

EXPLANATORY MEMORANDUM TO
THE ELECTROMAGNETIC COMPATIBILITY REGULATIONS 2006
2006 No. 3418

1. This explanatory memorandum has been prepared by the Department of Trade and Industry and is laid before Parliament by Command of Her Majesty.

2. Description

2.1 This instrument seeks to regulate the electromagnetic compatibility of electrical and electronic equipment and maintain a single European market in such equipment. These Regulations introduce revised provisions on conformity..

3. Matters of Special Interest to the Joint Committee on Statutory Instruments

3.1 None.

4. Legislative Background

4.1 This instrument implements Directive 2004/108/EC of the European Parliament and Council which repeals and replaces Directive 89/336/EEC on the approximation of the laws of Member States relating to electromagnetic compatibility. The Directives were introduced under Article 95 of the EC Treaty

4.2 This instrument revokes and replaces the existing Electromagnetic Compatibility Regulations 2005 (SI 2005/281) ("the 2005 Regulations") which implemented the EMC Directive 89/336/EEC. A transposition note is attached at Annex A.

4.3 DTI submitted an Explanatory Memorandum (5562/03) on 29/1/03 on a "Proposal for a Directive of the European Parliament and of the Council on the approximation of the laws of the Member States relating to electromagnetic compatibility". The Commons European Scrutiny Ctte considered it politically important and cleared it (Report 34, Item 24184, Sess 02/03). The Lords Select Ctte on the EU cleared it by letter to the Minister dated 11 November 2003 (Progress of Scrutiny, 17/11/03, Session 02/03).

5. Territorial Extent and Application

5.1 The Regulations apply to all parts of the United Kingdom.

6. European Convention on Human Rights

6.1 As the instrument is subject to negative resolution procedure and does not amend primary legislation, no statement is required.

7. Policy Background

7.1 The policy objective of the EMC Directive and the present instrument which transposes it is to:-

- (i) maintain the objectives of EMC Directive 89/336/EEC of 3 May 1989 on electromagnetic compatibility. These were to guarantee free movement of electrical products whilst creating an acceptable electromagnetic environment within the EU. It

therefore sought to ensure that electromagnetic disturbances produced by electrical equipment do not affect the correct functioning of other such equipment, including telecommunication and electricity distribution networks, and that such equipment has an appropriate level of immunity to electromagnetic disturbances so that it can function as intended.

(ii) based on events and experience since 1992 (when 89/336/EEC came into force) attempt to clarify the original Directive and reduce unnecessary administrative burdens on industry.

(iii) take into account the recommendations of the “SLIM” (Simpler Legislation for the Internal Market) panel which considered ways of simplifying the Directive

7.2 The EMC Regulations 2006 apply to most electrical and electronic equipment. The changes in the Directive are neither politically nor legally important but may help to make the legislation easier to understand and enforce through greater definition. It is also hoped that they will be simpler to use and reduce the burden on industry.

7.3 Building on the recommendations of the SLIM panel, between 1999 and 2002, the Commission consulted widely with member states, industry and others and held many meetings in order to draft a revised Directive which was in turn submitted to the Council and European Parliament on 23 December 2002. In Council, the UK broadly welcomed the proposals as it represented a genuine attempt to simplify the Directive and contained specific elements that the UK had been lobbying for. There was considerable discussion in Council but in the main, the Commission proposal was accepted except for the proposal to extend the scope of the Directive to include connecting devices which the Council and European Parliament rejected.

The main changes to the legislation

7.4 The EMC Regulations 2006 introduce a simplified regulatory procedure for manufacturers of apparatus. The conformity assessment procedure under the previous regulations required the mandatory involvement of an independent body in cases when manufacturers had not applied harmonised European standards in full. Under the new Regulations, manufacturers will themselves be able to establish the conformity of their products in all cases. However, if they wish, manufacturers will still be able to make use of the services of an independent body to assist them with the conformity assessment of their products.

7.5 The EMC Regulations 2006 introduce stricter requirements concerning information and documentation for products. They require manufacturers or their agents to provide enforcement authorities with additional means of control, such as clearer identification of a product and indication of the name and address of the manufacturer or his agent and, if necessary, of the importer established in the territory of the European Union. This will improve product traceability and make it easier for the authorities to monitor the market and ensure fair competition.

7.6 Fixed installations have been brought within the scope of the new regulations, but are subject to a separate regime from apparatus. A fixed installation is required to be installed applying good engineering practices, respecting the information on the intended use of components, with a view to meeting the protection requirements. These good engineering practices will have to be documented and the documentation held by the person responsible for the installation for as long as it is in operation. Apparatus incorporated within a fixed installation is not required to undergo conformity assessment unless it is separately commercially available.

One particular point in the transposition should be noted. It concerns the treatment of products that are *put into service*, having never been placed on the market. Under the existing regulations, these products are required to meet the essential requirements but are not required to comply with the requirements relating to the preparation of a technical file, the issuing of a *Declaration of Conformity* and imposition of the CE marking. With regard to the implementation of Article 3 of 2004/108/EC in respect of these products the Regulations have taken the approach of requiring that they need only comply with the essential requirements. This is considered to achieve the objectives of the Directive and avoid the imposition of unnecessary administrative burdens.

Consultation

7.7 During the three years that the Commission discussed publicly the drafting of their proposal (1999 to December 2002), the DTI ensured that interim drafts were made available and interested parties were encouraged to make their views known directly to the Commission. Once the proposal was published, the DTI carried out a public consultation before Council negotiations began over the period March-April 2003. Thirteen organisations responded and were mainly industry representative organisations. Comments were mainly of a non-controversial nature which might have been expected given that most of those that responded had been directly involved with the Commission during the drafting stage. However, the comments helped inform the HMG position on the proposal.

7.8 A formal consultation relating to the draft UK Regulations (and associated guidance) was held between 3 May 2006 and 3 August 2006. Some 32 substantial responses were received from a range of stakeholder organisations (manufacturers, trade associations, conformity assessment bodies, enforcements authorities, and EMC experts) covering the broad areas set out in the consultation document. In addition about 80 people representing similar stakeholders attended a public consultation meeting on 14 June 2006 in London. Topics raised included the treatment of fixed installations and administrative requirements eg the detail required on a Declaration of Conformity (DoC). Fixed installations attracted comment because it was one area where the treatment had changed as compared with the 2005 EMC Regulations. In several cases, points of substance were made that resulted in changes to the draft Regulations eg the Regulation dealing with DoC requirements was changed so that there are no additional UK only requirements. In many other cases the points made were of an editorial nature and proved helpful in clearer re-drafting of both the Regulations and guidance. A detailed assessment of points raised and the DTI response to them is available on the DTI consultation website <http://www.dti.gov.uk/consultations/index.html> .

Guidance

7.9 The DTI will release specific guidance explaining the changes before the Regulations come into force (20 January 2007 for guidance supporting the Regulations concerning the appointment of Notified Bodies and 20 July 2007 for the rest of the Regulations). In addition, work on extensive Europe wide guidance on the Directive is now complete and it is expected that it will be published well in advance of the 20 July deadline.

8. Impact

8.1 A Regulatory Impact Assessment is attached to this memorandum.

9. Contact

9.1 Iain Nicol at the Department of Trade and Industry Tel 020 7215 1408 or e-mail iain.nicol@dti.gsi.gov.uk can answer any queries regarding the Regulations.

FINAL REGULATORY IMPACT ASSESSMENT

Electromagnetic Compatibility Regulations 2006

Background

The Electromagnetic Compatibility Regulations will give effect to the Electromagnetic Compatibility (EMC) Directive (2004/108/EC) that came into force on 20 January 2005. The Directive has to be transposed into national law by 20 January 2007 and implemented on 20 July 2007. Directive 2004/108/EC repeals the previous EMC Directive 89/336/EEC with effect from 20 July 2007 although equipment types placed on the market before 20 July 2007 and compliant with the latter Directive can continue to be placed on the market until 20 July 2009.

2. During the development of Directive 2004/108/EC the Department of Trade and Industry (DTI) has consulted interested parties in the UK, including other Government Departments, industry trade associations, test organisations and users. The DTI also contracted Risk & Policy Analysts (RPA) Limited to develop a Partial Regulatory Impact Assessment (RIA) of the proposal. RPA published their final report on the Partial RIA in June 2003. The RPA report is annexed to this document. This Final RIA examines the impact on the findings in the RPA report of the modifications made to the original Commission proposal during its subsequent consideration by the Council and European Parliament.

RPA Recommendation

3. RPA, at section 11.2 of their report, recommended that DTI should seek to reduce the costs associated with three aspects of the original Commission proposal, by negotiating amendments during the subsequent Council considerations of the proposal, while retaining as much of the benefits as possible. No updating of the cost and benefit figures given by RPA in their report has been undertaken given that the issues addressed in this Final RIA are whether the DTI has been successful in removing the requirements in the original Commission proposal that gave rise to those costs.

3(1) Application of harmonised standards

RPA, at section 11.1, Table 11.1 of their report, identified potential costs of up to £150 million associated with the Commission's proposal to more rigorously require manufacturers to apply the test methods set out in harmonised standards (for example to one-off products or small batch production runs) but did not consider that it would be possible to negotiate changes to the original proposal. RPA had however, at section 5.1.1 of their report under the heading *UK-Specific Concerns*, qualified the potential additional cost by pointing to the fact that the Commission proposal presented the opportunity for manufacturers to not apply standards and thereby considerably reduce the cost of achieving compliance. During subsequent Council negotiations DTI succeeded in having the specific reference to the application of harmonised standards moved from the body of the Directive to the introductory recitals. As a result the status quo has been maintained.

3(2) Removing or reducing the information requirements

RPA, at section 11.2 of their report, considered that removing from the Commission proposal the requirement for additional information provision by manufacturers would reduce the costs of the proposal by £11 million but reduce benefits by only £1.1 million. Although these requirements have been retained in Directive 2004/108/EC the DTI consider that not enough consideration was originally given to the fact that the principle reason for such requirements are to facilitate the work of market enforcement authorities in removing non-compliant products from the market and that these requirements are consistent with what is already required by other New Approach Directives. For example, the Radio Equipment and Telecommunications Terminal Equipment Directive (1999/5/EC), the General Product Safety Directive (2001/95/EC) and the Toys Directive (88/378/EEC) contain similar requirements. Many manufacturers are therefore already familiar with such requirements and for those who are not there is only the initial cost as products are progressively updated. It must be noted that the manufacturers have the ability, under the transition arrangements, to continue to market equipment under the current Directive until 20 July 2009.

3(3) Ready made connecting devices

The Commission proposal for a new EMC Directive was borne out of the SLIM (Simpler Legislation for the Internal Market) initiative. The objective was to provide clarity, give legal certainty to agreed solutions, and also reduce unnecessary regulatory burdens on industry. In the UK view the inclusion of ready made connecting devices within the proposal did not meet this objective given that it placed an unquantifiable burden on manufacturers in that it required them to ensure compliance when the devices were connected despite manufacturers having no control over the apparatus to which they were to be connected. Furthermore, as it was not possible to clearly define such products, manufacturers and market surveillance authorities faced additional costs in identifying which products were within the scope of the Directive.

When RPA consulted with stakeholders there had been scepticism amongst UK manufacturers (RPA report, section 4.1) that the potential benefits of up to £37 million envisaged by including these devices within the scope of the proposal could actually be achieved, leaving only the costs of up to £37 million. RPA therefore recommended that DTI pursue the possibility of removing ready made connecting devices from the Commission proposal. During negotiations the DTI was able to secure the removal of these devices from the scope of the proposal.

3(4) Other amendments made during course of Council and European Parliament consideration.

No other amendments were made to the text of the Commission proposal that could give rise to additional costs or benefits.

Conclusion

4(1) Costs

In their Summary of Findings (section 11.1, Table 11.1) RPA referenced a total cost of £48 million if the Commission proposal was accepted in its current form. Additionally RPA drew attention to a potential additional cost of up to £150 million if there was a requirement to more rigorously apply the test methods specified in harmonised standards. As stated at 3(1) above, the DTI was successful in achieving an amendment to the proposal that maintained the status quo in relation to the application of harmonised standards. Consequentially there is now no potential additional cost arising from the application of harmonised standards.

Of the £48 million cost identified, RPA attributed £37 million to the inclusion of ready made connecting devices within the scope of the proposal. These devices, as explained at 3(3) above, were subsequently removed from scope. The residual £11 million costs were attributed by RPA to the requirement for full information provisions. However, as explained at 3(2) above these requirements are consistent with those in other New Approach Directives.

4(2) Benefits

RPA referenced a total benefit of £43 million if the Commission proposal was accepted. The £43 million figure however included £37 million attributed to the inclusion of ready made connecting devices, a benefit that UK manufacturers were actually sceptical about being achieved. With the subsequent removal of ready made connecting devices from scope the perceived benefits of the proposal is reduced to £6 million.

4(3) Outcome

As stated at 4(2) above £6 million potential benefits have been identified as arising from the new EMC Directive with, on the basis of the Partial RIA, potential costs of £11. These perceived costs were attributed to the requirement for manufacturers to provide additional information with their products. However, for the reasons given at 3.2 above, it is considered that the actual costs to manufacturers will be less than that originally estimated. In the opinion of the DTI the impact of the EMC Directive is therefore cost neutral.

5. Consultation

A formal consultation relating to the draft UK Regulations (and associated guidance) was held between 3 May 2006 and 3 August 2006. Some 32 substantial responses were received from a range of stakeholder organisation (manufacturers, trade associations, conformity assessment bodies, enforcements authorities, and EMC experts) covering the broad areas set out in the consultation document. In addition about 80 people representing similar stakeholders attended a public consultation meeting on 14 June 2006 in London. Topics raised included the treatment of fixed installations and administrative requirements eg the detail required on a Declaration of Conformity (DoC). Fixed installations attracted comment because it was one area where the treatment had changed as compared with the 2005 EMC Regulations. In several cases, points of substance were made that resulted in changes to the draft Regulations eg the Regulation dealing with DoC requirements was changed so that there are no additional UK only requirements. In many other cases the points made were of an editorial nature and proved helpful in clearer re-drafting of both the Regulations and guidance. A detailed assessment of points raised and the DTI response to them is available on the DTI consultation website <http://www.dti.gov.uk/consultations/index.html>.

6. Declaration and publication

I have read the Regulatory Impact Assessment and I am satisfied that the benefits justify the costs.

Signed

Malcolm Wicks

Minister of State for Science and Innovation
Department of Trade and Industry

Date.... 18th December 2006

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FINAL REGULATORY IMPACT ASSESSMENT

Revision of the Directive on Electromagnetic Compatibility:

Electromagnetic Compatibility Regulations 2006

Introduction

The Electromagnetic Compatibility Regulations will give effect to the Electromagnetic Compatibility (EMC) Directive (2004/108/EC) that came into force on 20 January 2005. The Directive has to be transposed into national law by 20 January 2007 and implemented on 20 July 2007. Directive 2004/108/EC repeals the previous

EMC Directive 89/336/EEC with effect from 20 July 2007 although equipment compliant with the latter Directive can continue to be placed on the market until 20 July 2009.

During the development of Directive 2004/108/EC the Department of Trade and Industry (DTI) has consulted interested parties in the UK, including other Government Departments, industry trade associations, test organisations and users. The DTI also contracted Risk & Policy Analysts (RPA) Limited to develop a Partial Regulatory Impact Assessment (RIA) of the proposal. RPA published their final report on the Partial RIA in June 2003. The RPA report is reproduced in this document. The document assesses in the Annex the impact on the initial RPA findings of the modifications made to the original Commission proposal during its subsequent consideration by the Council and European Parliament.

Department of Trade and Industry

March 2006

Partial Regulatory Impact Assessment: Proposed Revision of the Directive on Electromagnetic Compatibility

Final Report

prepared for the
Department of Trade and Industry

RPA
June 2003

***PARTIAL REGULATORY IMPACT ASSESSMENT
OF THE PROPOSED REVISION OF THE
DIRECTIVE ON ELECTROMAGNETIC
COMPATIBILITY***

FINAL REPORT – JUNE 2003

prepared for

Department of Trade and Industry

by

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1. INTRODUCTION

A proposal¹ for a revised Directive concerning the approximation of laws relating to electromagnetic compatibility (EMC) was published by the European Commission on 23 December 2002. The Directive will replace Directive 89/336/EEC, which was adopted on 1 January 1992. All electrical and electronic equipment marketed in the European Economic Area (EEA) must satisfy the requirements of the Directive and carry a CE mark. The UK is one of the four largest producers of electrical and electronic equipment in the EU with turnover of around £49 billion.

In order to understand the implications of the proposal, the Department of Trade and Industry (DTI) has contracted Risk & Policy Analysts Ltd (RPA) to develop a Regulatory Impact Assessment (RIA) of the proposal. This Partial RIA draws on responses from UK stakeholders to a cost benefit analysis of the draft proposal for the European Commission prepared by RPA in 2002² (the EU study). This has been supplemented by additional information to address under-represented stakeholders and changes in the proposal since the draft. As responses to the EU study provided data in Euro (€), the costs and benefits in the partial RIA are expressed in this form; costs in Pounds are also given, converted at the rate of £1=€1.5.

Stakeholders have a high degree of uncertainty about the potential impacts of the proposal, reflected in a wide range of estimates of the scale of most costs and benefits. In the EU study, the range was expressed in terms of low, 'typical' and high costs, with the 'typical' cost being, in most cases, the 'mid-point' between the high and low value. In this report, for clarity, only the 'typical' value is given.

The Partial RIA has been prepared in accordance with relevant Cabinet Office Guidance³.

2. PURPOSE AND INTENDED EFFECT

2.1 The Objective

The proposed Directive is a New Approach Directive. Its objective is to guarantee free movement of electrical products whilst creating an acceptable electromagnetic environment within the EU. The Directive therefore seeks to ensure that electromagnetic disturbances produced by electrical equipment do not affect the correct functioning of other such equipment, including telecommunication and electricity distribution networks, and that such equipment has an appropriate level of immunity to electromagnetic disturbances so that it can function as intended.

The Directive will apply to the whole of the United Kingdom.

2.2 The Background

The proposal was developed following a review of Directive 89/336/EEC as part of the SLIM process (Simpler Legislation for the Internal Market). The SLIM panel, on which the UK was represented, identified problems with some

¹ COM(2002) 759

² RPA (2002): **Cost Benefit Analysis on the Draft Amendment of the EC Directive on Electromagnetic Compatibility** – Final Report. Prepared for the European Commission, Directorate-General Enterprise. Available at http://europa.eu.int/comm/enterprise/electr_equipment/engin/cba.pdf

³ Cabinet Office (2003): **Better Policy Making: a Guide to Regulatory Impact Assessment**, Cabinet Office Regulatory Impact Unit.

aspects of its application and made a number of recommendations for clarification and reduced administrative burden. The Commission therefore set up a working group to develop proposals to amend the Directive. This involved an extensive consultation, involving a number of different drafts on which widespread comment was invited.

The proposal contains changes to Directive 89/336/EEC in the following areas:

- clarification of the existing scope of the Directive through clearer definitions and exclusions;
- extension of the scope to include signal-carrying ready made connecting devices;
- a new regulatory regime for the treatment of fixed installations;
- more detailed specification of essential requirements to be met by apparatus;
- clarification of the role of harmonised standards;
- simplification of the conformity assessment procedure, with a single procedure for apparatus;
- removing the need for compulsory third-party intervention where harmonised standards have not been applied but allowing voluntary involvement of conformity assessment bodies for apparatus in all cases; and
- improved market surveillance through better traceability of manufacturers.

2.3 Risk Assessment

The main risks addressed by the proposal are:

- that an unnecessary burden is being placed on industry in complying with the requirements of Directive 89/336/EEC. The SLIM process identified that there was potential for achieving the objectives of the Directive with greater clarification and a reduced administrative burden; and
- the potential for differences in application of the Directive, which could affect the free movement of electrical products. In 1997, in response to a number of issues that had arisen, the Commission issued an informal guide to application of the Directive. This has made a substantial contribution towards homogeneous application but its informal nature means that it cannot provide legal certainty.

The extent of these risks cannot accurately be quantified, but could be potentially significant given the size of the market affected by the Directive and the key role of exports to the UK electrical industry. The UK information technology (IT) and electronics industries employ around 330,000 people in almost 65,000 businesses, 99% of which are small and medium enterprises (SMEs)⁴. The value of its production in 2002 was €74 billion (£49 billion); Table 2.1 shows the breakdown in value between different sectors. Exports account for around 25% of turnover; with the main markets including Germany, France, Ireland and Switzerland as well as the USA.

Product Types	Value (€)
Telecommunication & power	18.5 billion
Computers & other IT equipment	20 billion
Domestic/consumer electronics <i>(TV, radio and audio inc. components/accessories – capacitors, resistors, tubes,</i>	13.7 billion

⁴ Trade Partners UK (nd): *EU Market Access Database* (Available at www.tradepartners.gov.uk).

<i>flat panel displays etc. and lighting and lamps)</i>	
Measurement, military, space and navigation equipment	11 billion
Industrial process equipment, pumps and compressors	4.4 billion
Ready-made connecting devices	2.1 billion
Others inc. office machinery	4.3 billion
Total	74 billion
Source: EECA (2003) ⁵ , Intellect (nd) ⁶	

The EU study found that the current costs of compliance with the Directive were below 1% of product prices for many companies. Assuming that the costs of compliance with the EMC Directive are of a similar percentage for UK manufacturers, current annual costs to UK industry are likely to be around €1 billion (£670 million).

Additional risks addressed by the proposal are:

- the risk of electromagnetic disturbances arising from signal-carrying ready made connecting devices, which are not currently covered by the Directive; and
- the risk of authorities being unable to enforce the requirements of the Directive effectively because adequate information is not provided on electrical products placed on the market.

The inclusion of signal-carrying ready made connecting devices is in response to the increased practice of selling such devices separately from the equipment they are designed to connect. Currently, purchasers of connecting devices have no means of knowing whether they are likely to generate or transmit electromagnetic disturbance. No data are available on the current scale of electromagnetic disturbance caused by ready-made connecting devices, so this risk cannot be quantified.

The EU study found that a proportion of electronic products placed on the market was not currently provided with the full range of information required by the amendment, although estimates of the proportion varied between manufacturers and enforcement authorities. Manufacturers indicated that 63% of products were provided with batch numbers whilst enforcement authorities estimated that only 30% had such information. Lack of a batch number could make withdrawal from the market and the recall of faulty products more problematic.

3. OPTIONS

3.1 Possible Options

⁵ EECA (2002): *EECA Market Situation Report*, European Electronic Components Manufacturers Association. Internet site www.eeca.org.uk

⁶ Intellect (nd): *UK Electronics Production by Sector*, Intellect Statistics Centre, Internet site: www.cssa.co.uk

There are three main options available to the UK in relation to the Proposal. These are:

- Option 1: accept the Proposal as currently drafted and seek to make no changes to it;
- Option 2: accept the need for the Proposal but press for amendments to reduce the costs whilst maintaining the benefits; or
- Option 3: refuse to accept the Proposal and seek to prevent its adoption, maintaining the current Directive together with the guidance issued by the Commission.

3.2 Risks Associated with the Options

Option 1

The risk associated with Option 1 is that the Proposal as currently drafted may pose excessive costs for the UK, particularly for UK manufacturers, compared to the current situation. Responses from UK companies to the EU study indicated that the more detailed specification of essential requirements in the proposal might impose significant additional costs for manufacturers. This would arise because of the need to demonstrate compliance with standards by using the testing methods set out in the standards, rather than by adopting the current, more pragmatic approach. Responses from companies in other countries did not indicate a similar concern.

Option 2

The risk associated with Option 2 is that the UK may not obtain the amendments it seeks and, by opening up the debate, other Member States could introduce amendments that increase the costs of the measure (or reduce its benefits) for the UK. However, the DTI believes that, based on their reactions so far, other Member States may support the type of amendments that the UK wishes to see.

Option 3

The main risk with Option 3 is that the UK will not succeed in preventing adoption of the proposal. This risk appears high, given the length of time and effort that has been devoted to development of the proposal, including widespread consultation. In this case, the UK's opposition to the proposal may limit the scope to seek amendments to the proposal that would reduce its costs for the UK.

4. BENEFITS

4.1 Option 1

The intended benefits of the proposal are improved harmonisation of the market for electrical and electronic equipment, leading to freer trade, together with improved control over electromagnetic interference.

By analysing information from UK respondents to the survey for the EU study, the benefits of Option 1 for the UK can be identified. The 'typical' estimates for these benefits are shown in Table 4.1.

As no UK enforcement authorities responded to the EU study, a proportion of the EU-wide benefits from easier identification of products requiring enforcement action is allocated to the UK based on the relative numbers of households in the UK and EU.

The ‘typical’ estimate of overall benefits to the UK is €64 million (£43 million, with a range of £21 million to £67 million). The basis of the individual benefits is discussed further below.

Table 4.1: UK Benefits Arising from the Draft Amendment of the EMC Directive	
Type of Benefit	‘Typical’ value (annual benefit)
Harmonisation of market for signal-carrying ready made connecting devices used in telecommunications (assumed to be equal to the costs of compliance)	€55 million
Removal of need for declarations of conformity for equipment used in fixed installations	€2.5 million ¹
Removal of need for compulsory resort to notified bodies	€55,000
Reduced levels of electromagnetic interference arising from inclusion of ready-made connecting devices, the new regime for fixed installations, equipment meeting the essential requirements without additional devices and the information requirements	€6.3 million
Easier identification of products requiring enforcement action	€5,800 (based on no. households in UK/EU)
Total annual benefits	€64 million
¹ Based on the current costs of declarations of conformity for equipment used in fixed installations	

Harmonisation of Market for Signal Carrying Ready Made Connecting Devices

UK manufacturers of signal-carrying ready made connecting devices responding to the EU study indicated that the inclusion of such devices within the scope of the EMC Directive would have benefits in terms of market harmonisation. The benefits would arise because a consistent system of classification of cables, in terms of the different environments they would be used in, would make it easier to meet customer needs. Respondents could not quantify these benefits, but indicated that they would at least equal the costs of compliance. The ‘typical’ value given in Table 4.1 is therefore equivalent to the costs of compliance, discussed in Section 5 of this report.

Discussion with UK trade associations representing manufacturers in general, though, has indicated some scepticism over whether these benefits will be realised in practice. This is because of there are currently no applicable standards (although the connecting device manufacturers responding to the survey hoped to use standards to achieve compliance) and the difficulty of assessing the compliance of cables in the absence of information on how cables will be used.

Benefits Associated with Fixed Installations

The benefits to companies associated with fixed installations result from reduced compliance costs, where manufacturers of equipment solely for use in fixed installations had previously declared the conformity of these products. The benefits for manufacturers in the UK, just 3% to 7% of the total estimated by the EU study, are much less than the UK's share of total EU production (around 12%) might indicate. This may be because the proposed regime for fixed installations accords with the current UK position expressed in the UK Regulations

Benefits from Voluntary Resort to Notified Bodies

Benefits to companies from voluntary resort to notified bodies are calculated from manufacturers' responses on the numbers of notified body reports that would no longer be required and the average cost of such reports. Benefits to UK respondents were generally in line with the UK proportion of EU production. Respondents indicated that they would continue to use notified bodies to confirm compliance of certain products, for example in cases of dispute.

Benefits from Reduced Levels of Electromagnetic Interference

There were differing views on the potential of the Proposal to generate benefits in the form of reduced levels of electromagnetic interference (EMI). Some users thought that interference would increase as a result of the Proposal but most thought that it would reduce. UK enforcement authorities contacted for this RIA did not believe that the Proposal would reduce EMI; the majority of EMI problems were associated with misunderstanding of the essential requirements, use of inappropriate standards or a failure to re-test products following design changes. One authority thought that EMI problems might increase with the removal of compulsory resort to notified bodies.

Responses to the study indicated that the majority of interference problems related to radio and telecommunications networks. Responses to the EU study indicated the proportion of interference problems associated with different types of equipment. Thus the proportion of interference problems that could potentially be reduced by the Proposal could be determined. The value of the reduction in interference was calculated differently for operators of networks and users. The benefit to network operators was estimated on the basis of information from network operators to the EU study, on their current level of expenditure in dealing with electromagnetic interference.

Benefits to users of networks were valued on the basis of studies by the UK Radiocommunications Agency on the consumer surplus value of access to TV and radio networks per household (for private users) and mobile phone networks (for professional users). The number of households affected was determined on the basis of the number of complaints about interference received by enforcement agencies and the response from consumer groups that 30-60% of consumers were likely to make a complaint in response to

interference problems. It was then assumed that, for affected households, interference would reduce the value of access to networks by 33%-50%. Benefits to professional users were calculated on a similar basis, assuming the same ratio of numbers of complaints to numbers of products purchased as for private users.

Benefits from Easier Identification of Products Requiring Enforcement Action

No enforcement authorities from the UK responded to the EU study. The potential benefits to the UK from easier identification of products requiring enforcement action were therefore derived, by dividing the total EU benefits by the UK's proportion of the total number of households in the EU.

The potential for benefits from easier identification of products requiring enforcement action was addressed in additional consultation with UK enforcement authorities for this RIA. The authorities indicated that, whilst the availability of information was likely to make enforcement easier, it was unlikely to reduce costs. One authority considered, however, that the provision of information might reduce costs for companies by helping them to trace the source of any problems.

4.2 Option 2

The objective of Option 2 would be to reduce the costs of the proposal whilst maintaining the benefits. If this objective is met, the benefits of Option 2 should be the same as for Option 1. However, some requirements of the proposal may impose significant costs for industry whilst also generating benefits.

If these requirements were removed, there would also be a loss of benefits. For example, excluding signal-carrying ready made connecting devices from the scope of the requirements could reduce benefits by €5 million (£37 million) per year. Similarly, reducing the requirement for manufacturers to provide full information might reduce benefits by €5,800 (£3,900) per year. Removing these requirements could also reduce benefits associated with reduced levels of electromagnetic interference. Inclusion of ready-made connecting devices is expected to contribute to 22% of the potential reduction in interference, equivalent to €1.4 million (£1 million), whilst information provision is expected to contribute 25%, equivalent to €1.6 million (£1.1 million).

If Option 2 resulted in the removal from the Proposal of requirements concerning signal-carrying ready made connecting devices and information requirements, the value of the benefits would be reduced by £39 million to £3.7 million.

4.3 Option 3

Option 3 would maintain the current regulatory position. None of the benefits associated with the proposal would therefore be realised.

4.4 Business Sectors Affected

The business sectors experiencing the majority of the benefits are manufacturers of electrical and electronic equipment and users and operators of networks.

Manufacturers and suppliers of electrical and electronic equipment are affected by the benefits associated with improved harmonisation of the market. In particular, manufacturers of signal-carrying ready made connecting devices may benefit from the inclusion of such devices under the EMC regime for the first time (although some UK industry associations have questioned whether this benefit can be realised in practice). The value of UK production of ready-made connecting devices was €2.1 billion (£1.4 billion) in 1999, the proportion exported to other EU countries is unknown but, overall, around 25% of total UK electronics production is exported. If the proportion of exports of ready-made connecting devices is similar, exports could amount to €30 million (£350 million). Improved harmonisation of the market may also result in benefits for consumers and other users of electrical and electronic equipment, in terms of improved access to a range of products, leading to greater consumer choice.

Companies manufacturing equipment for use in fixed installations will benefit from the new regime for such installations. Fixed installations may contain many different types of equipment, so that a wide range of businesses may be affected. The EU study estimated that up to 10% of equipment covered by the Directive is installed into fixed installations.

Benefits associated with reduced levels of electromagnetic interference will affect users and operators of networks, including radio and telecommunications networks and electricity distribution networks. This sector includes companies operating electricity, mobile telephone, TV and radio networks. In response to the EU study, 70% of network operators indicated that they were affected by electromagnetic interference. The impacts include lack of access to all required frequencies, reduction in quality and performance and degradation. Users of such networks include most business sectors, together with the public sector and consumers (such as amateur radio users and people who are electrically hypersensitive).

4.1 Issues of Equity and Fairness

The direct effects of the proposal will fall mainly on industry, particularly on manufacturers of electrical and electronic equipment. Such companies will also experience most of the benefits, but overall they are expected to experience net costs. In practice, these increased costs are likely to result in

increased prices for electrical and electronic equipment, which will be passed on to users of equipment. However, there will also be benefits to users of electrical and electronic equipment, both from improved market harmonisation and from reduced levels of EMI.

Table 4.3 provides an overview of the stakeholders that may face the main costs and/or benefits under the proposal. The distribution of costs is not always equal across all manufacturers. This is particularly true of the costs of meeting the information requirements. Manufacturers of IT and domestic products are more likely to face costs since they currently do not provide all of the required information. For example, 83% of IT manufacturers do not provide all of the required information, with 67% not providing batch numbers.

Table 4.3: Distribution of Impacts	
Stakeholders that will Benefit	Stakeholders Facing Costs
<p>Manufacturers – from harmonised market for ready-made connecting devices in telecommunications</p> <p>Manufacturers – producing one-off products for fixed installations</p> <p>Manufacturers – that are currently required to use notified bodies</p> <p>Network operators – from potential reduction in EMI</p> <p>Consumers (particularly those who are electrically hypersensitive or use hearing aids) – from potential reduction in EMI</p> <p>Enforcement authorities – from easier identification of products requiring enforcement</p>	<p>Manufacturers – from costs of compliance of ready-made connecting devices</p> <p>Manufacturers – from costs of providing all of the information requirements (mainly producers of IT and domestic equipment)</p> <p>Manufacturers – from costs of redesigning products so they do not need additional devices to comply with the amendment to the EMC Directive</p> <p>Notified bodies – from potential loss of business</p>

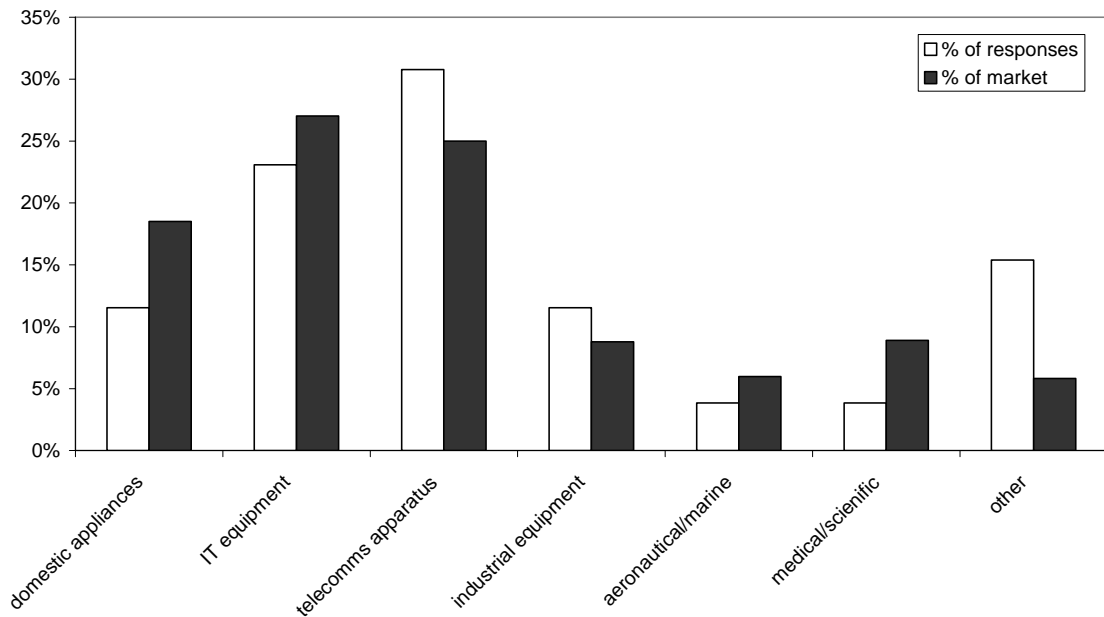
5. COSTS

5.1 Compliance Costs

5.1.1 Option 1

Costs to UK manufacturers have been estimated from responses to consultation undertaken for the EU study. The costs given in Table 5.1 below relate only to those organisations that produce electrical and electronic products in the UK. A total of 20 responses were available for the UK, most from large, multinational companies but including two responses from medium-sized companies. In order to assess the representativeness of the responses, Figure 5.1 compares the production of responding companies against the market profile. The Figure shows that the pattern of responses is a reasonable reflection of the market profile, so that the costs derived from the responses should also provide a reasonable indication of costs for the UK.

Figure 5.1: Comparison of Percent Responses by Product Type Against Percent of Total Production Value



Type of Cost	‘Typical’ value (annual cost, except where indicated)
Application of the Directive to signal-carrying ready made connecting devices	€55 million
Loss of sales of additional devices	(not applicable: UK manufacturers would choose to provide additional devices with equipment)
Redesigning equipment to meet the requirements without the use of additional devices (one-off cost)	(not applicable: no UK companies indicated that they would adopt this approach)
Providing the full range of information to improve traceability for market surveillance	€17 million
Total Annual Costs	€72 million

Overall Costs

Table 5.1 shows the estimated costs to UK manufacturers for each of the changes included within Option 1. The total cost of the changes is €72 million (£48 million, with a range of £29 million to £69 million). These costs are based on all responses to the EU study from companies that included UK operations (with UK production estimated by dividing by the proportion that UK produces compared with total production in all EU countries where the company has operations) plus those companies operating only in the UK.

In addition to the quantified costs, a number of additional costs were identified in the EU study that could not be quantified. These were:

- costs to manufacturers for additional training of staff where notified bodies are no longer used for compliance; and
- potential costs to installers/users of fixed installations in determining where responsibility lies for ensuring compliance, should any problems arise. Such costs could be high if uncertainty results in litigation. This has been addressed in the Proposal by requiring Member States to “set out the necessary provisions for the identification of the person or persons responsible for the establishment of compliance of a fixed installation with the relevant essential requirements”. UK industry believes, however, that this requirement could lead to a situation where responsibilities differ between Member States. This could result in additional costs for exporters of equipment for use in fixed installations in establishing the provisions applicable in each of its markets. It could also increase the likelihood of litigation where problems arise, resulting in potentially high costs.

Signal Carrying Ready Made Connecting Devices

The cost of ensuring that ready made connecting devices comply with the Directive was estimated by UK respondents to the EU study as being just below 4% of the total product price. The annual value of production of signal-

carrying ready made connecting devices in the UK is approximately £1.4 billion, indicating a cost of compliance of approximately £55 million. One respondent, however, indicated that the cost of compliance would be less than 1% of turnover. By contrast, a (non-UK) respondent to the EU study, producing ready-made connecting devices for the IT sector believed that the cost of compliance could be as high as 10% of product price.

Additional Devices

The only UK costs associated with the requirements concerning additional devices are those of selling the additional devices with the product. No UK respondents said they would redesign their products to meet the requirements without additional devices. This would increase costs for manufacturers of equipment, but would represent a transfer from consumers (who currently buy such devices) to manufacturers. It is expected that manufacturers would pass the costs back onto consumers, such that there is no overall change in costs. The increased costs for manufacturers of equipment would be offset by the fact that there would be no loss of sales to manufacturers of additional devices.

However, a concern has been raised by the UK industry regarding the ability to sell equipment without additional devices to customers who are “technically competent in the field of electromagnetic compatibility”. As no guidance is given on how such competence is to be assessed, manufacturers of equipment may take a precautionary approach and supply additional devices with all products. This may result in an unnecessary supply of additional devices to customers who do not need them. The extent of this excess supply cannot be determined; in any case, it will represent a transfer from manufacturers of equipment to manufacturers of additional devices.

Most of these costs would fall initially on manufacturers of equipment covered by the EMC Directive. However, it is likely that the costs would be passed on to users of such equipment in the form of increased prices. This would represent a transfer rather than an additional cost, so is not calculated separately. As the estimated costs to manufacturers account for only 0.1% of turnover, the resulting increase in prices is unlikely to exceed this level (i.e. this would increase the price of a product costing £100 to £100.10).

Information Provision

Responses to the EU study varied widely in their estimates of the potential costs associated with information provision. The highest costs were associated with providing serial numbers (especially for IT equipment) and information on restrictions on use (for telecommunications equipment and domestic appliances). UK trade associations contacted for the RIA also identified potential problems with the need to include the name of the manufacturer and the name of the authorised representative, whereas currently only one of these is required. This may cause problems in cases where products are manufactured by one company but then sold under a brand name by second. Often the second company does not want the name of the first to

appear on the product, to protect the brand identity. The requirement may therefore influence future purchasing strategies.

UK-Specific Concerns

In addition to these costs, certain UK respondents to the EU study raised concerns that the more detailed specification of essential requirements in the proposal might increase the amount of testing required to demonstrate compliance with the requirement. The proposal specifies that, where standards are used to demonstrate compliance with the essential requirements, the testing method specified in the standards must be used. This compares to the current requirement simply to generate a declaration of compliance. How such a declaration is supported or technically justified is entirely at the discretion of the manufacturer.

Respondents indicated that some manufacturers, particularly small manufacturers of one-off or small batch items, use simpler methods (such as scanners) to assess compliance with the limits in standards than those specified in the standards. This was because such companies did not own the equipment required to apply the methods set out in the standards and that, for a one-off or small batch product, the costs of having testing carried out by an external laboratory would be prohibitive. Applying the methods specified in standards exactly could require the purchase of additional testing equipment, at a one-off cost of around €160,000 (£107,000) per manufacturer, and increase the time needed to test products from two days to five to seven to ten days. Industry also considers that no benefit would result in terms of reduced electromagnetic interference.

If such an increase in testing requirements applied across the board to all UK production, the costs could be in the region of €70 million (£450 million). However, further consultation for this RIA indicates a number of factors that might reduce this cost. Firstly, the increase is most likely to apply to one-off or small batch products manufactured by SMEs. From UK responses to the EU study, one-off or small batch products account for 33% of products by number (compared with 15% for the EU as a whole); the proportion manufactured by SMEs is unknown. Applying the increase to all one-off and small batch products would therefore reduce the cost to €20 million (£150 million); the costs for one-off and small batch products manufactured only by SMEs would be lower still.

Secondly, the proposal reduces the costs of achieving compliance where standards have either not been used or have only been used in part, by removing the need to obtain reports from notified bodies. Where the costs of testing using the methods specified in standards are prohibitive, manufacturers may instead chose simply to describe and explain the testing methods used. Although market pressures may constrain some manufacturers of one-off or short batch products to continue using standards and thus to face the increased costs, the overall cost impact is likely to be reduced considerably.

Some IT companies responding to the EU study also anticipated significant increases in testing costs arising from the need to confirm that the equipment will meet the requirements of the Directive “in all possible configurations”. For equipment sold in modular form which can be connected to a wide range of other modules, for example IT or audio equipment, the number of potential configurations is enormous. For UK IT companies, the costs are estimated to be €2.8 million (£1.9 million).

In response to this concern, the text of the proposal has been modified so that the requirement is now to confirm that the equipment should meet the requirements “in all possible configurations identified by the manufacturer as representative of normal use in its intended application”. Consultation with UK IT companies for this RIA indicated that this amendment could go some way towards addressing their concerns about the requirement. However, this might still imply that a large number of tests might be required, as opposed to the current practice of testing only the ‘worst case’ configuration.

5.1.2 Option 2

The costs associated with Option 2 would depend upon the nature of amendments to the Proposal that the UK was able to obtain. The most significant costs for the UK arising from the proposal are associated with:

- **extension of the Directive to signal-carrying ready made connecting devices.** Removal of this requirement would reduce the cost to the UK by €5 million (£37 million) per year. Equivalent benefits in terms of market harmonisation would also be lost; however, UK industry has expressed some scepticism about whether such benefits would be realised in practice;
- **provision of information to improve traceability for market surveillance.** Removing this requirement would reduce costs by €17 million (£11 million) per year. The benefits associated with the requirement are only estimated at €5,800 (£3,900) per year; and
- **using testing methods as specified in standards.** If the concern that this requirement could add substantially to costs for UK firms making one-off or short batch products is correct, its removal could reduce costs by €20 million (£150 million). However, as this concern has not been raised in other EU countries (although UK industry believes that similar methods are used by SMEs elsewhere), there might be considerable resistance to such an amendment.

5.1.3 Option 3

As Option 3 would involve rejection of the proposal as a whole, none of the compliance costs associated with the proposal would be incurred. Instead, compliance costs would remain at current levels.

5.2 Other Costs

5.2.1 Option 1

The EU study identified costs to enforcement authorities associated with enforcement of the proposal arising from an increased workload, and potentially from increased time to withdraw non-compliant products from the market associated with the ending of compulsory use of certified bodies for compliance where standards are not used. (One respondent also identified costs arising from an increased workload associated with application of the Directive to ready-made connecting devices).

Assuming that these costs were shared between countries on the basis of their contribution to total EU production of electrical and electronic equipment, the UK might be expected to bear 12% of the costs associated with ending compulsory use of notified bodies. This would indicate UK costs of €10,000 (£73,000).

Consultation with UK enforcement authorities for this RIA confirmed that an increase in workload was possible under the Proposal, including enforcement of requirements for ready-made connecting devices and additional advice to manufacturers following the ending of compulsory resort to notified bodies. No costs could be allocated to this increase in workload; however the annual budgets for EMC enforcement were currently low (ranging from £3,000 to £12,000 per year for a single authority plus staff time of up to 10% of one full-time equivalent) so that major increases would be required to generate significant costs.

In the case of the UK, enforcement costs associated with the EMC Directive are borne by local authorities. No responses to the EU study were received from UK local authorities but three authorities with particular EMC expertise were contacted for this RIA.

5.2.2 Option 2

The only requirement affecting the costs of public authorities that also places significant costs on industry is the application of the Directive to signal-carrying ready made connecting devices. Negotiating removal of this requirement would result in only a minor reduction in local authority costs.

5.2.3 Option 3

Under Option 3, local authorities would face no change in costs compared to the current situation.

5.3 Costs for a ‘Typical’ Business

5.3.1 Typical UK Respondent to the EU Study

Based on the 20 responses to the EU study from firms in the UK, a typical business mainly mass-produces products, with some short batches and occasional one-off products. As the responses were primarily from large companies, together with two medium companies, this is

not necessarily typical of the UK as a whole. Issues for small companies are addressed in Section 6.

Current EMC compliance costs are between 1% and 5% of product price, with no price premium for those products that are fully compliant with the EMC Directive. The typical business expects there to be no change in the number of products that will have to comply with the Directive and currently follows the harmonised standards route for most products. However, they obtain around 8 reports per year from notified bodies to confirm compliance of certain products, at a cost of £2,300 per report.

Typical businesses of this type do not expect the amendment to change the way that they achieve compliance, but they do anticipate benefits from increased certainty that their products are compliant, following clarification of the essential requirements. The number of reports obtained from notified bodies is expected to stay the same. Hence, the typical business will gain no benefits in terms of reduced costs from the removal of compulsory resort to notified bodies.

On average, 28% of the typical business' products currently require some additional devices to ensure compliance, although these are already supplied with the product. Hence, there will be no change to products under the Directive and the typical business will face no additional costs as a result of the proposal.

Of the information requirements, 67% of products already include batch numbers, 89% include serial numbers, 94% have the manufacturers name and address, 94% are provided with precautions for assembly and 78% with restrictions on use. The average cost per company of providing the additional information that is not already included is estimated at €20,000 (£13,300).

A summary of the costs and benefits expected by a typical business is provided in Table 5.2. The Table also shows where there are expected to be no changes to the way that a typical business currently ensures compliance of its products.

Table 5.2: Distribution of Costs and Benefits for a Typical Business		
Benefits	No change	Costs
Increased certainty that their products are covered by the Directive and that they are fully compliant.	Number of products that have to comply Number of reports obtained from notified bodies Number of products requiring additional devices	Provision of additional information requirements not already provided (average cost £13,300)

5.3.2 Typical IT Company

All UK IT company responses to the EU study from were from large multinationals. Most of their products (75%) are mass-produced, with 13% produced in short batches and 2% as one-off products. The current cost of compliance with the EMC Directive is estimated to be between 1% and 5% leading to total compliance costs of €200 million to €1 billion. IT manufacturers do not consider that products complying fully with the EMC Directive attract a price premium. There may be some benefits to those manufacturers producing one-off products destined for fixed installations as the amendment no longer requires a declaration of conformity for these products from the manufacturer.

In order to comply with the Directive, IT manufacturers follow the standards route, with 97% of products being tested against harmonised standards. The

method used to show compliance would not change under the amendment. IT companies obtain an average of eight notified body reports per year, either with the TCF and/or where standards have not been applied. The average cost per report is €2,250. IT manufacturers would not increase the number of reports that they obtain under voluntary resort. The change will depend upon the specific products, with some decreasing the number of reports obtained while others would not change the number of reports that they obtain.

There will be no impacts on IT manufacturers from the requirement to supply additional devices with their products. This is because only a small percentage (4%) of products currently require these devices and all are supplied with the product.

Most IT manufacturers supply some of the information requirements, with precautions for use provided by all. Batch numbers are provided for around 50% of products, while 83% of products come with serial numbers, manufacturers name and address and restrictions for use. The cost of providing all of this information with all products is estimated to be €2.75 (£1.80) per 1,000 products (this compares with costs of €1.13 (£1.42) per 1,000 products for the ‘typical’ business, suggesting that cost to IT companies may be 29% higher).

A summary of the costs and benefits expected by a typical IT business is provided in Table 5.3. The Table also shows where there are expected to be no changes to the way that a typical business currently ensures compliance of its products.

Table 5.3: Distribution of Costs and Benefits for an IT Business		
Benefits	No change	Costs
Number of reports obtained from notified bodies (depending on product) Reduced cost of compliance for one-off products going to fixed installations	Number of products that have to comply Number of reports obtained from notified bodies (depending on product) Number of products requiring additional devices	Provision of additional information requirements not already provided: €2.75 per 1,000 products

6. SMALL FIRMS IMPACT TEST

As noted in Section 2, 99% of the 65,000 UK businesses in the electrical and electronics sector are SMEs. Of the 20 UK company responses to the EU study, two were from medium sized enterprises. It is possible to identify the costs and benefits that these two companies expected compared to the ‘typical’ business described in Section 5.3.

The medium-sized businesses tend to produce more products in short batches than the ‘typical’ company, and their current compliance costs range from less than 1% to 5%. They currently use the standards route for all products and obtain no reports from notified bodies. The number of products covered by the Directive may increase under the amendment, resulting in annual costs of €5,000 per company. These companies expect to use harmonised standards to show compliance of the additional products, but may obtain reports where standards are not available (although this will be offset by the fact that, under the proposal, such reports will no longer be compulsory where standards are not applied). They expect

there to be benefits from increased certainty that their products are covered by the amendment to the EMC Directive.

All of the information requirements are provided by medium-sized companies, except serial numbers. The cost of providing the additional information is not known.

Table 6.1 summarises where a medium-sized business expects to face costs, benefits or see no change under the amendment to the EMC Directive.

Table 6.1: Distribution of Costs and Benefits for a Medium-Sized Business		
Benefits	No change	Costs
Increased certainty that their products are covered by the Directive and that they are fully compliant.	Number of products requiring additional devices	Increased number of products having to comply: €5,000 per company Possible increased costs of applying standards Cost of providing serial numbers on all products

No responses to the EU study were received from small UK companies, although small companies from other countries did respond and information was received from trade associations having small companies within their membership and from EMC consultants with experience of small company operations.

To obtain information on the potential impacts of the proposal on small companies, trade associations representing the main manufacturing sectors in the UK electrical and electronics industry were contacted and asked, in particular, to comment on the impacts of the proposal for small businesses. Discussions were held with the EMC Committee of one such association, which is chaired by a representative of a small company.

Based on this consultation, impacts for small companies are unlikely to be disproportionate, except that small companies are more likely to produce one-off or small batch products and thus:

- compliance costs will be spread over a smaller number of products sold (although this applies equally to current compliance costs); and
- along with medium-sized firms, they may face the additional costs associated with the requirement to apply test methods specified in standards. These costs are estimated to total up to £150 million per year if they apply to all one-off or short batch products. The proportion of such products manufactured by small companies is not known. However, as the proposal reduces the costs of achieving compliance without applying standards (or without applying them fully), the actual costs may be considerably lower.

7. COMPETITION ASSESSMENT

The Competition Filter (Table 7.1 below) indicates that the proposal is unlikely to have significant impacts on competition.

Table 7.1: General Statements Based on ‘Competition Filter’
<i>Q1: In the market(s) affected by the new regulation, does any firm have more than 10% market share?</i>
<i>Q2: In the market(s) affected by the new regulation, does any firm have more than 20% market share?</i>
<i>Q3: In the market(s) affected by the new regulation, do the largest three firms together have at least 50% market share?</i>

The markets affected by the proposal are characterised by a high level of (international) competition.
<i>Q4: Would the costs of the regulation affect some firms substantially more than others?</i> The costs of the regulation are likely to affect all firms within each sub-sector equally, although there may be some differences in costs between sectors and costs may be higher for some SMEs.
<i>Q5: Is the regulation likely to affect the market structure, changing the number or size of firms?</i> It is possible that increased costs for small firms may reduce the number of such firms.
<i>Q6: Would the regulation lead to higher set-up costs for new or potential firms that existing firms do not have to meet?</i> It is unlikely that any actions resulting from the proposal would lead to higher set-up costs for new companies.
<i>Q7: Would the regulation lead to higher ongoing costs for new or potential firms that existing firms do not have to meet?</i> It is unlikely that any actions resulting from the proposal would lead to higher ongoing costs for new companies.
<i>Q8: Is the sector characterised by rapid technological change?</i> Many parts of the sector are characterised by rapid technological change, for example IT equipment.
<i>Q9: Would the regulation restrict the ability of firms to choose the price, quality, range or location of their products?</i> It is unlikely that the proposal would have such an effect.

8. ENFORCEMENT AND SANCTIONS

Effective enforcement of the Proposal, and sanctions for non-compliance, will be critical to generating its potential benefits. These will be addressed in more detail at the stage of UK enabling legislation.

It is likely that enforcement of the proposal will continue to be the responsibility of local authority Trading Standards services. As noted in Section 5, the EU study indicated that the additional costs of enforcing the proposal could amount to £73,000 per year for the UK from ending the compulsory use of notified bodies. Consultation with UK authorities indicated that their workload is expected to increase under the Proposal, but the cost of this could not be quantified. This may be partly offset by a reduction in workload from easier identification of non-compliant products. The EU study indicated that this might reduce enforcement costs by £3,900; UK enforcement authorities believed that enforcement would be made easier but that there would be no associated reduction in costs.

Sanctions for breach of the current Directive appear to be low. One enforcement authority cited a fine of £6,000 for a multinational manufacturer convicted of selling (very large numbers of) non-compliant hairdryers. This level of fines is unlikely to provide a strong incentive for compliance with the Proposal.

9. MONITORING AND REVIEW

There are no specific requirements in the proposal for monitoring and review of its effectiveness, although Member States will be required to report to the Commission the measures that they have taken to implement the measure.

10. CONSULTATION

The DTI has consulted interested parties in the UK throughout the development of the Proposal, including other Government Departments, industry, trade associations, test organisations and users.

The EU study included widespread consultation with stakeholders, with questionnaires sent to 418 industry associations and/or their members as well as to operators of networks, consumers, notified bodies and enforcement authorities in each Member State. In total, 31 responses were received from the UK, the second highest number for any Member State. In addition, meetings and telephone discussions were held with UK trade associations and individuals within industry and notified bodies.

In preparing this RIA, additional consultation was carried out with stakeholders under-represented in the EU study, to address changes from the draft assessed in the EU study and issues raised in that study of particular concern to the UK. This included consultation with enforcement authorities (no responses were received from these stakeholders to the EU study) and the main trade associations representing manufacturers of electrical and electronic equipment.

11. SUMMARY AND RECOMMENDATION

11.1 Summary

The main findings of the RIA are summarised in Table 11.1. The table shows that, given the uncertainty about the impacts of the proposal, there is relatively little difference in the balance of costs and benefits between the three options. The exception is in relation to the potential costs associated with the application of test methods set out in the standards to one-off and small batch products.

Table 11.1: Summary of Findings			
Option	Total Cost per Year	Total Benefit per Year	Key Risks
1. Accept Proposal in current form	£48 million (plus £150 million ¹)	£43 million	Excess costs imposed on UK business
2. Seek amendments	£0-37 million ²	£3.7- 42 million ³	Amendments may not be accepted
3. Reject Proposal	0	0	Failure to prevent adoption
¹ If concerns about the need to use test methods included in standards for one-off and short batch products are correct ² Cost will be zero if all amendments accepted: if only one amendment is accepted: - remaining costs after removing extension of scope to ready made connecting devices: £11 million - remaining costs after removing requirement for full information provision: £37 million (assuming concerns about test methods in standards are not correct) ³ Benefits will be £3.7 million if all amendments accepted: if only one amendment is accepted: - remaining benefits after removing extension of scope to ready made connecting devices: £4.8 million - remaining benefits after removing requirement for full information provision: £42 million			

Option 1 has the highest costs but also the highest benefits, although these benefits are highly dependent on the benefits for manufacturers of ready-made

connecting devices from market harmonisation, which some stakeholders have questioned. However, if the concerns about the impact of the requirement to apply testing methods included in standards are correct, the costs of Option 1 could significantly outweigh the benefits.

The costs of Option 2 could be reduced to zero if the requirements of the Proposal imposing the highest costs (including ready-made connecting devices within the scope, provision of market surveillance information and testing using methods included within standards) are removed. This would also reduce the benefits significantly, however, and it is not clear how much support this Option would have within other Member States. In practice, it may be possible to achieve a compromise that results in the reduction of some but not all of these costs and associated benefits.

Option 3 imposes no additional costs and generates no benefits compared with the current situation. However, it is a high-risk strategy as there is likely to be little support for rejecting the proposal amongst other Member States.

11.2 Recommendation

On the basis of the analysis above, we recommend that the DTI seeks to negotiate certain amendments to the current Proposal that could reduce the costs whilst retaining as much of the benefits as possible.

We do not believe that it will be possible to negotiate changes to the requirements in Annex 5 of the Proposal concerning the use of testing methods as specified in standards. No other Member State has identified this as an issue and there is considerable uncertainty about the extent of the problem within the UK. In addition, the proposal provides a remedy in the form of reduced costs of achieving compliance where standards have either not been used or have only been used in part, by removing the need to obtain reports from notified bodies.

Removing the requirement for full information provision would reduce the costs of the proposal by £11 million but reduce benefits by only £1.1 million. We recommend that the DTI investigates whether there would be support from other Member States for removing or reducing the information requirements.

Exclusion of signal-carrying ready made connecting devices from the Proposal would reduce costs by £37 million. It would also potentially reduce benefits by £37 million, on the basis that manufacturers expect the benefits to at least equal the costs. However, there is considerable scepticism amongst UK manufacturers that these potential benefits could actually be achieved. This is because of the absence of standards to form a basis for evaluating compliance of such devices with the requirements and the difficulties of testing when the configuration of the cable in use will not be known. We therefore recommend that the DTI investigates whether there would be support from other Member States for removing ready made connecting devices from the Proposal.

Given the uncertainties over the impacts of Option 2, however, and the relatively small size of the costs compared with the turnover of the electrical and electronics sector, we do not believe that there is merit in seeking to block the Proposal. Nor is it likely that acceptance of the Proposal in its current form would cause major problems for the UK.

Directive 2004/108/EC of the European Parliament and of the Council of 15 December 2004 on the approximation of the laws of the Member States relating to electromagnetic compatibility and repealing directive 89/336/EEC

Transposition Note

Introduction

The way in which the Government will be transposing Directive 2004/108/EC on electromagnetic compatibility into UK law is set out in the table below. The Directive will be transposed by the Electromagnetic Compatibility (EMC) Regulations 200X.

These regulations do what is necessary to implement the Directive, including making consequential changes to domestic legislation to ensure its coherence in the area to which they apply.

Article	Objective	Implementation	Responsibility
1.1	Sets out the purpose of the Directive: to ensure the functioning of the internal market by requiring equipment to comply with an adequate level of electromagnetic compatibility.	Introductory text	Secretary of State
1.2	Sets out the various types of equipment to which the Directive does not apply.	Regulations 3(1), 6(1), 9, 10 and 11	Secretary of State
1.3	Disapplies the Directive to equipment with inherent physical characteristics that prevent it generating or contributing to excessive electromagnetic emissions and that allow it to operate without unacceptable degradation in the presence of normal disturbances.	Regulation 8	Secretary of State
1.4	Disapplies the Directive to the appropriate extent for equipment for which the essential requirements are laid down in whole or in part more specifically in other Directives.	Regulation 12 and Schedule 4	Secretary of State
1.5	States that the Directive shall not affect the application of other legislation regulating the safety of equipment.	Regulation 7	Secretary of State
2.1	Defines important terms for the purposes of the Directive.	Regulation 3(1) and (2)	Secretary of State

2.2	Requires components or sub-assemblies in certain circumstances, and mobile installations, to be deemed to be apparatus for the purposes of the Directive.	Regulation 3(1)	Secretary of State
3	Requires Member States to take all appropriate measures to allow the placing on the market and/or putting into service of equipment only when it complies with the requirements of Directive.	Regulations 15 and 16. In the case of products that are put into service, having never been placed on the market, the requirements are specifically limited to meeting the essential requirements of the Directive. Regulations 37, 38, 40, 45, 46, 47, 48, 49, 50, 51, 53, 54, 56, 58, 59, 60, 61 and 63	Secretary of State Ofcom Local weights and measures authorities Department of Enterprise, Trade and Investment in Northern Ireland Gas and Electricity Markets Authority or any person designated to act on their behalf Northern Ireland Authority for Energy Regulation (in NI) or any person designated to act on their behalf
4.1	Requires Member States not to impede for reasons relating to electromagnetic compatibility, the placing on the market and/or putting into service of equipment in their territory, equipment that meets the requirements of this Directive.	Regulations 15 and 16	Secretary of State
4.3	Requires Member States to allow display and/or demonstration, at trade fairs and similar events, of equipment that does not comply with the Directive, if this is clearly indicated and disturbances are prevented.	Regulation 14	Secretary of State
5	Requires equipment within the scope of the Directive to meet the essential requirements set out in Annex I	Regulations 4 and 5	Secretary of State
6.1	Defines the term "harmonised	Regulation 3(1)	Secretary of

	standard”		State
6.2	Requires Member States to accept that equipment has a presumption of conformity with the essential requirements when it complies with relevant harmonised standards.	Regulation 19(4)	Secretary of State
7	Requires the compliance of apparatus with the essential requirements to be demonstrated.	Regulations 18, 19 and 20	Secretary of State
8.1	Requires the CE marking of apparatus that has been demonstrated to comply with the Directive	Regulation 21(2)	Secretary of State
8.2	Requires Member States to prohibit misuse of the CE marking.	Regulations 21(6) and 49(1)	Secretary of State
8.3	Allows other marks to be affixed to the apparatus, provided the visibility and legibility of the CE marking is not reduced.	Regulation 21(7)	Secretary of State
8.4	Requires the manufacturer or his authorised representative to bring the apparatus into conformity where a competent authority establishes that the CE marking has been incorrectly affixed.	Regulations 42 and 57	Secretary of State Ofcom Local weights and measures authorities Department of Enterprise, Trade and Investment in Northern Ireland Gas and Electricity Markets Authority or any person designated to act on their behalf Northern Ireland Authority for Energy Regulation (in NI) or any person designated to act on their behalf
9.1	Requires each apparatus to be identified appropriately.	Regulation 15(f)	Secretary of State
9.2	Requires each apparatus to be accompanied by the name and	Regulation 15(g)	Secretary of State

	address of the manufacturer or his authorised representative or the person responsible for placing the apparatus on the Community market.		
9.3	Requires the manufacturer to provide information on specific precautions that must be taken to ensure the apparatus when put into service meets the protection requirements in Annex I point 1.	Regulation 15(h)	Secretary of State
9.4	Requires apparatus for which compliance is not ensured in residential areas to be accompanied by an indication of this restriction of use.	Regulation 15(i)	Secretary of State
9.5	Requires apparatus to be accompanied by instructions for use	Regulation 15(j)	Secretary of State
10.1	Requires apparatus bearing CE marking but not in compliance with the Directive to be withdrawn from the market, or prohibited from being placed on the market or put into service.	Regulations 15, 16 and 43	Secretary of State Ofcom Local weights and measures authorities Department of Enterprise, Trade and Investment in Northern Ireland Gas and Electricity Markets Authority or any person designated to act on their behalf Northern Ireland Authority for Energy Regulation (in NI) or any person designated to act on their behalf
10.5	Requires appropriate action to be taken against a Notified Body, where non-compliant apparatus has been subject to the conformity assessment procedure in Annex III	Regulations 25 and 32	Secretary of State
11.1	Requires Member States to state the	Regulations 41,	Secretary of

	exact grounds for the withdrawal of apparatus from the market and to inform the party concerned and of remedies open to them under national law.	42, 43 and 44	State Ofcom Local weights and measures authorities Department of Enterprise, Trade and Investment in Northern Ireland Gas and Electricity Markets Authority or any person designated to act on their behalf Northern Ireland Authority for Energy Regulation (in NI) or any person designated to act on their behalf
11.2	Requires that the manufacturer or other interested party have the opportunity to put forward their point of view in advance of action that might be taken in respect of Article 11.1	Regulations 38(2)(c), 40(5), 41, 42(4), 43(2)(c), 44 and 52	Secretary of State Ofcom Local weights and measures authorities Department of Enterprise, Trade and Investment in Northern Ireland Gas and Electricity Markets Authority or any person designated to act on their behalf Northern Ireland Authority for Energy Regulation (in NI) or any person designated to act on their behalf

12.1	Requires Member States to apply the minimum criteria set out in Annex VI for the appointment of Notified Bodies.	Regulations 24, 29 and Schedule 5	Secretary of State
12.2	Requires that bodies that comply with the assessment criteria set out in the relevant harmonised standards shall have a presumption of conformity with minimum criteria set out in Annex VI.	Regulation 24(3)	Secretary of State
13.1	Removes the compulsory application of Articles 5, 7, 8 and 9 where apparatus is intended only for incorporation into a given fixed installation.	Regulation 34	Secretary of State
13.2	Allows Member States to request evidence of compliance of a fixed installation where there are indications of non-compliance, where appropriate to initiate an assessment, and to impose measures to bring the fixed installation into compliance.	Regulations 36, 39, 45 and 57	Secretary of State
13.3	Requires Member States to set out provisions for identifying the person or persons responsible for ensuring the compliance of a fixed installation.	Regulation 3(1)	Secretary of State
14	Repeals EMC Directive 89/336/EEC as from 20 July 2007.	Regulation 2(1)	Secretary of State
15	Requires Member States to allow a transitional period.	Regulations 6(2) and 17	Secretary of State
16.1	Requires Member States to transpose the Directive by 20 January 2007 and to apply the provisions of the Directive by 20 July 2007.	Regulation 1	Secretary of State
Annex I	Sets out the essential requirements of the Directive	Regulations 4, 5 and 35	Secretary of State
Annex II	Sets out the internal production control conformity assessment procedure referred to in Article 7.	Regulations 19, 22, 23 and 45	Secretary of State
Annex III	Sets out the procedure when a manufacturer chooses to involve a Notified Body referred to in Article 7.	Regulations 20, 27, 28, 30, 31 and 33	Secretary of State
Annex IV point 1	Sets out the requirements for the technical documentation.	Regulation 19(5) and Schedule 3	Secretary of State

Annex IV point 2	Sets out the requirements for the minimum content of an EC Declaration of Conformity.	Regulation 22	Secretary of State
Annex V	Sets out the requirements for the CE Marking.	Regulation 21 and Schedule 2	Secretary of State
Annex VI	Sets out the minimum criteria for notified bodies.	Regulation 24(7) and Schedule 5	Secretary of State