HT/JM

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FILE TITLE:	SERIES
Metrication	WEIGHTS AND MEASURES
	PART: 1
PART BEGINS: SEPTEMBER 1979	PART ENDS: DECEMBER 1994
	CAB ONE:

PART CLOSED

PREM 19/5119

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Printed in the UK for HMSO Dd 4599073 7/94 C15 59064

PART

CLOSED

DEPARTMENT OF HEALTH

Richmond House 79 Whitehall London SW1A 2NS Telephone 071 210 3000

From the Secretary of State for Health

RESTRICTED - POLICY

The Rt Hon Michael Heseltine MP
Secretary of State
Department of Trade and Industry
Ashdown House
123 Victoria Street
LONDON
SW1E 6RB

19 December 1994

Dear Michael,

METRICATION DIRECTIVE

I have seen a copy of John Gummer's letter to you dated 9 December about the Units of Measurement Directive and its implications for legislation and official documents.

I must say that I share John's concerns about the situation. It is very late in the day to be asking Departments to be issuing individual guidance on this matter.

On receipt of the recent DTI guidance, my officials have taken immediate steps to ensure that the Department of Health, the NHS Executive, our Agencies and other sponsored bodies for which my Department has responsibility, comply with the Directive with regard to legislation and official documents taking effect from 1 January 1995. However I am concerned that, as the need to review existing legislation and the status and validity of official documents issued before 1 January 1995 is still in doubt, we are only able to issue partial advice at this stage.

I understand that it had been DTI's intention to make any necessary retrospective changes to UK Law by generic legislation, but that your officials now advise that this may not be possible. Some Departments may face a heavy task if the Law Officers decide that existing legislation is covered by the Directive. I hope officials can find a satisfactory solution as a matter of urgency.

A copy of this letter goes to the recipients of John's letter of 9 December.

Yours ever
Virginia

VIRGINIA BOTTOMLEY

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From The Secretary of State for Wales

The Rt Hon John Redwood MP

CT/10885/94

15 December 1994

Dear Michael,

I am becoming increasingly concerned about the slow progress we are making on resolving the issues coming out of implementation of the Units of Measurement Directive. With just two weeks to go to that implementation, and at a most sensitive time, we find ourselves not only facing extensive revision of legislation and a plethora of official documents but also unable to fully advise local authorities on the costly implications of this Directive for them.

I need not dwell on the justifiable complaints we can all anticipate if we fail to find an efficient and effective solution. I would urge that we press very hard to find a generic answer and cannot stress enough that we must determine an outcome acceptable to local authorities and the business community.

Like John I am wary about my officials now circulating local authorities with guidance on the implications of the Directive and would like to go along with his suggestion that, if needs must, your Department is best placed to undertake this and cover the wider circumstances.

We must find a solution that will minimise the burdens of this Directive and that meet the natural concerns of both the public and private sector. I believe it is essential that we demonstrate a pragmatic approach to the current difficulties so that we can head off cynical and opportunist criticism of all things European.

I am copying this to the members of EDH, EDL, OPD(E), Nick Lyell, Richard Ryder, Sir Robin Butler and Sir John Kerr.

Yours ever

John

The Rt Hon Michael Heseltine MP
President of the Board of Trade
Department of Trade and Industry
Ashdown House
123 Victoria Street
LONDON SW1E 6RB

C-PU

2 MARSHAM STREET
LONDON SW1P 3EB
071-276 3000

RESTRCTED - POLICY

My ref:

Your ref:

RA
MF

The Rt Hon Michael Heseltine MP
President of the Board of Trade
Department of Trade and Industry
Ashdown House
123 Victoria Street
LONDON
SW1

9 December 1994

Dear President

METRICATION DIRECTIVE

I understand that your officials have been in touch with mine, and with those in other Departments, about the Units of Measurement Directive and its implications for legislation and official documents.

I have to say that I am extremely concerned about the position in which we find ourselves on this whole matter. Even at this very late stage there remain outstanding major unresolved issues, in particular the whole question of the status and continuing validity after 31 December 1994 of official documents, containing references to imperial units, which although created before that date were intended to have effect thereafter. I cannot stress too much the significance of this for local authorities, which, for example, will have issued numerous planning permissions, containing reference to imperial units, which were intended to remain extant after 31 December 1994.

I should not need to say just how important it is both that all these matters are now resolved with the greatest possible expedition, and that all the decisions which are finally taken fully reflect the practicalities involved and are overall presentationally and politically defensible.

In these circumstances, I cannot agree that my officials should now circulate to local authorities guidance on the implications of this Directive. As is starkly apparent from the Guidance Note which your officials have provided, we can at best tell authorities only part of the story, leaving open all questions about official documents etc created before 1 January 1995. To issue such guidance to local government would be, I believe, little short of a presentational disaster, placing us in an indefensible position in relation to the very justified and powerful criticisms which we

100%
RECYCLED PAPER

could expect from authorities across the country.

If for wider reasons, such as those of the UK's relations with the EU, you consider it imperative that such partial guidance is now circulated to all public bodies, including local authorities, I believe this would best be undertaken by your Department, who will be able to set out fully the background and reasons for the present circumstances.

Looking to the slightly longer term, once we have the full picture, I believe we and colleagues need to consider very carefully how we manage and present the full implementation of this Directive. The scope for those opposed to mount effective presentational campaigns against the Directive need hardly be stated. We must do everything possible to ensure that any burdens due to this Directive on businesses, local authorities, and others are kept to the barest minimum. I know that you are very alive to this.

I am copying this to the members of EDH, EDL, OPD(E), Nick Lyell, Richard Ryder, and to Sir Robin Butler and Sir John Kerr.

Yours sincerely

A H Davis

for JOHN GUMMER

Approved by the Rt and signed in his absence.

PRIVY COUNCIL OFFICE
WHITEHALL. LONDON SW1A 2AT

29 November 1994

Dear Mr Oldham,

UNITS OF MEASUREMENT DIRECTIVE: GOVERNMENT USE OF THE METRIC SYSTEM

Thank you for your letter of 21 November setting out the Directive's implications for legislation and official documents. Although this was circulated at official level I showed it to the Lord President because of its obvious political sensitivities.

He was concerned at some of the ramifications of the Directive and in particular the possible effects on private contracts. He believes the advice of the Law Officers should be sought on this as a matter of urgency. I would be grateful if you could let me know the outcome.

I am copying this letter to Mary Francis and Jonathan Reece, both at Number 10.

Yours sincerely

D Sandeman
Principal Private Secretary

Martin Oldham Esq
Consumer Affairs Division
Department of Trade and Industry
10-18 Victoria Street
LONDON SW1H 0NN

MARY FRANCIS

From: Jonathan Rees
Date: 29 November 1994

cc: Mrs Hogg
Mr Morris

UNITS OF MEASUREMENT DIRECTIVE: USE OF IMPERIAL MEASURES

1. Following yesterday's No.12 discussion, I have spoken to DTI about Martin Oldham's letter of 21 November. The position is fairly complex, but our present problems are (as with most implementation) largely self-inflicted.

2. The issue is how we implement the 1989 Units of Measurement Directive. The policy on this is now well known, and (DTI think) more or less publicly accepted. From next year, official recognition for imperial units must cease, but we have a series of derogations for those measures consumers love most. I attach the summary of the main provisions. The issue is therefore implementation. The main secondary legislation to implement the Directive (amending DTI Weights and Measures Regulations) has already been agreed by the House. Ministers agreed to postpone the Directive's implementation to 1 October 1995 (rather than 1 January 1995 as required by the Directive). We have not yet told the Commission (which seems sensible). A second issue is to ensure that there are no references to imperial units in new legislation and other official Government communications after 1 January 1995. Guidance has been given to Departments on this.

3. The third, and now most difficult, issue is the need to amend a whole raft of past legislation which may refer to imperial measurements. DTI's original hope had been to do this by a simple generic instrument. But Parliamentary Counsel believes that this is not possible (even though the Irish have done even less). The

Law Officers are currently considering this and a whole host of other issues. DTI's concern is that if we rule out generic legislation, then there is a large bureaucratic and time-consuming exercise to amend existing legislation. While this is bad enough for Central Government Departments, we would also need to ensure that Local Authorities carried it out for all their bylaws etc: a useless chore which will be badly received by Local Authorities, raise profile of issue, not help consumers, and be largely irrelevant in the real world. DTI are quite rightly taking no action on this until we have the broader Law Officers' advice (expected before Christmas).

4. What should we do now? At this stage, I think we probably need to await the Law Officers' advice. In the light of that, we clearly need to try and find a less bureaucratic solution. The Commission is at present unaware of all our internal manoeuvrings, and I suspect would be fairly unconcerned about our amending past legislation (they will be more worried about the nine month delay in implementation). I have suggested to DTI that their Ministers might like to write round on the way ahead in the light of the Law Officers' advice. I see that Dugald Sandeman has already registered Lord President's interest.

Jonathan Rees

JONATHAN REES

29-11-2.jnr

To Mary Francis
Company
From D. Anderson
Company
Tel No. No. of Pages 12
FAX
Post-it Fax Note
Ref No: 7688

IMPLEMENTATION OF UNITS OF MEASUR

Background

1 The 1989 Units of Measurement Directive requires member states to use the metric system, and to cease use of the imperial system for "economic, public health, public safety and administrative purposes." This obligation applies to: "measuring instruments used, measurements made and indications of quantity expressed in units of measurement." The principal purpose is to remove technical barriers to trade arising from the existence of different systems of measurement within the European Union.

2 There have been earlier stages requiring us to phase out a different set of imperial units. The 1989 Directive completes the process. The units it covers are some of those which are most widely used. The UK's policy has been to implement on the basis of making the minimum of changes required by the Directive.

3 Except for a number of special cases governed by derogations and exemptions for units which are governed by international conventions or agreements, official recognition for imperial units must cease before 1 January 1995. Details of the special cases are set out in the attached note: "Units of Measurement Directives: Transitional Arrangements and Exemptions For Units Governed By International Agreements". Government policy is to make the maximum use of the transitional periods. Ministers have also agreed to postpone the main implementation until 1 October 1995 and this decision has been reflected in the legislation recently approved by Parliament. However, it would be prudent for the government departments and the bodies for which they are responsible to aim to comply with Directive requirements from 1 January 1995 wherever possible. In particular, they should ensure that legislation and official documents issued after that date do not contain references to imperial units except in the special cases.

4 Statutory instruments making changes to legislation on weights and measures and price necessary to implement the Directive were passed by Parliament on 1 November. The instruments fall into two categories.

(i) instrument amending the Units of Measurement Regulations 1986

The amended Regulations declare that imperial units will cease to be authorised after 1 October 1995 except where derogations in the Directive permit their use. In the past DTI has stated publicly - for example, to the Joint Committee on Statutory Instruments - that this instrument is only declaratory and does not prohibit, or subject to penalty, the use of imperial units. It is, however, possible that the Law Officers may advise that the Regulations have some more substantive effect

and are not only declaratory.

(ii) instruments making specific amendments to weights and measures and prices legislation

These instruments phase out a number of requirements for imperial units to be used in connection with the sale of goods. This legislation will make it a criminal offence after 1 October 1995 to use imperial units as the primary measure of quantity in the generality of trade (e.g sales of packaged goods). However the legislation allows the continued use of imperial units for supplementary indications (indications of measurement expressed in non-metric units which accompany indications expressed in metric units), and for purposes of description (e.g. collar sizes and screw sizes.) The legislation does not extend to transactions in land and so does not prevent an estate agent, for example, from describing land and the dimensions of buildings in imperial units.

5 Government departments were sent guidance in May 1990 advising them to change all references to imperial units in their legislation, rules and guidance - including legislation rules and guidance of official bodies for which they are responsible - and to substitute references to metric units. Many Departments have made considerable progress in metricating their legislation and their use of metric measures in official documents. However, others still have a considerable amount of unmetricated legislation.

6 Until recently it had been intended to complete the implementation of the Directive by making a so-called "generic" instrument. This would have (a) amended all legislation - not already metricated - and other documents conferring official recognition on non-metric units by converting references to quantities expressed in imperial system units to the equivalent quantity expressed in the metric system and (b) provided that private contracts entered into after the date by which official recognition of imperial units must cease should not be capable of being held void because the contract refers to imperial quantities, even if, by so referring, a criminal offence is committed.

7 Serious difficulties have arisen over the proposal for generic legislation. Parliamentary Counsel has declined to draft legislation on the basis of DTI Solicitors' instructions either as originally drafted or as amended in any way. As regards 6(a) Counsel's main objection is that applying a single conversion factor could not be relied upon to achieve a sensible result in all cases. As regards 6(b) Counsel doubts whether there are vires to do what we have asked and considers that it may, in any event, be in breach of the Directive.

8 In the light of these problems, DTI Solicitors are consulting the Law Officers in conjunction with Parliamentary Counsel, Cabinet Office legal advisers and legal advisers of other government departments. They are seeking comprehensive advice from the Law Officers on the extent of the requirements made by the Directive, the legal risks involved in failing to

complete implementation on time and the options available for minimising those risks and their financial consequences. It is conceivable, although unlikely, that the Law Officers could say that the Directive requires us to go further than we have previously thought necessary. Conversely they may say that we do not have to amend all existing references - although amendment would be desirable and would avoid problems. The following assumes that specific amendment is necessary.

The problem of references to imperial units in existing legislation and official documents which have continuing effect.

9 The large number of such references makes specific amendment an unattractive and possibly impracticable proposition. The field covers not only primary and secondary legislation made by central government and its agencies but also court injunctions, local authority byelaws, planning consents, tender specifications, contracts issued by governmental bodies: in short, any official instrument which recognises imperial units.

10 Assuming that we are required by the Directive to amend the legislation and official documents by 1 January 1995, the risks of failing to do so are: the EC Commission may take infraction proceedings; the UK may be fined for non-implementation; prosecutions for breach of our national law may fail because the criminal offences concerned are defined by reference to imperial units of measurement (hypothetical example: failure to provide a safety guard not more than one inch above a blade). There is also the possibility of claims for damages against HMG from anyone who suffers loss as a result of non-implementation. It is extremely difficult to assess the probability of any of these consequences or to measure the scale of any costs falling on HMG. However the sums involved could be large.

11 An "ad hoc" inter-departmental meeting chaired by the Cabinet Office was held on 27 October to review the options available if generic legislation is ruled out. It was agreed that the only practicable option for amending legislation and other documents with continuing effect conferring official recognition of imperial units would be to institute a rolling programme, prioritised according to the assessed risks, with a target for the amount of legislation and documentation to be covered per annum and a target date for completion. The Cabinet Office will call a further interdepartmental meeting when the Law Officers' advice is available.

12 As DTI has overall responsibility for weights and measures legislation, it will act as a central coordinator of the conversion programme: for example vetting legislation and giving advice on appropriate conversion factors to ensure consistency. It will also keep a central register of "metricated" legislation and advise other departments on interpretation of the Directive.

To Lucy Frances
Company
From D. Anderson
Company
Tel No.
No. of Pages 12

FAX
Post-it™ Fax Note
Ref No: 7888

The problem of private contracts

13 As with previous instruments implementing European requirements to phase out imperial units, the Units of Measurement Regulations recently passed by Parliament provide that in contracts made before 1 October 1995 but performed wholly or partly after that date, any references to imperial units which cease to be authorised after the contract is made are to be read as if the imperial quantity were converted to an equivalent metric quantity. The intention is that contracts which refer to imperial units and which are made but not performed before official recognition of the units ceases should not for that reason be unenforceable. There is no similar provision for contracts made after 1 October 1995. This leaves a doubt about the enforceability of new contracts which refer to imperial units. We are seeking advice from the Law Officers on whether this doubt can be removed and how best to achieve that.

14 If the Law Officers advise that there is an insuperable problem, we should need to consider what action to take to alert business to this risk. This is an urgent matter as there are likely to be contracts made in January 1995 which are now under negotiation and, depending on the Law Officer's advice, there may be a need for firms to reprint standard terms and conditions for use after 1 January 1995.

15 The compliance costs would be high but no detailed estimate is yet available.

16 Even if it proves possible to make special provisions for private contracts which contain references to unauthorised imperial units, such provisions could not apply to contracts entered into by government departments or other official bodies. If such contracts (or associated documents such as specifications) contain measurements in imperial units this would constitute official recognition for these units and so would be incompatible with the Directive

Consumer Affairs Division
Department of Trade and Industry
November 1994

Attachment 2

UNIT OF MEASUREMENT DIRECTIVES: TRANSITIONAL ARRANGEMENTS AND EXEMPTIONS FOR UNITS GOVERNED BY INTERNATIONAL AGREEMENTS

The Directive requires the use of the metric system of measurement except in the following special cases from 1 January 1995.

Units Governed by International Agreements

The nautical mile and knot are to be used for sea and air traffic.

The foot is to be used for aircraft heights.

Discretionary Transitional Provisions

The Directive gives member states discretion:-	UK's exercise of discretion:-
(1) to permit the use of non-metric units of measurement as supplementary indications, until 31 December 1999. The Commission has additionally undertaken to bring forward a proposal to permit the use of supplementary indications in perpetuity.	UK has made imperial supplementary indications mandatory until the end of the transitional periods for certain products (see 3 below); and optional thereafter.
(2) to permit the following imperial measurements to be used in perpetuity: (i) acre for land registration purposes; (ii) troy ounce for transactions in previous metals; (iii) mile, yard, foot, inch for road traffic signs, distance and speed measurement; (iv) pint for draughts beer and cider, and milk in returnable containers.	UK has taken full advantage of this discretion to maintain use of these imperial measures.
(3) to permit the following imperial measurements to be used until 31 December 1999; (i) fathom for marine navigation; (ii) therm for gas supply; (iii) pint and fluid ounce for beer, cider, waters, lemonades and fruit juices in returnable containers; (iv) gill for spirit drinks; (v) ounce and pound for goods sold loose from bulk.	UK has taken full advantage of all these discretions, with the exception of the gill for spirit measures. The gill will not be permitted for use in measuring gin, rum, vodka and whisky for sale on licensed premises after 31 December 1994. It will cease to be authorised for all purposes from 1 October 1995.

Consumer Affairs Division - DTI
November 1994

Attachment 3

METRICATION OF LEGISLATION AND OFFICIAL DOCUMENTS ISSUED AFTER 1 JANUARY 1995

The Units of Measurement Directive, which was adopted by the European Community in 1989, requires member states to use the metric system of measurement and - subject to the special cases of transitional arrangements and exemptions for units governed by international agreements - to cease using the imperial system of measurement by 1 January 1995 for "economic, public health, public safety and administrative purposes". Official bodies should therefore cease giving official recognition to the imperial system of measurement - except in the special cases.

2. Legislation or official documents issued after 1 January 1995 which contain references to imperial units (except in the special cases) would be in breach of the Directive and could result in the legislation being unenforceable and in documents (such as contracts or planning consents) being void. All official bodies should therefore ensure that legislation or official documents which they issue on or after 1 January 1995 do not refer to imperial units of measurement (except in the special cases).

3. It is highly likely that the problems described above also arise to some extent in relation to legislation made before 1 January 1995 and to official documents issued before that date if they purport to have effect after 1 January 1995 and contain unamended references to imperial units of measurement. Urgent consideration is currently being given to this matter and further guidance will be issued as soon as possible.

Consumer Affairs Division
DTI

UNITS OF MEASUREMENT DIRECTIVE

Organisation	Contact
BANK OF ENGLAND	GORDON THOMSON ESQ
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CABINET OFFICE	MR L GRANT
CENTRAL OFFICE OF INFORMATION	STEPHEN PEACE
CENTRAL STATISTICAL OFFICE	THE SECRETARY
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OFFICE OF ELECTRICITY REGULATION	THE DEPUTY DIRECTOR GENERAL
OFFICE OF FAIR TRADING	THE DIRECTOR OF CONSUMER AFFAIRS
OFFICE OF GAS SUPPLY	THE DIRECTOR GENERAL
OFFICE OF HM PAYMASTER GENERAL	THE ASSISTANT PAYMASTER GENERAL
OFFICE OF POPULATION CENSUSES &	THE DIRECTOR
OFFICE OF TELECOMMUNICATIONS	THE DEPUTY DIRECTOR GENERAL
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REGISTERS OF SCOTLAND	A M FALCONER ESQ
REGISTRY OF FRIENDLY SOCIETIES	THE CHIEF REGISTRAR
ROYAL MINT	THE DEPUTY MASTER AND COMPTROLLER
SCOTTISH OFFICE	MS MAUREEN MCGINN
SCOTTISH OFFICE	MS CALLAGAN
SCOTTISH OFFICE	MS BELFALL
SCOTTISH OFFICE AGRICULTURE AND	JOHN BURNS
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SERIOUS FRAUD OFFICE	THE DEPUTY DIRECTOR
TREASURY	MR CASALE
TREASURY, INDUSTRY, AGRIC & EMPLOY	MR GALLAGHER
UKREP	TOM DAVEY
WELSH OFFICE	MS J GORDON

cc PH

Ministry of Agriculture, Fisheries and Food
Whitehall Place, London SW1A 2HH
~~XXXXXXXXXXXXXX~~
071-270 8709/8667

From the Minister's Private Office

Martin Stanley Esq
Principal Private Secretary to the
Rt Hon Peter Lilley MP
Secretary of State for Trade and Industry
1-19 Victoria Street
London
SW1H 0ET

22 April 1991

Dear Martin

HAP

Your Secretary of State sent my Minister a copy of his letter of 27 March on metrication, addressed to the Lord President. My Minister, who is at an Agriculture Council in Luxembourg, has asked me to write indicating that he is content with your Secretary of State's proposals.

I am copying this to Private Secretaries to the Prime Minister, members of the Cabinet and Sir Robin Butler.

Yours sincerely

David Rossington

David Rossington
Principal Private Secretary

10 DOWNING STREET
LONDON SW1A 2AA

From the Private Secretary

2 April 1991

Dear Martin,

The Prime Minister has seen a copy of Mr. Lilley's letter of 27 March to the Lord President about implementation of the EC Units of Measurement Directive.

The Prime Minister is content with Mr. Lilley's proposals.

I am copying this letter to the Private Secretaries to members of the Cabinet and to Sir Robin Butler.

Yours,

Stephen

(J. S. WALL)

Martin Stanley, Esq.,
Department of Trade and Industry.

Ref. Content f/31.3

10 DOWNING STREET

Prime Minister

For once, and largely due to Ian Britton as I recall, the Commission were sensitive to our concerns. We have an indefinite derogation for the most sensitive measures.

Agree with Mr Lilley's proposals (see summary at back)?

[signature]

7/3

The Rt. Hon. Peter Lilley MP

Rt Hon John MacGregor OBE MP
Lord President of the Council
Privy Council Office
68 Whitehall
LONDON
SW1A 2AT

Department of Trade and Industry

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Enquiries
071-215 5000

Telex 8811074/5 DTHQ G
Fax 071-222 2629

Direct line 071-215 5622
Our ref PE3254
Your ref
Date 27 March 1991

Dear John

I am writing to seek your agreement, and that of other Cabinet colleagues, to my proposals for legislation to implement the amended Units of Measurement Directive which was adopted in November 1989 by the EC Council.

The amended Directive sets out the latest dates for ending the use of imperial units for economic, public health, public safety and administrative purposes. It includes the derogations the UK sought following the policy agreed with colleagues in 1988 and also some derogations sought additionally by Ireland. The key question is whether to use all these derogations and whether to use them to the maximum extent.

Nicholas Ridley wrote to you and other Cabinet colleagues on 7 March 1990 to let you know of his intention to carry out a public consultation on implementing the Directive. I have now considered the replies to this exercise which in the event was a low key affair. I have concluded that, with one minor exception, we should use all the derogations to their maximum extent. I attach a summary of my proposals.

The most significant change for consumers and retailers will be in respect of goods sold from bulk. I suspect that there would be considerable opposition from older people to the early abolition of the use of the pound and the ounce for this purpose. Accordingly, I believe that we should announce our intention to delay the phasing out of the use of the pound and the ounce to the end of 1999 (rather than to the end of 1994, the latest date the Directive permits for phasing out imperial units for most other purposes).

dti

the department for Enterprise

The only area in which I do not propose to make maximum use of the derogations is in respect of the gill. I propose that this should be phased out at the end of 1994, rather than waiting until the end of 1999.

The Directive requires that legislation is made by November 1991. Whilst it will be for my Department to amend the Units of Measurement Regulations, the Weights and Measures Act 1985 and the Prices Act 1974, it will be for other Government Departments to bring their individual legislation and administrative provisions into line. My Department circulated guidance to other Departments on this issue last year in a letter dated 11 May. Although powers exist to make the legislation under the negative resolution procedure, Parliament will expect to debate the overall timetable for metrication and I would therefore favour using the affirmative resolution procedure for at least part of my Department's legislation provided that circumstances and pressure on Parliamentary time make this practicable.

It would be helpful if I could have your agreement to these proposals by 19 April. I will assume that copy recipients are content unless I hear to the contrary by that date.

I am copying this letter to the Prime Minister, members of the Cabinet and Sir Robin Butler.

Yours ever

Peter

Recycled Paper

SUMMARY OF PROPOSALS FOR IMPLEMENTING AMENDED EC UNITS OF MEASUREMENT DIRECTIVE

Permit the continued use, without time limit, of

a) the mile, yard, foot and inch for road traffic signs and related distance and speed measurements;

b) the pint for dispensing draught beer and cider on licensed premises and for milk in returnable containers; and

c) the troy ounce for transactions in precious metals.

d) the acre for land registration *

Require the phasing out, by the end of 1999, of

a) the pound and ounce for goods sold loose in bulk *

b) the pint and fluid ounce for beer, cider, waters, lemonades and fruit juices in returnable containers;

c) the fathom for marine navigation; and

d) the therm for gas supply.

Require the phasing out, by the end of 1994, of

all other imperial units used for economic, public health, public safety and administrative purposes.

* Derogations sought additionally by Ireland

SC4219p

cc PM

The Rt Hon Nicholas Ridley MP
Secretary of State for
Trade and Industry
Department of Trade and Industry
1-19 Victoria Street
London
SW1H 0ET

Richmond House
79 Whitehall
London SW1A 2NS
Telephone 01 210 3000
From the Secretary of State for Health

06 APR 1990

Dear Nick, cleared

Thank you for the copy of your letter to Sir Geoffrey Howe of 7 March and its enclosed draft consultation paper about the implementation of the amended Units of Measurement Directive on metrication recently adopted by the EC Council.

In principle I support the line you propose of using to the full any easements which allow retention of imperial units where this can be done without giving rise to unnecessary confusion. Our particular interest is in retaining for as long as possible the units of measurement for blood measure; the widely used (and non-imperial!) "millimetres of mercury" rather than the international unit which is intended to replace it.

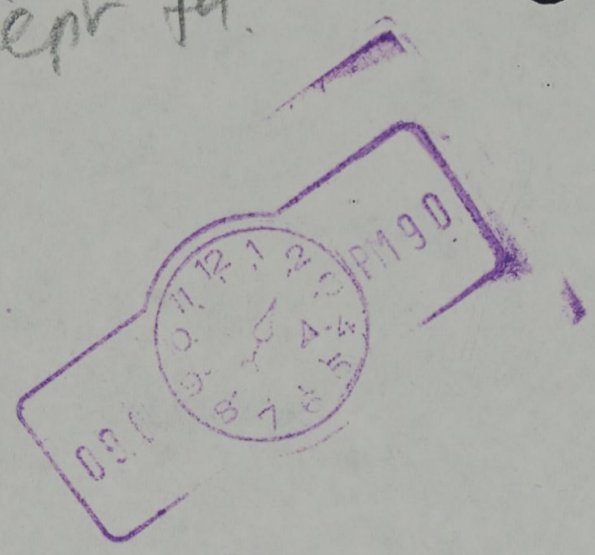
I am copying this letter to the Prime Minister, members of the Cabinet and Sir Robin Butler.

Yours ever,

KENNETH CLARKE

WEIGHTS & MEASURES: Metrication

Sept 79.



dti

the department for Enterprise

The Rt. Hon. Nicholas Ridley MP
Secretary of State for Trade and Industry

Rt Hon Sir Geoffrey Howe QC MP
Lord President of the Council
Privy Council Office
68 Whitehall
LONDON
SW1A 2AT

Department of
Trade and Industry

1-19 Victoria Street
London SW1H 0ET

Enquiries
01-215 5000
Telex 8811074/5 DTHQ G
Fax 01-222 2629

Direct line 01 215 5623
Our ref JW5AHU
Your ref
Date 7 March 1990

Dear Geoffrey

I am writing to inform you and other Cabinet colleagues of my intention to carry out shortly a public consultation on implementing the amended Units of Measurement Directive on metrication which was recently adopted by the EC Council. The amended Directive contains the derogations which we sought following the policy agreed by colleagues in 1988 on the latest dates for ending the use of imperial units for economic, public health, public safety and administrative purposes. The Government is required to carry out the requisite change to legislation by November 1991 although the changes will not be required to come into operation until the end of the transitional periods in the Directive. This Department will need to amend the Units of Measurement Regulations, the Weights and Measures Act 1985 (and Orders and Regulations made under this Act) and the Prices Act 1974. We are writing to all other Government Departments to inform them of the need to bring their legislative and administrative provisions into line.

A copy of our draft consultation paper is attached. The Directive's provisions on the dates for ending the use of imperial units are set out in paragraph 5 of the paper. The principal questions are about the extent to which the UK should take advantage of:

a the right to retain permanently certain imperial units for specified end uses;

b the extended transitional periods until the end of 1999 where these are permitted (notably the pound and ounce for goods sold loose from bulk ie goods weighed out for sale in the presence of the customer);

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the department for Enterprise

c the general transitional period until 31 December 1994 for all remaining purposes.

The response to the consultation exercise which we undertook in 1988 was generally low key and there was majority support for the transitional arrangements we then proposed. The proposed arrangements were subsequently incorporated into the Directive but Ireland obtained a small number of additional derogations, the most notable of which was for phasing out the pound and the ounce for goods sold loose in bulk by 1999 rather than by 1994.

The draft paper sets out the principal options without taking a strong line between them. The main exception to this is in stating that wherever the Directive gives a right to retain the use of an imperial unit without time limit we intend to make full use of that right. The main change to affect consumers and retailers will be for goods sold loose from bulk. The paper suggests that it would probably minimise the risk of confusion if the use of imperial units for this purpose were ended in 1994 - the date for ending the use of imperial units for most other purposes. This should give the traders concerned a reasonable time to prepare for metrication and to sort out most practical problems.

We propose, in conjunction with representative bodies, to work up a programme of publicity and guidance to facilitate the remaining stages of metrication. The programme would be aimed at identifying specific problems which are likely to arise on metrication and the action which needs to be taken to remedy these. Francis Maude's statement in our earlier consultative document indicated that consumers would be helped by conversion charts and dual price marking in shops. We also have in mind to undertake a limited amount of advertising and to circulate brochures to the public and to traders. However, the emphasis will be on making the maximum use of trade and consumer bodies to promote awareness and to give advice to their members.

I am copying this letter to the Prime Minister, members of the Cabinet and Sir Robin Butler.

Recycled Paper

OLD.001

DRAFT

CONSULTATION PAPER - METRICATION: IMPLEMENTATION OF UNITS OF MEASUREMENT DIRECTIVE

PURPOSE

The purpose of this paper is to seek views on the extent to which the Government should take advantage of the transitional arrangements for phasing out imperial units as set out in the amended EC Units of Measurements Directive which was adopted at the end of last year.

BACKGROUND

2. The Department consulted widely in October 1988 about proposals by the European Commission to extend the use of metric units. These proposals have now been incorporated into the amended Units of Measurements Directive broadly along the lines sought by most consultees and the UK Government. As amended, the Directive now sets out the latest dates permitted for phasing out imperial units for economic, public health, public safety and administrative purposes. As a result, legislation authorising use of imperial units for these purposes will need to be amended.

3. Metric unit have long been legal for most purposes in the

UK. Manufacturing industry has already adopted the metric system to a very considerable extent and there has also been considerable metrication in the retail sector. Metric units are already in widespread use for the sale of petrol, do-it-yourself supplies and for most pre-packed foodstuffs and non-food household products. There are still several areas however where the imperial system is still almost exclusively used, most notably fresh foods and drink weighed or measured for sale in the presence of the customer.

4. After metrication (ie. when the amending Directive's provisions have been brought into effect) if goods are sold by reference to a unit of measurement, for instance by weight, metric units will have to be used. While transactions will have to be undertaken by reference to metric and not to imperial units, the Government does not propose to prohibit the disclosure of the imperial equivalents of metric units as supplementary information. Under the EC Price Marking Directive (which the UK is required to bring into effect later this year) goods sold loose from bulk and random quantity pre-packed goods will be required to be unit priced. The consultation document issued by the Department in relation to implementing the Price Marking Directive has proposed that, up to the date of metrication, unit pricing would be permitted to be either in imperial units or in metric units. However, for food, the imperial equivalent would have to be shown when metric unit prices are used. After metrication all unit prices would have to be shown by reference to metric units (although again a supplementary indication of the imperial

equivalent would not be prohibited). There would also no longer be a requirement to disclose the imperial equivalent of metric unit prices for food.

5. The amended Directive provides as follows for ending the use of imperial units:

a) for most purposes it sets the latest date as 31 December 1994;

b) it sets an extended transitional period until at the latest the end of 1999 for:

- the pound and the ounce for goods sold loose from bulk (ie. goods weighed for sale in the presence of the customer);

- the gill for dispensing spirits on licensed premises (see para 12)

- the pint and fluid ounce for beer, cider, waters, lemonades and fruit juices in returnable containers;

- the fathom for marine navigation; and

- the therm for gas supply.

c) it permits the retention, without time limit, of:

- the mile, yard, foot and inch for road traffic signs and related distance and speed measurements;

- the pint for dispensing draught beer and cider on licensed premises and for milk in returnable containers;

- the troy ounce for transactions in precious metals; and

- the acre for land registration.

VIEWS SOUGHT

6. The Government would welcome views on taking advantage of:

a) the right to retain, without time limit, imperial units for specified uses where these are permitted;

b) the extended transitional period until the end of 1999 for ending the use of imperial units for specified purposes where these are permitted;

c) the general transitional period until the end of 1994 for ending the use of other imperial units.

7. It would be helpful to have comments on the options set out in the following paragraphs and in particular on the costs and benefits to consumers, traders and manufacturers including:

a) the impact on price transparency for consumers (Except in the case mentioned in para 4 there is no intention to require that price indications based on metric units should be accompanied by price indications based on imperial units. However consumers who wish to compare metric with imperial prices should be able to do this using conversion charts).

b) the extent to which existing measuring/weighing equipment or packaging material will need to be replaced or modified before the end of its useful life and the cost of this.

c) the extent to which it is anticipated that particular industries and trades will need to manufacture and/or sell simaltaneously in the two systems of measurement and the costs of this.

Right to retain imperial units without time limit

8. In negotiations on the amendment Directive, the Government sought the right to continue to allow the use of imperial units without time limit set out in paragraph 5c (except for the acre for land registration which was included at the request of Ireland) as such uses are largely domestic to the UK with a strong tradition attached to the employment of these units. In the case of precious metals the troy ounce is an international unit. Subject to consultees' views, the Government would propose to exercise the right it sought in these negotiations ie to continue to allow imperial units to be used for these purposes without time limit. Comments are also invited on whether to allow use of the acre for land registration to continue without time limit.

Extended transitional period until end of 1999

9. The main options for the use of imperial units which have an extended transitional period until the end of 1999, are: [A] to take full advantage of the transitional period or [B] to end their use earlier either by, say, (i) the end of 1992 or (ii) the end of 1994. Consultees' comments on these options would be welcomed.

10. In negotiations on the amendment Directive, the UK sought an extended transitional period for (i) the pint and the fluid ounce for drinks in returnable containers

(ii) the fathom for marine navigation and (iii) the therm for gas supply. There are strong arguments for allowing the use of imperial units in these categories until the end of 1999.

11. The UK did not seek an extended transitional period for the pound and ounce for goods sold loose from bulk. This was requested by Ireland. Ending the use of imperial units for weighing out goods from bulk will involve compliance costs for retailers as they will have either to change or modify their weighing machines. It is also likely to be the main change to affect consumers. It would minimise the risk of confusion if the transitional period for this purpose is the same as for the generality of other purposes except those set out in 5b and 5c.

12. The ending of the use of the gill for dispensing gin, rum, vodka and whisky is the subject of separate consultation.

General transitional period until end of 1994

13. This applies to the use of imperial units for all economic, public health, public safety and administrative purposes except as set out in paragraphs 5b and 5c. The main options are: [A] to take the maximum advantage of the time allowed under the transitional period or [B] to phase out earlier, say, by the end of 1992.

Comments

14. Comments should be addressed to Peter Brower, Consumer Affairs Division, Department of Trade and Industry, Room 504, 10-18 Victoria Street, London SW1H 0NN to arrive no later than March. Any telephone enquiries should be addressed to Sarah Mitchener (01 215 3261)

CONSUMER AFFAIRS DIVISION

DEPARTMENT OF TRADE AND INDUSTRY

FEBRUARY 1990

EXAM (87)
CCPU.

10 DOWNING STREET

LONDON SW1A 2AA

From the Private Secretary

21 June 1989

Dear Gareth,

NATIONAL MEASUREMENT SYSTEM

The Prime Minister has seen your Secretary of State's minute of 12 June and Mr Lamont's letter of 19 June. She is content for the Secretary of State to publish the draft document attached to his minute on 4 July.

I am copying this letter to Duncan Sparkes (Treasury), Keith Davies (Welsh Office), John Colston (Ministry of Defence), Stephen Pope (Northern Ireland Office), Kate Bush (Department of the Environment) John Ratcliff (Department of Education and Science), Debbie Haine (Ministry of Agriculture, Fisheries and Food), Uriel Jamieson (Scottish Office), Katherine Orrell (Department of Transport), Flora Goldhill (Department of Health), David Murphy (Department of Energy) and Steven Flanagan (Treasury).

Yours sincerely,

Caroline Slocock

CAROLINE SLOCOCK

Gareth Jones, Esq.,
Department of Trade and Industry

(1)

PRIME MINISTER

NATIONAL MEASUREMENT SYSTEM

Lord Young in the attached minute seeks your agreement to publish on 4 July a White Paper on the National Measurement System.

The main points of substance it covers are measures to strengthen first European collaboration; and a special effort to improve chemical measurement in the United Kingdom and harmonisation of analysis in Europe. Lord Young assures you that the White Paper is relatively uncontroversial.

Only Norman Lamont has yet commented on the proposal. His only point is that he wonders whether it warrants White Paper status. As Lord Young makes clear in his minute, the decision to publish a White Paper on this subject flowed from a scrutiny review. I think the document is rather short on substance but this is an important area for industry and it may well merit a White Paper. I suggest that you agree to Lord Young publishing the draft document attached to this minute and leave the question of its format up to him.

Do you agree to:

- Lord Young publishing the document on 4 July? Yes

- leaving the form in which it is published open? Yes

CAROLINE SLOCOCK
20 June 1989

DS2ARF

Lamont/vj1.16.6

FINANCIAL SECRETARY TO THE TREASURY

Treasury Chambers, Parliament Street, SW1P 3AG

The Rt Hon Lord Young of Graffham
Secretary of State for Trade & Industry
1-19 Victoria Street
LONDON
SW1H OET

19th June 1989

Dear David

DRAFT WHITE PAPER ON THE NATIONAL MEASUREMENT SYSTEM WITH PG?

Thank you for sending a copy of your minute of ~~12~~ June to the Prime Minister. The draft White Paper is a generally helpful statement of policy and I have no comment on it. However, much for the material it contains is largely descriptive and the proposals for amending the 1985 Weights and Measures Act have already been announced. I wonder therefore, whether it warrants White Paper status.

I am copying this letter to the Prime Minister, Nigel Lawson, Peter Walker, George Younger, Tom King, Nicholas Ridley, Kenneth Baker, John MacGregor, Malcolm Rifkind, Paul Channon, Kenneth Clarke and Cecil Parkinson.

NORMAN LAMONT

dti

the department for Enterprise

PRIME MINISTER

My Department has prepared a draft White Paper on the National Measurement System which, with your agreement and that of colleagues, I intend to publish on the 4 July. I enclose a draft text and a summary. The draft has been agreed between officials responsible for standards and accreditation policy in other Departments and is relatively uncontroversial.

The National Measurement System is the technical and administrative arrangement whereby a coherent set of units of measurement exist in the UK, harmonised with those abroad. My Department spends approximately £26M net per annum on ensuring that the necessary measurement standards and infrastructure is in place. This expenditure is principally at our own research establishments. Following a scrutiny review of this expenditure in 1987 changes were introduced and it was recommended that a White Paper be published which would set out the Government's role and emphasizing the importance of measurements in industry, trade, health and safety, making the link with innovation and quality and promoting accreditation.

I now see the White Paper as providing:-

(i) a clear statement of Government policy that will help provide the framework for work on national measurement standards undertaken my research establishments as they become Next Steps Agencies;

(ii) tells business about the importance of using the component parts of the National Measurement System when making measurements and tests. This message will be emphasized in separate material to be published at the same time as the White Paper;

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(iii) emphasizes the importance of agreed international measurement standards and explains measures we are taking to further strengthen European collaboration in this;

(iv) announces a special effort to improve the quality of chemical measurement in the UK and to achieve harmonisation of analysis within Europe.

The National Measurement System is, I believe, an example of a successful partnership between Government and private enterprise. We maintain the national measurement standards and provide the essential measurement services which enable private sector organisations to compete for business in the market-place. The White Paper sets out a policy that will ensure the future success of this partnership.

I am copying this letter to Nigel Lawson, Peter Walker, George Younger, Tom King, Nicholas Ridley, Kenneth Baker, John MacGregor, Malcolm Rifkind, Paul Channon, Kenneth Clarke and Cecil Parkinson.

D Y

12 June 1989

DEPARTMENT OF TRADE AND INDUSTRY

the Enterprise initiative

PB6AKK

CONFIDENTIAL

DRAFT WHITE PAPER: THE NATIONAL MEASUREMENT SYSTEM

Alternative Titles

MEASURING UP TO THE COMPETITION

or

MEASURING INTO THE FUTURE

Department of Trade and Industry

National Measurement System Policy Unit

Room 256

Ashdown House

123 Victoria Street

London

SW1E 6RB

MAY 1989

1 INTRODUCTION

1.1 The objective of the DTI, the department for enterprise, is to work with business to promote best practice and within Government to create by a climate that stimulates enterprise and reduces red tape. Business flourishes in a competitive and open economy and the Department aims to secure this at home and abroad. A system of measurement in which all users can have confidence is an essential part of the climate which business needs. Reliable measurement assists customers to purchase goods with confidence. It helps companies to compete for business on a fair basis and to understand the customer's requirement. It helps to improve the quality of products. DTI's objectives also include promoting the growth of international trade and working towards a single market within the European Community. Measurement needs to be an international language, clearly understood worldwide, so that trade can flow and wealth can be created whilst also ensuring that customers are afforded a fair level of protection.

1.2 Measurement also supports many other activities of Government, from defence procurement to health care, from revenue collection to environmental monitoring. Without accurate measurement aircraft could not fly safely, it would not be possible to diagnose or treat illnesses appropriately, the quality of food and drinking water could not be monitored and the workplace would be less safe. It is impossible to quantify precisely the amount of economic activity concerned with or dependent upon measurement in the UK, but the existence of a modern society without the ability to measure is unthinkable.

1.3 That everybody should have confidence in the accuracy of the measurements they make is of paramount importance. In the UK it is the National Measurement System (NMS) which underpins this confidence. The NMS, whose structure is described in chapter 2, provides a coherent, formal system which ensures that measurements can be made on a consistent basis throughout the country. It is closely coordinated with the measurement systems of our major trading partners in Europe and elsewhere. The Government believes that the NMS is an essential national resource, a fine example of cooperation between Government and the private sector to provide a service which is of benefit to the whole community.

1.4 The NMS works well, but it needs to respond to new opportunities. The completion of the European Community's single market by the end of 1992 will have a profound effect upon the UK. This White Paper sets out, in chapter 3, measures which are intended to contribute to the development of a more coordinated system of measurement in Europe. As society becomes more technically sophisticated and industry more aware of the importance of quality, so new demands for measurement standards and calibration facilities arise. Chapters 4 and 5 describe ways in which the resources of Government and industry can be used together to meet these demands. Each has its role to play and benefits from the other's involvement. Particular issues and challenges in the areas of legal metrology and analytical measurements are addressed in chapters 6 and 7.

1.5 In total the White Paper aims to give a clear statement of Government policy across the whole of the National Measurement System and to set the framework for its development into the 21st century. In doing so, it should also help to bring about greater public awareness of the NMS and of its value to industry, society and the economy.

2 THE STRUCTURE OF THE NMS AND ITS IMPORTANCE TO THE UK

Structure of the NMS

2.1 The NMS is the technical and organisational infrastructure which ensures a consistent and internationally recognised basis for measurement in the UK. It has two central objectives:

i. To enable individuals and organisations in the UK to make measurements competently and accurately and to demonstrate the validity of such measurements

ii. To co-ordinate the UK's measurement system with the measurement systems of other countries.

Much of the NMS framework and the work associated with maintaining it rests with its users. The Government and a number of specialist organisations provide the necessary co-ordination and regulation together with a range of services which form the core of the system.

2.2 At the heart of the NMS lie physical measurement standards* which are realised in accordance with the internationally recognised definitions of the International System of Units or SI.

*Definitions of metrological terms are given in the International Vocabulary of Metrology published by the International Standards Organisation and in British Standard BS 5233:1986. Definitions of the terms /in italics/ /underlined/ in this paper, reproduced from BS 5233:1986, are in the glossary on page .

Seven base units* form the cornerstone of the SI. There are numerous further units, known as derived units, which are defined in terms of one or more of the base units. Imperial units used in the UK for the measurement of length and mass are defined in the Weights and Measures Act 1985 and in subordinate regulations in terms of their metric (SI) counterparts. For example, one yard is equivalent to 0.9144 metre.

2.3 For each unit of measurement disseminated through the NMS there is a primary standard recognised as the UK national standard. This is linked by means of comparison ("calibration") through an unbroken chain of reference standards to the working standards for day-to-day use. Measurement standards provide the basis for accurate and consistent measurement in many different areas. This ability to relate an individual measurement back via successive calibrations to the national standard using recognised measurement techniques and methods is known as "traceability" and is the principle on which the integrity of the NMS is founded.

* The seven base units are the metre (length), the kilogram (mass), the second (time), the ampere (electric current), the Kelvin (thermodynamic temperature), the mole (amount of substance) and the candela (luminous intensity).

2.4 The National Physical Laboratory (NPL), a DTI research establishment, plays a central role in the organisational structure of the NMS. Its principal task is to develop and disseminate national measurement standards and the majority of its resources are devoted to this. As the UK's primary centre of metrological expertise, NPL is also required to designate the national standards for those units held at other locations in the UK and to make this information readily available to users of the NMS. For example, the national measurement standards for flow measurement, which are of particular importance to the oil, gas and water industries, are concentrated in the specialist facilities of the National Engineering Laboratory (NEL). Under a collaborative agreement between 17 European countries (see para 3.5-3.9 on EUROMET) it is envisaged that an increasing number of reference standards will be traceable to primary standards held at national laboratories in other countries. Reciprocal arrangements of this type, some involving the UK, have now been concluded, and it is expected that others will follow.

2.5 Calibration and testing laboratories, particularly those which have been accredited by the National Measurement Accreditation Service (NAMAS) play a vital part in the NMS. NAMAS accredited laboratories, some 90% of which are in the private sector, provide a service to a wide range of customers in British industry and they constitute the main channel for the dissemination of measurement standards. As well as their role in the dissemination of measurement standards, NAMAS accrediation also covers a broad spectrum of testing activities from chemical analysis to environmental testing and from software to safety

appliance testing. Accreditation is a sound indicator of a laboratory's competence to perform specified types of calibration or testing work.

2.6 The focus of the legal metrology sector (primarily concerned with the determination of weight or quantity for trading purposes) is the National Weights and Measures Laboratory (NWML). Under the provisions of the Weights and Measures Act (1985) NWML, which forms part of DTI, holds reference standards for mass, length and capacity which are used for calibrating the standards maintained by local authority Trading Standards Departments (TSDs). To underline the important part played by legal metrology in the NMS, the testing and calibration facilities of NWML are being progressively accredited by NAMAS. (Legal metrology is discussed in greater detail in chapter 6).

2.7 The legal units of measurement used in the construction and use of measuring instruments and in the indication of quantity for economic, public health, public safety or administrative purposes are set out in the Units of Measurement Regulations 1986 (SI 1986/1082) which implement the 1979 Units of Measurement Directive (80/181/EEC), as amended. The European Commission has made proposals to amend this Directive which would allow the continued use of the pint for the sale of draught beer and cider and for milk in returnable containers; the mile for road transport purposes; the acre for land measurement; and the troy ounce for bullion dealing. The proposals would also allow the use, until 1999, of the fathom, therm, the pint and fluid ounce for the sale of drinks (other than milk) in returnable bottles, the gill for dispensing spirits and the pound and ounce for over the counter sales of goods sold loose from bulk. The use of all other non-

metric units would be phased out by the end of 1994. The Government believes these proposals provide adequate transitional periods to enable business to adapt in an orderly manner without incurring freedom to operate efficiently in the Single Market. The proposed time-table will also allow consumers to become used to the new measurements. The Government is committed to ensuring that information on metric units is widely available to business and the general public.

2.8 The analytical measurement system, which allows the determination of the chemical composition of a material, is related to the physical measurement standards through a hierarchy of analytical methods supported by reference materials of known composition. The main focus for analytical measurement within Government is the Laboratory of the Government Chemist (LGC) - a DTI research establishment. The Secretary of State for Trade and Industry has a statutory responsibility for analytical measurement through the legal obligations placed upon the Government Chemist by a number of Acts of Parliament. At present the Government Chemist has formally defined functions under twenty-two Acts of Parliament. These define explicit or implicit obligations where the Government Chemist may be called upon to exercise a Referee Function*, act as Authorised or Approved Analyst, or to act as an Analyst Designated by Departmental Instruction. The Government believes that this

* Certain Acts require the division of prosecution samples into three parts; in the event of a dispute regarding the analysis the Court may require the Government Chemist to analyse the third portion and provide a certificate.

role is an essential component of statutory analytical measurement in the UK and will, from time to time, amend the duties placed upon the Government Chemist to reflect changes in the needs of Government. There are also specialised services throughout Government Departments and the system relies heavily on the collaborative efforts of the users themselves. (Proposals for the future of analytical measurement are set out in Chapter 7).

The Importance of the NMS to the UK

2.9 Who uses the NMS? The short answer is that, directly or indirectly, we all do. Each measurement made is expressed in terms of a unit, and the standards for these units form the core of the NMS. In many cases of day-to-day measurement the accuracy required is modest and the user need not be unduly concerned with the links back to these measurement standards. However, the role of the NMS is no less important for the fact that its influence goes largely unseen, and the implicit confidence felt by the public in the many measurements they make in daily life is perhaps a testimony to its effectiveness.

2.10 For many groups, however, traceable measurement, where the formal links back to the NMS are clearly demonstrable, assumes considerable importance. The existence of a comprehensive measurement infrastructure is a precondition for the competitiveness of a modern industrialised economy. These links between the NMS and competitiveness are most clearly seen in the context of three areas of Government concern:

(i) the facilitation of free and open trade, (ii) encouraging innovation and the spread of new technology and (iii) the promotion of quality.

- Trade

2.11 Agreement on measurement is essential for the conduct of international trade. For example, a metre in London must be accepted as equal not only to a metre in Glasgow but also to a metre in Brussels, Bonn or Beijing. Where agreement exists, transactions can be carried out across national frontiers on a uniform and equitable basis. In the absence of agreement, trade is likely to be impeded.

2.12 For over 100 years a framework for intergovernmental agreement on the uniformity of physical measurements has been provided by the Metre Convention of 1875. All major industrialised nations are signatories to the agreement. Through its constituent institutions, the General Conference on Weights and Measures (CGPM) and the International Bureau of Weights and Measures (BIPM), it provides a forum for multilateral discussion and agreement on all aspects of physical measurement. The CGPM has responsibility for the promulgation of SI which has gained acceptance worldwide as the basis for measurement in scientific, industrial and many other branches of human activity. It also directs the programme of work carried out by BIPM in collaboration with national laboratories to enhance worldwide uniformity and precision of measurement. The Government endorses this approach to ensuring a common basis for

measurement, which proceeds by means of consensus and collaborative effort, and believes it has proved successful in its central objective of minimising the barriers to trade arising from the definition of units of measurement and their realisation.

2.13 In addition to the international agreements on the units of measurement the UK has sought agreements in the areas of calibration and testing. Mutual recognition agreements betweeen NAMAS and accreditation organisations overseas can contribute to the elimination of technical barriers to UK goods in the European Community and other markets. Such agreements aim to ensure that a NAMAS certificate will be recognised as equivalent to a certificate issued by an accredited laboratory in the other country, thus removing the need for retesting or recalibration. The Government welcomes progress from bilateral to multilateral mutual recognition agreements such as that recently signed between six national calibration services in Western Europe (see paragraph 3.4). It looks forward to such agreements covering as many as possible of the national testing and calibration services of our major trading partners. Such agreements assist business when they are well known and their provisions understood. The Government, therefore, intends that more effort should be devoted to publicising, monitoring and ensuring their effectiveness.

2.14 In many countries the measurement infrastructure is at an early stage of development. The UK has been involved in assisting a number of such countries through the provision of expertise and

services. RESOURCE, an organisation sponsored jointly by DTI and the British Standards Institution (BSI), was launched in April 1987 to establish and co-ordinate cooperation in a number of areas including standards, measurement, testing and accreditation.

- Innovation

2.15 Measurement standards and associated measurement methods and techniques are of considerable importance in the innovatory process. In areas such as electronic materials, optics, ultra-high precision machining and ceramics where measurements of unprecedented accuracy are required the absence of adequate measurement standards and methods can pose a significant barrier to innovation. As well as links to state-of-the-art technology, measurement standards also assist those undertaking basic research in academic institutions. The Government is committed to ensuring that industry has access to the new measurement standards and associated technology which are developed in its own research establishments.

2.16 DTI's innovation policy set out in the 1988 White Paper "DTI - the department for Enterprise" (Cm 278) aims to encourage companies to increase their investment in R&D and to collaborate on the research which is necessary before commercial applications can be developed. The Government's commitment to encourage and finance collaborative research in the field of measurement is illustrated by its support for two programmes under the LINK initiative for pre-competitive but industrially relevant research, one on nanotechnology - the subject of manufacturing and measuring to tolerances between about 1 and 100 nanometres - and the other on industrial measurement systems.

- Quality

2.17 The 1982 White Paper "Standards, Quality and International Competitiveness" (Cmnd 8621) set out "the Government's determination to enhance the status of standards and quality assurance in the UK in order to increase the efficiency of British industry and thereby strengthen its international competitiveness". It stressed the importance of a more systematic approach to quality, which has been increasingly recognised by industry. Government has encouraged companies to demonstrate their quality achievements by obtaining certification to the national standard for quality systems BS 5750 (equivalent to EN 29000 and ISO 9002 at the European and international levels), and has assisted the expanding range of certification schemes operating in the UK.

2.18 One of the determinants of quality is the ability to confidently and consistantly make measurements to the required accuracy. Measurement standards and associated measuring techniques provided the basis for attaining the desired levels of precision in the design, manufacture and testing of products. Proper attention to the principles of metrology and their application in the workplace is an essential element in the management of quality. Specification standards, such as the voluntary, approved standards prepared and published in the UK by the British Standards Institution (BSI) and by European and International standards bodies* also play an important role in achieving product quality. Reference to measurement will be

* European Committee for Standardisation (CEN), European Committee for Electrotechnical Standardisation (CENELEC), International Organisation for Standardisation (ISO) and International Electrotechnical Committee (IEC).

included in the detail of some of these and accurate measurement will be needed in using others. In both cases traceability to national measurement standards is necessary as part of the management of quality.

2.19 Considerable progress has been made since 1982 in creating greater awareness of the measurement services available to industry to assist in the drive for quality. The role of NAMAS has been central to this process. The Government has sought to integrate NAMAS more closely into the formal mechanisms for quality assurance in the UK. Agreements between NAMAS and certain certification bodies (BSI.QAS and Lloyds Register Quality Assurance Ltd) have clarified the relationship between these organisations and their responsibilities in the area of laboratory accreditation. They also drew attention to the benefits which NAMAS accreditation offers to companies seeking assessment to BS5750/ISO9000. It is intended that these should set the pattern for similar agreements with other third party quality systems assessment organisations.

2.20 The role of NAMAS has also been given formal recognition by the National Accreditation Council for Certification Bodies (NACCB). NACCB was set up in 1985 with the objective of enhancing the status and authority of UK certification bodies by ensuring rigorous and consistent standards in this area. It also aims to encourage the development of internationally harmonised accreditation arrangements for certification bodies. NACCB criteria, which have been drawn up in the context of recognised

European and international criteria, specify that NAMAS accredited testing facilities, or facilities which meet the same standard, should be used by all product certification and product approval bodies seeking NACCB recognition.

2.21 The Government welcomes these developments which bring greater recognition to the importance of competence in measurement and testing as part of a company's approach to quality. They are important contributions to better coordination between the NMS and the quality infrastructures in the UK.

3 EUROPE

3.1 The objective of a single European market by the end of 1992 has major implications for the measurement infrastructure throughout the European Community. To create a single market embracing twelve countries will require a high level of confidence in the measurement capability of all the EC states. An agreed approach will be needed to overcome the barriers to trade caused by retesting and recertification as products pass between Member States. At the level of national measurement standards there is also the need, as 1992 approaches, for greater co-ordination and collaboration between the measurement systems and practice of individual Member States. The following paragraphs give details of three ways in which the Government intends to pursue this objective, a European Calibration and Testing Policy, "EUROMET" and through the European Community programme for research and technical development.

- European Testing and Calibration Policy

3.2 The formulation of a European policy on testing and calibration is vital to the completion of the single European market. Requirements for the re-testing of products as they cross national frontiers are time-consuming and frequently costly to industry. To remedy this, measures are necessary to help generate mutual confidence between Member States in their partners' testing and calibration arrangements. This forms part of a broader strategy to eliminate technical barriers to trade in Europe resulting from differences in national practice on specification standards, certification and testing.

3.3 The Government believes that national laboratory accreditation schemes such as NAMAS offer an effective means of ensuring uniform level of laboratory competence across Europe without imposing unnecessary additional burdens on industry. NAMAS is recognised internationally as a leader among accreditation schemes for testing and calibration laboratories and has provided an influential model for similar schemes being established in other European countries. Formal mutual recognition agreements now exist between NAMAS and a number of its counterparts in other Member States recognising the equivalence of test and/or calibration certificates issued by accredited laboratories (see paragraph 2.13).

3.4 The UK has also participated actively in negotiations leading to the formulation of European specifications for testing laboratories and accreditation bodies now published as the EN 45000 series of documents. These documents set out guidelines to be followed in the operation and assessment of testing laboratories and for the organisation of accreditation schemes which should facilitate the establishment of laboratory accreditation in those Member States where there is currently no national scheme. Conformance to these specifications could then form the basis for a comprehensive network of mutual recognition agreements within the Community which the Government regards as a valuable contribution to the elimination of barriers to Community trade. A Multilateral mutual recognition agreement exists between those national calibration laboratory accreditation services which form the Western European Calibration Co-operation (WECC) and which meet

the requirements of the EN45000 series. The agreement recognises the equivalence of the calibration certificates issued by the laboratories belonging to the national services and commits WECC Members to promoting the wide acceptance of such certificates in their own countries. At present the agreement covers the national services of the UK, France, Federal Republic of Germany, Italy, Netherlands and Sweden but can be extended to other EC and EFTA Countries.

- EUROMET

3.5 The UK, with France and West Germany, launched an initiative for European collaboration on measurement in 1986. This led to the signing of the EUROMET Memorandum of Understanding which came into force on 1 January 1988. Membership of EUROMET is open to national metrology institutes, that is the organisations principally responsible for national measurement standards, of the countries belonging to the European Community and EFTA. With the exception of Iceland all have joined. The European Commission is also a member.

3.6 The objective of EUROMET is to promote the co-ordination of metrological activities and services with the purpose of achieving higher efficiency. Within the existing decentralised structure based on national metrology institutes, EUROMET will seek to optimise the utilisation of resources and services. It will work to improve measurement services in Europe and that, along with national facilities developed through EUROMET collaboration, they are accessible to all members.

3.7 Three main types of collaborative activity are envisaged through EUROMET:

(i) Common Measurement Standards

EUROMET offers its members the possibility of maintaining measurement standards on a common basis. Under this arrangement one national laboratory could hold the primary standard and provide access to it for other members. Where the UK participates in such arrangements with overseas laboratories it is intended that the primary standard should be formally recognised as the UK national standard for traceability purposes.

(ii) Facilities

From time to time investment in major specialist facilities for measurement standards work can involve considerable expenditure. Through EUROMET, organisations considering major capital investment programmes can explore the possibility of shared provision.

(iii) Research

EUROMET provides for the establishment of coordinated research programmes which may be undertaken at a single site or progressed concurrently at a number of laboratories. EUROMET will also encourage the sharing of results and information arising from national research projects between members.

3.8 The UK is playing an active role in the development of EUROMET. The Government believes that collaboration can help to reinforce the existing strengths of the UK's own measurement system whilst allowing improved access to European facilities and expertise in other areas. Collaboration depends, however, on the

ability to reciprocate, and the Government recognises that a strong overall national measurement capability is essential if the UK is to derive full advantage from EUROMET. Collaboration through EUROMET should also enhance the total European measurement capability and encourage the growth of greater mutual confidence among European countries. In this way EUROMET can make an important contribution to the development of systematic, fully-coordinated measurement arrangements across Western Europe.

3.9 A proposal to establish an agreement for European collaboration in the area of analytical measurement is outlined in chapter 7.

- European Community Programmes

3.10 Within the European Communities Framework Programme for Research and Technology Development it is the Community Bureau of Reference (BCR) that is most concerned with the national measurement systems in member States. The objective of the programme is to improve the reliability of chemical analysis and physical measurement so as to achieve agreement of results throughout the Community. In the field of chemical analysis BCR supports an extensive collaborative programme, particularly for the certification of natural matrix reference materials. It has also organised intercomparisons of measurement standards between member states, aiming to identify and eliminate systematic errors in their realisation and dissemination. The Commission, through BCR, is a member of EUROMET and it is intended that the work of these two programmes complement each other. Similarly it is hoped that BCR will participate fully in the proposed European collaboration on analytical measurements, (see paragraph 7.9).

3.11 Increasingly, the BCR programme is supporting collaborative projects aimed at solving problems found in implementing the specifications used for the testing of products in different member states. These projects frequently involve the participation of industry as well as government laboratories and this trend is welcomed. The Government considers that the work of BCR makes a valuable contribution to the closer alignment of measurement standards and practices across Europe and would like to see this continue in support of establishing the single European market. It welcome the suggestion that BCR has a role to play in support of the European Community certification and testing policy and believes that future priorities should include work to resolve technical problems which hinder the mutual recognition of the results of testing and analyses. Such assistance would need to extend wider than the production of reference materials and the conduct of intercomparisons.

4 THE ROLE OF GOVERNMENT IN THE NMS

4.1 The Government has the ultimate responsibility for the integrity and efficient functioning of the NMS and in the last financial year spent over £25 million in support of this. In addition it has a direct interest in ensuring the validity of measurement data which it uses or, as a result of legislation, requires of others. The purpose of this section is to set out the Government's view of its future involvement in the NMS both as a provider and user of its services. Five main areas are covered; the NMS in support of Government functions, the role of the Secretary of State for Trade and Industry, the future role of DTI Research Establishments, the funding of national measurement standards and the Government's support for laboratory accreditation.

- The NMS in Support of Government Functions

4.2 A wide range of regulations, both domestic and European, make specific provision to ensure the validity of measurements on which they depend. Such provisions include traceability of calibrations to national standards, the use of approved measurement procedures and the use of approved laboratories. For example, altimeters in civil aircraft must be calibrated in accordance with regulations drawn up under the Civil Aviation Act 1982 - an essential measure for passenger safety. Similarly some regulations made under the Food and Agriculture Acts require the use of statutory or approved analytical measurement methods with LGC specified as the referee analyst. In framing regulations and guidance under domestic and European health and safety legislation, traceability to national standards or NAMAS accreditation is specified by the Health and Safety Exective on a "deemed to satisfy" basis wherever appropriate. Indeed, NAMAS is playing an increasingly important part generally assisting in the implementation of EC Directives by the UK where validated measurements and tests are called for - from cosmetics to the quality of drinking water, and from electromagnetic compatibility to acoustic noise emissions from earth moving machinery. Its role can be expected to continue to grow as further Directives are approved.

4.3 Government Departments are also dependent on the NMS in a great diversity of functions not covered by regulation. Audiometric testing in NHS hospitals relies on accurately calibrated equipment traceable to national measurement standards.

MOD's defence procurement policy specifies that contractors should be able to demonstrate quality control; this includes a requirement for measurements to be traceable to national standards and MOD suppliers are expected to make use of NAMAS accredited testing and laboratory services. A number of Departments, including MAFF, MOD, DoH and DoE, have also sought NAMAS accreditation for their own in-house laboratory facilities.

- The Role of the Secretary of State for Trade and Industry

4.4 Supervision of the NMS is exercised on behalf of the Secretary of State by the DTI. Existing statutory recognition for the Secretary of States role is derived principally from the Weights and Measures Act 1985. Part 1 of this act requires the Secretary of State to maintain measurement standards for length, mass and capacity. These provisions have remained largely unchanged since the turn of the century and have failed to keep in step with the evolution of the NMS in the UK.

4.5 The Government has already announced its intention to introduce changes to existing weights and measures legislation in order to implement the reforms outlined in Cmnd. 9850 ("Metrological Control of Equipment for Use for Trade: The Government Response to the Report of the Eden Committee"). This would provide a suitable opportunity to amend the duty placed on the Secretary of State in order to reflect advances in measurement practice and to bring it more closely into line with other countries, particularly the UK's partners in the European Community. It is intended that the Secretary of State should be

given a duty to maintain national measurement standards for the SI base units of measurement, and a power to maintain derived units. The duty will be framed to allow the Secretary of State to maintain these units in collaboration with overseas countries where he sees fit. The Secretary of State will further be required to compare measurement standards submitted by any person in the UK with the national standards of base units when there is no other reasonable means of calibration.

- The Future Role of DTI Research Establishments

4.6 As the Prime Minister announced on 18 February 1988, the Government have accepted the main recommendations in a report by the Efficiency Unit "Improving Management in Government: the Next Steps". As a result, a number of the executive functions of Government will be carried out by units designated as "agencies" within departments. The objective of this programme is to make further improvements in efficiency by giving managers greater flexibility. Responsibility for the day-to-day operations of each agency will be delegated to a Chief Executive who will be responsible for management within a framework of policy objectives and resources.

4.7 The bulk of research, development and promotion of dissemination in support of the NMS is currently carried out in the DTI research establishments, principally NPL (including NAMAS). Proposals to introduce significant changes to the structure of these establishments were announced on 7 June 1988. Following a review of their activities, it was decided that they should

concentrate on work required by Government for statutory, regulatory or policy reasons. Work done in support of the NMS falls within this definition. It was decided that NPL, LGC and the Warren Spring Laboratory (WSL), as well as NWML, would remain within Government but, subject to the establishment of appropriate framework agreements, become separate Executive Agencies within the Department of Trade and Industry. NWML and WSL became Executive Agencies in April 1989. It is proposed that LGC will be given this status later in 1989 and NPL during 1990. The National Engineering Laboratory (NEL) at East Kilbride provides the flow measurement standards of the NMS. The Laboratory has been proposed for privatisation at the conclusion of a restructuring period which commenced in January 1989. Suitable arrangements will be made for the continuation of the flow measurement work.

- Funding of work on national measurement standards

4.8 The bulk of funding for the development and maintenance of measurement standards comes from general taxation. The Government believes that this should continue to be the case. And, as at present, it does not intend to seek to recover these costs through the fees charged for calibrations, recognising that such a policy would be likely to both discourage potential users of standards and set UK companies at a disadvantage vis-a-vis overseas competitors.

4.9 The central justification for public funding lies in the nature of measurement standards themselves. Since a measurement standard will typically be used by a very wide range of individuals and firms, the investment necessary to develop and maintain it will yield benefits which accrue to all. The private benefits to

be obtained from committing funds to work on measurement standards are therefore generally overshadowed by the broader benefits they confer on the user community as a whole - a strong disincentive to investment by individual private firms. If left to itself, therefore, the private sector can be expected to devote fewer resources to the development of measurement standards than is desirable from the point of view of the economy as a whole.

4.10 Whilst the Government is satisfied that this constitutes reasonable grounds for public funding of work on national measurement standards, it recognises that criteria need to be established to determine the allocation of these resources. This is particularly important in respect of work which falls outside the statutory and regulatory areas outlined in paragraphs 4.2-4.5 where the onus is clearly on Government to ensure that measurement standards are available. Proposed programmes will therefore be assessed against a number of criteria designed to establish whether they are of benefit to the national economy and would not be carried out without public support. The following are likely to be relevant considerations:

- whether the work will have applications across a range of important industrial sectors

- whether the work will significantly improve UK competitiveness

- whether the work could form part of a collaborative programme with the UK's partners in Europe

- whether the work will lead to a measurement standard which is likely to be of use to a large number of firms, including small and medium-sized enterprises

- Government support for Laboratory Accreditation

4.11 NAMAS is the national accreditation service for calibration and testing laboratories. There are currently over 700 accredited laboratories in the UK and the scheme is growing rapidly. Responsibility for the operation of NAMAS lies with its Executive which is located in, and forms part of, NPL. Government involvement plays an important part in establishing the credibility of NAMAS at home and abroad. It gives demonstrable evidence of the organisation's commercial impartiality and allows the UK to negotiate from a strong position with other Governments on the mutual recognition of accreditation schemes. NAMAS members have expressed strong support for continued Government participation in the running of the scheme.

4.12 It has already been noted that a number of developments, notably the Single Market Programme and proposals for an improved framework for analytical measurement, will call for increased activity by NAMAS and its expansion into new fields of accreditation. Anticipating these developments the Government has taken steps to introduce greater flexibility into the operation of NAMAS, placing it as from 1 April 1988 under a new financial regime based on net running cost control. This should allow the NAMAS Executive greater freedom in the recruitment of staff to match demand for accreditation. The Government will also encourage NAMAS to maximise the use of personnel from outside Government in the assessment of laboratories.

4.13 The Government is concerned that, as far as possible, firms throughout the UK should have ready access to NAMAS accredited facilities. Whilst recognising that accreditation must remain firmly based on a voluntary principle and that the spread of laboratories will often reflect the pattern of local industry, it wishes to encourage an increase in the number of accredited laboratories especially in areas such as Northern Ireland which are currently under-represented. In publicising its activities by means of seminars, paid publicity and exhibitions, NAMAS will in future place emphasis on extending its regional coverage.

4.14 The Government wishes to see NAMAS vigorously promoted as a unified scheme covering all areas of laboratory accreditation, whose functions are widely understood and appreciated both in the UK and abroad. A major advantage offered by the existence of a national laboratory accreditation scheme is the prospect of the elimination of multiple assessment requirements on businesses. As sponsor of the scheme the Government recognises that it has a special duty in giving a lead here. NAMAS has already been accorded wide recognition by Government Departments and nationalised industries in the framing of quality assurance requirements relative to procurement and regulatory policies. Furthermore laboratory assessment schemes operated by Government Departments will, wherever appropriate, be brought within NAMAS. A target date of 31 December 1991 has been set for the achievement of this.

4.15 Running parallel with NAMAS is the Department of Health's Good Laboratory Practice (GLP) Compliance Monitoring Programme. This programme monitors the quality and integrity of (mainly) biological and toxicological data generated by UK laboratories, for submission to Government regulatory agencies at home and abroad, in support of the human health and environmental safety of chemicals. The GLP programme operates under a number of international agreements and plays an important role by providing assurances to regulatory agencies as to the quality of chemicals safety data, thereby facilitating international trade in pharmaceuticals, pesticides and industrial chemicals. There are currently 58 UK laboratories recognised as being in compliance with GLP requirements.

4.16 Consistent with its policy of reducing the burden on laboratories of satisfying the needs of different accrediation and monitoring programmes an agreement has been reached between NAMAS and GLP. Under the agreement, provided that certain conditions are met, NAMAS accredited laboratories carrying out physical and chemical tests (including analytical measurement activities) can be recognised as being GLP compliant.

5 ROLE OF ORGANISATIONS OUTSIDE GOVERNMENT IN THE NMS

5.1 The Government recognises that private sector and other organisations play an important role in providing many of the measurement services which constitute the NMS. It believes, however, that wider involvement of outside organisations should be encouraged, particularly in activities such as the development of

national measurement standards which have traditionally been regarded as the preserve of Government. Three main areas are foreseen for the greater involvement of the private sector; in providing external advice to DTI on the NMS, through competitive tendering for work on national measurement standards and through collaborative projects on industrial measurement.

The Government believes that the measures in these areas outlined below will permit more effective targeting and enhanced efficiency in the use of public funds whilst attracting new resources and expertise into the NMS.

- External advice to DTI on the NMS

5.2 The Government recognises that close liaison with users of the NMS is essential if resources are to be directed at areas of measurement where the requirements are greatest. The Standards, Quality and Measurement Advisory Committee (SQMAC) was established in January 1988 to ensure a coherent formal structure for advice to DTI on the broad objectives, balance and strategy for Departmental expenditure on metrology. The linkage of measurement with the areas of quality and specification standards ensures that the broader objectives of the NMS in underpinning the competitiveness of UK industry are not lost from sight in framing this advice. The composition of the Committee is representative of a broad spread of industrial interests as well as including members from universities and Government Departments.

- Competitive tendering for work on national measurement standards

5.3 The Government believes that efficiency in the provision of services is most effectively promoted through competition. It intends to open the way to competition for the work it funds in support of the NMS wherever this is consistent with the maintenance of public confidence in the integrity and impartiality of the system. Competition already works successfully at the level of reference standards where laboratories compete for calibration business in many areas. For national measurement standards the position is more complex. The principle of traceability, on which the integrity of the NMS depends, requires a single national measurement standard. This need not, however, preclude competition from operating at the point where a decision is taken over who should develop and subsequently hold a national measurement standard.

5.4 The bulk of work on national measurement standards is currently assigned to NPL. It holds virtually all the national measurement standards and carries out the lion's share of the associated research and development work in-house. The Government recognises that in many instances this may lead to savings through economies of scope and scale and through facilitation of the interdisciplinary approach often necessary in work on measurement standards. It is conscious, however, that it has been difficult to put this to the test in the past, since competition has been restricted by the assumption that national standards should be developed and operated exclusively by organisations within Government. This assumption will now be dropped.

5.5 Through the introduction of competitive tendering it will be possible to secure greater value for money from public funds devoted to work on measurement standards. The feasibility of competitive tendering is supported by the existence of considerable measurement expertise outside Government. There are a number of organisations outside Government with the interest and potential to develop and operate national standards if given the opportunity. These include Research and Technology Organisations (RTOs) and higher education institutions (HEIs). The Government will therefore in future look for appropriate opportunities to seek tenders from such organisations to develop and hold the national measurement standards of derived units, particularly in areas where NPL has not built up facilities or expertise of its own.

- Collaborative projects in support of the NMS

5.6 In some cases industry may believe there is a pressing need for the development of a national measurement standard or other aspect of the NMS which is not currently part of a Government funded programme and for which there is no alternative available through European collaborative arrangements. The likelihood is that this would apply in areas where the benefits arising from the project would accrue to a very restricted user community. If, in these circumstances, DTI is approached by a group of organisations with a programme who are prepared to contribute towards its cost, the Government will consider giving support under the terms of DTI's Research and Technology Initiative. In appraising such requests it will look for the acceptance of the proposal among all

the potential user community. The Government would not normally insist that a national standard developed in this way should ultimately be held or operated within Government if suitable alternative arrangements were available.

- Supervision of national measurement standards held outside Government

5.7 Competitive tendering and collaborative projects are likely to lead to the future location of national measurement standards for a number of derived units outside the Government laboratories where they have traditionally been held. The Government recognises that adequate safeguards will be needed to ensure that the quality of these measurement standards is maintained, that access is available to all parties on a fair and reasonable basis and that international confidence in the integrity of the NMS is not prejudiced.

5.8 Three basic conditions would need to be satisfied by any organisation outside Government wishing to hold a national measurement standard:

i. the holder should be able to demonstrate the traceability of the measurement standard to the national measurement standards for the base units held at NPL or other laboratories approved by the Secretary of State for Trade and Industry.

ii. the holder should be willing to participate in international intercomparisons where appropriate.

iii. the holder should provide independent confirmation of its competence to perform calibrations against the national standard. (This condition would generally be met by means of NAMAS accreditation).

Further, more detailed conditions would be drawn up, based on the requirements of the particular national measurement standard. DTI, in consultation with users will establish appropriate mechanisms to monitor compliance with these conditions and to ensure that the holder does not abuse its position by unreasonably refusing or discouraging requests for calibrations. In the event of the measurement standard being maintained or operated in an unacceptable manner, DTI will withdraw recognition of it as the national standard and will seek alternative arrangements regarding traceability for the unit in question.

6 LEGAL METROLOGY AND THE NMS

6.1 Legal metrology covers certain areas of measurement controlled by statute or regulation. In the UK the term is applied principally to the control of measuring equipment in use for trade, although in many countries, including a number of the UK's EC partners, the boundaries of legal metrology are drawn far wider. The main legal requirements for measurement are set out in the Weights and Measures Act 1985, and associated secondary legislation. Controls over the metering of gas and electricity are contained in the Gas Act 1986 and the Electricity Supply (Meters) Act 1936, both of which are administered by the Department of Energy.

6.2 In 1986 the Government reviewed arrangements for the metrological control of trade equipment. In Cmnd. 9850 ("Metrological Control of Equipment for Use for Trade: The Government Response to the Report of the Eden Committee") it reaffirmed its commitment to fair trading whilst ensuring that burdens of legal control sit as lightly as possible on business. Among the recommendations accepted by the Government was the introduction of a voluntary scheme to allow manufacturers, installers and repairers of weighing and measuring equipment to verify and stamp equipment; this is seen as an important deregulatory measure.

6.3 The Government recognises the major part played by local authority Trading Standards Officers (TSOs) in the enforcement of weights and measures legislation and the verificaton and inspection of measuring equipment. They are specifically trained and qualified (through the Diploma in Trading Standards) in a range of consumer-related activities and already fulfil a multiple role in the surveillance of manufacturers and traders. So far as weights and measures legislation is concerned, this is likely to be a changing role in the 1990s with increased emphasis on quality assurance and on meeting agreed criteria for certification and testing. The Government has recognised these developments by providing funding for training TSOs in quality assurance and by encouraging Trading Standards Departments (TSDs) to seek NAMAS accreditation when appropriate. In these ways TSOs are keeping abreast of progress in metrological control and preparing the way for compliance with the relevant European standards.

6.4 A number of TSDs have already obtained NAMAS accreditation, particularly for the calibration of mass and length standards, and the Government hopes that more TSDs will appreciate the value of accreditation as a means of generating increased confidence in their measurement and testing laboratories. It is expected that the wider market for their services thus generated will offset the resource costs of obtaining accreditation. Furthermore, a proposed amendment to the Weights and Measures Act will remove the need for multiple traceability of standards held by local authorities with NAMAS accreditation.

6.5 Developments in Europe leading to the completion of the single European market will have a considerable impact on legal metrology in the UK. The Government welcomes proposals for European Directives specifying performance requirements for measuring instruments in order to permit their free circulation within the Community. In negotiating measuring instrument Directives, the UK will seek to balance the need to maintain confidence in accurate measurement against the importance of lightening the compliance burden on manufacturers and traders.

6.6 The Government welcomes proposals to include arrangements in Directives whereby manufacturers will be able to choose to make their own declarations of conformity without the need for 100% testing by an inspection body (eg a TSD). These arrangements would mirror the proposed self-verification scheme in national regulations referred to in para 6.2.

6.7 Under the measuring instrument Directives, designated bodies responsible for design approval and initial verification will be notified to the European Commission. These notified bodies will be expected to comply with the requirements in the relevant European standards.

6.8 NWML will also continue to play an active part in the International Organisation of Legal Metrology (OIML), of which the UK is a full member. The Government supports the work of the organisation and endorses its aim to encourage and facilitate world-wide trade in measuring instruments. It further believes that the UK should play a full part in the preparation of OIML International Recommendations. These are of particular importance as in many cases they will be adopted as European Standards to accompany future EC Directives and are also likely to form the basis of trade between the European Community and the rest of the world.

7 ANALYTICAL MEASUREMENT AND THE NMS

7.1 The determination of the chemical composition of a material by analytical measurement has developed primarily to meet the needs of trade. Agreement on composition remains of crucial importance to commerce as many decisions taken in national or international trade depend on the compliance of goods with contractual or statutory requirements derived from chemical analysis. It is estimated that approximately 1000 million analytical measurements are carried out each year in the UK. Many of these measurements

play a vital part not only in ensuring the quality of goods and commodities but also in the development of Government policy in areas as diverse as revenue collection, health and safety, environmental protection, agriculture and law enforcement.

The need for an Analytical Measurement Initiative

7.2 The problem of the validity of analytical data - and the need for clear and unequivocal means to demonstrate that validity - has become increasingly apparent in recent years. The successful creation of the European single market in 1992 will have signficant implications for the analytical measurement sector of the NMS. After 1992 the UK and other member states will be required to accept each other's test data. However, present evidence suggests that there is frequently lack of agreement as to the validity of this data or even the methods which are best used to undertake a particular analysis. As well as representing a waste of effort and money this may also cause losses in trade.

7.3 The key to resolving these problems lies in analytical laboratories utilising a coherent quality control system, acceptable across both national boundaries and different fields of application, by which they can ensure the validity of their data and offer an independent demonstration of their capabilities to third parties. The remainder of this chapter sets out the way in which the Government intends to support the wider development of this approach.

The Way Forward in the United Kingdom

7.4 The Government believes that although the prime responsibility for determining and demonstrating the validity of analytical data rests with the analytical community more can be done to help them meet this requirement. LGC will therefore foster an improvement in analytical measurement within the UK, working in close collaboration with others eg WSL in the environmental area. The Laboratories' programmes will be revised to devote a larger proportion of their current resources to work aimed at establishing the validity of analytical data. This will include promoting the adoption of analytical quality assurance programmes and the production of a comprehensive range of chemical standards and matrix reference materials, where specific needs for Government involvement are identified.

7.5 The Government believes that where practicable laboratories providing analytical measurements to third parties, particularly Government Departments, should seek some form of independent accreditation. The expansion of NAMAS to cope with demand in the analytical and other areas is described elsewhere in this White Paper. The Government intends LGC to play a greater role in supporting the NAMAS Executive in developing accreditation in analytical measurement.

7.6 The Government recognises the special contribution to the development and validity of analytical measurement made by professional bodies and learned societies, both within the UK and internationally. For example, the Royal Society of Chemistry

through its Analytical Division sponsors groups covering all aspects of analytical measurement. The Association of Public Analysts performs a particularly important role in support of analytical measurement for statutory requirements. The Government will continue to collaborate with these organisations in methods development, training and professional development of staff, and dissemination of information.

7.7 The Government notes that within the HEI's there are relatively few departments specialising in analytical measurement. A review is to be undertaken to ascertain whether the limited number of specialist departments is able to provide adequate numbers of trained analytical scientists to meet the demands of UK industry and Government. Previous studies have shown a shortage of trained metrologists available to industry and the provision of new courses has been supported by the Government.

The Way Forward in Europe

7.8 There is no single body responsible for European or international coordination of analytical measurement but ISO, the International Union of Pure and Applied Chemistry (IUPAC) and the Association of Official Analytical Chemists (AOAC) have played major parts in defining internationally agreed methods of analysis. Within Europe the Community's BCR Programme has fostered the production of a range of chemical reference materials. LGC and other organisations have made a substantial contribution to the acceptance of methods incorporated in the newly introduced harmonised system of Tariff Classification accepted by 108 countries.

7.9 The analytical measurement community works to improve accuracy by comparing and improving methods. The Government believes that this approach can provide a firm basis for the mutual acceptance of analytical data in 1992 and beyond and is providing new impetus and direction by seeking greater collaboration within Europe. LGC will, working with other relevant organisations, encourage the development of common analytical methods, a hierarchy of reference materials and a system of proficiency testing necessary to establish the acceptability of analytical measurement nationally and internationally. To facilitate this, the Government is consulting on a new network for European collaboration on analytical measurement enabling appropriate organisations to agree joint actions and to collaborate on development projects. This network of direct links between national centres of excellence in analytical measurement will reduce duplication of effort and increase efficiency. It will complement the activities of the BCR Programme in the field of chemical analysis.

GLOSSARY

Part 1 Abbreviations

AOAC	-	Association of Official Analytical Chemists
BCR	-	Bureau Communautaire des References (Community Bureau of Reference)
BIPM	-	Bureau International des Poids et Mesures (International Bureau of Weights and Measures)
BSI	-	British Standards Institute
BSI.QAS	-	British Standards Institute Quality Assurance Services
CEN	-	Comite Europeen de Normalisation (European Committee for Standardisation)
CENELEC	-	Comite Europeen de Normalisation Electrotechnique (European Committee for Electrotechnical Standardisation)
CGPM	-	Conference Generale des Poids et Measures (General Conference on Weights and Measures)
EUROMET	-	an agreement under which European signatories co-operate in the development and provision of measurement standards and related services.
GLP	-	Good Laboratory Practice
HEI	-	Higher Education Institute
IEC	-	International Electrotechnical Committee
ISO	-	International Organisation for Standardisation
IUPAC	-	International Union of Pure and Applied Chemistry
LGC	-	Laboratory of the Government Chemist
NACCB	-	National Accreditation Council for Certification Bodies
NAMAS	-	National Measurement Accreditation Service
NEL	-	National Engineering Laboratory
NMS	-	National Measurement System
NPL	-	National Physical Laboratory
NWML	-	National Weights and Measures Laboratory
OIML	-	Organisation Internationale de Metrologie Legale (International Organisation of Legal Metrology)

RTO	-	Research and Technology Organisation
SI	-	Systeme International (d'Unites) (International System of Units) The coherent system of units adopted and recommended by the General Conference on Weights and Measures.
SQMAC	-	DTI Standards, Quality and Measurement Advisory Committee
TSD	-	Trading Standards Department
TSO	-	Trading Standards Officer
WSL	-	Warren Spring Laboratory

Part II Terms used in Metrology (taken from BS5233)

base unit (of measurement) - a unit of measurement of a base quantity in a given system of quantities.

base quantity - One of the quantities which, in a system of quantities, are conventionally accepted as independent of each other.

derived unit (of measurement) - a unit of measurement of a derived quantity in a given system of quantities.

legal metrology - that part of metrology which treats of units of measurement, methods of measurement, and of measuring instruments, in relation to the mandatory technical and legal requirements which have the object of ensuring a public guarantee from the point of view of the security and of the appropriate accuracy of measurements.

measurement standard; etalon - a material measure, measuring instrument or system intended to define, realize, conserve or reproduce a unit or one or more known values of a quantity in order to transmit them to other measuring instruments by comparison. (The term 'etalon' is now often used to avoid confusion between measurement standards, which are physical in nature, and purely documentary standards, such as BS 5233, BS 5781, etc.)

national standard - a standard recognized by an official national decision as the basis for fixing the value, in a country, of all other standards of the quantity concerned.

primary standard - a standard which has the highest metrological qualities in a specified field. Note: The concept of primary standard is equally valid for base units and for derived units.

reference standard - a standard, generally of the highest metrological quality available at a given location, from which measurements made at that location are derived.

reference material - a material or substance one or more properties of which are sufficiently well established to be used for the calibration of an apparatus, the assessment of a measurement method, or for assigning values to materials.

working standard - a standard which, usually calibrated against a reference standard, is used routinely to calibrate or check material measures or measuring instruments.

unit (of measurement) - a specific quantity, adopted by convention, used to express quantitatively quantities which have the same dimension.

DRAFT WHITE PAPER ON THE NATIONAL MEASUREMENT SYSTEM

SUMMARY OF CONTENTS

Department of Trade and Industry
National Measurement System Policy Unit
Room 256
Ashdown House
123 Victoria Street
London
SW1E 6RB

MAY 1989

028ACG

A/T/5/MON/29

DRAFT WHITE PAPER

SUMMARY OF CONTENTS

Chapter One - Introduction

- sets the NMS within the context of DTI objectives and then within the broader objectives of Government as a whole

- summarieses the main areas where new policy measures are included in the White Paper

Chapter Two - The Structure of the NMS and its Importance to the UK

- the technical structure of the NMS, centering on the hierarchy of measurement standards linked by means of calibration (2.1 - 2.3)

- the organisational structure, including the role of the National Physical Laboratory and laboratories accredited by the National Measurement Accreditation Service (2.4 - 2.5). Responsibility of National Weights and Measures Laboratory (NWML) for legal metrology (2.6) and Laboratory of the Government Chemist (LGC) for analytical measurement (2.8)

- three of the areas where the NMS has an important role: facilitating international trade (2.11 - 2.14), underpinning innovation (2.15 - 2.16), promoting quality (2.17 - 2.21).

Chapter Three - Europe

- the NMS in the context of the Single European market objective and of the efforts to eliminate technical barriers to trade caused by different national practice on standards, testing and certification (3.1)

- UK policy towards harmonisation of testing and calibration arrangements within Europe, stressing the importance of mutual recognition agreements between national laboratory accreditation schemes and the leading role being played by NAMAS (3.2 - 3.4)

- the role of EUROMET (agreement signed in 1987 by members of EC and EFTA) in promoting collaboration on measurement standards and greater coordination across Europe (3.5 - 3.9); work on measurement forming part of the European Community's framework programme (3.10).

Chapter Four - The Role of Government in the NMS

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- European context: proposals for measuring instrument directives; UK desire to balance interests of deregulation and fair trading (6.5 - 6.8)

Chapter 7 - Analytical Measurement and the NMS

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- proposals for improvements to analytical measurement in the UK to be coordinated by LGC (7.4 - 7.7)

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dti

the department for Enterprise

CCDC.

CONFIDENTIAL

NBPm — yet.

To:

SECRETARY OF STATE

From:

FRANCIS MAUDE

16 June 1988

METRICATION

As indicated in your letter of 25 May to Geoffrey Howe, I raised this issue with Arthur Cockfield in Luxembourg on 7 June. I indicated to him that we were likely to be able to move a considerable way, but there were a number of areas, such as the pint of beer, returnable imperial bottles and miles, where the public response to change was likely to be disproportionate to the "free trade" advantages; and where attempts by Brussels to impose metrication would sour the positive image of the Single Market that we are painstakingly establishing.

He responded sympathetically. He recognised the sensitivities involved, and agreed on the need for the Commission to co-ordinate closely with us on handling. His officials would shortly be drafting a proposal, and he was conscious of the risks of this becoming public prematurely. He undertook to make special efforts to avoid this happening. He saw some difficulties in the way of "piecemeal" announcements as the Commission will at some stage have to publish a single proposal. But he agreed that we should seek ways to soften the effects of this.

On the substance, he said that some in the Commission and Council might have problems with permanent derogations or with derogations extending beyond 1992 - though on the latter point he voluntered his view that the link between metrication and completion of the single market was slight, but said that others might not heed this plea to logic.

This was a helpful discussion, and the outcome was I think as good as we could have hoped (subsequent contacts with Arthur Cockfield's Cabinet by UKREP have confirmed his sympathetic attitude). He clearly appreciates our willingness to approach this issue positively, and will do what he can to ensure that the process is as painless as possible.

We agreed that the next step should be for our officials to meet and discuss the issues in more detail.

Now that the way forward is a little clearer, there may be merit in our beginning to prepare the ground publicly. But in view of Arthur Cockfield's helpful attitude, I think it is essential that no public pronouncements should be made without our discussing it with his office first.

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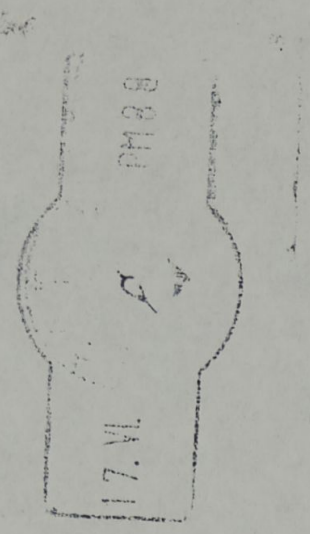
the department for Enterprise

In the circumstances it is clearly important that we co-ordinate our public line on metrication effectively. I have therefore asked our officials, in conjunction with other Departments, to draw up a standard form of words which can be used in correspondence and in response to questions as necessary. I will arrange for this to be circulated to colleagues shortly.

I am copying this minute to the Prime Minister, members of the Cabinet, the Chief Whip and Sir Robin Butler.

FRANCIS MAUDE

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Weights + measures

Mechanics

SD/3573p

NBPM

CC PSG

DEPARTMENT OF HEALTH AND SOCIAL SECURITY

Richmond House, 79 Whitehall, London SW1A 2NS

Telephone 01-210 3000

From the Secretary of State for Social Services

The Rt Hon Lord Young of Graffham
Secretary of State for Trade and Industry and
President of the Board of Trade
Department of Trade and Industry
1-19 Victoria Street
LONDON SW1H 0ET

15 June 1988

METRICATION

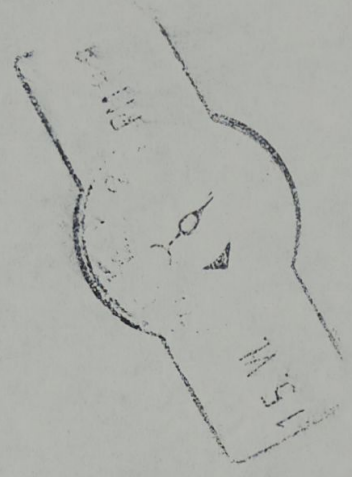
I have seen your letter of 25 May to Sir Geoffrey Howe and I agree entirely with the approach proposed. I would, however, just like to repeat the point I made in my letter of 22 December 1987, that we should hope to see the retention of the millimetre of mercury (mm Hg) for the measurement of blood pressure, etc, in the place of the kilopascal. This is permitted by Directive 85/1/EEC amending 80/181/EEC to meet the needs of the medical and other health professions and associated scientific and technical services.

I am copying this letter to the Prime Minister, other members of the Cabinet, the Chief Whip and to Sir Robin Butler.

JOHN MOORE

WEIGHTS + MEASURES

Metrcalen Cap 7



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CGBG.

NBPM.

FINANCIAL SECRETARY TO THE TREASURY

Treasury Chambers, Parliament Street, SW1P 3AG

The Rt Hon Lord Young of Graffham
Secretary of State for Trade and Industry
Department of Trade and Industry
1-19 Victoria Street
LONDON
SW1H OET

6th June 1988

Dear David

METRICATION

I have seen your letter of 25 May to Sir Geoffrey Howe, and the Prime Minister's comments of 27 May. Given that the Irish seem content with the abolition of imperial units, your proposal seems the most practicable approach.

I would, however, like to add one further area in which we should seek a derogation, and that is in the use of troy weight for bullion dealing. The troy ounce is the international standard. All the major countries for bullion dealing (London, Zurich, New York, Hong Kong and the Far East) are geared to its use, and it would be nonsensical for the EC alone to seek to abandon it.

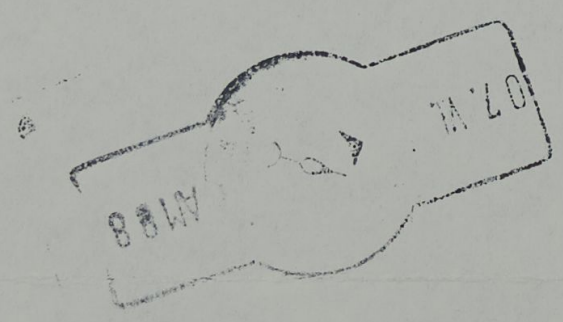
In general, we should seek to ensure that the timetable for metrication allows for gradual and phased change, to minimise costs for both the public and private sectors. The presumption must be that Departments will meet any costs to them of metrication from within existing provision.

I am copying this letter to recipients of yours, and to Francis Maude.

Yours

NORMAN LAMONT

WEIGHTS + MEASURES : Metrication Sep 79



CCBG

16pm

FCS/88/111

SECRETARY OF STATE FOR TRADE AND INDUSTRY

Metrication

1. Thank you for your letter of 25 May 1988 about metrication.

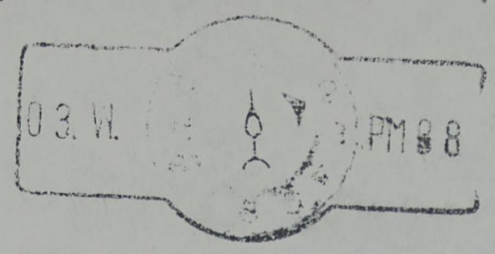
2. I agree with the approach you suggest, and with the general line taken in your policy paper. As you say, we need to start a dialogue with the Commission now, and I note that your officials will be clearing a detailed brief with other departments.

3. I am copying this minute to the Prime Minister, other members of the Cabinet, the Chief Whip and Sir Robin Butler.

(GEOFFREY HOWE)

Foreign and Commonwealth Office
3 June 1988

WEIGHTS + MEASURES : Metrication Sep 79



10 DOWNING STREET
LONDON SW1A 2AA

From the Private Secretary

27 May, 1988.

Dear Jeremy

METRICATION

The Prime Minister has seen your Secretary of State's letter of 25 May to the Foreign Secretary, and has confirmed that she agrees with the approach therein.

I am sending copies of this letter to the Private Secretaries to the other members of the Cabinet, the Chief Whip and Sir Robin Butler.

Yours

(P.A. Bearpark)

Jeremy Godfrey, Esq.,
Department of Trade and Industry.

dti

the department for Enterprise

R26/5.

cc BG

cc SI

The Rt. Hon. Lord Young of Graffham
Secretary of State for Trade and Industry

. The Rt Hon Sir Geoffrey Howe QC MP
Secretary of State for Foreign & Commonwealth Affairs
Foreign & Commonwealth Office
Downing Street
London
SW1A 2AL

Prime Minister. (1)

Lord Young's proposal is now to seek to retain imperial units for some key purposes, and to go for long transitional periods for the rest.

Content for him to proceed on that basis? MEA 26/5

Agree this approach

at flap

Department of Trade and Industry

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Direct line 215 5422
Our ref DW2AFD
Your ref
Date 25 May 1988

METRICATION

Thank you for your minute of 2 February. I have also seen the letters of 7 December and 4 February from the Prime Minister's Private Secretary, and letters from John Moore, Nicholas Ridley, John MacGregor and Paul Channon.

The Council of Ministers, under the terms of the EC Units of Measurement Directive of 1979, has to decide by the end of 1989, under the qualified majority procedure, on a final date (or dates) for ending the use of imperial units for the purposes set out in my letter of 3 December. The indications are that, in the absence of any steer from us, the Commission will simply propose that imperial units should cease from the end of 1992, the target date for the completion of the single market. But there are also indications that they will be sympathetic to our concerns about specific areas of difficulty.

Given that the decision is subject to qualified majority voting, and that our only potential ally is Ireland, our negotiating capital is limited, and we need to ensure that we spend it to best effect.

And as we are making much of the running on moving swiftly towards the completion of the single market, there are wider negotiating difficulties in our seeking to retain what are undoubtedly seen by other member states as barriers to trade.

A dual approach seems to offer the best prospects. First, we should identify those areas of greatest difficulty, where it

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is essential to retain imperial units (the pint in the pub, the doorstep pint of milk, the mile and so on), on which the trade barrier arguments are less strong; while showing a readiness to move on those areas where public sensitivities may be less acute and the trade arguments stronger The attached policy paper examines specific areas in greater detail.

Second, on those areas where we accept that we will have to move, we should aim for long transitional periods, and staggered implementation dates. This is important both for business to adapt smoothly, for consumers to familiarise themselves and to avoid any impression of a metrication "big bang", which would tend to focus opposition.

If we are to influence the Commission's proposals, we need to do so soon. I suggest that Francis Maude should take the opportunity to talk to Arthur Cockfield in the margins of the Internal Market Council on 7 June. While it is clearly not essential for all the details of the negotiating strategy to be agreed by then, I would be grateful if colleagues could indicate any disagreement with this broad approach by Thursday 2 June. Discussions with Commission officials should start at the earliest possible moment and my officials will develop the negotiating brief with other departments as a matter of urgency. This brief will need to take account of the line to be taken on the forthcoming Non-automatic weighing machines directive.

John Wakeham will want to note that when the proposals for the Units of Measurement Directive were debated in the Commons on 19 December 1979, it was resolved that:

> "That this House takes note of EEC document No.5247/79, as amended, on Units of Measurement, but affirms that no decision on the phasing out of those imperial units which the EEC Directive requires to be reviewed by the end of 1989 should be taken before the House has first given its approval."

This plainly commits us to a debate before the Council of Ministers reaches a common position, likely to be in mid-1989.

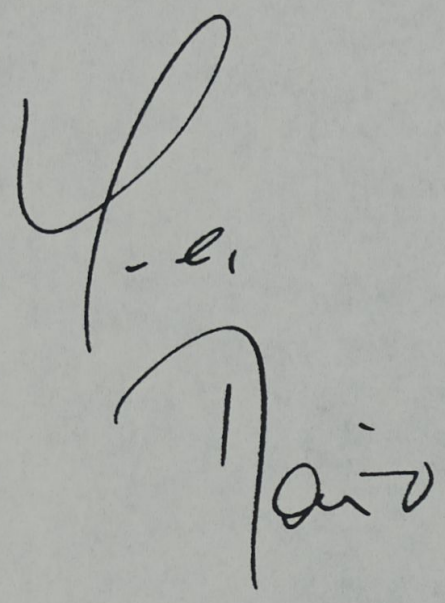
Although this is an issue which can be expected to be controversial, there has been far greater movement towards metrication already than may be generally realised. And given

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the familiarity of younger people with the metric system, it may well be that making progress in some of the remaining areas will prove less sensitive than we might have anticipated on the basis of past experience.

I am copying this letter to the Prime Minister, other members of the Cabinet, the Chief Whip and to Sir Robin Butler.



the enterprise initiative

METRICATION POLICY

ISSUE

1. This paper sets out the position in the UK on some metrication issues primarily in the retail sector. The EC Units of Measurement Directive (80/181/EEC) establishes that the metric system should eventually be the only permissible system of measurement in the Community. A temporary derogation allows the UK and Ireland to use certain imperial units (listed in Annex A). But the Council has to decide, not later than the end of 1989, under the qualified majority voting provisions of Article 100A, on a final date beyond which imperial units may not be used.

2. The continuing use of imperial units by the UK is regarded as a barrier to trade by most other Member States. We can therefore expect to come under pressure to agree a final date for abandoning the imperial system, at least for trade purposes.

3. The Weights and Measures Act 1985 sets out those units of measurement that may legally be used in trade, and those that may not. The relevant Schedule is at Annex B. If our general derogation under the Units of Measurement (UMD) Directive ends without any further derogations, we would have to transfer all imperial units into the prohibited list. Metric units would thus become mandatory for use for

trade.

4. Informal indications are that, except for retention of the pint for sales of draught beer, Ireland will not be seeking a further exemption for imperial units, beyond a reasonable transitional period, once the present derogation has expired.

TIMESCALE

5. DGIII will need to draft the proposal for amending the UMD by September for a formal proposal to be sent to the Council in late 1988. A common position will have to be reached in the Council by the middle of 1989 in order to allow time for the proposal to go through the co-operation procedure for adoption before the end of 1989.

FURTHER ACTION

6. The DTI suggest that the issue should be discussed informally with Lord Cockfield in the margins of the Internal Market Council on 7 June. And that on the basis of an agreed negotiating brief, officials should meet their opposite numbers in the Commission to seek a proposal which meets out objectives. Paragraph 15 onwards give an indication of the objectives which might be set.

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BACKGROUND

Present Position

General

7. The use of metric units has been legal for most purposes since 1897, but it was not until the early 1960s that the majority of British industry came to favour adopting the metric system as the primary method of measurement.

8. In 1972 the Government took enabling powers to remove the few remaining legal barriers to metrication in the industrial sector. It was always recognised that change could not be undertaken in the retail sector until the industrial programme had been completed. Further powers were taken in 1976 to end the use of individual imperial units in industry and to phase out the use of imperial where imperial and metric ranges for pre-packaged goods co-existed. The Metrication Board agreed with trade and consumer interests a programme for metrication.

9. By 1980 manufacturing industry was largely committed to the changeover.

Education

10. In addition, following advice given by the Department of Education and Science, teaching has been chiefly in metric units since 1974,so that anyone now under the age of 25 is likely to be more familiar with the metric than with the imperial system. Employers, particularly retailers, complain that they have to instruct school leavers in the imperial system. This is an inevitable consequence of gradual metrication, and it suggests that resistance to further metrication may well be less forceful than hitherto.

Retail

11. There has been considerable metrication in the retail sector already; but some of the most sensitive areas are still predominantly imperial. The following is a summary of the present position; paragraph 15 onwards gives details of particular problems for the UK.

(a) Goods pre-packed in pre-determined quantities (see also drinks - (d) below): These fall into 4 categories.

(i) Those which can only be sold in prescribed metric quantities (so imperial quantities are already illegal). This category includes most staple foods. These may carry the imperial equivalent quantity marking.

(ii) Those which can only be sold in prescribed metric or imperial quantities. Milk, for example, can only be sold in the following quantities: $^1/_3$ pint, ½ pint, multiples of ½ pint; or 200ml, 250ml, 500ml, 750ml, 1 litre, 2 litre and multiples of ½ litre.

(iii) Those few which can only be sold in prescribed imperial quantities - jam and similar preserves. These must carry the metric equivalent quantity marking.

(iv) Those which are sold in pre-determined sizes which are not prescribed. Salad cream for example can be sold in any quantity. The only requirement is that the metric quantity be marked; the imperial equivalent may also be marked. This category includes most prepacked non-food goods - cosmetics, cleaning products etc.

(b) Food sold loose (eg fresh vegetables, fish, meat); or in random weight prepacks (eg joints of meat in supermarkets).

The weight of random-weight prepacks may be expressed in either imperial or metric quantities. However the price of both random-weight prepacks and foods sold loose must be expressed in terms of price per imperial pound.

(c) Non-food goods sold loose: (eg building materials and furnishing fabrics). These are now often sold in metric quantities, although there are generally no legal requirements as to the units of measurement. (But the "cubic yard" and "hundredweight", for example, are already illegal for use for trade).

(d) Drinks

(i) Bottled or canned drinks. Most are now sold in metric quantities. Except for milk, wines and spirits, specific quantities are not prescribed by law. There are in circulation some 200 million returnable imperial milk bottles, and some 1,100 million returnable imperial beer, cider and soft drink bottles. The latter group are now mainly supplied to pubs, clubs and restaurants. (The new EC Price Indications Directive for foodstuffs - see paragraph 13 - will require most drinks sold in quantities other than the EC's optional prescribed ranges (which are metric) to carry an indication of the price per litre. We sought and obtained a derogation in respect of certain imperial quantities for beer, cider and milk and (for 7 years) for soft drinks.

(ii) Draught beer and cider. Our law requires this to be sold in units of $^1/_3$, ½ pint, and multiples of ½ pint.

Petrol

12. There has been a major shift by garages to selling road fuel in litres during the 1980s. 80 per cent of sites, accounting for 90 per cent of sales, are now fully metric. The number of "metric" sites will undoubtedly continue to increase, although there could be a small minority of "imperial" garages in rural areas for some years. The law requires "metric" garages to display the equivalent price per gallon.

13. Directives on Price Indications of Food and Non-Foodstuffs shortly to be formally adopted provide derogations to allow prices to be expressed in terms of imperial units. These will lapse when, under the UMD, it is no longer legal to use imperial units for trade.

COMMISSION OPTIONS

14. The Commission seem to have three options:

(i) First, they could simply propose an extension of the time limit so that the decision on fixing a deadline for ending the use of imperial units is deferred for a further period. But it is most unlikely that this would be acceptable to other Member States whose economic interests are undoubtedly affected by having to supply goods in, or marked in, imperial quantities,

or equipment calibrated in imperial units. This is almost certainly not achievable.

(ii) Second, the Commission could propose their own date for ending the legal use of all imperial units. They might well suggest that the end of 1992 would be appropriate, as the target date for completing the single market.

(iii) Finally, the Commission could propose different dates for disapplying some units (either for all or for specific purposes) and perhaps defer the disapplication of other units. This would enable those imperial units which genuinely inhibit free trade to be eradicated, but should enable us to retain those where loss would cause us greatest difficulty. This seems the most attractive option for us, and the Commission may well be sympathetic to this approach.

PROBLEMS FOR UK

15. The ending of our derogation would cause particular problems in the following areas:

FOOD AND DRINK

(a) Draught beer and cider

Technically, without a derogation, we could simply translate the present imperial prescribed sizes into metric equivalents. Customers would still be able to order pints, and would be given a pint in a glass which would be marked "568 ml". However this would be unlikely to defuse what will be the major controversy. As with petrol, the free trade argument for metrication is secondary, being limited to the effects on trade in beer glasses and measuring equipment.

We should clearly hold out for a permanent derogation, and there should not be great difficulty in achieving it.

(b) Milk

Milk must be sold in certain prescribed sizes: $^1/_3$ pt, ½ pt or multiples of ½ pint; or 200 ml, 250 ml, 500 ml, 750 ml, 1 litre, 2 litres and multiples of ½ litre. We have implemented the EC optional range of sizes, but have retained our own imperial sizes. There is nothing to stop us converting the imperial sizes permitted into their metric equivalents. The range would therefore be: 189 ($^1/_3$ pt), 200, 250, 284 (½ pt), 500, 568 (pt), 750, 1 litre, and so on.

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This would be a messy compromise. In any event, there is a very real possibility of the optional range becoming mandatory at some later date. This would almost certainly exclude 568 ml in view of its proximity to 500 ml.

A concession on imperial units coupled with an intention to continue to allow the use of the pint in its metric form would avoid immediate controversy, but would carry the risk of renewed controversy later. We should therefore seek a derogation, but there might be negotiating advantages in agreeing eventually to a final date - perhaps ten years hence - beyond which pints would no longer be useable.

(c) Foods sold pre-packed in a fixed quantity but not subject to a prescribed range

These can at present be sold in any quantity, the only requirement being that the metric quantity must be marked. Most are sold in metric quantities, and many carry only the metric marking. Without a derogation we would have to make illegal the use of voluntary imperial markings, but given the overall trend to metrication this might well pass without great controversy. We should however press for a date later than 1992 for this change.

(d) Foods (jams etc) at present required to be sold only in prescribed imperial quantities

We are already under some pressure from business to move to metric sizes, and there are strong arguments for doing so. The present obligation is plainly a trade barrier. There are difficulties in abandoning imperial quantities before the EC has adopted a quantity range, but we can indicate to the Commission our readiness and indeed our desire, to move on this front.

(e) Bottled beer, cider and soft drinks

There are no prescribed quantities. Most beer, cider and soft drinks sold in retail outlets are now bottled or canned in metric quantitites. However, there are some 1,100 million returnable imperial soft drink, beer and cider bottles in circulation, mostly for sale to pubs, clubs and restaurants. The cost of replacing these would clearly be prohibitive, and the life of such bottles can apparently be as much as 20 years. As there is no bar to imports bottled in metric quantities competing with these imperial sizes, a derogation should be sought; and would be hard to resist. As with milk, we might eventually offer a distant final date for abandoning imperial units.

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(f) Food - loose sales and random weight prepacks

This is the most difficult area. There is an argument that the need to prepack foods by reference to their imperial quantity for the UK market makes their imports difficult. And with so much of the total retail market now metric, there are clear advantages for clarity and consistency in pricing loose sales and random-weight prepacks in terms of metric quantities. On the other hand, it is in the retailing of loose sales - fresh meat etc - that the imperial system predominates and that the consumer is most directly aware of weights and measures; and despite the far greater familiarity with metric units that the last fifteen years have brought, metricating fully is likely to provoke serious controversy.

In addition, moving to metric pricing on a given date would have substantial costs for business, since all existing weighing equipment would need to be adapted or replaced.

There are 3 options.

(i) To seek no derogations, so that on a given date, probably 1 January 1993, the change to full metrication in this area would take place. This would cause substantial problems both for consumers and retailers.

(ii) To seek a permanent derogation. This is very unlikely to be achievable.

(iii) To seek derogations which enable us to implement metrication over a period to say 1995. This would seem to be the most viable option.

The decision to accept full metrication in this area was effectively taken when we agreed to the UMD in 1979.

NON-FOOD

(g) Petrol

We would have to outlaw the use of imperial pumps, with an obvious cost for the small rural garages who retain them. But a derogation allowing continued use of gallons should not be difficult to obtain, as there are no strong "free trade" arguments for compulsory metrication.

There is likely to be a draft Directive before long affecting new petrol pumps and if this required all new pumps to be metric only, it would enable the process of metrication of petrol sales to be completed gradually.

We would need at some stage to remove the requirement for all petrol stations under UK legislation to show the price per gallon, and replace it with an obligation for "imperial"

garages to show the price per litre. In view of the rapid voluntary metrication in this field and the increasing familiarity with litres, this is a sensible step at some stage in any event.

DISTANCE MEASUREMENT

(h) The mile

While the UMD covers linear measurement, it is doubtful whether it applies to distance marking and speed limits on roadsigns. But it does apply to speedometers, distance meters and so on in vehicles. It may be argued that the requirement to put imperial meters in vehicles to be sold in the UK disadvantages imported vehicles; but this is a minor disadvantage compared with the need to manufacture right-hand drive vehicles for our market. The inescapable consequence of requiring vehicle meters to be metric would be to force us to move to metric units for road signs. The cost of this would be out of all proportion to the trade issue involved; we should therefore hold out for a derogation to allow the continued use of miles for all transport purposes.

IMPERIAL WEIGHING AND MEASURING EQUIPMENT

16. As part of its programme to achieve a single European market, the Commission has proposed a "new approach"

Directive on non-automatic weighing machines [III/1591/87], which includes shop scales. The Directive will be "total" (ie replace all national legislation). The Commission had intended that such machines shall indicate in metric units only. UK officials have pointed out that the effect of this would be to enforce metrication by the "back door" (as the trade use of imperial units is now concentrated in retail sales) and that a technical Directive on weighing machines is not the way to deal with metrication policy. The Commission have informally accepted this and seem prepared to include a provision allowing the use of specified imperial units (pounds, ounce, troy ounce) in its formal proposal to the Council (now expected to be made by October 1988). Our insistence would clearly signal our determination to retain imperial units for domestic transactions beyond the date for implementation of this directive. There may, of course, be objections from other Member States and European manufacturers of machines. The latter have an influential trade federation, and informal enquiries suggest that they are firmly in favour of a metric-only regime.

Current indications are that the weighing machine directive may be passed in Council by the end of 1989, leaving Member States to implement by, say, early 1991. It should be noted, however, that even if imperial units were allowed to continue under this directive, the provisions of the Units of Measurement Directive would take precedence.

MN2AAA

Clearly, therefore, the effects of both directives have to be considered together when developing the UK policy line. One possibility would be go give way gracefully to expected pressure to exclude imperial units from the weighing machines directive, and use this gesture of goodwill as a bargaining point in seeking derogation in the Units of Measurement Directive for draught pints of beer and doorstep pints of milk. Should this line be adopted - and an early decision, preferably by early June 1988, would be necessary - it would mean that new weighing machines for pre-packed and loose goods would be metric only, but provision should be possible in the UMD to allow existing imperial machines to continue in use by a further derogation for a limited period. This would ease the burden on shop-keepers of re-equipping, though cause some consumer confusion. Consultation may favour an immediate changeover.

MN2AAA

ANNEX A: DEROGATION FOR IMPERIAL UNITS IN THE EC UNITS OF MEASUREMENT DIRECTIVE

ANNEX B: IMPERIAL AND METRIC UNITS IN SCHEDULE 1 TO THE WEIGHTS AND MEASURES ACT 1985

CHAPTER III

LEGAL UNITS OF MEASUREMENT REFERRED TO IN ARTICLE 1 (c) for construction and use of measuring instruments, economic, public health, public safety and administrative purposes

Length		
inch	1 in	= $2{\cdot}54 \times 10^{-2}$ m
foot	1 ft	= 0·3048 m
fathom (1)	1 fm	= 1·829 m
mile	1 mile	= 1 609 m
yard	1 yard	= 0·9144 m
Area		
square foot	1 sq ft	= $0{\cdot}929 \times 10^{-1}$ m²
acre	1 ac	= 4 047 m²
square yard	1 sq yd	= 0·8361 m²
Volume		
fluid ounce	1 fl oz	= $28{\cdot}41 \times 10^{-6}$ m³
gill	1 gill	= $0{\cdot}1421 \times 10^{-3}$ m³
pint	1 pt	= $0{\cdot}5683 \times 10^{-3}$ m³
quart	1 qt	= $1{\cdot}137 \times 10^{-3}$ m³
gallon	1 gal	= $4{\cdot}546 \times 10^{-3}$ m³
Mass		
ounce (avoirdupois)	1 oz	= $28{\cdot}35 \times 10^{-3}$ kg
troy ounce	1 oz tr	= $31{\cdot}10 \times 10^{-3}$ kg
pound	1 lb	= 0·4536 kg
Energy		
therm	1 therm	= $105{\cdot}506 \times 10^{6}$ J

(1) For marine navigation only.

Until the date to be fixed under Article 1 (c), the units listed in Chapter III may be combined with each other or with those in Chapter I to form compound units.

SCHEDULES

SCHEDULE 1

Sections 1(2), 8(1).

DEFINITIONS OF UNITS OF MEASUREMENT

PART I

MEASUREMENT OF LENGTH

Imperial units

Mile	= 1760 yards.
YARD	= 0·9144 metre.
Foot	= 1/3 yard.
Inch	= 1/36 yard.

Metric units

Kilometre	= 1000 metres.
METRE	is the length of the path travelled by light in vacuum during a time interval of 1/299 792 458 of a second.
Decimetre	= 1/10 metre.
Centimetre	= 1/100 metre.
Millimetre	= 1/1000 metre.

PART II

MEASUREMENT OF AREA

Imperial units

Acre	= 4840 square yards.
SQUARE YARD	= a superficial area equal to that of a square each side of which measures one yard.
Square foot	= 1/9 square yard.

Metric units

Hectare	= 100 ares.
Decare	= 10 ares.
Are	= 100 square metres.
SQUARE METRE	= a superficial area equal to that of a square each side of which measures one metre.
Square decimetre	= 1/100 square metre.
Square centimetre	= 1/100 square decimetre.
Square millimetre	= 1/100 square centimetre.

SCH. 1

PART III

MEASUREMENT OF VOLUME

Metric units

CUBIC METRE	= a volume equal to that of a cube each edge of which measures one metre.
Cubic decimetre	= 1/1000 cubic metre.
Cubic centimetre	= 1/1000 cubic decimetre.
Hectolitre	= 100 litres.
LITRE	= a cubic decimetre.
Decilitre	= 1/10 litre.
Centilitre	= 1/100 litre.
Millilitre	= 1/1000 litre.

PART IV

MEASUREMENT OF CAPACITY

Imperial units

GALLON	= 4·546 09 cubic decimetres.
Quart	= 1/4 gallon.
Pint	= 1/2 quart.
Gill	= 1/4 pint.
Fluid ounce	= 1/20 pint.

Metric units

Hectolitre	= 100 litres.
LITRE	= a cubic decimetre.
Decilitre	= 1/10 litre.
Centilitre	= 1/100 litre.
Millilitre	= 1/1000 litre.

PART V

MEASUREMENT OF MASS OR WEIGHT

Imperial units

POUND	= 0·453 592 37 kilogram.
Ounce	= 1/16 pound.
Ounce troy	= 12/175 pound.

Metric units

Tonne, metric tonne	= 1000 kilograms.
KILOGRAM	is the unit of mass; it is equal to the mass of the international prototype of the kilogram.
Hectogram	= 1/10 kilogram.
Gram	= 1/1000 kilogram.
Carat (metric)	= 1/5 gram.
Milligram	= 1/1000 gram.

DEFINITIONS OF

Furlong
Chain

Square m
Rood
Square in

Cubic yar

Cubic foc
Cubic inc

Bushel
Peck
Fluid drac
Minim

Ton
Hundredw
Cental
Quarter
Stone
Dram
Grain
Pennyweig
Ounce apot
Drachm
Scruple
Metric ton
Quintal

1 (*a*) AMPERE

PART VI

SCH. 1

DEFINITIONS OF CERTAIN UNITS WHICH MAY NOT BE USED FOR TRADE

Measurement of length

Furlong	= 220 yards.
Chain	= 22 yards.

Measurement of area

Square mile	= 640 acres.
Rood	= 1210 square yards.
Square inch	= 1/144 square foot.

Measurement of volume

Cubic yard	= a volume equal to that of a cube each edge of which measures one yard.
Cubic foot	= 1/27 cubic yard.
Cubic inch	= 1/1728 cubic foot.

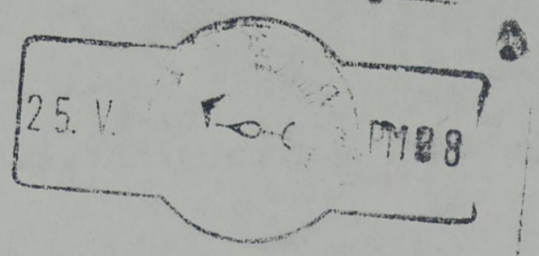
Measurement of capacity

Bushel	= 8 gallons.
Peck	= 2 gallons.
Fluid drachm	= 1/8 fluid ounce.
Minim	= 1/60 fluid drachm.

Measurement of mass or weight

Ton	= 2240 pounds.
Hundredweight	= 112 pounds.
Cental	= 100 pounds.
Quarter	= 28 pounds.
Stone	= 14 pounds.
Dram	= 1/16 ounce.
Grain	= 1/7000 pound.
Pennyweight	= 24 grains.
Ounce apothecaries	= 480 grains.
Drachm	= 1/8 ounce apothecaries.
Scruple	= 1/3 drachm.
Metric ton	= 1000 kilograms.
Quintal	= 100 kilograms.

WEIGHTS + MEASURES SEM '79.



cc BG.

DEPARTMENT OF TRANSPORT
2 MARSHAM STREET LONDON SW1P 3EB

My ref:

Your ref:

The Rt Hon Lord Young of Graffham
Secretary of State for Trade and Industry
Department of Trade and Industry
1-19 Victoria Street
LONDON
SW1H OET

8 MAR 1988

Dear David,

METRICATION

I have been following the correspondence which started with your letter of 3 December to Geoffrey Howe.

I think we should meet soon - while there is still time to influence events in Brussels - to consider our aims and tactics on this awkward topic. As the basis for discussion, it would be useful to have a paper setting out the issues involved. If you agree with this suggestion, I should be grateful if my officials could be involved in drafting the issues paper.

I am sending copies of this letter to the Prime Minister, to other members of the Cabinet, and to Sir Robin Butler.

Yours,
Paul

PAUL CHANNON

WEIGHTS & MEASURES

Metrication Sept 79

CCB/1

MINISTRY OF AGRICULTURE, FISHERIES AND FOOD
WHITEHALL PLACE, LONDON SW1A 2HH

nb pm

From the Minister

The Rt Hon Lord Young of Graffham
Secretary of State for Trade
and Industry
Department of Trade and Industry
1-19 Victoria Street
London SW1H OET

23 February 1988

Dear David,

METRICATION

cc Pat Clap

I have seen a copy of your letter of 3 December to Geoffrey Howe and his reply of 2 February; he has, in my view, produced some powerful arguments why the UK should proceed towards complete metrication. However, there is little doubt that such a move would give rise to a significant public outcry, particularly so far as my interests are concerned in the event of the returnable pint bottle of milk having to be scrapped but also more generally in relation to the food sector. In order to assess the situation my officials have undertaken a quick review of likely attitudes in the sectors for which I am responsible.

The agricultural industry is clearly already well down the road towards metrication and I expect the current resistance to the use of metric units (for example, the continued references to acreage rather than hectarages) will be overcome in time. As for fisheries, the extensification of metrication could prove beneficial in enforcing the Common Fisheries Policy. But as I have indicated there are very real problem areas mainly in connection with food and drink retailing as Geoffrey himself has mentioned. In addition to the political difficulties of abolishing the doorstep pinta, changes to the pint in the pub could be strongly resented. The costs of conversion for brewers and the milk industry as well as for many small retailers could be considerable and would be seen as unnecessary as the existing arrangements hardly constitute a barrier to trade. But there is also the danger, whether perceived or real, that many people will believe that the move has been used for unwarranted increases in food prices.

Nevertheless, none of these problems are, in my view, insuperable. It would, I believe, be a mistake to wait until we have our hands forced by the Community, an event which could be accompanied by accusations that the Government was not sufficiently farsighted.

/Moreover, if ....

WEIGHTS + MEASURES:
Metrication Sept 79

Moreover, if we were then forced to complete metrication, those calling for the retention of imperial units would accuse us of weakness. After considering the arguments I am therefore in agreement with the proposal that a consultation document should be produced seeking the widest range of views, but I should like my officials to be involved in the drafting in so far as it affects the sectors for which I am responsible.

I am copying this letter to the Prime Minister, to other members of the Cabinet and to Sir Robin Butler.

Yours ever,

JOHN MacGREGOR

CONFIDENTIAL

pie MT

10 DOWNING STREET
LONDON SW1A 2AA

From the Private Secretary

4 February 1988

Dear Lyn

The Prime Minister has seen the Foreign Secretary's minute of 2 February to the Secretary of State for Trade and Industry on the subject of metrication. You will wish to know that she commented that a move such as the Foreign Secretary proposes would cause a major political row.

I am copy this letter to the Private Secretaries to the other members of Cabinet and to Trevor Woolley (Cabinet Office).

Yours ever

Andy

P.A. Bearpark

Lyn Parker, Esq.,
Foreign and Commonwealth Office.

CONFIDENTIAL

CONFIDENTIAL

Prime Minister 2

Such a move would cause a major political row. MS

FCS/88/022

SECRETARY OF STATE FOR TRADE AND INDUSTRY

Metrication

1. Thank you for your letter of 3 December about the continuing use of imperial units of measurement after 1989.

2. I recognise that the next stages of metrication will be no easier than those which have gone before. I had Ministerial responsibility for the subject between 1972 and 1974 and need no reminding of the political difficulties. Even so, like you, I see no alternative, and indeed considerable virtue in necessity. We originally started down the road because of the need to reduce the costs of manufacture and trade. We were not alone in doing so. Most other countries have now overtaken us and gone metric, including all the major Commonwealth countries: Canada, Australia, Kenya, India, Nigeria and New Zealand among them. (South Africa also went metric some 15 years ago.) The laggards are countries like the Yemens and Burma. Among major countries, only the United States, which has had a voluntary programme like ours, has made relatively little progress; though recent concern about US competitiveness in international trade has led to the issue being reopened and to the drafting of legislation designed to push the process along.

/3.

3. I do not believe the problems are insuperable. Most items sold in supermarkets are now packaged primarily in metric units. People have got used to buying petrol by the litre. Thanks to the decision announced by the Prime Minister when she was Secretary of State for Education, children have been taught in metric units since 1972. I understand all GCE and GCSE exam papers are set in metric units. That means that anyone of 25 or under is more familiar with the metric than the imperial system. And anyone over 25 the reverse.

4. The main presentational problem is appearing to want people to get used to asking over the counter for half a kilo of apples or for a half litre of beer. But there is no intrinsic reason why the familiar terms should not be used even if the actual measure has changed. We still talked about pennies even though the value had been changed). The French still talk colloquially of "pounds" when they mean half-kilos.

5. The arguments for metrication are of course reinforced by the legal position. As you point out, we are presently operating under a EC derogation which requires a decision to be taken on the phasing out of imperial units by the end of 1989. The issue will be decided by qualified majority vote and, with the sole exception of the Irish, no other member state uses the imperial measure. We and the Irish together do not constitute a blocking minority. I therefore agree that we need to initiate a consultation exercise.

/6.

CONFIDENTIAL

6. Given the legal position, I think our consultation has to be conducted on the basis that metrication has come a very long way and that we now need to embark on the remaining stages envisaged when the process started in 1972. The one exception we should envisage is the use of miles for road travel. Although the 1979 Directive also covers linear measurement, I do not believe that the continued use of miles rather than kilometres could be deemed to constitute a distortion of trade. The costs of changing road signs in the UK would moreover be prohibitive. I believe that, if we were prepared to move to full metrication of weights and measures, we could negotiate a further derogation to keep kilometres out.

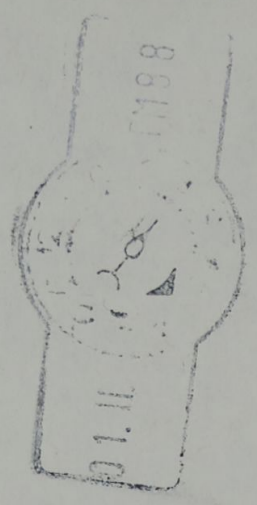
7. I think that the next step should be for officials to draw up a draft consultation document. It will need careful drafting, and full consideration and clearance by Ministers. Thereafter, we might talk to the Irish, who face similar problems, and the Commission. I think that we might get round the problem of the 1989 deadline provided we can offer clear evidence of intent to make substantial progress by 1993.

8. I am copying this minute to the Prime Minister, other members of the Cabinet and to Sir Robin Butler.

(GEOFFREY HOWE)

Foreign and Commonwealth Office
2 February 1988

WEIGHTS & MEASURES: Memorandum: Sept 79



CDSG

2 MARSHAM STREET
LONDON SW1P 3EB
01-212 3434

16pm

My ref:

Your ref:

The Rt Hon The Lord Young of Graffham
Secretary of State
Department of Trade and Industry
1-19 Victoria Street
LONDON
SW1H 0ET

23 December 1987

Dear David

METRICATION

I have seen a copy of your letter of 3 December to Geoffrey Howe, which invited the views of colleagues on your proposal to prepare a paper for consultation on phasing out imperial units, perhaps by 1992.

So far as my Department is concerned, metrication should not present insuperable problems, but I am aware that others, not least local authorities, will not be in such a fortunate position and that there will be those who strenuously object to further metrication without clear justification.

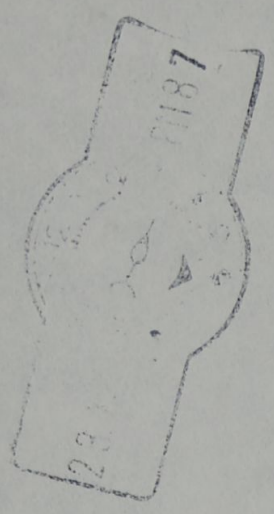
I suggest therefore any public consultation document should seek to clarify where the continued use of imperial units is a real barrier to trade and to identify the costs and benefits of any change. To proceed on this basis should at once provide us with arguments in dealings with the Commission without provoking the rows against which the Prime Minister has warned.

Copies of this go to the Prime Minister, Geoffrey Howe, other members of the Cabinet and to Sir Robert Armstrong.

Yours ever

NICHOLAS RIDLEY

100% RECYCLED PAPER



WEIGHTS + MEAS : metrication Sept '79

MG6286p

CABG

DEPARTMENT OF HEALTH AND SOCIAL SECURITY

Alexander Fleming House, Elephant & Castle, London SE1 6BY

Telephone 01-407 5522

From the Secretary of State for Social Services

The Rt Hon Lord Young of Graffham
Secretary of State for Trade and Industry and
President of the Board of Trade
Department of Trade and Industry
1-19 Victoria Street
LONDON
SW1H OET

22 December 1987

Dear David,

METRICATION

Thank you for sending me a copy of your letter of 3 December to Sir Geoffrey Howe and the note recording the comments of the Prime Minister. I am sorry you have not had an earlier response.

Metric measures are now used for most purposes in the National Health Service and associated technical services and I would not expect strong opposition from health authorities, the medical and other health professions or associated scientific and technical services to their use becoming obligatory. The exception would be, of course, the continued retention of the millimetre of mercury (mm Hg) for the measurement of blood pressure, etc, in the place of the kilopascal, which is permitted by Directive 85/1/EEC amending 80/181/EEC.

In these circumstances I agree with the basis on which you propose to proceed.

I am copying this letter to the Prime Minister, other members of the Cabinet and to Sir Robert Armstrong.

JOHN MOORE



WEIGHTS + MEASURES;
Metrification 1975

10 DOWNING STREET
LONDON SW1A 2AA

From the Private Secretary

7 December 1987

Dear Stephen

METRICATION

The Prime Minister has seen your Secretary of State's letter of 3 December to the Foreign Secretary. She has commented that she feels we will be unable to phase out imperial units as she thinks there would be an enormous row with media interests and Parliament both united against a change.

I am copying this letter to the Private Secretaries to other members of the Cabinet and Sir Robert Armstrong.

Yours ever

Andy

P A BEARPARK

Stephen Ratcliffe, Esq.
Department of Trade and Industry

Secretary of State for Trade and Industry

DEPARTMENT OF TRADE AND INDUSTRY
1-19 VICTORIA STREET
LONDON SW1H 0ET
TELEPHONE DIRECT LINE 01-215 5422
SWITCHBOARD 01-215 7877

3 December 1987

The Rt Hon Sir Geoffrey Howe QC MP
Secretary of State for
Foreign and Commonwealth Affairs
Foreign and Commonwealth Office
Downing Street East
London
SW1A 2AL

Dear Geoffrey,

METRICATION

We have to take a view on continuing the use of imperial units of measurement after 1989.

At the end of 1979, the Council adopted a revised Units of Measurement Directive (80/181/EEC) prescribing the legal units which must be used in the construction and use of measuring instruments and in the indication of quantity for economic, public health, public safety or administrative purposes. The units are based on the International System of Units (the SI or "metric system"). By derogation the UK (and Ireland) have been able to continue to use imperial units. However, before the end of 1989 the Council has to take a decision on a final date after which imperial units may not be used.

We therefore need to consider our policy towards the post 1989 arrangements so that we can make representations to the Commission before they put their proposal to the Council. In effect, the procedure as laid down in the Directive limits our options to suggesting alternative termination dates.

Since 1979 metrication has been introduced into trade entirely on a voluntary basis. Whilst industry has metricated its products to a considerable extent, anecdotal evidence suggests that there is unlikely to be further metrication - should this become an objective - unless Government takes the lead. In particular, imperial units firmly remain the basis for the retail sale of weighed or measured goods, notably food and drink. There seems no prospect of a voluntary change in this area because individual

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retailers are unlikely to risk placing themselves at a competitive disadvantage by pricing in metric amounts e.g. per 500g instead of per pound (454g). They also anticipate that metrication of weighed-out goods will not be attractive to the public and will resist adopting the metric system until all are compelled to do so.

The formal proposal for the Directive which went from the Commission to the Council in March 1979 was not as the Commission had originally framed it. In particular the Commission's first working document envisaged the end of 1989 as the cut-off date after which imperial units would no longer be permitted. But following UK objections that this would prejudice a smooth change to metric units by introducing a compulsory element, the Commission reluctantly agreed that the decision on the final date should in effect be postponed for 10 years.

Since 1979 it has become increasingly apparent that our continuing use of imperial units is regarded as a trade barrier by most other Member States. We can therefore expect to come under increasing pressure as 1989 approaches to agree a final date for abandoning the imperial system - at least for trade purposes. The Commission will no doubt be tempted to suggest that 1992 would be right, as the target date for completing the single market. It must be recognised that an amending proposal will now be made under the qualified majority voting provisions of Article 100A, so that we and Ireland will not be able to block it on our own.

During the Commons debate on the Commission's proposals for the 1979 Directive it was resolved that no decision on the phasing out of imperial units should be taken before the House has first given its approval. We shall need to prepare carefully for this. Previous attempts to impose metrication have met with public controversy and our policy of voluntary progress recognises the divergent opinions which were expressed at that time.

As a first step I therefore propose that we should now seek the views of a wide range of interests on the introduction of complete metrication. Since virtually all Departments clearly have a substantial interest in the issue I would aim to put a paper to colleagues before next summer. I should be glad to have your agreement to proceeding on this basis.

I am copying this letter to the Prime Minister, other members of the Cabinet and to Sir Robert Armstrong.

Yours,
David

LORD YOUNG OF GRAFFHAM

DW4CUA

999.49

With the Compliments of

Deputy Director



Metrication Board

Millbank Tower

Millbank

London SW1P 4QU

Tel: 01-211 3000 Ext:



Metrication Board

Final Report of the Metrication Board

1980

London: Her Majesty's Stationery Office

.... I was engaged, for I believe 6 months, in the constant study and conversion of English weights, measures, and prices into French weights, measures, and prices. To say I felt the disadvantage of our system as compared with say that of France, and felt mortified and annoyed, would not express my feeling at the time; I felt humiliated. The one is simple, symmetrical, logical and consistent; the other is dislocated, complicated, uncouth and incoherent....

Mr Richard Cobden, in the House of Commons, 1 July 1863

To the Right Hon John Nott, MP,

Secretary of State for Trade

I have the honour to submit the Tenth and last Report of the Metrication Board for the period July 1978 to April 1980.

In this last Report I should like to thank all present and past members of the Board and its committees, and the many people in education, consumer organisations, industry, trade, agriculture and other walks of life who have helped facilitate the progress of metrication.

I have the honour to be,

Sir

J MAXWELL WOOD

METRICATION BOARD REPORT JULY 1978 - APRIL 1980

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CHAPTER 1: REVIEW

1.1 The first move for a change to metric for all purposes of trade was made by the Federation of British Industries (now the Confederation of British Industry) in 1965 when it informed the Government that the large majority of its members favoured this course. In response the Government stated that over half British exports went to metric countries, and that it was desirable that British industry should adopt metric units, sector by sector, until the system could become the primary system of weights and measures for the country as a whole. The Government also stated that it hoped that most of industry would have made the change by 1975, but recognised that some sectors might aim at an earlier or later date.

1.2 Today metric units are used in many important areas of British life - including education; agriculture; construction; industrial materials; much of manufacturing; the wholesaling of petrol, milk, cheese and textiles; fatstock markets and many port fish auctions; nearly all the principal prepacked foods; posts and telecommunications; most freight and customs tariffs; all new and revised Ordnance Survey maps; and athletics. Nevertheless, taken as a whole, Britain is far from being wholly metric.

1.3 Certainly there has been hostility to metrication. Against metrication it has been argued that:

- traditional weights and measures should be kept as part of the national heritage;
- the metric system is difficult to understand and would confuse people;
- some metric units are less convenient and practical than those they replace;
- it would increase costs;
- the EEC is to blame for the changeover.

1.4 The truth of the matter is that:

- metrication does not involve rewriting English literature which in any case already uses many units strange to us today;

- metric is much the simpler system;

- virtually all the rest of the world is committed to metric;

- Britain has to change to metric in order to succeed in international trade;

- the British Government's decision of 1965 in favour of the metric system was taken well before Britain joined the EEC in 1973.

1.5 When metrication has actually happened - as, for example, in the case of prepacked foods like margarine and sugar - the great majority of people have taken it in their stride. The Price Commission found that metrication had not resulted in increases in retail unit prices, and the Board's monitoring of retail prices since the summer of 1979 onwards points to the same general conclusion. No country has been able to calculate the costs of going metric but all agree that the continuing benefits for the future far outweigh them. A carefully timed and planned changeover can bring substantial financial savings and benefits to individual firms.

1.6 The misapprehensions might have been overcome if the Board had been able to campaign in favour of the adoption of the metric system. Our terms of reference did not permit us to do this. This gap was not filled by successive Governments with the result that no one made a sustained argument for metrication.

1.7 From the beginning a principal feature of Goverment policy was that metrication should be voluntary, that no compulsory powers would be sought, and that the Metrication Board would be advisory only. The vast majority of the metric advances of the past fifteen years have in fact resulted from voluntary decisions and actions. The Metrication Board has helped with co-ordination, publicity and consumer information.

1.8 The voluntary approach, that is change not backed by legislation, has been much less effective in retailing than in other sectors. The report 'Metrication in the Retail Trade', which we submitted to the Secretary of State for Prices and Consumer Protection in 1974, advised that unless legal cut-off dates were established (that is, dates after which the use of imperial units would no longer be legal) some retailers would not go metric and these would

deter others from doing so. This point was demonstrated in practice when fabric and floor-covering retailers began a voluntary change in February 1975. Not all retailers changed: some who did claimed that they lost sales and then either reverted to selling in imperial or adopted dual measurements.

1.9 Teachers were among the first to recognise the simplicity, logical construction and educational benefits of the metric system. Today, in GCE, SCE and CSE examination papers,metric units are the rule. But on leaving school many young people find themselves having to adapt to an economy which is partly imperial. Employers who still operate in the imperial system have to train recruits. Since complete elimination of imperial measurements from the economy is likely to take some years, pressure may be expected for courses and examinations to be made to reflect both systems. In 1974 the Department of Education and Science issued advice (which still stands) to schools that teaching should be conducted principally in metric terms while maintaining general familiarity with imperial units.

1.10 Thus while most sectors are metric or largely metric two major sectors are not: retailing of weighed out foods and many sales by length, volume or area; and speed limits and road distance, height and weight signs.

1.11 Fifteen years ago the Government of the day accepted that the country should go metric in the interest of Britain's survival in world markets. In the light of economic performance and with the worldwide advance of metrication, this argument is even stronger today. There are no legislative barriers to the change, yet much of British industry is said to work at reduced efficiency because of dual standards, double stockholding, conversion problems and waste and mistakes on the shop floor. Many of the opportunities to rationalise specifications are being missed; and failure of industry to metricate fully, except to the extent that imperial production is necessary for spares and replacements for existing equipment, reduces efficiency and affects sales.

1.12 As long ago as 1968 the Government-appointed Standing Joint Committee on Metrication, representing management, trade unions and Government, reported that manufacturing industry could make the change efficiently and economically only if the economy as a whole moved in the same direction on a broadly similar time-scale and in an orderly way.

Industry attaches importance to the early completion of the metric programme throughout the economy as a whole. In June 1979 the Confederation of British Industry, while recognising that industry itself has a part to play in bringing this about, commented 'there is no room for two measurement systems in an efficient trading nation - one for the housewife and one for the businessman' .... 'at the moment we are in the worst of both worlds'.

1.13 Most organisations representing consumers believe that it would be best for shoppers for the retail change to be total, speedy and orderly. A long transition would prolong confusion and remove from shoppers the safeguard of a single and universally accepted system of weights and measures. Honest traders could be penalised while those prepared to exploit areas of uncertainty and confusion could stand to gain.

1.14 In 1977, after the Weights and Measures Act of 1976 had made legal cut-off dates possible, we held extensive discussions with consumer organisations and those concerned with retailing weighed and measured out goods. We achieved agreement on programmes for metricating retail sales of all these goods by the end of 1981; a principal requirement was that the programmes should be backed by statutory Orders giving legal status to the agreed cut-off dates. Draft Orders were laid before Parliament in March 1978 but were withdrawn in May. At this point the Government of the day asked the Board to try once again to see whether acceptable voluntary programmes could be devised. The Board therefore opened fresh discussions with the retail trade to see whether this was possible.

1.15 We submitted our 'Report on the Change to Metric in the Retail Trade' to the Minister of State for Consumer Affairs in October 1979. Our major finding was that retailers of weighed out foods and measured out goods totally reject the idea of voluntary metrication in the near future, except petrol for which there is no economic alternative to metrication (see page 16). They pointed out that as yet there are no commercial advantages to them in going metric. The retail trade is highly competitive and even if all trade association members changed, many non-members would continue to trade in imperial in order to gain an unfair commercial advantage. The majority of customers do not yet favour the metric system and metric prices appear to be higher than imperial prices because, in general, round metric quantities are larger than

imperial. Although unenthusiastic about the adoption of the metric system, retailers seemed willing to support an early, orderly, time-tabled programme provided it is backed by legislation.

1.16 However, in November 1979 the Government announced that since it had no plans for further cut-off Orders there was very limited scope for the Board's activities and no further appointments to the Board would be made after current terms expired on 30 April 1980. Government policy is that future metrication should proceed by voluntary programmes and Ministers have indicated that they favour such voluntary action to achieve an orderly transition.

Conclusion

1.17 Industry, especially engineering, says that the rate of change to metric working is greatly affected by progress in other sectors, especially retail trade. The phasing out of imperial units for retail sales would quickly bring about the use of metric units in everyday life and powerfully influence the changeover in industry.

1.18 Many prepacked goods, especially the main 'shopping basket' foods, and some measured out goods are sold in metric quantities in the High Street. Most organisations representing consumers believe it would be best for shoppers if the change were total, speedy and orderly.

1.19 Trade organisations representing retailers of measured out and weighed out goods, especially meat, fish, fruit and vegetables, are not prepared to recommend a voluntary change to selling in metric in the near future. Although unenthusiastic about the adoption of the metric system, all seem willing to support an early, orderly, change provided there is a fixed statutory timetable.

1.20 Government policy is that future metrication should proceed by voluntary programmes of industry, trade, retailers, firms, associations and individuals. Ministers have indicated that this is the best method of achieving an orderly transition.

1.21 The Board believe that the essential prerequisite to retail metrication being completed voluntarily in the next few years is a change in the public's attitude towards the adoption of the metric system. Our surveys show that a majority of people are not in favour of changing, although over eighty per cent of them believe they would be able to

cope with the change when they had to.

1.22 This necessary change in attitude can be achieved only by a successful information programme explaining why the country is going metric and the adverse effect on the economy of not completing the change. The alternatives to changing public opinion in favour of metrication, which would remove retailers' fears about changing voluntarily, are: -

1) a timetabled retail programme, backed by the minimum legislation necessary, and agreed in advance with retailers, consumers and other interests;

or

2) continuing with the existing mixed system until such time as the retail trade see commercial benefits in 'going metric'.

1.23 The Board consider that an early and orderly completion of the change to metric would be in the best interests of the economy and thus the consumer, and we urge everyone to press ahead as quickly as possible.

CHAPTER 2: MAIN DEVELOPMENTS

Prospects for completing metrication in retailing

2.1 During 1979 the Board discussed with some one hundred organisations representing the trade and its suppliers the possibility of achieving a voluntary time-tabled change to metric for retail sales of weighed out foods, fabrics, floor coverings, DIY and hardware products. This followed the hope expressed by the then Secretary of State for Prices and Consumer Protection on 16 May 1978 that such a change would be possible.

2.2 We found that no organisation representing retailers, wholesalers, packers or measuring equipment manufacturers was prepared to recommend voluntary change in the near future. The retail trade associations claimed there were no commercial advantages to their members in going metric. Retailing is highly competitive and even if all trade association members changed, many non-members would continue to trade in imperial in order to gain an unfair commercial advantage. Metric prices appear to be higher than imperial because, in general, round metric quantities are larger than imperial. Also, the majority of customers do not favour the metric system. The unanimous view of all the organisations consulted was that any voluntary changeover would be fragmented and prolonged. This is consistent with the views put forward by consumer and women's organisations.

2.3 On the other hand, although unenthusiastic about going metric, all sectors of retail trade said they were willing to accept an early, orderly, time-tabled programme with supporting legislation to guarantee fair trade competition, and with publicity to help consumers during the transition. Some trade associations would prefer to see the smallest retailers exempted from any legal requirements.

2.4 In October 1979 we submitted our findings 'Report on the Change to Metric in the Retail Trade' to the Minister of State for Consumer Affairs. Our conclusion was that without some form of legislative approval by the Government to a new programme agreed by trade and consumer organisations, metrication in the retail sector would not be achieved in the near future. Our recommendations were:-

a the Government should negotiate metrication programmes acceptable to retail, wholesale, packing, equipment, consumer and women's

organisations and support any agreements with the minimum of legislation necessary to complete the transition;

b to facilitate the transition, arrangements should be made:

i to explain the metrication programmes to the public at large;

ii to monitor retail prices during transition; handle complaints; negotiate 'value for money' assurances with manufacturers and generally help to advise and inform the consumer.

2.5 On 14 November 1979 the Minister announced that the Government had no plans for further compulsory Orders. The Minister indicated that it was in everybody's interest that as industry continued to go metric they should proceed to expedite in an orderly way on a voluntary basis a programme for any future metrication.

Prepacked prescribed quantity foods

2.6 Metrication of the basic 'shopping basket' foods, such as flour, instant coffee, tea, butter and margarine is largely complete. By the beginning of 1980 over 95 per cent by value of these foods was made up in rounded metric quantities. Jam, marmalade, honey, jelly preserves, syrup, cereal grains and starches, and coffee (beans and ground) are the only prescribed quantity foods for which ranges of metric sizes are not yet agreed.

2.7 Manufacturers and importers of dried vegetables, dried fruits, flour and flour products, oat products, cocoa and chocolate powder finished the change to metric prepacks in the second half of 1978. In February 1979 margarine in 250 g and 500 g packs started to appear on retailers' shelves. In July instant coffee and butter started to appear in metric sizes. In September white fats and dripping began the changeover.

2.8 The changes were brought into effect by legislation embodying timetables agreed by the sector concerned. Manufacturing cut-off dates were introduced for imperial packs of pasta, dried fruits, dried vegetables, and flour and flour products. Additionally, cut-off dates for retail sales of imperial packs were approved for biscuits, bread, chocolate bars, cocoa and drinking chocolate, oat products, sugar, cornflakes, salt, tea, butter, margarine, white fats and dripping, and shredded suet. There are two retail cut-off dates in 1980;

for tea on 29 June and for shredded suet on 28 September. Legislation permitting metric ranges for instant coffee and prepacked potatoes has resulted in a widespread change of the former product, but little change of the latter. For milk see page 20.

2.9 In the main the metric range selected has been based on a 125 g module, slightly larger than the 4oz imperial equivalent. The overall reduction in the number of packs could lead to savings in packing costs. The principal exception is instant coffee, where the trade opted for the 100 g module in line with Continental practice.

2.10 In August 1979, when margarine, butter and instant coffee were all changing to metric quantities, the Metrication Board and nine local authorities who monitored complaints during that period received a total of 19 500 enquiries. Only 38 were complaints about metrication.

Value for money

2.11 Before each of the prescribed quantity food changes which began in 1979 the Board sought from manufacturers an assurance that on a 'weight for weight' basis the new metric packs would cost no more than the imperial packs they replaced. Major manufacturers of tea, margarine, lard and other cooking fats gave us such assurances. In the case of butter this was not possible because of changes in the EEC subsidy and devaluation of the green pound just before the start of the change. In addition, not all manufacturers of instant coffee were able to give such an assurance. The most commonly available metric packs of instant coffee weigh nearly 12% less than the imperial packs they replace and packing in smaller sizes costs more. The major manufacturers assured us, however, that their prices to the grocery trade would be reduced by either the full amount of 11.8% or by at least 10%.

2.12 Two Price Commission reports, in 1977 and 1979, concluded that metrication did not, on a weight for weight basis, lead to increases in the retail prices of the main 'shopping basket' foods. Indeed, six brand name foods were better value for money in grams and kilograms than in ounces and pounds.

2.13 After the Price Commission's demise, the Metrication Board enlisted the help of the National Federation of Consumer Groups and of some local authorities, who carry out their own price surveys, to monitor the change to metric of instant

coffee, margarine, butter and tea. Prices in over 200 retail outlets from Scotland to the South Coast were surveyed. Analysis of the butter and tea surveys is not yet complete but for instant coffee and margarine we found that both national brands and own labels in general give as good, and sometimes appreciably better, value for money in metric packs as in imperial.

Petrol

2.14 The Motor Agents Association and the Institute of Petroleum, which represents the major oil companies, have recommended to their members that all retail sales of petrol should be in litres by end-1982. The major oil companies have agreed to have a common changeover period but the timing has yet to be decided.

2.15 Three major factors, none of which affects other sectors of retailing, have prompted this recommendation:

i the unsatisfactory nature of half-price posting, adopted by many retailers whose price-computing pumps cannot cope with present prices per gallon, which is confusing to motorists and garage forecourt staff alike and causes uncertainty and mistakes;

ii the cost of converting price-computing pumps to cope with prices over £2 per gallon, which the great majority do not currently reach, is generally higher than the cost of converting to sales in litres. In addition, the latter conversion extends the life of mechanical pumps by reducing wear and tear on price-computing mechanisms;

iii safety on garage forecourts will be improved. While petrol deliveries are by litres into underground storage tanks calibrated in gallons there is the possibility of mistakes.

Prepacked non-prescribed quantity goods

2.16 A major change in 1979 was the adoption of metric pack sizes for tobacco. This was carried through voluntarily by the main manufacturers who by end-June 1979 were marketing all prepacked pipe and hand rolling tobacco in metric quantities only.

2.17 Since 15 May 1978, when the Prepacking and Labelling of Wine and Grape Must (EEC Requirements) Regulations 1978 came into operation, wine prepacked in quantities between 0.05 litre and 5 litres has been bottled only in a standard range of metric sizes, eg 350 ml, 500 ml, 700 ml, 750 ml (75 cl) and 1 litre. Sparkling wine, vermouths, British wines, liqueur wines and spirits are being packed increasingly according to this range. For example, the 75 cl (26.4 fluid ounces) size is replacing the old 26 2/3 fluid ounces (75.7 cl) for bottles of gin and whisky.

2.18 Another change being made by most producers is the adoption of of the International Organisation of Legal Metrology system for measuring alcoholic strength. The Labelling of Food (Amendment) Regulations 1979 permit the symbol '% vol' to be used in declarations of the alcoholic strength of intoxicating liquor prepacked for retail sale. This means that, for example, spirits such as whisky and gin may be labelled '40% vol' instead of '70° proof'. The alcohol content remains exactly the same but is calculated and declared differently.

Average system

2.19 Legislation which came into effect on 1 January 1980 permits 'average' instead of 'minimum' quantity declarations on packaged goods. We have recommended to packers that, where appropriate, they should adopt round metric quantities as they change to the average system.

Engineering

2.20 In July 1968 the British Standards Institution published, after widespread consultations through trade associations and in other ways, an agreed metrication programme and guide for the engineering industry. This set a target of 75% metric production by the end of 1975.

2.21 Progress has been substantially less than planned and leaders in the industry attach importance to the early completion of the metric programme throughout the economy as a whole. They say that the industrial rate of change is greatly affected by progress in other sectors, especially retail trade. The phasing out of imperial units for retail sales would quickly bring about the use of metric units in everyday life and powerfully influence the changeover in industry. Until metric production is the norm for all but spares and replacements for existing equipment, companies compete at a disadvantage with overseas suppliers. Many say they face extra costs in working to dual standards, double stockholding, conversion problems and waste due to errors and scrap on the shop floor.

2.22 'Metrication - An Investment in Efficiency', a study meeting, was sponsored jointly by the Confederation of British Industry and the Metrication Board in April 1979. Its main conclusions were that:

> There are no legislative barriers to the industry changing, but the agreed engineering target of 75% metric production by end-1975 has not yet been reached;
>
> some imperial production will be required for many years to provide spares and replacements for existing equipment;
>
> prolonged general working in the two systems of measurement harms efficiency and imposes substantial cost penalties;
>
> there is an urgent need to combine a programme of plant and equipment modernisation with metrication;
>
> manufacturing, wholesaling and retailing have to move together in the change; and,
>
> there is a clear need for a more positive commitment to metrication by Government.

2.23 In June 1979 the Director General of the Confederation of British Industry, while recognising that industry itself has a part to play in bringing about the completion of metrication in the economy as a whole, commented 'there is no room for two measurement systems in an efficient trading nation - one for the housewife and one for the businessman' ....'at the moment we are in the worst of both worlds'. The President of the Institute of Purchasing and Supply has estimated that fastener manufacturers and stockists alone have £40 million tied up in dual stocks.

2.24 The Board is collaborating with a firm of management consultants in a survey to try to quantify the cost of 1) changing to metric and 2) working in imperial as well as metric. Over 800 firms have taken part in the survey. Preliminary analysis of the replies indicates that over 50% of production is still in imperial; the costs of dual working are nearly 3% of the annual value of home sales; and the capital costs of metricating could be recovered in less than two years.

2.25 A limited survey of metrication progress in small firms was undertaken by the Metrication Board at end-1978. The Board found that some small firms claimed to have problems obtaining

supplies of raw materials, especially nonferrous metals and bright steel, at an economic price and within the required time-scale. All accepted the inevitability of metrication but found little incentive to accelerate the pace of change. However, those that had made the change experienced no major technical problems and none wished to revert to working in imperial.

2.26 To try to identify and help overcome alleged supply problems, the Board wrote in October 1979 to a wide range of small engineering firms inviting them to let us know, if they do have supply difficulties, their annual requirements for nonferrous metals and bright steel. The replies indicated that few firms have exactly the same problems. Wherever practicable, we have suggested how supply difficulties might be dealt with.

Swimming pools

2.27 Recommendations for water depth markings in swimming pools were agreed at a meeting in 1979 called by the Board and attended by representatives from swimming pool designers, constructors, managers and users, Government departments and other organisations interested in water safety precautions. The recommendations are:

i Pool depths of water should be marked clearly and conspicuously in metric units and, for the time being, in imperial units.

ii Metric measurements should be marked in metres to one place of decimals.

iii Depths below 1.0 m should show a zero before the decimal point.

iv Except for depths of less than 1.0 m, where the markings may need to be more frequent, the depth of water should be marked at each end of the pool, at sudden changes of depth, and elsewhere at each increase of 0.5 m.

EEC Directives

2.28 A new EEC Directive on Units of Measurement comes into effect on 1 October 1981 and provides for the use of SI units for trade and other purposes throughout the Community. A decision on the future of the imperial units listed in the new Directive, which include the inch, foot, yard, mile, ounce, pound, pint and gallon, does not have to be taken until 31 December 1989. The Directive thus reflects the Government's view that the rate of change to the use of SI units in the United

Kingdom should not be determined by the Community.

2.29 A number of less widely used units, such as the cubic yard, the chain, the rood and the dram, have already been removed from use in legislation in accordance with an earlier Units of Measurement Directive; the hundredweight, cubic inch, hand and degree Fahrenheit are being removed.

2.30 Two other EEC Directives also affect the rate of change to metric in the food manufacturing industries. The Directive on standardisation of prepacks, which Member States have to implement by 17 January 1982, sets out ranges of prescribed weights and capacities for a wide variety of foodstuffs and household goods, from frozen vegetables to shoe polishes. Its effect is to require all Member States to permit the import of products prepacked in the quantities prescribed in the Directive. It will not prevent individual Member States permitting trade in these products prepacked in other sizes, but clearly it will be to manufacturers' advantage to produce packs which will be readily acceptable throughout the Community.

2.31 The Liquids Directive, from which the United Kingdom obtained a derogation until 31 December 1979, requires Member States to permit the import of a wide range of liquids, for example milk and alcoholic spirits, prepacked in the quantities prescribed in the Directive. The most notable change resulting from this Directive is that prepacked milk may now be offered for retail sale in metric. Statutory Instrument 1979 No 1752 added a metric range to the already permitted range of imperial quantities.

CHAPTER 3: INFORMATION

3.1 With the sequence of metric changes in the shops awareness of metrication rose during the first eighteen months of this report. This was demonstrated by increased coverage in the media, by the marked growth of public enquiries and requests for information put to the Board and by the very strong demand for the Board's publications, which stretched staff resources to the limit.

3.2 The evidence is that the great majority of consumers took the new sizes for prepacked foods in their stride. Certainly very few complaints were made to the Board, or so far as we can judge, to consumer protection organisations. But the experience of 1979 suggests strongly that high levels of interest and demand for information must be expected when the remaining major retail changes eventually happen. There will then be more need to become familiar with metric units and to use them for every-day purposes. Consumers will also need more help in judging value for money during and after the transitions.

Information Objectives

3.3 The Board's main information objectives were, first, to help consumers, trade and industry with metric changes as they occurred; and second, help people acquire knowledge of metric units. During the period of this report most of our resources were applied to the first objective. We alerted consumers to the metrication of the prescribed quantity foods; explained the relationship between the new quantities and the old; and tried to protect consumers by helping them to judge value for money. We also gave practical help with using metric quantities in cooking. To reduce mistakes in the shops we made a point of drawing retailers' attention to the changes before they took place.

Collaboration with trade, industry and consumers.

3.4 All the Board's information campaigns were developed in consultation with retailers, manufacturers and packers, and consumers. We emphasised that consumers can be helped by information on the new packs additional to that required by law. We stressed the desirability wherever possible, of not charging more for the metric packs on a 'weight for weight' basis than for the imperial packs they replaced.

3.5 Our experience confirmed that discussions of this type can help consumers and traders; also that there is a need for an organisation to act as coordinator of information planning and to take the initiative where necessary.

Press and broadcasting

3.6 Strong anti- and pro-metric views continued to be expressed in the media, with the latter probably more prominent than in earlier years. The metric changes of 1979 led to substantial coverage in the media and the Board's news releases were widely and mainly factually reported, particularly in the provincial press. Briefings with journalists and broadcasters resulted in considerable coverage and a number of radio and TV programmes featured Board members. Prerecorded tapes were produced for BBC local radio.

Advertising

3.7 Advertising campaigns were mounted in the national press to alert consumers to the metrication of margarine, butter, lard and other cooking fats, instant coffee and tea. The advertisements compared new sizes with the old and gave guidance on prices consumers should expect to pay. They also invited readers to write in for the Board's publications which usually included "analogues", or simple bar charts enabling people to make value for money comparisons at any appropriate level.

3.8 The Board also advertised in the retail trade press, in women's magazines to help with cooking in metric, and in publications published for elderly people. Altogether the Board made 137 insertions of advertisements in the national press, 24 in the retail trade press, 30 in women's magazines, and 36 in publications for the elderly.

Publications

3.9 In the period of this report the Board issued more than 12 million leaflets, mainly through retailers and to meet individual requests from the public. Over 2 million were existing titles mainly explaining metric units. The rest were new.

- Metric for Shoppers, published in January 1979, dealing with pasta, cocoa, drinking chocolate, oats, dried fruits and dried vegetables and containing a price analogue (2 million copies).

- Shopping in Metric 1979, dealing with margarine, butter, dripping, lard and cooking fats, solid vegetable oils, shredded suet, tea and tea bags and containing a price analogue (5.7 million copies).

- Metric Cook's Guide, May 1979, giving metric recipes and metric units. 1.6 million copies were inserted in a leading women's magazine and 630 000 were distributed through individual requests, exhibitions and consumer organisations.

- Instant Coffee goes Metric, June 1979, with information on the new coffee sizes (375 000 copies).

3.10 In addition the Board prepared three numbers of the Going Metric bulletin, a poster produced in conjunction with the Angling Trades Association and National Anglers' Council, and a leaflet to publicise its new film The Move to Metric.

Films

3.11 The fourteen minute 16 mm colour and sound film The Move to Metric released in September 1979, helps people to understand the use of kilograms, litres and metres, and shows where metrication has got to in shops, industry and schools. It has been available on free loan to consumer and adult education groups, other local organisations, schools, firms running training courses - and so far has been booked on well over a hundred occasions. The Board's earlier film for consumers, Simply Metric, has been booked on nearly a thousand occasions during the period of this report.

Exhibitions and Displays

3.12 During the period of this report the Board arranged 166 consumer information displays including major exhibitions, public meetings and in Citizens' Advice Bureaux, Consumer Advice Centres, libraries and consumer groups. There was a large demand for the Board's publications and people welcomed the chance of getting firsthand information.

Enquiries

3.13 In its advertising and other publicity the Board has made a point of inviting people to contact it for information and publications. Between July and December 1978 Information Division dealt with 5 700 enquiries; in 1979 as a whole the total was 42 700. The rate of enquiries rose more than sevenfold during this period, from a monthly average of 830 in the third quarter of 1978 to a monthly average of 6 090 in the third quarter of 1979. The peak month was October 1979 with 8 140 enquiries.

Public knowledge and attitudes

3.14 Surveys of public knowledge and attitudes to metrication were

commissioned by the Board in September 1978, February and August 1979 and March 1980. The surveys showed that knowledge of metric units as compared with their imperial equivalents is highest for the metre with the kilogram and litre way behind.

Knowledge of metric units

3.15 (in terms of imperial equivalents)

	July 1975 %	Sept 1978 %	Aug 1979 %
The metre			
Correct	53	67	64
Incorrect	11	8	8
Don't know	35	25	28
The kilogram			
Correct	21	38	37
Incorrect	18	19	21
Don't know	60	43	42
The litre			
Correct	30	35	31
Incorrect	37	34	41
Don't know	33	31	28

The August 1979 survey indicated that 95% of adults were aware the country was changing to the metric system and that 84% of those who knew this thought that it was Government policy to go metric. 31% of people who knew about the change were in favour and 46% opposed. Of those hostile to metrication 27% did not like change; 20% thought there is nothing wrong with the old system; 23% thought the metric system too complicated and 15% believed it would be too difficult for old people. On the other hand 72% accepted that the metric system would make trade and business easier; and 84% believed they would be able to cope when they had to. Despite the contrary results shown by Price Commission and Metrication Board investigations, 65% felt that metrication puts prices up unfairly. (see paragraphs 2.11 to 2.13).

CHAPTER 4: METRICATION OVERSEAS

4.1 All major nations are now metric or are committed to adopting the metric system. Burma, Brunei, North Yemen and South Yemen are the only countries which have not decided to go metric.

4.2 In Australia, New Zealand, Nigeria and South Africa the changeover is substantially complete in the majority of their activities, even though these countries took the decision after Britain.

4.3 The United States commitment to voluntary change, announced in 1975, was reaffirmed in 1979 by the Carter Administration, Congress, and private sector interests.

4.4 Australia, Canada, New Zealand and South Africa wished to avoid compulsion as far as possible. But in Australia, New Zealand, and South Africa legislation has been needed to complete the metrication of retailing. In some cases governments have acted at the express request of retailers and consumers.

Australia

4.5 The Australian Metric Conversion Board was set up in 1970. The aim was that conversion to the sole use of the metric system would be effectively completed in 10 years. This target has been virtually achieved.

4.6 Road speed and distance signs were converted in 1974. Sectors which are now wholly or predominantly metric include education, technical standards, primary industry, construction, transport and communications, fuel and power, land and surveying, sports, the media, public administration and the retail sector. The level of conversion achieved in the various segments of engineering is considered to be close to the maximum realistically attainable at this stage bearing in mind the need to retain some imperial production for maintenance and repair purposes.

4.7 Voluntary programmes in the retail sector were originally introduced in three States but failed due to consumer confusion and trade disadvantage. Legislation was subsequently passed to require retail sales of weighed out foods and of goods sold by length or area to be conducted in metric units. By 1979 the use of imperial units for weighing, measuring, pricing

and, in some cases, advertising these products was prohibited in most States and Territories, and legislation is pending in others. The Metric Conversion Board claims that resistance and confusion disappeared overnight when metric units became mandatory.

Canada

4.8 The Canadian Metric Commission (established in 1971) drew up a national programme which envisaged that all normal daily transactions would be metric by end-1980. It was recognised that the rate of change would be influenced by developments in the United States. Canada's metrication programme is now about 55 per cent complete.

4.9 Road signs, weather reporting and Post Office scales and tariffs are metric. Petrol retailing by either gallons or litres has been permitted since 1 January 1979 and 85% of petrol stations have now converted; with limited exceptions, only litres will be permitted after end-1980. About 60% of all car components made in Canada are produced in metric dimensions.

4.10 Although the retail programme was intended to be voluntary, the retail trade asked for legislation to ensure fair trading. Regulations issued in May 1979 incorporated a national programme for metricating retail sales of weighed out foods and converting scales by end-1981; implementation of this mandatory programme has since been postponed for a minimum of one year, though this decision does not affect voluntary arrangements. Under Regulations issued in November 1979 the retailing of home furnishings in metric is mandatory.

India

4.11 In 1955 the Government accepted a recommendation that India should adopt the metric system. The Standards of Weights and Measures Act 1956 set up a Standing Metric Committee (later replaced by a permanent Directorate of Weights and Measures) and provided that the changeover should be completed by 1969.

4.12 Among the first to change to metric were government departments and public undertakings, including railways, posts and telegraphs, public works, excise and customs, meteorological services and ports. Education is metric from the primary to the university level. The import of non metric equipment is generally prohibited.

Republic of Ireland

4.13 In 1968 the Government decided to adopt the metric system, in

principle on a voluntary basis.

4.14 By 1972 the change to metric had been completed in the construction,building material, fuel, fertilizer, pharmaceutical, adhesive, paper, packaging and grain milling industries. Most other manufacturing sectors were generally metric by by end-1975. By then the metric system had been adopted at all levels of education. Weather forecasting, telephone and postal services are now metric, and use of metric units is pressed forward by all Government departments. The programme for conversion of road signs (other than speed limit signs) is expected to be completed by end-1981.

4.15 Moves to metricate the sizes of prepacks (other than sugar and instant coffee which are already metric by Order) were postponed pending finalisation of the EEC Directive on prepackages and preparation of legislation for the average contents system. The metrication of retail sales of weighed out and measured out goods is not expected to be effected in advance of that of prepacks.

New Zealand

4.16 The New Zealand Metric Advisory Board was set up in 1969. The aim was that the change to metric should be substantially completed by end-1976. Much was achieved by the target date and virtually all the remainder by mid-1979. The Board was disbanded at end-1979.

4.17 In the case of retailing of weighed out and measured out goods, although much voluntary progress was made, it became apparent that shops would not be completely metric by end-1976. After retail federations requested that metric units should be made mandatory the Government issued regulations requiring metric sales, pricing and advertising of goods retailed by weight or measure as from 1 April 1978 and prohibiting the use of other units as from 30 June 1979. In practice most retailers had abandoned imperial before the 1979 deadline, apparently without consumer difficulties.

Nigeria

4.18 Nigeria's metrication programme was announced by the Government in 1972 and aimed at completion by 1977 The target was not achieved but much progress has been made.

4.19 Metric units are now the legally recognised system in Nigeria and are widely used. In industry a programme of gradual change has been supported by banning imports of new non-metric equipment. Education at all levels is in metric, and

virtually all newspapers, periodicals and Government circulars use metric terms.

Pakistan

4.20 In 1972 the Government took the decision to go metric with the aim of completing the transition by 1980.

4.21 Early developments included adoption of metric in education, major government departments, the Pakistan Mint and insurance companies. Road transport, railways, manufacturing and exports followed. Some foods and other consumer goods are retailed in metric units. Quantity marking of prepacks in imperial or indigenous units only is not allowed. The Customs Tariff has been converted to metric. Petrol and diesel oil are sold by the litre. The change to metric in land measurement has begun. Planning for completing the transition in engineering is well advanced.

South Africa

4.22 In 1966 the South African Government decided in principle that the country should change to the metric system. The change should be voluntary and legislation should be enacted only to consolidate a particular situation and to prevent any slipping back. Sometimes the legislation came about as a result of requests from trade or business. By end-1977 South Africa was substantially a metric economy.

4.23 By early 1972 the South Africa Railways and Post Office had changed to metric for their commercial operations, basic materials were available in metric dimensions, milk was sold in bottles of 500 ml or 1 litre in most urban centres and all teaching was in metric. By 1976 all major industries were changing to metric, the Customs Tariff and road signs were metric, and petrol pumps dispensed in litres.

4.24 The Government agreed to pay compensation for the conversion of assizeable measuring instruments used in trade, including retail scales and petrol pumps. The use of imperial weighing or measuring instruments in trade is no longer permitted. Regulations published on 18 November 1977 (under the Trade Metrology Act 1973) have effectively meant that since that date all trade in South Africa has had to be exclusively in metric units.

United States of America

4.25 The United States Metric Board was set up in 1978, under the Metric Conversion Act 1975, to co-ordinate conversion to the

metric system under the national policy for voluntary change.

4.26 In 1979 the Carter Administration affirmed publicly that it believes metrication will bring significant benefits, that it supports a strong interpretation of the Metric Conversion Act, and that it is encouraging conversion both in Government and the private sector.

4.27 Metrication of parts of United States industry and business (for example, automobiles, computers, steel, fasteners, pharmaceuticals, bottled wine and spirits) has been taking place over the past 5 years or so. Some States and local government bodies have also taken steps towards metrication. The Metric Board intends to create a planning framework.

4.28 One State, California, has passed a Metric Conversion Act based on the 1975 Federal Act. Thirty-two States have official resolutions for metric education passed by State School Boards or have legislation making metric education mandatory. Some States have set target dates for the attainment of predominantly metric teaching in their schools. In the United States, as in Britain, the increasing price of petrol has stimulated interest in metricating retail sales of petrol and seventeen States have already started the change.

CHAPTER 5: THE BOARD, ITS FUNCTIONS AND COSTS

5.1 Board Members: J Maxwell Wood OBE (Chairman)
J K Humble (Director)
D Hobman
Miss D D Hyams OBE
D M Landau
T R S Lyon CBE TD
Professor M L McGlashan PhD DSc FRIC
The Baroness Macleod DL JP
Mrs A Stanley OBE JP
Mrs J Upward

Secretary: Miss M M Perry

Deputy Director: W A Methven

5.2 Mr F Lacey retired as director in April 1979 and Mr J K Humble in February 1980. Dr M A Abrams, Mr E Cust, Mr D H Darbishire and Lord Scanlon also retired from the Board in April 1979 when their terms of office expired. In May 1979 Miss M M Perry succeeded Mr A B Clarke as Secretary.

5.3 Four meetings were held in 1978, four in 1979 and two in 1980.

5.4 In February 1979 the Board's offices moved from 22 Kingsway, London WC2B 6LE to Millbank Tower, Millbank, London SW1P 4QU.

5.5 The total staff was 43 at end-1978 and 30 at end-1979, compared with 48 at end-1977.

5.6 The Government's decision to abolish the Board takes effect on 30 April 1980 when the appointments of the Chairman and members expire.

5.7 Terms of reference

1 The Board shall facilitate the transition from the use of existing systems of weights and measures in the United Kingdom to the metric system on the assumption that the end of 1975 should be the target operative date for all provisional programmes, with the qualification

that, if this date proves to be unreasonable for any particular sector, the programme for that sector may aim at an earlier or later date.

2 In particular the Board are required:

a to examine in consultation with such organizations and persons as the Board consider appropriate the problems involved in the transition;

b to advise the responsible Minister on the implications of the change to the metric system in each sector of the economy and, so far as practicable, the costs and other considerations involved, including any legislative changes which may be judged necessary;

c to make generally available information and advice on the co-ordination of timetables and programmes for the change in the various sectors of the economy;

d to furnish to any enquirer information and to publish, whether by advertisement or otherwise, such information as the Board may think useful for familiarising the public with the metric system;

e to ensure that the relevant educational interests are kept fully and continually informed of plans and progress for metrication;

f to make investigations and surveys for obtaining information relevant to the performance of any of the duties of the Board;

g to give such assistance to the Government as Departments may request in connection with the preparation or amendment of any legislation needed to permit the wider use of the metric system; and

h to give such other assistance as the Government may require in the implementation of Government policy on the adoption of the metric system.

3 the Board shall report annually to the Secretary of State for Trade on the performance of their duties in a form suitable for publication.

COSTS OF METRICATION BOARD

Calendar year	Salaries	Administration	Accommodation and rates	Public information	Consultants	TOTAL
1969(9months)	54 000	3 000	51 000	53 000	-	161 000
1970	124 000	17 000	75 000	115 000	22 000	353 000
1971	163 000	19 000	76 000	174 000	4 000	436 000
1972	195 000	27 000	82 000	338 000	3 000	645 000
1973	188 000	29 000	83 000	347 000	31 000	678 000
1974	191 000	24 000	89 000	343 000	8 000	655 000
1975	284 000	35 000	133 000	500 000	20 000	972 000
1976	296 000	50 000	181 000	735 000	-	1 262 000
1977	299 000	40 000	189 000	534 000	-	1 062 000
1978	287 000	25 000	182 000	345 000	-	839 000
1979	278 000	18 000	88 000	795 000	-	1 179 000
1980 (4 months-estimate)	74 000	5 000	25 000	167 000	2 000	273 000
TOTAL	2 433 000	292 000	1 254 000	4 446 000	90 000	8 515 000

APPENDIX A

METRICATION - SHORT CHRONOLOGY

1790 - Invitation for Britain to join France in establishing an international system of weights and measures. No action taken.

1871 - House of Commons rejects by 5 votes a Bill to make metric system compulsory.

1897 - Weights and Measures Act legalises the metric system for use in trade and commerce.

1900 - 35 countries, including most leading European states, are now metric.

1950 - Hodgson Committee concludes that metric system is better than imperial and that its adoption in the UK is inevitable.

1960 - About 80 countries are now metric.

1963 - British Standards Institution survey reveals majority of industry favours change to metric.

1965 - Federation of British Industries informs Ministers that they favour adoption of the metric system.

1968 - British Standards Institution publishes 'The adoption of the metric system in engineering: basic programme and guide'.

1969 - Metrication Board established.

1970 - Electric Cable Makers Confederation complete change to metric.

- British Aerospace Companies Limited express drawing ings and documentation in metric.

- London Metal Exchange goes metric.

- Production of flat glass goes metric.

1971 - Paper and board products work to standard metric measurements.

- National Coal Board specifications, buildings and engineering products in metric.

- Engineering industries reach 25% metric production.

- Pharmaceutical trade completes change to metric.

1972 - White Paper on Metrication (Cmnd 4880) reaffirms Government support for completing the broad metrication programme by the end of 1975.

- Paint industry completes change to metric.

- Steel industry adopts metric quantities and sizes.

- Building Regulations go metric.

1973 - British Government emphasises commitment to metric change in House of Commons debate.

- Metrication Board publishes 'Value for Money in Metric': a report on safeguarding consumer interests.

- Commonwealth Conference on Metrication recognises urgent need for change to metric by all member countries.

- Parliament approves first Orders permitting metric prepacks of 'shopping basket' foods.

1974 - Textile and wool industries trade transactions in metric.

- Leading manufacturers of men's and women's wear give dimensions in both centimetres and inches.

- Metrication Board publishes 'Metrication in the the Retail Trade': a report on programming the change.

- Department of Education and Science memorandum acknowledges substantial metric progress made in schools and recommends restricted use of imperial.

1975 - Retailers of fabrics and floor coverings start to sell and price by the metre and square metre.

- Post Office metricates tariffs.

- National Health Service - metric system introduced into medical and allied practice.

- Engineering industries' metric production substantially

less than the 75% envisaged in BSI programme.

1976 - Weights and Measures Act empowers Government to phase out imperial units in retail trade.

- Bulk sales of petroleum go metric.

- Metrication Board publishes report 'Metrication and Elderly people'.

- Agriculture, horticulture and allied industries essentially metric by year-end.

1977 - Parliament passes Orders setting cut-off dates for sale of sugar, breakfast cereal foods, butter, margarine, white fats, oat products, cocoa and chocolate powders, biscuits, bread, chocolate bars and tea in imperial prepacks.

- Price Commission reports no evidence that metrication is cause of price increases.

- Metric trading at livestock auction and deadweight markets.

- South Africa virtually metric.

1978 - Government withdraws draft Orders which would have given legal effect to the already agreed target dates for completion of metrication in retail sales of weighed out and measured out goods.

- Parliament passes Orders setting cut-off dates for pasta, dried vegetables, dried fruits, and flour in imperial prepacks, and permitting prepacking of potatoes and instant coffee in metric quantities.

- Solid fuel retailing goes metric.

- Cheese wholesaling and packing go metric.

- Regulations ceasing to authorise chain, furlong, nautical mile, rood, cubic yard, dram, bushel, cental, inch of water, ton-force, foot-candle and knot come into effect.

- Bread goes metric.

- Teaching at all levels of education predominantly metric; metric units used in national school-leaving examinations.

- Commonwealth Secretariat survey indicates that Australia, Botswana, Cyprus, Fiji, Ghana, India, Kenya, Malaysia, Malta, Mauritius, New Zealand, Papua, Singapore, Sri Lanka, Swaziland, Uganda, Zambia are in late stages of metrication.

1979 - London commodity market completes change to metric.

- Carter Administration announces it supports a strong interpretation of the Metric Conversion Act 1975 and will encourage conversion in the USA.

- Major changes affecting prepacked foods completed.

- Government states it has no plans to introduce further statutory metrication Orders.

- Metrication Board reports to Ministers on prospects for completing change in retailing.

- Motor Agents Association and Institute of Petroleum announce support for change to sales of petrol by the litre.

- Australia and New Zealand virtually metric.

1980 - Metrication of Customs Tariff and Overseas Trade Classification completed.

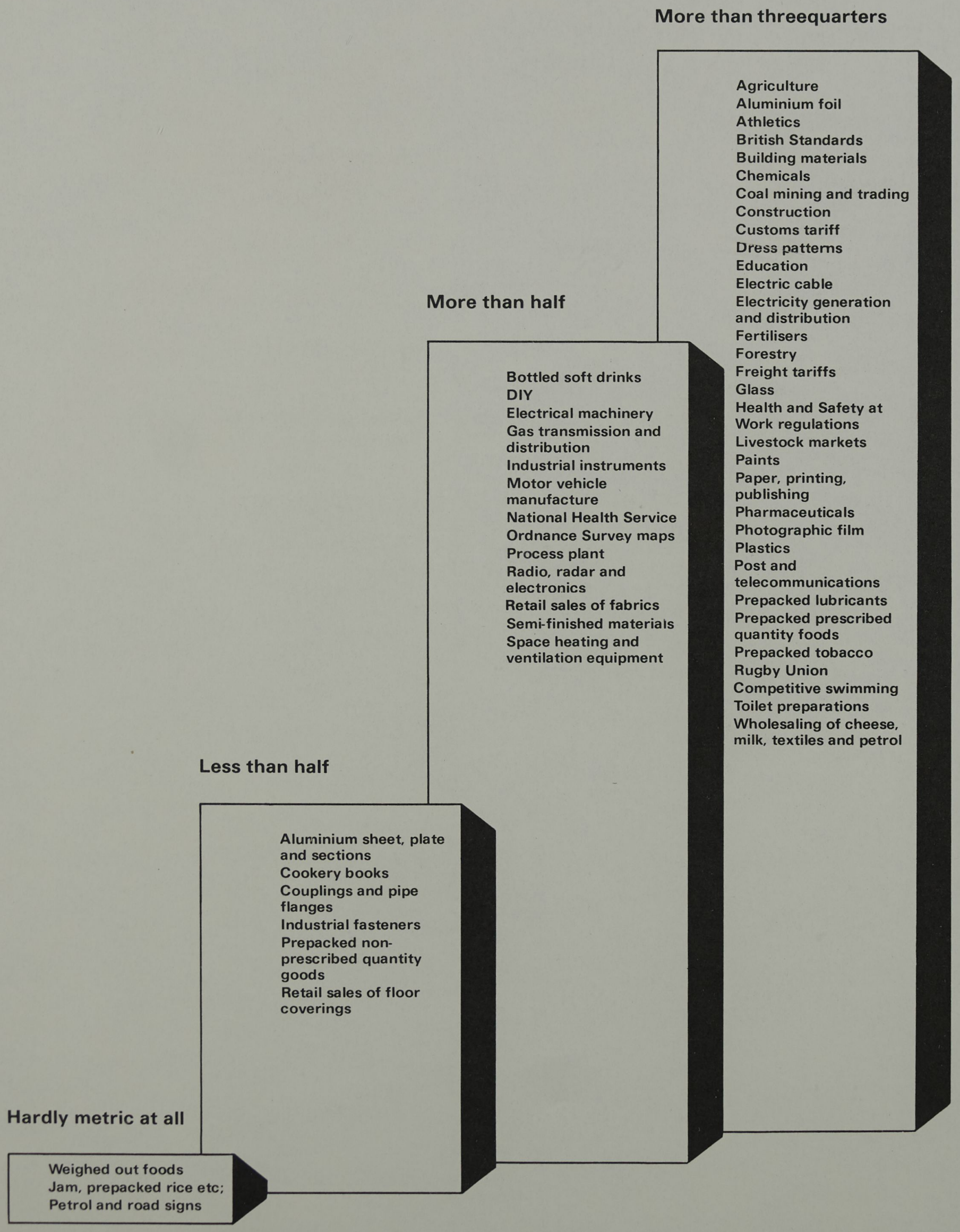
- Metric sizes of milk permitted.

- 111 countries are now metric, and 42 are in the process of change.

- Metrication Board abolished.

METRIC PROGRESS

This diagram shows broadly how far metrication has progressed in some sectors



Weights & Measures

10 DOWNING STREET

From the Private Secretary

Mr. Vile

The Prime Minister has seen the exchanges relating to Mrs. Oppenheim's announcement of the winding up of the Metrication Board, culminating in the Minister of Agriculture's letter to her of 28 November.

The Prime Minister has commented that the existence of Cabinet Committees and Sub-Committees does not obviate the need for each Department automatically to coordinate with every other Department concerned in a decision. That should be done (i) in any event, and (ii) before going to a Cabinet Sub-Committee.

I do not intend to send a circular note around to Ministers on this one point, but I would be grateful if you could ensure that the Secretariat are aware of the Prime Minister's concern following the case in question.

M. A. PATTISON

3 December, 1979.

PRIME MINISTER

You will remember that Mrs. Oppenheim left it very late to clear lines with you on the winding up of the Metrication Board. I expect that she was justifiably confident that you would not dissent, but that does not excuse the lapse. – We didn't even know before I saw it what had happened

We now learn that others were unhappy about the handling of decisions on metrication. I attach a letter from Mr. Walker to Mrs. Oppenheim, following several exchanges of letters. Mrs. Oppenheim used the E(EA) network for clearance and this does not include agriculture. When Mr. Walker became aware of the matter he pointed out his interest, and received a reply at Flag A from Mrs. Oppenheim.

No action: but you should be aware of the increasing evidence that the consumer part of the Department of Trade seems to be having a rough ride.

30 November 1979

I'm afraid The existence of Cabinet committees + sub-committees does not obviate the need for each department to co-ordinate with every other department concerned in the decision. That should be done (i) in any event (ii) before going to the sub-committee

MINISTRY OF AGRICULTURE, FISHERIES AND FOOD
WHITEHALL PLACE, LONDON SW1A 2HH

From the Minister

The Rt Hon Sally Oppenheim MP
Minister of State for Consumer Affairs
Department of Trade
1 Victoria Street
London SW1H OET

28 November 1979

Thank you for your letter of 14 November.

I do not want to prolong this correspondence: the decision has been taken. But I want to make my position clear. In my previous letter I made two points. First, as Minister of Food, I should be consulted on matters like metrication which are of obvious importance to the food industry. That there may have been some previous undertaking does not in my view affect that position. Secondly, I wanted you to know, as did Lord Trenchard also, that we might be criticised because of the costs involved for industry so long as two systems continue side by side. Industry was not responsible for introducing metrication and we can hardly claim that the increased costs associated with continuing a dual system are one of the benefits of less Government.

Finally, on the facts, you are quite right about milk - but I did not raise any argument about milk. There are, however, important items sold by prescribed quantity which are not yet metric eg jam, marmalade, rice, and of course the cost problem can arise with the very wide range of foods not sold by prescribed quantity.

I am copying this to the Prime Minister, the members of E (EA) and Sir Robert Armstrong.

PETER WALKER

CONFIDENTIAL UNTIL 4.00 PM TODAY

A

DEPARTMENT OF TRADE
1 VICTORIA STREET
LONDON SW1H OET

TELEPHONE DIRECT LINE 01 215 5662
SWITCHBOARD 01 215 7877

From the
Minister of State
for Consumer Affairs
The Rt Hon Sally Oppenheim MP

The Rt Hon Peter Walker MBE MP
Minister of Agriculture, Fisheries
& Food
Whitehall Place
London SW1

14 November 1979

Dear Peter,

Thank you for your letter of 8 November. As I am sure you will be aware a definite commitment was given by Geoffrey Howe recorded in Hansard when we were last in power that there would be no statutory metrication, and several such commitments were given by me when we were in Opposition.

As far as my responsibilities in this matter are concerned the only outstanding items relating to prescribed quantity goods are weighed-out foods, textiles and hardware and as you will know there is no intention of laying any compulsory Orders with regard to these. However there is no reason why industry should not proceed to go metric. I have always encouraged them to do so where they wish to in an orderly manner based on a clearly laid out programme agreed on a voluntary basis. The CBI and others have been made aware of this for sometime. I see no objection to the Department of Industry or the trade side of my Department encouraging and assisting in this course of action. As far as the retailers are concerned the problem is more difficult. They quite rightly realise that metrication will be unpopular and want to be able to say that Government has made them do it. I must say that I find it rather ironic that trade and industry who have been calling out to be freed of regulations are now calling out to be regulated because it suits them. I am reminded of the Prime Minister's cogent remarks that freedom brings with it responsibility.

I have no intention of hindering either trade or industry from reaching agreement on a voluntary programme of metrication and have stated in a Parliamentary Answer given today that I think this would be desirable. I enclose a copy of that Answer which relates to the winding-up of the Metrication Board.

contd/.....

CONFIDENTIAL UNTIL 4.00 PM TODAY

I am a little surprised to learn of your opposition to what was our declared policy both in Government and Opposition since I cannot understand how it relates to your Departmental responsibilities as all foodstuffs sold in prescribed quantities with the exception of weighed-out foods and milk have already gone metric and as I was given to understand that your Department were specifically opposed to liquid milk being sold by the litre for a number of very good reasons. As a result the point that you make about manufacturers having to pack goods according to both systems only relates to the food industry in the case of milk where a specific undertaking was given both by the previous Conservative Government and the last Labour Government that the pint of milk would be retained.

I am copying this letter to the Prime Minister, members of E(EA) and Sir Robert Armstrong.

Yours Ever
Sally

SALLY OPPENHEIM

Weights + Measures

HANSARD EXTRACT : 14.11.79

TRADE

COL 642

Metrication Board

Mr. Moate asked the Secretary of State for Trade if he will make a statement about the future of the Metrication Board.

Mrs. Sally Oppenheim : My right hon. Friend and I have been reviewing the functions of a number of public bodies for which we have responsibility, including the Metrication Board, to see whether they are essential. Metrication has now been extensively adopted in manufacturing industry and also in retail trade, where most prepackaged goods sold in prescribed quantities are now sold in metric sizes, so there is now very limited scope for the Board's activities, which can easily be fulfilled by my Department and by the Department of Industry.

In a few months' time, after the final statutory orders made by the previous Administration prescribing metric sizes for tea and suet have taken effect, there will be few, if any, cases where public information is necessary. This is because the Government have no plans for further compulsory orders of this type. I think it is in everybody's interest that as industry continues to go metric it should proceed to expedite in an orderly way, on a voluntary basis, a programme for any future metrication.

Current appointments to the Board expire on 30 April 1980. In present circumstances I do not intend to renew these or make new ones. The effect will be that the Metrication Board will then come to an end.

I should like to thank the chairman and Board members for the work they have put into informing and guiding the public on the principles of metrication.

Mr. Moate asked the Secretary of State for Trade what has been the total cost of the Metrication Board since its establishment.

Mrs. Sally Oppenheim [*pursuant to her reply*, 8 November 1979, c. *254*]: Including estimated expenditure for 1979-1980 the total costs to the end of this financial year will be £8,319,000.

Metrication

Mr. Brotherton asked the Secretary of State for Trade what is the total sum of public money that has been spent to date on the promotion of the use of metric measurements.

Mrs. Sally Oppenheim : The total cost of the Metrication Board to date is £8·3 million. Statistics relating to the cost of central and local government time involved in the promotion of the use of metric measurements is not separately identifiable.

Mr. Moate asked the Secretary of State for Trade how many letters his Department has received since the announcement of the ending of further compulsory metrication : how many were in favour of the decision ; and how many were against.

Mrs. Sally Oppenheim [*pursuant to her reply*, 8 November 1979, c. *254*]: I have received a number of letters recently, many of which were solely on the subject of metrication and many others which included a reference to metrication in a more general letter. In so far as it was possible to determine a single view, a good majority of the people who wrote to me favoured my announcement.

DEPARTMENT OF TRADE
1 Victoria Street, London SW1H 0ET
Press Office: 01-215 5061
Out of hours: 01-215 7877

Ref 489

Press notice

14 November 1979

METRICATION BOARD

Replying to a Parliamentary Question from Mr Roger Moate MP, (Faversham), Mrs Sally Oppenheim, Minister for Consumer Affairs, made the following announcement today.

"My Rt Hon Friend and I have been reviewing the functions of a number of public bodies for which we have responsibility, including the Metrication Board, to see whether they are essential. Metrication has now been extensively adopted in manufacturing industry and also in retail trade, where most prepackaged goods sold in prescribed quantities are now sold in metric sizes, so there is now very limited scope for the Board's activities, which can easily be fulfilled by my Department and by the Department of Industry.

"In a few months' time, after the final Statutory Orders made by the previous Administration prescribing metric sizes for tea and suet have taken effect, there will be few if any cases where public information is necessary. This is because the Government have no plans for further compulsory Orders of this type. I think it is in everybody's interest that when industry wants to go metric they should proceed in an orderly way on a voluntary basis to construct a programme for any future metrication.

"Current appointments to the Board expire on 30 April 1980. In present circumstances I do not intend to renew these or make new ones. The effect will be that the Metrication Board will then come to an end.

"I should like to thank the Chairman and Board members for the work they have put into informing and guiding the public on the principles of metrication."

Notes for Editors

The Metrication Board was set up in May 1969 to assist the changeover to the metric system. The present part-time Chairman is Mr Max Wood who receives an annual salary of £8,120 and there are 8 part-time members who are each paid £1,355 a year. The full-time civil service staff totals 33.

DEPARTMENT OF TRADE
1 Victoria Street
London SW1H OET

Tel Direct Line 01-215 5626
Switchboard 01-215 7877

Mike

As promised

Denis

14/11

With the Compliments of

PS/ the Minister of State
for Consumer Affairs Office

CS 178

cc Press

Note – PM: agree

MAD 14/xi.

METRICATION BOARD

ARRANGED PQ AND ANSWER

Proposed Question

To ask the Secretary of State for Trade if he will make a statement about the future of the Metrication Board?

Proposed Answer

"My Rt Hon Friend and I have been reviewing the functions of a number of public bodies for which we have responsibility, including the Metrication Board, to see whether they are essential. Metrication has now been extensively adopted in manufacturing industry and also in retail trade, where most prepackaged goods sold in prescribed quantities are now sold in metric sizes, so there is now very limited scope for the Board's activities, which can easily be fulfilled by my Department and by the Department of Industry.

In a few months' time, after the final Statutory Orders made by the previous Administration prescribing metric sizes for tea and suet have taken effect, there will be few if any cases where public information is necessary. This is because the Government have no plans for further compulsory Orders of this type. I think it is in everybody's interest that when industry wants to go metric they should proceed in an orderly way on a voluntary basis to construct a programme for any future metrication.

contd/.....

Current appointments to the Board expire on 30 April 1980. In present circumstances I do not intend to renew these or make new ones. The effect will be that the Metrication Board will then come to an end.

I should like to thank the Chairman and Board members for the work they have put into informing and guiding the public on the principles of metrication."

CONFIDENTIAL UNTIL 4.00 PM TODAY

DEPARTMENT OF TRADE
1 VICTORIA STREET
LONDON SW1H OET

TELEPHONE DIRECT LINE 01 215 5662
SWITCHBOARD 01 215 7877

From the
Minister of State
for Consumer Affairs

The Rt Hon Sally Oppenheim MP

The Viscount Trenchard MC
Minister of State
Department of Industry
Ashdown House
123 Victoria Street
London SW1

14 November 1979

Dear Lord Trenchard,

Thank you for your letter of 2 November. As I am sure you will be aware a definite commitment was given by Geoffrey Howe recorded in Hansard when we were last in power that there would be no statutory metrication, and several such commitments were given by me when we were in Opposition.

As far as my responsibilities in this matter are concerned the only outstanding items relating to prescribed quantity goods are weighed-out foods, textiles and hardware and as you will know there is no intention of laying any compulsory Orders with regard to these. However there is no reason why industry should not proceed to go metric. I have always encouraged them to do so where they wish to in an orderly manner based on a clearly laid out programme agreed on a voluntary basis. The CBI and others have been made aware of this for sometime. I see no objection to the Department of Industry or the trade side of my Department encouraging and assisting in this course of action. As far as the retailers are concerned the problem is more difficult. They quite rightly realise that metrication will be unpopular and want to be able to say that Government has made them do it. I must say that I find it rather ironic that trade and industry who have been calling out to be freed of regulations are now calling out to be regulated because it suits them. I am reminded of the Prime Minister's cogent remarks that freedom brings with it responsibility.

I have no intention of hindering either trade or industry from reaching agreement on a voluntary programme of metrication and have stated in a Parliamentary Answer given today that I think this would be desirable. I enclose a copy of that Answer which relates to the winding-up of the Metrication Board.

I am copying this letter to the Prime Minister, members of E(EA) and Sir Robert Armstrong.

Yours very sincerely
Sally

SALLY OPPENHEIM

CONFIDENTIAL UNTIL 4.00 PM TODAY

CONFIDENTIAL UNTIL 4.00 PM TODAY

DEPARTMENT OF TRADE
1 VICTORIA STREET
LONDON SW1H OET

TELEPHONE DIRECT LINE 01 215 5662
SWITCHBOARD 01 215 7877

From the
Minister of State
for Consumer Affairs

The Rt Hon Sally Oppenheim MP

The Rt Hon James Prior MP
Secretary of State for Employment
Caxton House
Tothill Street
London SW1

14 November 1979

Dear James,

Thank you for your letter of 12 November. As I am sure you will be aware a definite commitment was given by Geoffrey Howe recorded in Hansard when we were last in power that there would be no statutory metrication, and several such commitments were given by me when we were in Opposition.

As far as my responsibilities in this matter are concerned the only outstanding items relating to prescribed quantity goods are weighed-out foods, textiles and hardware and as you will know there is no intention of laying any compulsory Orders with regard to these. However there is no reason why industry should not proceed to go metric. I have always encouraged them to do so where they wish to in an orderly manner based on a clearly laid out programme agreed on a voluntary basis. The CBI and others have been made aware of this for sometime. I see no objection to the Department of Industry or the trade side of my Department encouraging and assisting in this course of action. As far as the retailers are concerned the problem is more difficult. They quite rightly realise that metrication will be unpopular and want to be able to say that Government has made them do it. I must say that I find it rather ironic that trade and industry who have been calling out to be freed of regulations are now calling out to be regulated because it suits them. I am reminded of the Prime Minister's cogent remarks that freedom brings with it responsibility.

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I am copying this letter to the Prime Minister, members of E(EA) and Sir Robert Armstrong.

Yours ever
Sally

SALLY OPPENHEIM

CONFIDENTIAL UNTIL 4.00 PM TODAY

CONFIDENTIAL

file

SECRETARY OF STATE FOR EMPLOYMENT

Caxton House Tothill Street London SW1H 9NA

Telephone Direct Line 01-213 6400
Switchboard 01-213 3000

The Rt Hon Sally Oppenheim MP
Minister of State for Consumer Affairs
Department of Trade
1 Victoria Street
LONDON SW1H 0ET

12 November 1979

Dear Sally

METRICATION BOARD

I have seen your letter dated 24 October to Keith Joseph about winding up the Metrication Board and Lord Trenchard's reply.

I accept that the Board may not be needed any more, but I hope that you will not allow the closing down of the Board to delay necessary and useful metrication. Unless someone is prompting and coordinating action among producers and retailers, and educating consumers, metrication may lose its momentum altogether. I join Lord Trenchard in urging you to consider ways of getting industry to agree mandatory cut-off dates for going metric.

I am copying this letter to members of E(EA) and Sir Robert Armstrong.

Yours

Jim

Mr Gardiner

PS/FOS
PS/PUSS(CA)
PS/Sec
Mr Bourne
Dr Eden
Mr Thornhill
Mr Carrod
Mr Lloyd

MINISTRY OF AGRICULTURE, FISHERIES AND FOOD
WHITEHALL PLACE, LONDON SW1A 2HH

From the Minister

The Rt Hon John Nott
Secretary of State for Trade
Department of Trade
1 Victoria Street
LONDON SW1H OET

RECEIVED IN
9 NOV 1979
SECRETARY OF STATE FOR
TRADE'S OFFICE

RECEIVED IN MINISTER
OFFICE
12 NOV 1979

8 November 1979

METRICATION

I have seen Sally Oppenheim's letter of 24 October recording the decision not to proceed with compulsory metrication, and to let the Metrication Board die a natural death on 30 April 1980. I have also seen the letter of 2 November to her from the Minister of State, Department of Industry.

Like him I must apologise for not commenting earlier, but the papers were not copied to me initially because my Department is not represented on E(EA). It would be helpful if in future we could receive any papers on metrication and be given an opportunity of taking part in discussion, since I need hardly point out the connection between metrication and food.

I fully support the points made by Lord Trenchard and his conclusion that, while we do not need the Board we do need an end date. Although I do not think that there will be much difficulty in leaving the retailer to choose whether to weigh out loose goods in metric or imperial weights, there is a real risk that manufacturers may be forced for some time to come to pack goods according to both systems. This could be an important additional production cost and if we meet criticism because of it we shall not be able to say simply that the area is one where Government interference is not appropriate.

I am copying this letter to the members of E(EA) and to Sir Robert Armstrong.

TO Mr Tardiel
FOR ADVICE AND DRAFT REPLY IF APPROPRIATE
PLEASE BY:
18/11/79

Copies to
PS/SoS
PS/Pres CA
PS/Secretary
Mr Burgh
Dr Eden
Mr Thornhill
Mr Garrod
Mr Lloyd.

PETER WALKER

MQS2

RECEIVED IN MINISTER OFFICE
-2 NOV 1979

DEPARTMENT OF INDUSTRY
ASHDOWN HOUSE
123 VICTORIA STREET
LONDON SW1E 6RB
TELEPHONE DIRECT LINE 01-212 7691
SWITCHBOARD 01-212 7676

From the
Minister of State
Lord Trenchard

2 November 1979

The Rt Hon Sally Oppenheim MP
Minister of State for Consumer Affairs
Department of Trade
1 Victoria Street
London SW1H 0ET

TO Mr Jardine
FOR ADVICE AND
DRAFT REPLY BY
APPROPRIATE
PLEASE BY
9/11/79.

PS/DS
PS/PUS (CH)
Mr Burgh
Dr Eden
Mr Garnod.

Dear Mrs Oppenheim,

METRICATION BOARD

You wrote on 24 October to Keith Joseph asking if he or colleagues on E(EA) had objections to your proposal to wind up the Metrication Board. I am sorry not to have replied sooner but I have just returned from a visit to Japan.

Since the main decision not to continue with compulsory metrication has been taken, I accept that the Board will soon have completed its allotted tasks. However, you should be prepared for renewed protest from industry, which finds our general policy on metrication unwelcome and you may be helped if I indicate the lines of the criticism we shall have to be prepared to meet. While there may be no legal impediment to prevent manufacturers and retailers switching to metric units, further change now seems likely to be very slow. Retailers have little incentive to convert: their customers are resistant to change. Individual manufacturers are, in their turn, understandably reluctant to go it alone. They cannot get all their customers to convert at the same time even if all suppliers want to do so. Those with export sales are thus forced to produce less efficiently according to both sets of measurement. Industry therefore remains of the view that a negotiated mandatory cut-off date is the only workable solution. This has, of course, also been the conclusion of other countries who have recently metricated or are in the process of doing so.

I understand that the CBI have yet to discuss the subject with you following your correspondence with them, and I hope you will keep an open mind until you see them. Production lines are bound to remain fragmented if there is no overall incentive or necessity for retailers to have to reach agreements with their suppliers. We do not need the board but I believe in the interests of productivity we need an end date.

I am copying this letter to other members of E(EA) and to Sir Robert Armstrong.

Yours sincerely

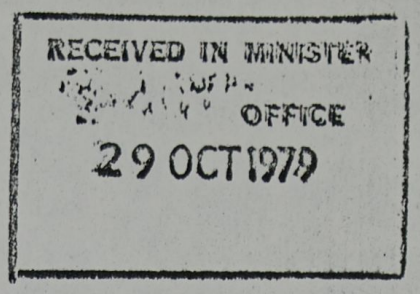
David Trenchard.

LORD TRENCHARD
(Approved by the Minister
and signed in his absence)

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file





MAF52

Treasury Chambers, Parliament Street, SW1P 3AG

The Rt Hon Sally Oppenheim MP
Minister of State for Consumer Affairs
1 Victoria Street
London SW1H OET

26 October 1979

Dear Sally,

METRICATION BOARD

I have seen your letter of 24 October 1979 and I welcome your proposals for winding up the Metrication Board. I understand that they will involve modest savings in expenditure and civil service numbers which will make a useful contribution towards the Lord President's exercise.

I am copying this letter to colleagues on E(EA), the Lord President and Sir John Hunt.

John Biffen

JOHN BIFFEN

Mr Sadine

cc. PS/SOS.
PS/PUSS(CH)
PS/Sec
Mr Bush
Dr Eden

Earl Home
Sile copy handed to

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DEPARTMENT OF TRADE
1 VICTORIA STREET
LONDON SW1H 0ET

TELEPHONE DIRECT LINE 01 215 5662
SWITCHBOARD 01 215 7877

From the
Minister of State
for Consumer Affairs

MQS2

The Rt Hon Sally Oppenheim MP

The Rt Hon Sir Keith Joseph Bt MP
Secretary of State for Industry
Ashdown House
123 Victoria Street
London SW1

24 October 1979

Dear Keith,

METRICATION BOARD

John Nott and I have been considering the future of the Metrication Board now that it has been announced that there will be no further compulsory metrication.

Since the Board was set up in 1965 the transition to metrication has made considerable progress. The process is virtually complete in manufacturing industry, apart from some 40 per cent of the engineering sector, who have decided that their interests are best served by continuing to manufacture in imperial units for the time being. Public bodies and Government Departments have largely adapted their practices and purchasing policies to the metric system. Petrol traders recently announced a voluntary agreement to metricate pumps over a three year period.

In trade, most prepackaged goods are now retailed in metric sizes, and by 1 January 1980 it will be legally acceptable to mark in metric sizes only for most goods. For some of the remainder dual marking in metric and imperial will be required, but there will be no barrier to any retailer who wishes to sell metric packs. Retailers of goods sold loose across the counter - mainly greengroceries, meat and fish - have chosen to continue to sell in imperial units, although the option of changing to metric is open to them at any time.

In summary therefore, there is no legal impediment to prevent manufacturers or retailers switching to metric if they choose to do so. The Government's declared policy, as we made clear when in Opposition, is to retain this freedom of choice and to leave the decision to the commercial judgement of those who must live with the costs or benefits of that decision. It is not an area where Government interference is appropriate.

contd/.....

cc E(EA) MEMBERS
SIR JOHN HUNT
PS/SoS
PS/PUSS(C&CA)
MR BURGH
DR EDEN
MR JARDINE on file

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Our policy decision means that the Board's principal role in educating consumers at the time of new metrication will be required only in the case of the two items outstanding from metrication Orders of the previous Government ie tea and suet. The cut off date for packing in imperial sizes is 31 December 1979 for both and for retail sale, 29 June and 28 September 1980 respectively. Publicity is necessary at the time that metric packs begin to appear in the shops which in both cases will mean early next year. When the Metrication Board have dealt with the necessary publicity for these items they will have no further significant tasks in this connection. Our policy decision also means, of course, that the Board's role in relation to manufacturing industry and retailers is also considerably reduced.

Appointments of all nine Board members expire on 30 April 1980. As the publicity effort on tea and suet will have been completed by that date, I intend to allow the Metrication Board to die a natural death at that time by announcing now that the Government do not intend to make any new appointments.

I need to inform Maxwell Wood, the Chairman of the Board, of our intentions, and to announce the decision to Parliament shortly afterwards.

I am very conscious of the media interest in this subject and am anxious to avoid the possibility of press leaks or speculation which could result in the decision being announced in a politically unattractive way. Because of this, I intend to inform the Chairman of the Board early next week and would be grateful, therefore, if you, and colleagues on E(EA) to whom I am copying, would let me know if you have any objections to this course of action by the end of this week.

I am also copying to Sir John Hunt.

Yours ever
Sally

SALLY OPPENHEIM

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VLS

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FILE

W+M

17 September 1979

The Prime Minister has read the note on metrication of food which you sent over with your letter of 14 September. She was grateful to have this information, and she hopes that there will be no more compulsory metrication. If your Minister dissents from this view, the Prime Minister would be grateful if she would let her know.

T. P. LANKESTER

Stuart Hampson, Esq.,
Department of Trade.

CONFIDENTIAL

Elkin

DEPARTMENT OF TRADE 1 VICTORIA STREET LONDON SW1H 0ET Telephone 01-215 7877

2

From the Secretary of State

Prime Minister
A useful note - metrication of food is now pretty far advanced.

Tim Lankester Esq
10 Downing Street
LONDON
SW1

14 September 1979

I think there will be no more compulsory metrication. Please let all Ass. Opposition - I am sure she will agree not

14/9

Dear Tim

METRICATION

You asked me to prepare a note for the Prime Minister on the extent to which metrication was a statutory requirement in the food retailing sector. I enclose a short explanatory note and tables showing the dates on which metrication has become compulsory. I have also indicated the way in which the Conservative Party has voted on questions of principle relating to metrication.

I also enclose for your records a copy of the letter which the Secretary of State has written to Mr Zahler, Managing Director of Instron Limited.

Yours sincerely

Stuart Hampson

S HAMPSON
Private Secretary

METRICATION OF FOOD

1. Food which is weighed or measured out by the retailer himself at the time of sale is not subject to any requirement that metric quantities must be used.

2. The compulsory metrication of sales of food products applies only to those prepacked items which are subject to a legal requirement that they may only be packed in prescribed sizes.

3. Prescribed quantity controls establish permitted ranges of packs with a simple linear relationship: they are intended to aid consumers to make price comparisons between different manufacturers' products or different pack sizes. Since 1973 metric quantities have been gradually introduced as a permissible alternative to imperial ranges.

4. The Weights and Measures etc Act 1976 provided enabling powers for authorising the exclusive use of metric units for trade purposes. An amendment to deny the Bill a Second Reading received 194 votes (of which 171 were Conservative Members) but was not carried. On Third Reading, 35 Members (including 8 Conservatives) voted against the Bill.

5. For most prescribed quantity foods (including butter, margarine, flour, salt, sugar, breakfast cereal, bread and tea), orders have now been made providing that, after a transitional period, only the metric range will be authorised. Details are given in the attached Table. These orders are subject to Affirmative Resolution; all have been debated but none has been pressed to a Division.

6. The prohibition of imperial ranges has generally applied both at manufacturing/packing or importing stage and, from the later dates, at retail level. However, no cut-off date at retail level has been introduced for dried fruits, flour and flour products, pasta and dried vegetables.

7. Three of the orders referred to in paragraph 5 above have been made but have not come into force. For lard, cooking fats and dripping the cut-off date for manufacturing/packing or importing imperial quantities is 29 September 1979 and for shredded suet and tea (including tea bags) it is 31 December 1979. The relevant orders were, however, made in 1977 and the trade has therefore already made plans and ordered packing materials to make the transition.

8. For potatoes and instant coffee, imperial ranges are still permitted, but in the case of coffee manufacturers and packers have almost entirely adopted the metric range on a voluntary basis.

Department of Trade
1 Victoria Street

14 September 1979

PRESCRIBED QUANTITY FOODS: METRIC RANGES AND CUT-OFF DATES FOR IMPERIAL QUANTITIES

Commodity	Metric range: net weights	Metric quantities permissible from	Manufacturing/packing or importing cut-off date for imperial quantities	Retail cut-off date for imperial quantities	Order no
Pasta	125 g, 250 g, 375 g, 500 g, or a multiple of 500 g. No restriction up to 50 g.	1 July 1974	31 August 1978		1973 No 1967 1978 No 1080
Salt	125 g, 250 g, 500 g, 750 g, 1 kg, 1.5 kg or a multiple of 1 kg up to and including 10 kg, 12.5 kg, 25 kg or 50 kg. No restriction up to 100 g.	1 January 1975	30 June 1978	31 December 1978	1973 No 1968 1977 No 2058
Sugar	125 g, 250 g, 500 g, 750 g, 1 kg, 1.5 kg, 2 kg, 2.5 kg, 3 kg, 4 kg or 5 kg. No restriction up to 100 g and over 5 kg.	1 October 1975	21 April 1978	2 July 1978	1974 No 1166 1977 No 1333
Cereal breakfast foods in flake form	125 g, 250 g, 375 g, 500 g 750 g, 1 kg, 1.5 kg or a multiple of 1 kg. No restriction up to 50 g and over 10 kg.	1 November 1975	30 June 1978	1 July 1979	1975 No 1177 1977 No 2058
Dried vegetables	125 g, 250 g, 375 g, 500 g, 1 kg or a multiple of 1 kg. No restriction up to 100 g and over 10 kg.	1 April 1976	31 December 1978		1975 No 1179 1978 No 1080

Commodity	Metric range: net weights	Metric quantities permissible from	Manufacturing/packing or importing cut-off date for imperial quantities	Retail cut-off date for imperial quantities	Order no
Butter, margarine	50 g, 125 g, 250 g, 500 g, or a multiple of 500 g up to and including 4 kg and thereafter a multiple of 1 kg. No restriction up to 25 g and over 10 kg.	1 January 1977	14 July 1979	26 August 1979	1976 No 430 1977 No 2058
Lard, cooking fats, dripping	50 g, 125 g, 250 g, 500 g or a multiple of 500 g up to and including 4 kg and thereafter a multiple of 1 kg. No restriction over 10 kg.	1 January 1977	29 September 1979	30 December 1979	1976 No 430 1977 No 2058
Shredded suet	As for lard.	1 January 1977	31 December 1979	28 September 1980	1976 No 430 1977 No 2058
Dried fruits	125 g, 250 g, 375 g, 500 g, 1 kg or a multiple of 1 kg. No restriction up to 75 g and over 10 kg.	1 January 1977	31 December 1978		1976 No 431 1978 No 1080
Flour and flour products	125 g, 250 g, 500 g or a multiple of 500 g. Additionally, for cornflour only, 375 g and 750 g. No restriction up to 50 g and over 10 kg.	1 July 1977	31 August 1978		1975 No 1178 1978 No 1080
Oat products	As for cereal breakfast foods.	1 August 1977	31 October 1978	29 July 1979	1975 No 1177 1977 No 2058
Cocoa and chocolate powders	50 g, 75 g, 125 g, 250 g, 500 g, 750 g and 1 kg. No restriction below 50 g and over 1 kg.	8 August 1977	31 August 1978	31 August 1979	1977 No 1332

Commodity	Metric range: net weights	Metric quantities permissible from	Manufacturing/packing or importing cut-off date for imperial quantities	Retail cut-off date for imperial quantities	Order no
Biscuits	100 g, 125 g, 150 g, 200 g, 250 g, 300 g, and multiples of 100 g. Additionally, 175 g if made up before 1 January 1981. No restriction up to 85 g and over 5 kg.	1 January 1978	21 April 1978	2 July 1978	1976 No 111 1977 No 2058
Bread	400 g or a multiple of 400 g. No restriction up to 300 g.	1 January 1978	2 May 1978	8 May 1978	1976 No 1297 1977 No 2059
Chocolate bars	85 g, 100 g, 125 g, 150 g, 200 g, 250 g, 300 g, 400 g or 500 g. No restriction below 85 g and over 500 g.	1 January 1978	31 December 1977	30 April 1978	1977 No 1332
Tea, including tea bags	50 g, 125 g, 250 g, 500 g, 750 g, 1 kg, 1.5 kg, 2 kg, 2.5 kg, 3 kg, 4 kg or 5 kg. No restriction up to 25 g and over 5 kg.	1 April 1978	31 December 1979	29 June 1980	1976 No 1294 1977 No 2058
Potatoes (pre-packs)	500 g, 1 kg, 1.5 kg, 2 kg, 2.5 kg or a multiple of 2.5 kg up to and including 15 kg, 20 kg or 25 kg. No restriction over 25 kg.	1 June 1978		-	1978 No 741
'Instant' coffee	50 g, 100 g, 200 g, 300 g, 500 g, 750 g, 1 kg, 1.5 kg, 2 kg, 2.5 kg, 3 kg and multiples of 1 kg. No restriction up to 25 g and over 10 kg.	1 July 1979		-	1978 No 1081

DEPARTMENT OF TRADE 1 VICTORIA STREET LONDON SW1H 0ET Telephone 01-215 7877

From the Secretary of State

G C Zahler Esq
Managing Director
Instron Ltd
Coronation Road
High Wycombe
Bucks HP12 3SY

11. September 1979

Dear Mr Zahler!

I have been asked to reply to your letter of 23 August to the Prime Minister about metrication. Although, as you say, this is a subject of interest to a number of Government Departments, my Department is responsible for weights and measures legislation and the Metrication Board.

You refer to statements attributed to Mrs Oppenheim, the Minister of State for Consumer Affairs, at a recent meeting of the National Consumer Council expressing support for the Council's opposition to metrication. I fear that there must have been some error in the report which you read, since Mrs Oppenheim has not attended a meeting of the National Consumer Council, and, incidentally, I was not aware that the NCC were opposed to metrication.

Successive Governments have removed all hindrances to the voluntary adoption of the metric system throughout the economy. In manufacturing industry the changeover is well advanced, apart from half of the engineering sector, and very soon virtually all pre-packaged goods will be sold in metric sizes.

contd/....

From the Secretary of State

So far this process of transition to metric measures has been voluntary, with different sectors of industry choosing their own timetables. This enables them to plan carefully to minimise the costs involved. The Government propose to continue this voluntary basis for change rather than imposing a timetable by legislation. That is what Mrs Oppenheim has told interested parties who have raised the subject. In the case of your particular company, therefore, there is nothing in the Government's policy to prevent you from moving to metric units - indeed we hope that every business will proceed as fast and as far as possible in this direction so long as it is in their interest to do so.

We are currently discussing with the CBI the effects on industry of operating two systems of measurement: an example has been quoted of one company having to tie up £20 million in stocks, and we should like to know whether this is an isolated example or whether similar costs are being incurred throughout industry. If sums of this order are involved I should have thought that firms would be anxious to seize the benefits of changing to the metric system, thus providing the basis for voluntary programmes of transition.

Yours Sincerely,

John Nott.

JOHN NOTT

B/F 13-9-79

weights & measures

10 DOWNING STREET

PRIME MINISTER

Mr. G. Zahler wrote to you about metrication.

I think that we should ask Mr. Nott to reply on your behalf. But I know that you have firm views on metrication, so I asked that we see Mr. Nott's reply in draft. Here it is. Do you have any comments?

MF

Agreed MT

7 September 1979

To Ld Hampton who will tell Nott's office. DoT have promised a further note on metrication.

CF chase on Thursday TL | 10-15

DRAFT

File No. Original in G/Rooms

Addressed to:

G C Zahler Esq
Managing Director
Instron Ltd
Coronation Road
High Wycombe
BUCKS
HP12 3SY

Copies to:

Enclosures:

Originated by:
(Initials and date)

Seen by:
(Initials and date)

Type for signature of

SOS(T)

(Initials and date)

DEPARTMENT OF TRADE

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Contd...

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