontxylo.co.uk

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, from all manner of businesses and the general public. BWMA is financed by subscriptions and donations. Membership is £12 per year. Cheques or postal orders payable to "BWMA", 29 Chart House Road, Ash Vale, Surrey GU12 5LS

Metrological Office weather forecasts

On 24 June, our friend Rex Poulton emailed the Metrological Office

I note from your website that, while wind speed is given in miles per hour, distances are given in centimetres and kilometres; why does the Met Office use the metric system in some measurements?

Met Office reply, 24 June 9.03am: Thank you for your e-mail regarding units of measurements in Met Office weather forecasts and reports. You have raised a very common query and I hope the following information will be helpful. Wind is currently an exception and our warnings are issued using mph. We appreciate that some customers may prefer imperial units so, given that our web site has recently been refreshed, you are now able to customise your forecast pages for the measurements you prefer. Our Weather Desk operate a continual process of gathering feedback which is forwarded for management review. This allows our Public Weather Service team and other departments to know what the public are telling us when considering further enhancements. We are always keen to gather feedback via our feedback process, details about which are found here: <http://www.metoffice.gov.uk/about-us/contact>

Jonny, Customer Feedback Team, Exeter

Follow up email by Rex Poulton, 24 June 9.51am: So many thanks for such a rapid response ... The British people have never been consulted about use of the metric system of measurement. Indeed, surveys repeatedly show that some 90% of British people strongly reject metrication as uninvited foreign intervention. Quite apart from the fact that few British people understand metric measurements, metrication is against the public will, contrary to English Law, and is actually treason as it attempts to undermine and influence the British nation into accepting something it does not want and which is entirely alien to our culture and interests.

Further reply from Met Office, 25 June: Thank you for your ongoing feedback which raises your concerns about the use of mixed or non-imperial measurements by the Met Office. I have broken down the units we use with the reasons why.

Temperature: The Met Office used Fahrenheit up until the end of 1960. By international agreement, standard measurements have been adopted for meteorology worldwide to enable easier comparison of weather data from across the globe. The Celsius scale of temperature was adopted by the World Meteorological Organization (WMO) as the standard unit of temperature measurement and was formally adopted by the Met Office on 1 January 1961. Historically, in 1953 the Executive committee of the WMO decided that degrees Celsius should be used for the coding of temperature in all upper-air reports. Surface observations were recorded in Celsius

throughout Europe, except in the United Kingdom. However, it was in 1961 that the Met Office finally bowed to pressure and adopted the Celsius scale for both its upper-air and surface observations and for use in forecasts to the scientific community. Finally, on 15th January 1962 forecasts for the public were given in Celsius.

We appreciate that some customers may prefer the other widely known unit for temperature, Fahrenheit. In order to ensure consistency the Met Office forecasters who write the scripts for our web forecasts and severe weather warnings are bound by clear advice about which units should be used.

Rainfall & Snow: Inches for rainfall was the standard measurement until the end of April 1914. As with the units for pressure (see below), the inch was replaced by the millimetre as the standard unit of rainfall and snow on 1st May 1914. This was by agreement at a meeting of European Institute members of the Royal Prussian Meteorological Institute in June 1913. The millimetre was formally adopted as the standard unit of rainfall by the British Rainfall Organisation in 1915. In BBC TV forecasts, when time allows, the broadcast forecaster can decide if he/she will also include imperial measurement too.

Pressure: The change from inches of mercury to millibars took place as long ago as 1st May 1914. The change came into effect as a direct result of a meeting in June 1913 at the Royal Prussian Meteorological Institute when it was agreed that all European Institutes should change to a standardised way of recording atmospheric pressure.

Wind: Wind is currently an exception and our warnings are issued using mph. Among other reasons, this is by agreement with the Civil Aviation Authority for whom we produce global aviation forecasts in a format they need.

With regret, we are unlikely in the near future to make changes to the way we feature units of measurement given they are historically embedded in what we do and some cases facilitate without ambiguity the exchange of data. We appreciate that metric measurements are not for everyone which is why we have made it possible to customise our website. However, your feedback is valuable and will be reported to management.

Mrs Sarah Spedding, Customer Feedback Co-ordinator

Rex made the following observations:

Though the standard measurement unit for rain and snowfall might have changed from inches to millimetres in May 1914, it is my clear recollection that inches were used exclusively in all radio and TV forecasting until the 1980s or 1990s, and I note that certainly until the late mid-1960s, inches were used exclusively by the Met Office in its own monthly weather reports. If the millimetre was officially adopted in 1914, why was the inch used exclusively for

so many years after? And depending upon the answer to that, if its continuance for all those years was considered entirely appropriate, why not since then? Clearly there has been no strong obligation to use millimetre values, else they'd have been in exclusive use since 1914.

If the Civil Aviation Authority prefers wind speed in miles per hour and that request is honoured to this day, why has the British public choice of inches, feet and yards also not been retained given that the British public are conceivably the numerically greatest consumer of Met Office data? It is an unfortunate fact that metric rain or snowfall figures in metric convey nothing to most British people. In contrast, inches and feet cannot be mistaken and would be instantly informing.

Attempting to use millimetre, centimetre and no doubt metre measurements with imperial wind speeds is completely irrational; the two scales do not relate. One cannot sensibly have centimetres and metres which in their greater quantities magically become miles. Weather prediction cannot be precisely accurate and where measurement is concerned, it is far simpler and more meaningful to use the approximation of (say) an inch of rain or half an inch of snow than trying to be overly precise with millimetres or centimetres which people do not understand.

* * *

Royal birth

The Daily Telegraph contained the following letter by one Bill Soens, Ormskirk, Lancashire, on 24 April 2018: SIR - I am delighted that the duchess has given birth to a baby boy, but astounded that the BBC reported the weight in pounds and ounces. This is a bad lapse by the Corporation, normally determined to bring the entire nation under the metrication thumb.

Consumers Association admission

Robert Carnaghan reports (22 March 2018): The only time the Consumers Association magazine *Which?* uses non-metric units is for the size of TV, computer, tablet and phone screens. The Feedback section in the April 2018 issue of *Which?* had the following comment:

Your 'Just tested' review of the Google Pixel 2 XL phone made interesting reading, not least because while trying to decide whether the phone might just be a little too large for me, I became confused by the dimensions shown in the key facts box. Why show its length and width in millimetres but the diagonal measurement in inches? I just can't visualise both at once! Mike Williams, Allendale

Oli McKean, *Which?* phones expert, says: We have to admit we had not thought about this before. Within the smartphones market, it's standard practice to use metric measurements for body dimensions and imperial for screen size. It's possibly because screen size is more often used in smartphone marketing than body measurements, and that it's simpler to think in terms of smaller

inch numbers'. If it's any help, the Pixel 2 XL's 6-inch display is equivalent to 152.44mm.

Robert comments: the conversion to the nearest hundredth of a millimetre is absurd, but more important is the admission by *Which?* that smaller inch numbers are useful!

***Daily Telegraph* – “Modern products (and imperial measurements) give this pipe maker the edge”, Richard Evans, 7 March 2018**

The continued use of feet and inches in Britain will strike many as archaic but it provides a key competitive advantage to one maker of plastic pipes. Polypipe, which makes recyclable pipes for residential, commercial and infrastructure use, generates 90% of its profits in the UK and some of its success here can be put down to overseas suppliers' reluctance to produce pipes in imperial units. "New entrants from abroad find it hard to enter the UK market given the use of imperial as opposed to metric measurements," said Charles Montanaro, who holds Polypipe in his Montanaro UK Income fund ... Its plastic pipes are often used to replace legacy materials such as clay, copper and concrete. In addition, the Government's £15bn road investments strategy has resulted in the award of significant road projects that need Polypipe's products.

In the Commons - on an amendment defining a 'portrait miniature', 14 June 2018, 12.30pm

Sue Hayman, Shadow Secretary of State for Environment (Labour), Food and Rural Affairs: I beg to move amendment 5, in clause 6, page 5, line 6, at end insert -

'(1A) In this section, "portrait miniature" means a portable portrait that is (a) of no more than 204mm in height; (b) of no more than 153mm in width ...

It is important to get a clear definition in place, so that the exemption cannot be abused. The consultant on portrait miniatures from Philip Mould & Company suggested that we go for a maximum size of 6 inches wide by 8 inches high. She said that would cover between 90% and 95% of all the portrait miniatures that she was aware of. In the amendment, we have converted that suggested measurement into millimetres and stated a maximum thickness. I understand that earlier portrait miniatures are slightly thicker than later ones, owing to the technology used to slice the ivory. On the basis that we are now a metric country, even though personally I would much rather deal with inches, [Hon. Members: "Hear, hear!"] if the Minister accepts the amendment, I would be happy for him to turn millimetres into inches, but because we are a metric country and my understanding is that these days our laws are made in metrics, not in feet and inches, we have converted the 8 inches by 6 inches into 204mm by 153mm ...

Pauline Latham (Conservative) Mid Derbyshire: I endorse what the hon. Lady has said. It was clear in the evidence that a measurement was wanted. The whole point about the Bill is that we need clarity and certainty so that everyone knows exactly where they stand. If an item were bigger than is suggested, it would not be considered a miniature, because a miniature is something small. Whether the measurements are in inches or millimetres, I do not mind, although like the hon. Lady, I do not really understand millimetres; I only understand inches ...

Local Authorities, Traffic Signs and the Law

Readers will recall the letter, recorded in *Yardstick 65*, from Andrew Brown, Seafront Operations Manager at Bournemouth Borough Council, to Stuart Delvin, regarding signs along Bournemouth sea front:

“Whilst we take on board your comments with regard to Traffic Signs Regulations and General Directions 2016 regulations, the seafront areas where our signage is placed are not areas of public highway, therefore we are not going to make alterations to the signage on our seafront”.

Is Mr Brown telling the truth – or is he confused – or is he making excuses to maintain unlawful metric signs? Here follow instances, from the early 2000s, of local authorities being prepared to maintain metric signs, *after* admitting that they were unlawful.

The first is a letter to Jeffrey Titford, then leader of the UK Independence Party, from Portsmouth City Council regarding pedestrian signs in the city centre. The Council’s letter, from Barry Smith, Director of Corporate Services, is dated 22 January 2001:

Thank you for your letter of 12 January. I have indeed advised the Council's City Engineer on this matter. I accept the signs do not comply with the regulations but I have to tell you that it is not our intention to remove them.

Barry Smith sent a similar reply to John Green (founder of the Anti-Metrication Board; see Yardstick 65) on 23 February 2001:

The Council introduced these particular signs some years ago to assist foreign tourists and we believe in that regard they still provide a useful service. It has to be admitted that they do not comply with central Government regulations but nor, in our view, do they cause any problems for our own residents, or indeed, British tourists visiting the City. At this stage, we will not be expending further Council taxpayers' money on altering the signs.

John Green replied on 2 March 2001:

You write that these unlawful signs do not cause any problems for residents or visiting British tourists. This is not the point. The point is their illegality. Though you are a powerful city council, you are not above the law. None of us can choose which laws to obey or disobey; therein lies anarchy. You write that you will not be spending more council taxpayers' money on alternations to

comply with the law, but you had no difficulty spending taxpayers' money when you first installed these illegal signs. You know you are wrong, yet you persist with your intransigence.

Meanwhile, on 29 September 2000, Oxfordshire County Council replied to a member of the public who pointed out the unlawful nature of signs in Bicester:

I refer to your letter of 24 September concerning the pedestrian crossings signs on A41 (T). If this road were a County Council responsibility I would certainly not recommend wasting scarce public funds changing the distance indications on these signs from metric to imperial. Colin Carrit, Area Engineer

The District Auditor for East Sussex County Council wrote to Mr A Leeding on 27 June 2000:

I understand that the sign [in West Down Road, Bexhill on Sea] is a small supplementary plate below a warning sign and has been in place for a number of years. It seems to have been accepted that the sign does not conform with the requirements of the Traffic Signs Regulations and General Directions 1994 and should be replaced. However, I am informed that as the sign only gives additional information to that provided on the warning sign, it is considered a lower priority than other issues for use of available budgets ... On the basis of the above information, there does not seem to be any further audit action that I should be taking, particularly as the accounts prior to 1 April 2001 have been certified as closed. Peter Arkell, District Auditor

William Scott received the following from East Lothian Council regarding pedestrian fingerpost signs in North Berwick, on 16 October 2000:

... I can confirm that, within North Berwick, the four signs with metric distances do not fully comply with the Traffic Signs Regulations and General Directions 1994. However, as stated in my previous letter of 14 September 2000, these signs are solely for the direction of pedestrians and are not intended for road users. S Baxter, Senior Area Officer (West)

William Scott followed up on 19 October with a letter to S Baxter's boss, Ray Montgomery, the Head of Transportation:

It is irrelevant that the signs are, as Mr Baxter states, "solely for the direction of pedestrians and are not intended for road users." Members of the public must abide by the law and I assume local authorities are no different. This being so I look

forward to hearing that you intend to have the offending signs removed or amended to comply with the law.

Mr Montgomery evidently handed the letter back to S Baxter, who replied on 23 October 2000:

You may not be aware that the Scottish Executive is currently amending the Traffic Signs Regulations and Directions 1994. Therefore appropriate action will be taken dependent on the content of the new regulations.

William Scott fired a letter to the Procurator Fiscal on 27 October:

Please find enclosed copies of letters I have received from Mr S. Baxter, Senior Area Officer (West) ... You will see it has been decided that no action will be taken until the content of new regulations currently being considered by the Scottish Executive is known ... I should welcome your professional opinion as to whether the head of a local authority department can flout the law in such a way or not.

The Procurator Fiscal, one John Napier, replied on 2 November 2000:

I have not personally seen the signs to which you refer but I have taken the liberty of discussing the matter with Mr Hannah, the Director of Environment and Technical Services of East Lothian Council. Mr Hannah advises me he is aware of your complaint and that the Council is awaiting sight of the final form of new regulations being considered by the Scottish Executive before taking further action. My remit is, *inter alia*, the prosecution of crime in the public interest and I have taken the view that should you have difficulty with the decision to await the new regulations then this is not a matter within my remit but one which you should take up with the elected members of the Council. I regret I cannot be more helpful.

William Scott asked Mr Napier on 4 November:

... Are there any other circumstances that you know of where existing laws might be ignored on the chance that at some future date the illegal activity will become lawful?

John Napier replied on 6 November 2000:

If ... as you contend, the sign is unlawful, that is to say erected without proper authority, that could be a matter either for your local Councillor or perhaps subject to some other legal remedy. In this respect you might wish to consult a solicitor. On a general note all persons and organisations with very few exceptions are subject to the rule of law. The Head

of Transportation is not an exception ... each case must adjudicated upon its merits.

Stuart Delvin received the following from Hastings Borough Council on 10 March 2008:

Our signs are in metres because we have a lot of European visitors and, of course, the metric system has been widely taught in schools for many, many years. Younger members of the population are far more comfortable with the metric system and, as time goes by, the proportion who are more comfortable with it will increase. We have taken advice, and the 'fingerpost' signs of the type you are referring to, which are solely for pedestrian use, are not traffic signs. They are not therefore illegal. I would also make the point that these signs have now been up for a considerable number of years, and the only objections received about them is from BWMA members. The signs are cast metal, and it would be a fairly expensive exercise to re-cast them into imperial measurements, and I would much rather spend my budget on continuing to improve the environment. Indeed, given that I cannot recall a single complaint about the signs from local residents, I'm not sure whether they would think spending a considerable amount of Council tax-payers was good use of that money. Kevin Boorman, Head of Destination Management & Marketing

The above letter claims the signs are "not therefore illegal", and refers to earlier letters of complaint. A dig through BWMA's box files reveals Hastings Council's reply to a complaint on 10 August 2001 (our emphasis):

Further to previous correspondence in respect of the above, I am now in receipt of comments from the Head of Environment and Highways and would respond as follows. The direction signs at Harold Road and on West Hill are both pedestrian finger post signs showing distances in metric. There are a small number of pedestrian signs that show metric distance in Hastings. These signs are not misleading and, although they are not technically correct, I am informed that remedial action cannot be justified. Kirsty Cameron, for Borough Secretary

So, Hastings Borough Council claimed in 2008 that the signs were lawful while citing earlier correspondence in which the Council had admitted that the signs were not lawful.



Unlawful Hastings sign; photograph taken 16 March 2018.

House of Commons, 8 July 1970

In *Yardstick 64*, Christopher Booker referred to a Parliamentary question by John Page MP, just after the June 1970 election. Here, we present that question, and the minister's reply, as recorded in Hansard.

10.19 p.m.

Mr John Page (Harrow, West): I am extremely grateful to be chosen for the second Adjournment debate of this Parliament. Had hon. Members realised the great importance of this matter, I am sure that they would not have left the Chamber in the ugly rush in which they have left in the last minute or two.

During the General Election of recent memory, a number of my well informed constituents asked me questions about metrication. I found my knowledge of this subject was sadly narrow and I promised them that I would apply for an early Adjournment debate so that the present state of play on metrication could be made known to the public.

During the last few days, when I have had the opportunity to study metrication, I have been amazed how far the country has become committed to going metric, making changes in our everyday habits far more far reaching than decimalisation, the 24-hour clock, messing about with Greenwich Mean Time, or other new activities which have been forced on the general public. Literally every activity of our lives and even the size of our coffins when we die will be affected, all these potential changes without a White Paper and without a single day's debate in the House.

I believe that the previous Government were determined to go metric and, remembering the decimalisation row, wanted to introduce metrication by stealth and present the country with a *fait accompli* when the point of no return had actually been passed, a Wedgwood Bennedit which I do not appreciate. Thank heavens, we have not yet reached the point of no return, particularly where the individual is affected. I hope very much that my hon. Friend and his colleagues in the new Government will take a hard close look at the situation with which they have been left. The object of metrication seems to be to standardise our methods of measuring and to make them more convenient, more internationally acceptable, and to bring us into line, as it is said, with everybody else in a world going metric. If I may, I will deal with the question of convenience a little later.

We are not yet part of a metric world. The United States, which is the most powerful industrial and technological country, still uses the traditional measurements of the pound, the foot and the second. Many so-called metric countries and industries in

them are not applying the metric system totally. For instance, even in France many Frenchwomen, as those of us who have been for a cheap holiday on the Continent may recollect, still buy goods and ask for a poid, or pound, 150 years after Napoleon had tried to break them of the wicked habit of being non-metric.

As for convenience, let us consider metrication in two ways: first, as it affects manufacturing industry and, secondly, as it affects the individual. For the last 25 years I have worked in manufacturing industry, and I am a wholehearted supporter of standardisation. It is economical and can be efficient. But I am equally opposed to stagnant uniformity. Industry should be quite capable of looking after itself and if it chooses to improve standardisation by using a metric basis, let it do so. Industry, however, must be the judge of its own interests, and it would surely be stupid for the Government to force metric standardisation on an industry which feels that it would suffer from it.

Over the years and under the umbrella of the Federation of British Industries (FBI) and the Confederation of British Industry (CBI) it appears that most industries have been moving towards metrication of new manufactures by 1975, although I believe that some industries are becoming less enthusiastic the more they examine the effects of this movement. For instance, the carrying of the old type and the metric type of spare parts is a real and expensive problem for some industries which manufacture heavy equipment such as diesel engines. They may have to carry spares of both kinds for the next 20 to 30 years.

It is also significant in the context of industry that our most highly technological industry, the computer industry, will not be going metric because of the complete existing international standardisation in imperial measurements. The aircraft industry dare not go completely metric because of the dominance of American aviation. However, I think industry can and should look after its own affairs. The situation is quite different when we consider the convenience of the individual. Here it is the duty of independent individual MPs and of Parliament itself to step in and take a real and active interest. We must examine the benefits of metrication and weigh them against the total cost. May we look at some examples. How would it affect Mr and Mrs Harrow in their everyday lives? If the present plans as they seem to be running go through, when Mrs Harrow goes shopping in three or four years' time she will have to order her potatoes by the kilo and in addition, remember, she will be paying for them in new pence, a new decimalised currency to which I do not think she will by then have got used. Her milk will be delivered in half-litre bottles, just under a pint, although I under-

stand that the Milk Marketing Board is manfully standing up against pressure to change its bottles and bottling equipment because it does not want to waste hundreds of millions of pounds by making the change and then finding that it is actually selling less milk. Butter and tea would be packed in fractions of a kilogram, and for whose benefit?

What about Mr Harrow? If he drove to the pub in his car he would be required to buy half a litre of beer rather than a pint. According to the brewing industry, this change would cost it over £100 million. Is there any point in it? If he filled up his car on the way it would be filled up with litres of petrol, and the changes to the pumps would be an extremely expensive item for the petrol companies, the petroleum industry has informed me. On the way home he would find himself driving through an area restricted to 80 kilometres an hour instead of the 50 miles an hour, if the changes proposed for 1973 by the right hon. Member for Greenwich (Mr Marsh) when he was Minister of Transport went through. It would cost the taxpayer or ratepayer £1½ million to £2 million merely to change the speed limit signs. Signposts would be done later, which seems pretty inconvenient, and we are told that this would cost another £30 million or so.

If Mr and Mrs Harrow wanted to sell their house the conveyancing deed would have to be translated into square metres and hectares. I do not see the point of this except for the rather entertaining value of introducing the slide rule into the solicitor's office. I cannot see that it will make any difference to the land conveyed, nor do I think that it will do anything but add to the cost of the transaction.

Children's mathematical teaching is already under review, although the exact stage I do not know, and the 'O' level examinations or what is to succeed them in mathematics would be in metric only from 1972. The reprinting of the textbooks on mathematics would cost another £30 million or £40 million - good fun, I suppose, for the educational publishers.

In total, an estimate has been made by the Business Equipment and Trade Association that going metric would cost the country £5,000 million. This is a staggering figure which may or may not be accurate. The previous Government, however, never gave the House an estimate of what might be the total cost of going metric. I also understand that the previous Government were contemplating legislation during 1970-71 to cover alterations to the weights and measures legislation and other necessary amendments to fall in with the idea of total metrication.

I ask my hon. Friend the Parliamentary Secretary, and the new Government, to trust the people and tell them the facts. Instinctively, I feel very much inclined to ask for the pint to be saved for the pub, the

pound to be saved for the shop and the mile to be saved for the motorist, and particularly for my right hon. Friend the Minister of Posts and Telecommunications, who has a special relationship with the mile.† I am not heavily dug in, however, and if I can be persuaded, and if the general public can be persuaded, that the changes are worthwhile, and if the matter can be properly explained to them, I have no doubt that if the arguments are sufficiently substantial they will go along with it.

It is interesting that following an interesting and important article in the supplement to the Daily Telegraph some months ago, a tear-out coupon was put in asking the views of people on metrication. These were sent to the Daily Telegraph to be followed up by my hon. and gallant Friend the Member for Arundel and Shoreham (Captain Kerby). I am informed that 19,000 answers were received to that questionnaire, which is a pretty staggering number, and that 92% declared themselves against complete metrication. That seems to me to have been a fairly valuable poll but, nevertheless, if the matter is properly explained to the country, I am sure that people would be prepared to go along if it is sensible.

I therefore ask my hon. Friend, on behalf of the ordinary citizen, for the following action to be taken. First, that as soon as possible, even during the coming Recess, a White Paper on the whole subject should be presented setting out the pros and cons and the cost. Secondly, through my hon. Friend, I beg my right hon. Friend the Leader of the House to allocate a full day to a debate on metrication as soon as possible after we return in November.

Thirdly, I ask that the Government should put into cold storage until after this debate any action to follow the orders that might already have been given about compulsory metrication to different Departments, particularly Transport and Education. Lastly, I hope that during the production of the White Paper, my right hon. and hon. Friends will have genuine consultations with the retail trade and other organisations which are in close touch with the people.

Let the facts be known. When the skeletons are taken out of the cupboards, the people will appreciate it and make the right decision, as they did on 18th June. If, however, they are kept in the dark, the whole affair will be considered to be a kind of trap, a means of backdoor Europeanisation, and the fury of the housewife, the motorist, the taxpayer and the man in the pub will justifiably be vented upon those who have committed what might prove to be a monumental and expensive absurdity.

† The said Minister Christopher Chataway had been a long distance runner, and was pacemaker to Roger Bannister when Bannister ran the first four-minute mile on 6 May 1954.

10.34 p.m.

The Parliamentary Secretary to the Ministry of Technology (Mr David Price): I welcome the initiative of my hon. Friend the Member for Harrow, West (Mr John Page) in raising the whole question of metrication this evening. May I congratulate him upon his recent mastery of the subject. He certainly has done his homework and he has made me do mine. He mentioned education, and I suggest he does one further piece of homework in his constituency and visits Harrow School which, I am informed, is fully committed to metric mathematics and is one of a dozen schools pioneering the new mathematical approach named Mathematics for Education and Industry which, of course, uses S.I. units.

I welcome this debate first of all because it gives me the opportunity of explaining what is meant by the general term "metrication". I am sure that many hon. Members know what is meant by it, but I am equally sure that many members of the general public are uncertain as to what metrication will mean in practice. Indeed, I have found constituents who quite understandably confuse metrication with decimalisation of the coinage. Secondly, the debate enables me to say a little about the past history of metrication in this country. For instance the House will know that metric measures for length and weight have been lawful for use in trade since 1897. I wonder how many of the public know this. Thirdly, I welcome the consequential opportunity of outlining to the House briefly - because that is all I have time to do - the state of play on metrication, which we have inherited from our predecessors in government. Fourthly, I should like to say a word about development in other countries. The world trend towards the metric system is developing apace. Clearly this has an important bearing on what ought to be our own attitude. Finally, I shall say a word or two about the future. However, I must warn my hon. Friend that in this respect I may disappoint him. In the course of my remarks, I hope that I shall be able to answer most of the specific points which he has made. If there are any outstanding I shall of course write to him about them.

What is meant by metrication? In a popular sense, metrication means the adoption of any form of metric unit for measurement. And these have been legal for trade since 1897. In a more technical sense, it can mean the basic unit of measurement adopted as a country's national standard. In the latter sense, very narrowly conceived, we are already a metric country. As a result of Section 1 of the Weights and Measures Act, 1963, which I had the honour to pilot through the House, the yard and the pound are determined by reference to the metre and the kilo-

gramme. But this is a highly technical point, and not what my hon. Friend has raised the debate about.

What we are talking about is the possible adoption of the International System of Units - known universally as S.I. - by the country at large. This would include the legal definition of metric units of measurements in S.I. terms and similarly a change in certain statutory provisions from Imperial to metric. A more widespread use of metric units would not of itself raise great issues for Government and Parliament, because they are already lawful. The real issue is the proposed change from Imperial to S.I. units as standard units of measurement for Britain and their substitution for imperial units in certain principal and subordinate legislation. The legal definition of Imperial weights and measures would remain alongside the metric as long as was felt necessary. Let me make it clear that the incoming Government have as yet made no firm commitment to make this change.

I turn to the question of progress towards metrication. The present move towards metrication really dates from the publication of the Hodgson Committee's Report - the Committee on Weights and Measures Legislation - in December 1950. The Hodgson Committee regarded the disappearance of the Imperial system as inevitable. It recommended the abolition of the Imperial system over a period of some 20 years, subject to a number of conditions, the majority of which have been fulfilled. At that time British industry and commerce in the main were opposed to the change. However, by 1963 the balance of industrial opinion had shifted in favour of metrication. This was made clear in the report of the British Standards Institution.* In 1965 the President of the Federation of British Industries informed the Government of the day that the majority of the members of the FBI favoured the adoption of the metric system as the primary, and ultimately the only, method of measurement to be used in Britain. Since then the general attitude of industry has remained constant in favour of metrication.**

Many industries have gone ahead with their plans for metrication. For instance, all the suppliers of major industrial materials - non-ferrous metals, steel, building materials, chemicals, plastics, paper and timber - are changing over this year to metric specifications, standards and quantities. Manufacturing industries are still mainly in the planning stage, but almost all the major companies have developed their plans for going metric. Metric supplies are now coming forward in many engineering fields - nuts and bolts, electrical cables, electrical components. On the industrial scene, the present problem is largely one of co-ordination of programmes between suppliers of materials and components and producers of finished goods. These changes have been made voluntarily by industry without any compulsion by the Government.

I turn to the present state of play on metrication at Governmental level. Under our predecessors there has

been a general move in the country towards metrication. On 24th May, 1965, the then President of the Board of Trade made a statement to the House, which included these words: "the Government consider it desirable that British industries on a broadening front should adopt metric units, sector by sector, until that system can become in time the primary system of weights and measures for the country as a whole". This, of course, was to be a voluntary move.

Things developed. Early in 1966 the Minister of Technology of the day set up the Standing Joint Committee on Metrication. The principal task of this committee was to co-ordinate Government and industrial policies. Over the next two years the committee considered a number of specific problems relating to metrication in industry, including the implications of such a change for education, legislation and Government purchasing. In June 1968, that committee reported to the Minister of Technology. On 26th July 1968, the then Minister of Technology made a statement to the House which laid down his Government's strategy for the gradual adoption of the metric system in Britain. I have not time to read out the whole statement, but, as it is basic to the strategy which had been outlined by our predecessors, I should like to pick a few sentences from that statement to indicate the strategy of our predecessors:

The adoption of the metric system must be gradual, through democratic procedures based on the widest consultation ... No compulsory powers will be sought. There can be no question of compensation; the costs of adopting metric weights must lie where they fall. The Government agree that programmes for the different sectors of the economy can be properly co-ordinated only if there is some general guidance on timing. They therefore accept the end of 1975 as the target date for all provisional programmes, with the qualification that if this date proves to be unreasonable for any particular sector, the programme may aim at an earlier or later date ... The Government accept that legislation will be needed to remove obstacles to the adoption of metric units and to define the units to be used.

That gives the broad strategy. There were subsequent statements but I have not got time to go into them tonight. However, briefly, that is the present state of play.

I now turn briefly to what is happening in the world as a whole. The plain fact is that the world is going metric. If we look at world trade, we find that whereas in 1950 at least 50% of the world's trade was in imperial units, today 80% is conducted in metric units. If we look at our own trade we will find that during the 1960s the proportion of British exports to metric markets has risen from 50% to 65% and is rising.

I turn now to the future. From what I have said, it must be clear to the House that in Britain we have been moving gradually towards further metrication. The question is whether we go the whole way and become a completely metric country. That, in any event, we shall be a partially metric country is a fact of life. The indus-

trial commitment to going metric is now very deep. On the other hand, little progress has been made in the retail and distributive sectors. These are of course the sectors which affect the ordinary citizen most directly. They are also the sectors in which statutory obligations under the Imperial System are most frequently found; and naturally they are the sectors in which right hon. and hon. Members will be most interested.

My hon. Friend raised the question of the pubs going metric. In a logical world the pubs would have to go metric if the remainder of the country went metric. But we do not live in an entirely logical world. So that it is quite conceivable that the pubs would remain on imperial measures, as long as the majority of the trade and of their customers so determine. I can assure my hon. Friend that no decision has been taken by the Government on this matter, any more than it has made a decision on the general issue of metrication as a whole. Obviously my hon. Friend would like me to be able to make a definitive statement on the Government's attitude to this whole question tonight. He will not be entirely surprised if I tell him that I am not yet in a position to do so. As a Government, we are looking at the whole question of how far and how fast we should move towards complete metrication.

My hon. Friend has suggested that we might in due course publish a Green Paper or a White Paper. He has also asked whether it would be possible to have a general debate on the subject. I am sympathetic to both proposals. But, of course, I shall have to put them to my right hon. Friends the Minister of Technology and the Leader of the House.

As a Government, we are looking at the whole question and we have not yet completed our studies. I hope my hon. Friend will accept from me that his views will be taken into account, certainly by myself, and I hope he will be content to let the matter rest there tonight. I hope that I have been able to assist him and the House in explaining the state of affairs that we have inherited.

Mr John Page: I thank my hon. Friend. Knowing how honourable he is, I take the words that he has uttered about a Green and a White Paper and a later debate as a great comfort. I am grateful to him for the trouble that he has taken in answering in so much detail this debate tonight.

Question put and agreed to. Adjourned accordingly at ten minutes to Eleven o'clock.

* In November 2016, John Gardner asked the BSI for a copy of this report; their Knowledge Centre (library) said they did not have a copy.

** In his 1996 book, *The Castle of Lies*, Christopher Booker cited a February 1965 confidential memo by the Federation of British Industries which suggested that industry's support for metrication was less ringing than the government implied. Christopher has shared that memo with BWMA and it will be reproduced in the next Yardstick.

Metric downsizing – Cidre

In 2014, *Yardstick 54* reported that Gaymers cider had been reduced from 568ml bottles (i.e. one pint) to 500ml, and then sold at the same price as 568ml competitors. It was noted: “Evidently, Gaymers is seeking to undercut bottled pint producers, raising the question as to how long Magners, Bulmers and Cidre will continue to be sold in 568ml quantities”.

Yardstick 63 reported that, in September 2016, the metric infection had spread to Bulmers cider.

Now, bottles of Cidre, produced by the AB InBev company as part of the Stella Artois brand, have also been downsized: in late 2017, Cidre switched from 568ml bottles to 500ml bottles.

To achieve the reduced content, the bottle diameter was reduced from 3 inches to 2¾ inches. The labelling, however, remains identical.



BWMA's John Gardner found that a branch of Whistle Stop Food & Wines had neglected to change the shelf edge ticket after the changeover; this revealed that the new 500ml bottle was being charged at the same price as the former 568ml bottle. John took a photograph of the 568ml shelf edge ticket and made a purchase of a 500ml bottle; the charge was £3.89, indicating that prices had been kept constant while the quantity was reduced. He asked the cashier to supply a till receipt:



BWMA letter to AB InBev, 28 March 2018

We are disappointed to see that Stella Artois has replaced its 568ml bottles of Cidre (i.e. one pint) with 500ml bottles. Please explain why the pint-equivalent quantity has been abandoned in favour of a reduced metric size.

We also notice, at one major retail outlet, 500ml bottles of Cidre are on sale at the same price as the 568ml bottles, meaning a price increase in real terms of 12%. I attach a photograph of the shelf-edge ticket showing this. Please explain why customers are being charged the same price for smaller metric bottles of Cidre as for 568ml/pint bottles.

We await your answers with interest. In the meantime, we hope that AB InBev will consider reintroducing the 568ml/1 pint bottle.

Reply from AB InBev, 26 April 2018

Thank you for your letter dated 28 March 2018, regarding the changed pack format of Stella Artois Cidre. Before I address your question, I wanted to reiterate our commitment to giving our customers choice. We have a wide and varied portfolio of beers and ciders available in retailers, as well as pubs, restaurants and bars around the country and pride ourselves in offering a number of different serving sizes and pack formats.

Relating to Stella Artois Cidre product, we took the decision to change the size of some of the products in this range early last year - your letter refers to the 568ml bottles becoming 500ml in size - this change was part of our focus on the premium side of the cider category, where serving sizes tend to be smaller. This decision was also based on consumer preferences towards smaller serves. For instance, the 330ml beer can is a product format that has grown in popularity recently.

Your letter noted that in some outlets the price has stayed the same following the format change. While retailers have complete discretion to set the prices paid by consumers, so we are unable to comment on the retailer's pricing decision, what we can say regarding the recommended retail price is that, while the volume has decreased by 12%, business costs have increased in the past two years, including in the areas of packaging and distribution. Together with currency fluctuations and rising inflation, this initiative has enabled the brand to maintain the same recommended unit price and defend its affordability.

We are always reviewing our product and pack formats, and although we do not have any current plans to change this product format, if this changes I will be sure to let you know.

Andrew Whiting, Legal & Corporate Affairs Director

The Marathon, Earth Measure and the Queen

By Michael Kuser, New Jersey, USA

The marathon legend began more than 5,000 years ago in ancient Greece. One excited soldier, Pheidippides, ran 22 miles to Athens to tell of a great victory over the Persians at Marathon. He shouted the news – Niki! – for Nike, the Greek goddess of victory. This was the first promo spot in recorded history. Ironic, since he ran the distance barefoot. And he promptly died.

Though the philosopher and mathematician Pythagoras was alive at the time of the battle, the run by Pheidippides had nothing to do with geometry. Jump to the modern era, however, and that changed.

When the Greeks commemorated the original feat at the revived Olympics in 1896, they decided to make the athletes run exactly 40 kilometres (24.85 miles), from Marathon Bridge to the stadium in Athens. Not only did the organizers go metric, but they chose a distance equal to 1/1000th the polar circumference of the earth (99.9% accurate).

There is no record of any runner complaining that the contest had added nearly 13 percent to the ancient run. The record is silent on whether or not anyone noted the earth measure. Marathon runners did understand the change, for they shouted “God save the metric system” as they continued on past the ancient 22-mile mark.

Move ahead a dozen years to the 1908 Olympics in London. The British, being British, said to blaze with the metric system. The road distance between Windsor Castle and White City Stadium happened to be around 26.2 miles, a more or less round number, even if it was longer than the previous modern-era marathons. However, the London organizers needed to make the marathon longer still, just a tad, so that the race ended in front of the royal viewing box.

The British fine-tuned the Olympic nod to earth measure, for the new marathon length equals the amount of the so-called equatorial bulge, the difference between the earth’s polar and equatorial circumferences (99% accurate). Diehard customary measure lovers sacrificed accuracy in their bid to supplant the boring meter with the noble mile as the truly royal earth measure.

No one complained that the race was now more than 19 percent longer than the ancient run, but that year’s change is said to have been the start of the marathon tradition of runners shouting “God save the Queen!” as they pass the 24-mile mark. Those old-school Brits would do anything to cut the metric system. Of course, in 1908 they would have said “God save the King!”, as King Edward VII sat in the royal viewing stand.

Perhaps the British change in 1908 resulted from a secret plot to honour Isaac Newton, the great mathematician who had solved the riddle of the bulge in 1684 by positing his theories on motion, force, gravity, inertia and planetary orbits. A clue of sorts can be found in the extra bit of length added in 1908 to get the runners to collapse in exhaustion in front of the royal box. It is the difference between 26.2 miles and the actual length of a marathon today, 26.21875 miles, a difference of 99 feet, which just happens to be 33 yards. A perfect number with which to salute the occult natural philosopher Newton.

Let us also recall that it was Queen Elizabeth I who in 1593 decreed that the statute mile would have exactly 5,280 feet. Hers is the standard that makes the .2 in 26.2 – a fifth of a mile – equal 1,056 feet. Is it mere coincidence that the year of her royal decree, divided by the sum of the upper cubes – 1584 – is a number that resonates with a fifth of a mile: 1.0056? In any case, long live the Queen! Long live the Mile!

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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