



# UKMA news

The newsletter of the UK Metric Association

Campaigning for a single rational system of measurement

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## A message from our Chairman

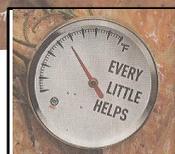
Chairman's New Year message

2011 will be an important year for the UK Metric Association. Of course, every year seems important at the beginning, and every New Year message could begin with the same trite statement. However, I believe that 2011 will be different in that we need to make an important decision about the future of UKMA.

2010 has been the year in which I think we have finally had to face the grim fact that our campaign for a "single, rational system of measurement" in the UK has foundered. Nobody is listening. The media are not interested. The EU has withdrawn from the battlefield (perhaps we may be thankful for that!) The Consumers Association is too concerned about its revenues to dare to tackle the issue. Trading Standards officers are not prepared to enforce the law on the use of metric scales and prices. Local Government Regulation (formerly LACORS) refuses to correct its misleading advice on the Weights and Measures Act. Even the very modest proposal to require dual metric/imperial signage of low bridges has been quietly dropped by the Coalition Government. The "two systems" muddle has become entrenched and is now the settled position in the UK for the foreseeable future.

Faced with this depressing situation, UKMA needs to consider its strategy. Clearly, we are not going to go away, and, if and when opportunities arise, we shall of course continue to argue as forcefully as ever the case for completing metrication. However, the fundamental problems that we face are those of ignorance, prejudice, misinformation, and a misplaced concept of "Britishness" – all reinforced by a wealth of myths endlessly repeated by the lazy and uninformed popular media. Even if they privately accept the case for completing metrication (which many do), our politicians will not take the measures needed to achieve it if they believe (rightly or wrongly) that significant sections of public opinion are sufficiently opposed that the issue might influence the way they vote.

## Hope you had a Merry Christmas



But why does it have to be °F? Every little helps, but does this?

### **Not a metric Christmas according to Tesco**

The image is from a Tesco advertisement in a recent Sunday Times.

Do they think it matters to use °F instead of °C?

Do you think it matters?

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The challenge therefore is a long term one of changing the public perception of and attitudes to measurement units and systems. This can only be done by a long term process of education. Central to this should be our websites, supplemented by hard copy publications, factsheets, style guides, DVDs, press releases and speakers' notes. Which brings me to UKMA's strategy.

At the 2010 AGM and Annual Conference, we discussed the possibility of UKMA seeking to become a charity. This would bring certain financial advantages (in terms of tax relief on gifts etc), but, more importantly, it would confer enhanced status and perhaps cause others to take us more seriously. However, in order to qualify for this status, our objectives would need to be wholly charitable – which means that we would need to amend our constitution and adopt new “Objects” (such as “to advance education in and understanding of the International System of Units (SI), commonly known as “the metric system”). Charitable status by no means excludes campaigning, but campaigning could not continue to be our primary activity, and this change would need to be reflected in our website and publications.

So this is the major strategic decision for UKMA in 2011 – which is why I started by saying that 2011 will be an important year for the UK Metric Association.

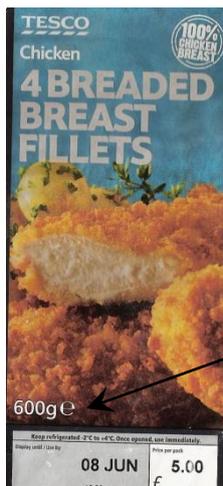
That said, may I wish all members of UKMA (and our thousands of supporters) a successful and prosperous New Year – both in campaigning for completing metrication and in their private lives.

Robin Paice

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## Not all bad news Robin

While our Chairman quite rightly points out the ‘depressing situation’ the UKMA finds itself in, there are some signs of hope from the retail sector:



Typically good use of rounded numbers.  
Pity about ground coffee, jams, etc. Though.

Since the retailers are in a very strong position to influence the public's perception of the metric system, their advertising may ultimately be a much stronger motivator than any government perceived ‘force’.

### Broadcasting

Broadcasters also have a very significant part to play and the recent cold weather has seen a welcome description of snow depths in centimetres rather than inches, even to the extent of the language of the ‘on-location’ journalists rather than just of those in the studio.



Have you noticed that the use of Fahrenheit has virtually disappeared?  
Is it just because it's cold?

### On the subject of snow..

#### Extract from 'Metric Views'

Snow calculations made simple, or not

One of our readers, John Frewen-Lord, has been housebound for four days by the recent heavy snow falls – about 60 cm deep in his area. This has prompted him to provide an illustration of the comparative simplicity of calculating snow loads in metric units.

John writes:

“Two winter calculations. Which is easier?

Like many parts of the UK in the beginning of December 2010, we in North East Lincolnshire have had a lot of snow. Up to now we've had around 60 cm. On the roofs of our cars it is about 50 cm deep. Like all good motorists, and having just spent three days digging one car out, we do not drive off with snow like this on the roof. Apart from it being dangerous to vehicles behind (and possibly illegal as well), it is a huge amount of extra weight to carry around! Carrying all that extra weight not only increases fuel consumption unnecessarily, but it is more likely to get you stuck in deep snow – a lighter vehicle will not bog down in snow as much as a heavier one.

So how much extra weight does this 50 cm of snow amount to? In metric it is a very easy calculation. The only things we need to know are that snow has about 1/10th the density of liquid water, 1 litre (L) is 1000th of a cubic metre, and that 1 L of water weighs 1 kg. Now from this it can be seen that 1 L = 1 m<sup>2</sup> x 1 mm deep.

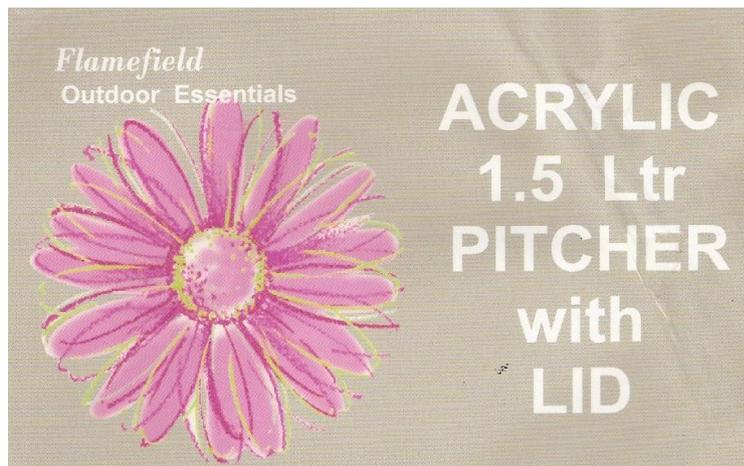
Now I measured the pile of snow on the roof of my car, and it was approximately 2 m long x 1.5 m wide, or 3 m<sup>2</sup>. Using the above information, 3 m<sup>2</sup> of snow x 50 cm deep is equivalent to 3 m<sup>2</sup> of water x 50 mm deep. Therefore the snow on the roof of my car will have an equivalent water volume of 3 x 50 = 150 L. Which will weigh 150 kg?

As the average adult person weighs 75 kg, that is equivalent to carrying an extra two people around. I think you will agree that those calculations are pretty simple, and could be easily done in your head. Could you do the same in imperial units? I very much doubt it. *(No John, most would have given up long ago – Editor)*

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### Time to sort out the Litre symbol?

The editor of this newsletter is unrepentant in focussing again on the subject of the symbol for the Litre. Surely the standard should not offer the option of the use of the lowercase 'l' or the uppercase 'L'. Indeed the confusion caused and the understandable desire of catalogue and product labelling graphics artists to be as clear as possible has led to many examples of the use of 'Ltr' as shown below:



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Even Evian water gets it wrong, not in using 'Ltr' but in mixing up uppercase and lowercase 'l':

Evian Natural Mineral Water is characterised by its lightness and balanced composition.

Composition in mg/litre:

Calcium	80	Sulphates	12.6
Magnesium	26	Chlorides	6.8
Sodium	6.5	Nitrates	3.7
Potassium	1	Silica	15
Bicarbonates	360		

Dry residue 180°C : 309mg/l - pH = 7.2  
Cachat Spring - S.A.E.M.E. 74500, Evian - FRANCE  
Please recycle this bottle.

DANONE WATERS HELPLINE  
For further information, please call:  
**0800 279 8882**  
(if calling from the UK)  
**1800 556543** (if calling from 800)  
PO Box 4361, Trowbridge, BA14 4DR

**2L**

Note use of lowercase 'l'.  
Should be 309 mg/L to be consistent with main size shown as 2L

The Comité International des Poids et Mesures - CIPM, in 1990, considered that it was still too early to choose a single symbol for the litre.. but how long do we have to wait for a change?, and more importantly, who will be responsible for publicising the fact at the individual national levels? Indeed, is there a mechanism for payment for publicising standards issues at the consumer level at all?

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## More on Road Signs

### *Extract from 'Metric Views'*

#### ***Optimism bias' falls from favour***

In November 2005, the UK Department for Transport (DfT) produced an estimate of the cost of converting road traffic signs for speed and distance measurements to metric units. Optimism bias accounted for between 26% and 33% of the total overall cost. Now, the usefulness of optimism bias is being questioned.

The comments by John Frewen-Lord and The Glob following the last article on Metric Views reinforce the view that the UK's imperial road traffic signs are a handicap, both for road users and for the country as a whole. Yet, for almost forty years, the change to metric signs has fallen in the political 'too difficult' box – too difficult to explain to the public, and too difficult to carry out without running a risk of losing popularity (and votes).

"Too difficult" is not a phrase that comes easy to politicians, and the DfT has been required to find alternative reasons for lack of progress with the sign changeover. For many years, the DfT claimed that it would be "confusing" to make the change while a significant number of drivers had received no metric education at school (Hansard, 2002). More recently however, the cost of the changeover has become the focus of its attention, and an estimate was prepared in November 2005 by the Traffic Management Division. This is available on the DfT web site

At about that time, the Treasury had introduced optimism bias to counter criticisms of the cost escalation of road schemes. It ranged from 45% for a standard scheme to 65% for a non-standard scheme, adding between £175 million to £254 million to the 2005 estimated cost of the sign changeover.

Recently it has become clear that UK costs of civil engineering projects exceed those of similar schemes in continental Europe by a substantial margin, and the Treasury-sponsored body Infrastructure UK (IUK) has been asked to investigate and report.

Its Chairman, James Stewart, said last week that this work had identified a fundamental need to change the attitudes of those procuring and delivering projects. The process where budgets are inflated to allow for things going wrong was flawed.

"For every public sector project, before you even start you add a 50% optimism bias to allow for contingencies," he said. "That then creates an affordability envelope, and then you get a budget equal to that affordability envelope.

"So it is no great surprise that most projects come in to that price."

Thank you, Mr Stewart, for casting doubt on that 2005 estimate – UKMA has always said it was far too high.

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Stewart said a better model was the London 2012 Olympics, where the contingency fund is managed separately. The Olympic Delivery Authority chairman and former chief executive of Network Rail, John Armitt, agreed.

“Optimism bias is a fundamental failing,” he said. “We did it at Network Rail and all it does is convince people that the money is there to be spent.”

That said, we should not fall into the trap of becoming obsessed with cost. The real issue is political will. The national interest requires a single system of measurement which is understood and used by everyone for all purposes. On the highways, it requires consistent information in a single system of units used by all those involved. This includes pedestrians, motorists, motor manufacturers, those who build and maintain the network, the emergency services, map makers, and so on, as exemplified by the comments of John and The Glob.

Other Commonwealth countries and, closer to home, the Republic of Ireland showed that where there is a will there is a way. Now it is our turn.

(Some information for this article was taken from ‘New Civil Engineer’ of 4 November 2010.)

### ***Comment from philh says:***

The costs for installing or replacing road signs is something that should be well known to DfT with little uncertainty. They have plenty of experience. What is so fundamentally different about metric signs?

It is quite ridiculous that they should lump 45% – 65% on top just to allow for uncertainty. The work involved is quite routine. If anything the actual (pre-bias) costs are over already over the top. If it really costs as much as they say to put up or replace a road sign then why do highways authorities deploy so many of them? (they have recently been accused of sign clutter)

There are other ways in which this estimate is disingenuous. For example there is no allowance for the fact that the true cost of replacing a sign for the purposes of metrication is partly mitigated by normal replacement liability. If say the normal life of a sign is 10 years and it is already 5 years old, the true cost of replacing it is about half the money actually spent – you get half the money back because its next replacement is delayed by 5 years beyond when it would have been replaced anyway.

There is then the question as to whether the whole approach is wrong. The DfT figures are based on an instant replacement nationwide. Is that really necessary? They didn’t do it that way in Ireland. Distance signs were phased in over 8 – 10 years so that for most them the effective cost was zero. Only the speed limits were changed in a day or so. 10 years may be bit too long but it is possible to significantly reduce the overall cost using this approach.

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## **European Parliament Wants U.S. to Accept Metric-Only Labels**

### ***Extract from Metric Today 2011-January/February issue***

On 11 November 2010 the European Parliament adopted a resolution on the (then) forthcoming EU-US Summit and Transatlantic Economic Council (TEC) meeting, the latter scheduled for 16–17 December 2010. The resolution covered a lot of topics, and included the following:

The European Parliament “calls on the [European] Commission to pursue, in the light of the forthcoming TEC meeting ... to insist on the mutual recognition of legal units of measurement, in particular acceptance of metric-only labelling of EU products in the U.S., to explore standardisation with U.S. authorities, to establish round tables on standards, focusing on innovative solutions, and to coordinate internationally....”

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## **The International Docking System Standard**

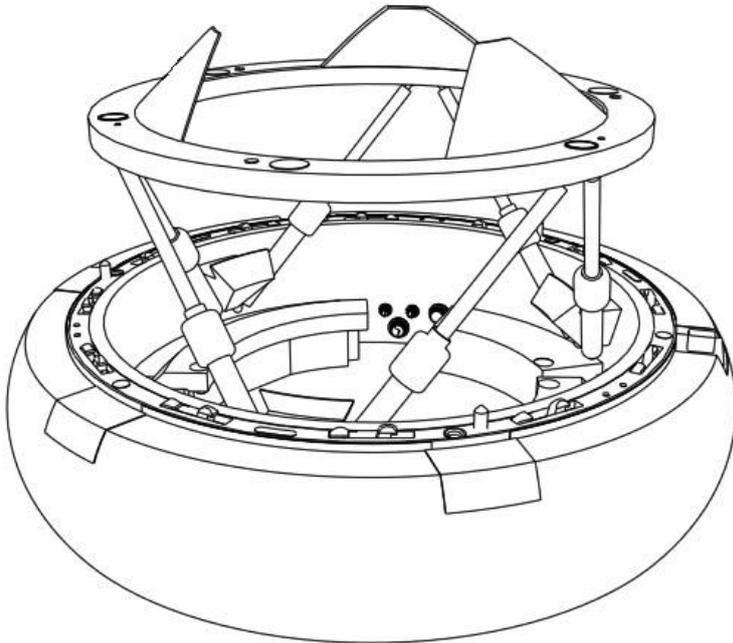
### ***Extract from Metric Today 2011-January/February issue***

The International Space Station (ISS) Multilateral Coordination Board approved the International Docking System Standard (IDSS) in October 2010. The newly released (albeit not yet complete) Interface Definition Document describes itself as “defining the interface characteristics and requirements of the IDSS, which is intended for uses ranging from crewed to autonomous space vehicles, and from Low Earth Orbit (LEO) to deep-space exploration missions,” including missions to the ISS, the moon, and crew rescue missions.

The standard resulted from a working group established in 2009 by the ISS partners, consisting of the Canadian Space Agency (CSA), the European Space Agency (ESA), Japan’s Ministry of Education, Culture, Sports, Science and Technology (MEXT) assisted by the Japan Aerospace Exploration Agency (JAXA), the National Aeronautics and Space Administration (NASA), and the Russian Space Agency (Roscosmos).

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As ESA explains it, "The IDSS provides the guidelines for a common interface to link spacecraft together. It builds on the heritage of the Russian developed APAS system (Androgynous Peripheral Attachment System) used for the Space Shuttle for the 'hard docking' and the innovative soft-capture features of the new NASA and ESA systems." Because the port is androgynous, a spacecraft can dock with another spacecraft or with a space station without needing two different kinds of docking ports.



Dimensions in the standard, available from [www.internationaldockingstandard.com](http://www.internationaldockingstandard.com) as a PDF, are metric, with linear dimensions in millimetres and forces in newtons.

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## How Bright Is That Flashlight?

*Extract from Metric Today 2011-January/February issue*



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Comparing flashlights at a store can be confusing, so 14 flashlight manufacturers collaborated with the National Electrical Manufacturers Association (NEMA) to develop a new standard, ANSI/NEMA FL 1-2009, Flashlight Basic Performance Standard, to specify how to measure and report the performance of hand-held flashlights, spotlights, and headlamps providing directional lighting.

Approved as an American National Standard in August 2009, many flashlight packages now use the icons introduced by the standard to display up to six characteristics of the light: beam distance—the distance at which the light beam decreases to 0.25 lux, in meters; peak beam intensity—the maximum luminous intensity along the central axis, in candelas; run time—how long the batteries last before light output reaches 10% of its initial value, in hours and minutes; light output—total luminous flux in lumens; impact resistance—how far you can drop it without damage, in meters; and water resistance—a cloud-and-rain icon, if it's water resistant, or a water-wave-and-arrow with a depth in meters, if it's waterproof and submersible.

The icons are designed to be reasonably obvious in meaning. See the photo for one example, on a package whose flashlight has:

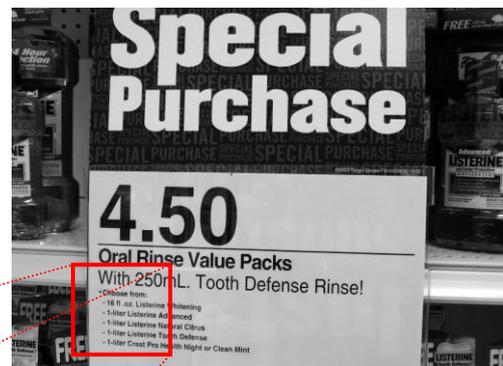
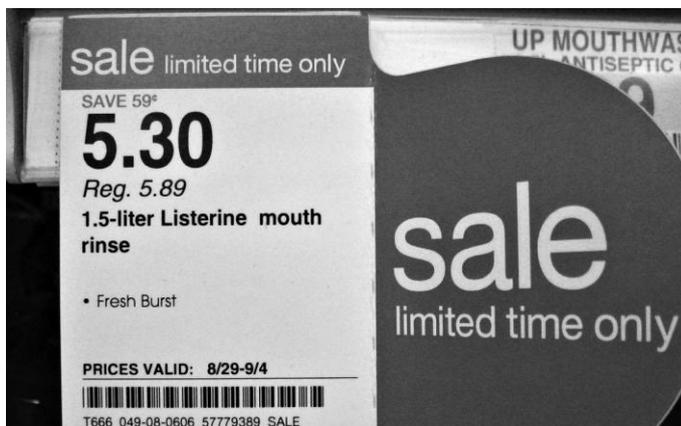
- Peak beam intensity of 2547 cd
- Beam distance of 101 m
- Total light output of 69 lm
- Water resistant
- Impact resistant to a 1 m drop
- Total run time of 18 h on “high” or 31 h on “low”

A manufacturer can, of course, show a full set of values for each flashlight mode, if desired.

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## Metric Signs on (US) Store Shelves

*Extract from Metric Today 2011-January/February issue*



Note instance of '16 fl oz' !!!

