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**PILOT STUDY OF A COMBINED POSTAL, TELEPHONE AND  
STRUCTURED INTERVIEW METHODOLOGY FOR ASSESSING THE  
IMPACT ON BUSINESS OF EXISTING REGULATION**

THE CABINET OFFICE  
REGULATORY IMPACT UNIT

**FINAL REPORT**

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## EXECUTIVE SUMMARY

### Background and Approach

The primary aim of this study is to assess potential *methods* for evaluating the impact of regulation on business, based on the combined usage of a postal survey, telephone interviews and face-to-face interviews. A secondary ("if possible") aim, is the production of robust findings about the impact of regulation on businesses in the particular industry chosen for study: surface engineering.

Throughout the study, we have interpreted the 'impact of regulation' in a broad sense, and have, in section 2, assessed a range of potential impacts, including those associated with:

- Direct compliance costs (including equipment costs, professional fees etc.);
- Time costs (i.e. the value of the time expended by employees of businesses in compliance activities);
- Administrative fees;
- Learning and Training costs;
- Risk and uncertainty (in particular with respect to future regulatory developments and enforcement);
- Threshold incentive effects (i.e. the effects that boundaries/categories defined by administrative agencies can have on business incentives); and,
- Non-compliance (e.g. the effects that differences in compliance levels can have on competition).

With respect to time costs, we pay particular attention to senior management time, in large part because of the potential impact that regulatory compliance could have on *entrepreneurship*, for example, through 'crowding out' (given limited available time), distraction (given a wider set of activities to manage than would otherwise be the case), and/or the creation of diversionary incentives (e.g. incentives to divert time towards 'regulatory entrepreneurship').

In addition to desk research, the principal information gathering exercises undertaken as part of the study were as follows:

- *Initial Interviews*: face to face interviews with Brian Greenwood (DTI), three trade associations, and five firms.
- *Postal Questionnaire*: 500 questionnaires were posted and 105 responses received; an overall response rate of 21%.
- *Telephone Questionnaire*: 77 non-trade association businesses were contacted, 20 of which completed a telephone questionnaire: a positive response rate of 26%. In

addition, 12 follow-up calls were made to businesses that had responded to the postal questionnaire, 7 of which resulted in additional details/clarification of specific points.

- *Final interviews*: a focus group meeting was held with representatives from 5 firms; 1 return interview was held with a firm that we had visited as part of the initial interviews.

Detailed discussion of the issues that arose at each stage of the study, and of how they were resolved, is set out in section 3 of the Report.

### **Assessment of the methods employed**

Whilst no survey work is ever exact or fully comprehensive, we consider that the information gathered in this study is sufficient to provide an informed view, underpinned by substantial quantification, of regulatory impacts in surface engineering. Given this, and taking account of an earlier study by staff at Manchester Business School, it can be confidently concluded that a combined postal, telephone and interview approach is a *feasible* way of determining/estimating the impact of regulation on businesses.

The key questions, therefore, concern efficacy/effectiveness rather than feasibility. It is clear that the efficacy/effectiveness of alternative approaches will be heavily dependent on the purposes and objectives which the gathering and subsequent analysis of information might, in the future, be required to serve, and this will have significant implications for assessing the desirability of alternative types of follow-up work (see suggestions below). However, a number of more general points can be made with respect to the informativeness and cost of the different methods used. Whilst, each element of the approach used in the study -- postal, telephone, and interview -- yielded information, we would highlight the following points:

- The highest ratio of information to cost was provided by the face-to-face interviews: combined with desk research, our assessment is that, although few in number, the interviews gave us a very good sight of the impact of regulation in the sector – it was possible to determine, very quickly, which aspects of regulation were more burdensome and which were less burdensome (a mapping that can be expected to vary from industry to industry); In the event, we found that the information and evidence gathered in initial interview process was not, in any material way, contradicted by later information acquired or by evidence garnered from the postal survey and telephone interviews. The latter evidence was naturally much more detailed, and allowed us to address a wider range of issues, such as variations in regulatory impact according to the size of the business. In overall terms, however, the initial interviews, supported by desk research on the industry and on regulations applicable to it, provided a remarkably good guide to the central issues.

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- We ultimately achieved a satisfactory response rate to the postal questionnaire (21%), and found that the responses generated an informative pool of data which potentially could be analysed in considerably greater detail than has been feasible within the constraints of this study. However, we would urge considerable caution in seeking to generalise from these findings. A common response of businesses to this kind of postal questionnaires is that they are just another box-ticking exercise instituted by government, which will affect nothing. These attitudes point to significant potential difficulties in ‘rolling out’ a postal questionnaire, particularly if this is perceived by businesses to be a routinised, 'scanning' exercise. Relationship and credibility building, and active encouragement (including by trade associations) appear to have been important factors in achieving a satisfactory overall response rate in the study (in particular, significant efforts were made to try to secure ‘buy in’, and to credibly communicate that we would take careful note of responses in our assessments). We have doubts that anything like this response rate could be achieved in a much wider exercise, particularly in sectors where trade association coverage is not so comprehensive.
- We found the telephone questionnaire to be the most costly of the methods used for acquiring useful information. The telephone questionnaire process proved very time consuming with, in most cases, several calls being made to each business (including those that did not, in the event, complete the questionnaire). Interviewers recorded significant skepticism in relation to what appeared to be “off-the-cuff” responses to a number of specific questions, and that in several cases the respondent appeared to be answering from beyond their own area of competence. Overall, we found that the telephone questionnaires did not perform well as a means of acquiring systematic, reliable information about compliance cost levels. They did, however, appear to provide a reasonable basis for getting a view of the concerns and preoccupations of respondents.
- We found a significant bias in response levels related to firm size for both the postal and the telephone questionnaire. In particular, there appears to be a real difficulty in securing adequate numbers of responses from small businesses (using either a postal or a telephone questionnaire). It can be noted that investigations into the effects of regulation can raise very sensitive issues for businesses, and particularly smaller businesses, as they can easily be treated as investigations of compliance; since any well conducted survey will inevitably throw some light on compliance issue – even if that is not a central aim – such an interpretation is not irrational. This is likely to be a significant, limiting factor in any larger-scale ‘roll-out’ of a survey approach.

Based on our experience with this study, we would make the following suggestions with respect to potential further research:

- The projects should have clearly defined objectives. Research can then be tailored more specifically to the relevant objectives, to achieve better value information for a given cost.

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- It would be beneficial if the work could be linked to possible future actions that might, depending upon findings, be taken. If these could be signaled to businesses, more information is likely to be forthcoming.
- In a range of regulatory areas -- PAYE, VAT, employment, etc. -- regulatory impacts are likely to be broadly similar across sectors. It is not clear to us that repeatedly asking similar questions will add very much. Moreover, a number of costs can be estimated from market benchmarks (e.g. accountants fees) and simple characteristics of firms (e.g. number of employees) at significantly lower cost.
- In other areas of regulation, investigation might usefully be based upon the impact of particular policies (e.g. IPPC), and therefore work with multi-industry samples -- rather than be industry/sector based.
- Particular attention should be given to *variations* in the impact of regulation on different businesses. The average, overall burden of regulation can (as the results of the current study confirm) mask very considerable variations in effects, depending upon particular business circumstances, compliance options and strategies, etc. As well as raising issues of fairness, such variations can have very material effects on the ways in which businesses compete and markets perform.
- Consideration be given to an approach that focuses first upon a combination of desk-research and face-to-face interviews, and then uses a relatively limited and focused postal questionnaire to test general propositions that arise from the case study material (e.g. do you agree that ....). Depending upon objectives, this might be an efficient and effective approach in many circumstances.

### **Results for Surface Engineering**

The principal objective of the study was to assess a methodology, but the work has, in the event, produced a database for surface engineering that we believe contains a considerable amount of valuable information on regulatory impacts. Section 4 of the Report summarises some of the initial findings and, whilst it has not been possible to explore the possible implications of the data in any great detail, a number of notable results can be highlighted:

- Headline numbers for the compliance costs of regulation suggest 'burdens' equal to around 2.3% of turnover, equivalent to £2,224 p.a. per full time employee or nearly £43 per week per full time employee.
- The cost of time spent dealing with regulatory matters is a major contributor to the overall cost of regulation, accounting for well over 50% of the total.

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- Respondents appeared more negative about regulation than they did in the Manchester study. Whilst the objectives of regulation were accepted as legitimate, the perception is that policy implementation and enforcement is, given the objectives, disproportionate.
- There was also great concern in the sector about variations in the impact among businesses. We consider this a rational position, since such variations cause differentials in the competitive positions of individual businesses (in ways that a common, average burden does not).
- Regulatory uncertainty was a very major issue. Such uncertainty stemmed from the sheer volume and complexity of regulation, its rate of change, and, perhaps most important of all, in variations in enforcement.
- Similarly, compliance was a big issue for businesses in the industry. We found a perception that competitive advantage could be gained from non-compliance, which is generally much easier at small scale.
- For compliant businesses, there is strong evidence of economies of scale in regulatory costs. Thus, the ratio of compliance costs to turnover is substantially lower for larger firms than for smaller firms. Relative to their levels of activity, therefore, small firms face a particularly high burden of regulation.
- On the other hand, there is evidence suggesting that regulatory uncertainty might have its greatest impact on medium-sized businesses. If corroborated, the impact of regulation on investment and business expansion among this key group of firms might be particularly problematic.
- The evidence is consistent with the proposition that the regulatory environment encourages passive, 'lie low' strategies on the part of small businesses and, by the same token, discourages expansion, growth and innovation. Put another way, regulation may have the unintended, adverse consequence of creating barriers to expansion at small scale.

## SECTION 1 INTRODUCTION

The objectives of the study were those set out in the Cabinet Office's invitation to tender (ITT):

*Through a pilot in a single UK industry, to assess the feasibility of a combined postal, telephone and structured face-to-face interview approach to determine the impact of existing regulation on businesses. To refine this methodology or identify alternative approaches. If possible, to produce statistically robust findings which will allow conclusions to be drawn about the impact of regulations and about particular regulations suitable for reform.*

The objectives therefore comprised two, inter-related elements:

- A primary aim, concerned with the assessment of potential *methods* of assessing the impact of regulation on business, and focused initially on one particular approach that is based on a combination of a postal survey, telephone interviews and face-to-face interviews.
- A secondary ("if possible") aim, concerned with the production of robust findings about the impact of regulation on businesses in the industry chosen for study.

These two elements are inter-related in that the ability or inability to produce robust and interesting findings in relation to the sector studied clearly has implications for the likely usefulness of the methods adopted when those methods are applied to other industries and sectors. The linkage here is not rigid: methods that are sound may nevertheless fail to produce robust findings in a pilot study as a result of factors such as idiosyncratic characteristics of the industry chosen and insufficiency of time and resources. It remains the case, however, that confidence in particular methodological approaches will be enhanced or eroded by the nature of the 'substantive' findings in any pilot study.

Partly for this reason, we have devoted considerable attention to the secondary aim of the study, as well as to the primary aim. The other considerations that influenced this decision were judgments that: (a) the industry chosen for study faces many regulations that are common across large parts of UK industry, and (b) the time and resources available were sufficient to yield robust, substantive findings if the methods under assessment were realistically capable of leading to such results.

Given these initial points, this Report is organised as follows:

- Section 2 sets out the background to, and scope of, the issues to be addressed. As well as various issues raised in the ITT, this includes a discussion of different types of impact that regulation may, in general, have on affected businesses.
- Section 3 is an account of how we approached the project work, the rationales for the various choices made, the adaptations that were made along the way, and some 'high-level' findings that might be inferred from general characteristics of responses to the investigation (e.g. the response rate for the postal questionnaire).
- Section 4 presents summary results drawn from the postal questionnaires and the telephone interviews, together with points that emerged from the face-to-face interviews. Amongst other things, these include indicators of: the types and levels of costs that businesses incur; the impact of regulation on activities, processes, working practices, etc.; the significance of indirect regulatory impacts; and possible links between these effects and characteristics of businesses such as size and principal activities.
- Section 5 contains our general assessment and conclusions in relation to the various issues raised in the ITT. Specifically, we here explicitly address questions concerning (a) the feasibility and likely value of the methods explored and used, if they were to be applied more widely across UK industries, and (b) policy-relevant inferences that can be drawn from the results of the industry study conducted in this pilot exercise.

In addition, the following information is provided in annexes to the Report:

- An economic outline of the structure of the surface engineering industry (Annex 1)
- More detailed quantitative results from the postal questionnaire (Annex 2)
- The postal questionnaire itself (Annex 3) and the telephone interview questions (Annex 4)
- Summaries of the face-to-face interviews (Annex 5)
- A CD containing spreadsheets of the coded (anonymous) responses to the postal questionnaire and telephone interviews (Annex 6).

## SECTION 2

### BACKGROUND AND SCOPE OF THE STUDY

#### 2.1 Assessing the ‘burden of regulation’

The work undertaken in this study is clearly and directly related to concerns that have been raised by business organisations in recent years about the overall, and growing, ‘burden of regulation’ on business in the UK. Some business organisations have also attempted to estimate the regulatory burden in quantitative terms, either in terms of billions of pounds or relative to some measure of business activity such as turnover or value added.

In the questionnaire and in the interviews, we have sought wherever possible to obtain quantitative estimates or indicators of the impact of regulation. However, the simple production of an overall numerical result – for example, a conclusion that the cost of regulation to a typical firm in the relevant industry lies between X% and Y% of turnover – is not necessarily the matter of central interest. Just as the statement that the (large companies) rate of corporation tax in the UK is 30% gives no immediate guide as to the desirability or otherwise of maintaining the status quo in company taxation, so a simple number summarising the increase in costs faced by companies as a result of the cumulative impact of regulation, while clearly of interest, leaves much else to be considered.

Throughout the study, then, the ‘impact’ of regulation on businesses has been interpreted in a wide sense. For example, consistent with the specification for the study, we have considered matters such as: the types and levels of costs that firms incur; how businesses adapt processes, working practices, products, etc. to comply with regulations; the indirect impacts of regulation; whether it is possible to identify regulations or parts of regulations that appear ripe for reform; and so on. Some of the underlying distinctions and trade-offs that are associated with this wide interpretation are discussed further in section 2.4 below.

#### 2.2 The Manchester study

Our work follows on from a previous ‘pilot’ project for the Cabinet Office by staff at the Manchester Business Study, upon which we have drawn at a number of points.

The MBS pilot focused upon a total of fifteen businesses, divided equally between three industries: electronics, aluminum recycling and restaurants. The method adopted was the structured interview approach, based upon a questionnaire comprising both categorical and open ended questions. The focus was on compliance costs, broken down into internal and external categories. Internal costs were defined as the value of time absorbed in compliance activities, while external costs largely consisted in fees

paid to advisers in relation to regulatory compliance (although there was a very limited number of citations of ‘other’ costs.

The scope of the RPI study has been somewhat wider than this, on three main counts:

1. It has covered a much larger number of businesses.
2. Postal questionnaires and telephone interview methods have been used, as well as face-to-face interviews.
3. The ‘impacts’ of regulation have been considered at a significantly greater level of disaggregation (see section 2.1).

We have also sought to build upon the internal/external cost approach by seeking to make some degree distinction in the (internal) time devoted to regulation between senior management inputs and the time devoted to more routine tasks by employees.

Differences between our own findings and those of the MBS, and some possible explanations of those differences, will be discussed in detail later in this Report.

### 2.3 The sector chosen

The Cabinet Office project specification required us to identify, with the agreement of the Project Steering Group, a sub-sector of ‘high value-added’ manufacturing, such as surface engineering or electronics. In the event, the surface engineering industry quickly emerged as an agreed choice.

From the research perspective, surface engineering had a number of positive features. In particular:

- Trade association membership was relatively high in major parts of the industry, and membership lists (a) were of around the right length for the size of sample contemplated for the postal questionnaires (400+) and (b) included substantial numbers of smaller businesses, ensuring that these could be encompassed by the study.
- The industry comprises a range of different activities and businesses of different sizes, implying that there was a good prospect of being able to address that part of the project specification that asked whether it was possible that generalisations could be drawn by type of firm, or by other characteristics or classifications.

On the other hand, there were certain characteristics of the industry that were potentially problematic. Chief amongst these was the impending introduction of the Integrated Pollution Prevention and Control (IPPC) regulations. Thus, we were, in effect, investigating an industry that was going through a very substantial regulatory transition, and we were conscious throughout of the requirement that this transition, which was

very much to the forefront of the minds of just about everyone connected with the industry, not be allowed to dominate the research just because it was the ‘issue of the moment’. The extent of our success in this task can only be judged from the results themselves, and will be discussed later in the Report. In broad terms, however, we believe that we have been able to maintain an appropriate balance, and that the results are not inappropriately skewed as a result of the pending introduction of IPPC.

It is also the case that surface engineering is likely subject to a lesser degree of direct international competition than a number of other parts of engineering. This is because in many cases the value added in applying surface treatments to (typically, but not exclusively metal) components is not sufficient to warrant long distance transport of those components to a dedicated surface treatment facility. Companies in the industry therefore rely heavily for business on UK, and often relatively local, customers. The implication is that much of the impact of international competition is indirect, in the sense that, in the first instance, it is frequently felt most immediately by customers of the surface engineering industry, and then transmitted to the industry through the purchasing behaviour of those customers.

One potential concern here is that the industry may respond to regulation in ways that differ from other parts of engineering that are exposed more directly to international competition. In the event, the results indicate that there are a number of businesses that do export a significant fraction of their output, and hence these observations provide a means of checking whether or not this sub-group did, in fact, respond differently to existing regulations.

#### **2.4 The different potential impacts of regulation on businesses**

As stated above, we have interpreted the term ‘impact of regulation’ to have a relatively broad meaning. This sub-section therefore sets out the range of potential impacts that were considered prior to the development of the postal questionnaire, this range was influential in determining the general shape of the questionnaire.

It is intended neither to be a fully comprehensive list of possible impacts nor an analysis of how the various factors combine to provide a specific ‘regulatory environment’. Rather, the discussion provides a guide to the thinking behind the structure of the survey and telephone interview work, with the aim of facilitating the assessment of the potential for the survey/interview approach (the primary objective of the study).

We start by commenting upon, and developing, a number of the factors considered in the Manchester study, before moving on to consideration of less direct costs of regulation, including those associated with impacts on business operations and strategies.

(a) *Transfer payments*

For the purposes of the project, we have not devoted attention to those cash outflows of business that represent transfer payments. Much the most important of these are tax payments, or at least the major part of tax payments -- since there are administrative or 'transactions' costs to be incurred in raising tax revenues (see below).

Although paying taxes obviously imposes a financial burden on businesses, this is an area generally treated separately under the heading of the burden or impact of taxation, rather than of regulation. In any event, the main parameters of the tax system -- e.g. Employer's National Insurance, VAT and corporation tax rates, local tax rates, etc. -- are either well known or readily available from public sources, so detailed research is not required in order to obtain reasonable estimates of the levels of taxation to which businesses are subject.

Minimum wage legislation is a more ambiguous issue than taxation. To the extent that it pushes wage rates above competitive levels, it may involve some element of transfer payment to employees, in which case it could be regarded as economically equivalent to a NI surcharge that was subsequently distributed back to employees. On the other hand, minimum wages are not legally equivalent to taxation.

In order not to divert significant effort to the making of fine distinctions, we have included potential minimum wage effects within the scope of the study; and, as will be seen later, the relevant issues do not appear to be significant in the surface engineering sector.

(b) *Direct compliance costs, including professional fees*

The costs of complying with the UK taxation arrangements -- as opposed to the tax payments themselves -- are very much within the scope of the study, because tax systems can be more or less complex, and give rise to higher or lower burdens on businesses. Thus businesses must administer PAYE and VAT systems, or pay professional fees to external accountants for the required services.

Consideration of tax compliance costs immediately raises *counterfactual issues*. That is, if these taxes did not exist, precisely what reduction in 'accounting costs' would be achievable? Not all such costs would be eliminated, if only because of statutory reporting requirements for companies, and hence total 'accounting costs' would be an overestimate of the impact of regulation. In our judgment, for firms of the size and type typical of surface engineering, the extra resources absorbed in dealing with PAYE and VAT can be expected to be substantial in relation to the total, whereas it can be

expected that the extra costs in making corporation tax computations, which is an annual exercise typically handled in conjunction with the production of annual accounts, is not.<sup>1</sup>

In the survey and interviews, therefore, we focused attention on PAYE and VAT. Counterfactual problems mean that the resulting estimates of costs arising from regulation might be a little on the high side. On the other hand, by refraining from trying to estimate the costs of complying with corporation tax, a counteracting bias is introduced. Whilst precision is impossible in this area, it is our view that the estimates derived on this basis are not likely to be subject to major bias resulting from problems of identifying exact counterfactuals.

Direct compliance costs also arise in relation to other areas of regulation, such as employment, health and safety, and environment. In these areas, the counterfactual issue has been addressed indirectly, by seeking to elicit information as to what extra costs have been incurred as a result of the regulations themselves. That is, what the firms would have done otherwise has not been explicitly explored (which would have been a very major exercise), but is treated as the 'understood given' against which the relevant question is posed. Whilst this raises many potential questions and issues of detail, our *ex post* assessment, based on the evidence gathered, is that this was, and is, a reasonable approach to take.

In areas such as health and safety (including fire) and environmental controls, compliance may affect the short-term variable costs, the capital costs, or other overhead costs of businesses. Examples of the first effect include lower productivity as a result of additional procedures in the production process or recurring training requirements, of the second effect include the installation of health and safety equipment or of 'cleaner' technologies, and of the third effect include professional fees to external advisers and consultants. These different impacts need to be distinguished since they tend to affect business behaviour in different ways. Thus, capital expenditures required for compliance may, if large, give rise to cash flow problems and may trigger strategic re-evaluations, such as might lead, for example, to withdrawal from some lines of business or even closure.

(c) *Time costs*

The Manchester study rightly placed considerable emphasis on the estimation of 'time costs' of compliance, i.e. the value of the time expended by employees of businesses in the various compliance activities. In estimating time costs, the researchers asked for two types of information: (a) days absorbed in compliance and (b) the relevant value of labour time.

Examining the results, it can be seen that there was a wide variation in the 'daily rate' cited as appropriate by different companies. This raises concerns that the figures cited

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<sup>1</sup> It is to be stressed that this is not a general judgment. In other sectors, for example, large multinational companies may face exceedingly complex corporation tax computations.

may be unreliable. One source of difficulty is that the 'daily rate' is not necessarily precisely defined. For example, does it or does it not include an element of overhead allocation (office space, office supplies, secretarial and clerical support, etc.)? We suspect that the variation in the numbers obtained in the Manchester Study reflect, to a significant degree, differences in the 'understood givens' on the part of different companies.

One way of dealing with this problem is to be more precise about what it is that the 'daily rate' is intended to include. However, it is difficult to set down (e.g. on a paper questionnaire) the relevant accounting assumptions to be used, and it may be difficult for firms to give precise estimates based on the specified assumptions if they do not accord with methods routinely used in the business. Our experience with this type of allocation problem in other contexts (e.g. assessing 'activity' costs -- and regulatory compliance can be regarded as an activity -- in competition law cases) indicates that it can become exceedingly complex, which would be a major limiting factor in large scale survey work.

Our preferred approach, therefore, is to make a basic distinction between senior management time and other employee time, and then, rather than ask businesses about daily rates, to apply benchmark daily rates, which are the same for all companies. These benchmarked rates can be obtained from labour market information, for example concerning typical employment costs per employee, differentials between managerial salaries and administrative/clerical rates, accountants' daily rates, and so on.

A specific focus on senior management time is also warranted because a simple costing of the time absorbed, even if based on market rates, would likely fail to address one of the major issues surrounding the impact of regulation, particularly in relation to smaller enterprises. Such time can fairly be described as a quasi-fixed factor of production. That is, whilst the quantity available might not be rigidly set in stone, it is difficult (costly) to increase. Consider, for example, a small company with one senior manager (e.g. the owner) and ten employees. A 20% increase in production requirements might be met by hiring two extra workers; but how is a 20% increase in demand for executive time, required for regulatory compliance, to be met? Even if a retired manager could be induced to work one day per week, there would, in effect, be a major change in the management *structure* of the firm; and the new manager's time is unlikely anyway to be a good substitute for the incumbent's time, for want of accumulated experience in the idiosyncrasies of the particular business (much business 'knowledge' is idiosyncratic and specific, rather than general and universal).

More likely than the hiring of part-time senior assistance would be a diversion of managerial time from other activities. Since the marginal cost of diverted time can be expected to be increasing in the amount of time diverted, the 'market' rate for the job as a whole will, therefore, tend to understate the value of diverted time, possibly to a substantial degree if the diversion itself is substantial. Arguably, therefore, the value attached to senior management time devoted to regulatory compliance should be above the market/going rate.

Whilst a simple, if somewhat speculative, correction to the benchmarked daily rate can address the problem identified, there is a further, more fundamental point, again particularly relevant to small businesses, that is more difficult still to quantify. This concerns the 'entrepreneurial input'.

Entrepreneurship is about more than labour time, although the latter is certainly one relevant component. Precise definitions are elusive, but the concept carries with it notions of *attentiveness*, ability to spot *opportunities*, and *responsiveness* to perceived opportunities in the form capacity to deploy resources to take advantage of opportunities ("*innovation*").

Entrepreneurial inputs into the supply of goods and services can be affected in at least three ways by regulatory compliance activities, which collectively can potentially lead to a shift in business cultures:

1. The simple *crowding out* of (fixed) time available.
2. *Distraction*, by which we mean reductions in attentiveness to business opportunities as a result of a more diversified set of managerial activities.<sup>2</sup> This type of effect could explain comments made in the final interviews to the effect that the time burden of regulation seemed, on reflection, to understate the impositions that businesses felt were placed on them.
3. *Diversionsary incentive effects*, which lead to reallocations of time toward 'regulatory entrepreneurship', by which we mean attentiveness to opportunities to reduce regulatory impacts (rather than to opportunities to increase revenues or reduce production costs), and which is not entirely dissimilar from creative avoidance and evasion of taxes.

An advantage of seeking to quantify senior management time absorbed in compliance is that it is possible to construct indices that may be of use in the assessment of effects of regulation on entrepreneurship, even in circumstances where the value of entrepreneurship is itself too nebulous to quantify in an very reliable way.

(d) *Administrative fees*

Over time, successive governments have made increasing use of administrative fees as a source of funding for regulatory agencies. For example, sector specific regulatory agencies in the network industries, such as Ofgem in energy, are funded by licence fees

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<sup>2</sup> We owe the following simple illustration of 'distraction' effects to Dr Mark Williams of NERA. Give each member of a decision-making group a small number of trivial, non-time-intensive tasks to perform during the course of a meeting (adjusting a curtain, moving a chair in a corner of the room, etc.). The distracting effects of the activities can substantially alter the course of the meeting, notwithstanding the limited amount of time devoted to them in aggregate.

paid by companies operating in the relevant sector. The fees substitute for tax funding of the agencies.

In relation to surface engineering, the principal areas in which such fees are to be found are health and safety regulation and environmental regulation. Companies are required, for example, to pay fees for site visits by the relevant inspectors; and, under the new IPPC arrangements, businesses that meet specified criteria will be required to pay fees for the approved 'registration' that is required in order for them to engage certain production activities.

Thus, putting the these impacts together, in the case of environmental regulation, and depending upon circumstances, a surface engineering business may face compliance costs in relation to: professional fees, time costs, administrative charges, and capital expenditure on new equipment.

(e) *Learning and training*

As the Manchester study indicated, the costs of complying with new regulations may differ significantly from that of complying with established regulations, even if factors such as the level of complexity remain broadly similar. Businesses must acquire new knowledge in relation to new regulations, which may well lead to higher professional fees, higher time costs, and increased requirements for training.

(f) *Risk and uncertainty*

In practice, the overall scope of regulation bearing on companies in most sectors of the economy has been increasing over time, accompanied by a trend to ever greater complexity. Among other things, increased complexity can lead to greater *risks* of inadvertent non-compliance and to the liabilities that might arise from such non-compliance. The frequency with which regulation changes can also create *uncertainty* about the future course of policy -- businesses may not have sight of future regulatory developments which, if they were known or at least predictable today, might have significant bearing on today's decisions -- and, equally if not more importantly, about how stringently policy will be enforced. Consideration of the implications of such regulatory uncertainty takes us in to territory well beyond simple estimation of compliance costs, even when such costs are broadly defined. Questions are raised about the impact of uncertainty on investment, business expansion more generally, innovation and productivity growth.

Risk issues are perhaps best illustrated by the effects of employment regulation. The increased scope and complexity of regulation might, in addition to imposing direct compliance costs of types that fall under the previous headings of this sub-section, increase the risks of non-compliance (e.g. because of procedural defects in a dismissal, there might be exposure to *ex post* costs and liabilities). The same factors may also increase both the opportunities and incentives for *ex post* actions to be brought.

In principle, businesses can protect against risks by means of insurance, albeit at some cost. Insurance markets are, however, subject to a number of well known weaknesses (moral hazard, adverse selection), particularly when relevant contingencies are difficult to define and monitor (incomplete contracts). Poorly specified regulation therefore has, via the creation of both insurable and uninsurable risks, the potential to create escalating costs.

Uncertainty differs from risk in that it refers to situations in which the perceived likelihoods of future outcomes can be expected to be different tomorrow than they are today (compare with repeated throws of dice, where the likelihoods remain constant over time). Changing regulation inevitably creates some uncertainty, and the wider the scope and greater the complexity of the regulation, the greater the effect is likely to be. The central effect of uncertainty to create an option value in 'waiting' in relation to decisions that involve irreversible (sunk) commitments. Investments of every conceivable kind (in equipment, in marketing, in learning and training, in innovation, etc.) are potentially affected, with obvious implications for business expansion and productivity growth, which is typically founded on investment of one kind or another).

The underlying issue is simple to illustrate. A business may, at a particular time, have a number of investment options: which technology to adopt, what capacity to install, and so on. If the relative advantages of the alternatives are affected by regulation, and regulation is expected to change in ways that are not fully predictable (some matters will be 'determined' later), there is value in waiting (until it is more clear precisely how matters will be determined).

This is not to say that the decision to invest will, in the event, be delayed: there may be other influences that are more pressing. Rather, the point is that, in any given set of circumstances, uncertainty will increase the payoffs from delay, and hence can be expected, in the aggregate, to reduce the propensity to invest.

Although difficult to quantify, the effects of regulatory uncertainty are clearly of the most fundamental importance for regulatory studies. Moreover, whereas there has been a general improvement in the reduction of policy uncertainty at the macroeconomic level (also known as greater 'stability'), it is difficult to perceive any similar trend at the microeconomic levels with which this study is concerned.

(g) *Threshold incentive effects*

A conceptually distinct, but empirically related, set of issues concerns what may be called threshold incentive effects and/or boundary incentive discontinuities. These arise as a result of the tendency of administrative agencies to draw boundaries and define categories for the purpose of making differentiations in the application of regulation. Thus, businesses that are below a certain size or that satisfy a set of other, defined criteria may be exempt from some regulations, or subject to a different enforcement regime, or face different administrative fees or taxes, or otherwise face very different incentives.

One effect of these regulatory delineations can be highly perverse incentives in the neighbourhood of the relevant boundaries. For example, if the costs of regulation are subject to a step increase at a certain level of business activity, the incremental costs of expansion become very large around the threshold, and, at least over some incremental range, expansion will be rendered unprofitable. Similarly, the workings of the tax system itself, particularly in relation to qualification for tax credits, may mean that, in certain periods, post-tax income of employees may decline as hours worked increase. (This latter illustration can be interpreted as a regulatory effect, because it results from the *structure* and *administration* of taxation, rather than from the general level of tax, and potentially imposes additional costs on businesses -- for example, flexibility in working hours may potentially be lost.)

A number of distinct 'costs' associated with thresholds can be identified:

- As a matter of general principle, the result is an incentive structure that, around threshold levels, can deviate very substantially from cost reflectivity. The resulting resource allocation inefficiencies occur at both the firm level (e.g. costs are raised as a result of lower flexibility) and the market (e.g. companies are deterred from expanding).
- The perverse incentives around thresholds/boundaries give rise to potential costs arising from evasion, avoidance and enforcement efforts.
- The locations of the thresholds/boundaries, being matters for regulatory determination, give rise to a very specific form of regulatory uncertainty. Even when the general direction of policy is clear, the determination of precise thresholds may be left until relatively late in the process, and the effects of the resulting uncertainty (which increases the option value of 'waiting') will be felt by all those businesses who perceive that the decisions might possibly affect the category into which they will fall, and hence might possibly affect their costs and incentives.

Put in summary form, it might be said that threshold effects can give rise to (a) poor, and possibly perverse, localised incentives and (b) forms of regulatory uncertainty that are closely linked to enforcement.

(h) *Non compliance*

Issues of non-compliance raise difficult questions for any study of the costs of regulation. In the limit, a business that is non-compliant (across the board) will have no direct compliance costs. On the other hand, non-compliance may require adjustments in business plans so as to increase the probability of 'staying below the radar', and such adjustments may have indirect costs for the business.

For self-evident reasons, it is also extremely difficult to elicit good information about the possible extent of non-compliance with regulations. The problem cannot reasonably be ignored, however, and it is possible to derive at least some signals about its possible

scope, including by the analysis of survey response rates and by information provided by businesses that may have been adversely affected by the non-compliance of others.

For our purposes, perhaps the most important aspect of non-compliance is that, the greater its scope, the higher are likely to be the costs of regulation borne by those businesses that are compliant. If regulatory costs can be avoided, competitive advantage can be gained, which implies that competitive disadvantage is conferred on compliant businesses. This kind of point is often made by UK businesses when they complain of overseas competition from less regulated enterprises, although it is often conflated with other factors affecting comparative advantage (e.g. input prices, including labour).

We are not concerned in this study with macro-economic effects, and simply note in passing that the macro issues tend to become more significant in a common currency area, when there is no possibility of countering systematic geographic variations in the burden of regulation via exchange rate movements. There remain, however, important micro-level effects of non-compliance to consider. The most important of these is probably the development of barriers to expansion: companies may seek to 'stay below the radar', avoiding investment, growth, higher productivity and higher wages, and anything else that might bring their activities to the attention of regulators.

## SECTION 3 METHODOLOGY

### 3.1 Introduction

In this section we describe the approaches and methods adopted in the study, including the thinking and the choices made along the way. A number of the comments involve assessments relevant to the overall objectives of the project, but these are made on a non-systematic basis. Our overall assessment is set out in section 5.

#### (a) *Stages of work*

In the proposal to the Cabinet Office, the planned, information-gathering stages of the project were as follows:

1. Desk research on the surface engineering industry and initial (semi-structured) interviews, to build up pictures (case studies) of the regulatory issues faced by typical firms in the industry.
2. Informed by stage 1, the design and implementation of a postal questionnaire.
3. Similarly informed by stage 1, the design and implementation of structured telephone interviews.
4. A final set of face-to-face interviews, focused on problems of reconciling information obtained from the different sources, and on unresolved cost issues.

This sequence was followed in practice, although there were some adjustments to the plans at a more detailed level in response to information being received and for reasons that will be explained in what follows. In very broad terms, however, *relative to initial expectations* we found that:

- The initial interviews, to which considerable importance was attached *ex ante*, gave us even better initial insights than expected.
- The 'useful information content' per postal questionnaire response was higher than expected.
- The early response levels to the postal questionnaire were lower than expected. However, a satisfactory final response rate was achieved following a number of 'prodding' initiatives.
- The telephone interviews were more difficult/costly to arrange than expected.

- In consequence of the first two bullet points above, the final interviews were less critical than expected.

### 3.2 Initial Interviews

The initial round of face to face interviews were with:

- Brian Greenwood of the DTI, to take the benefit of his/DTI's considerable prior knowledge of the surface engineering industry.
- Three trade associations – the Thermal Spraying and Surface Engineering Association (TSSEA), the Galvanizer's Association (GA), and the Surface Engineering Association (SEA) - both to obtain information about the industry and its component segments, and to encourage buy-in and support from the associations prior to the postal questionnaire and telephone interviews.
- Five firms in the industry, chosen largely on the basis of recommendations from the DTI and the trade associations. A reasonable coverage was obtained by including a thermal sprayer, an electroplater, an anodiser and powder coater, an electroplater and sprayer, and an equipment supplier.

This highly non-random approach allowed us to allocate limited, available time to interviews with people who were knowledgeable, articulate and open in relation to the information provided. We found that the interviews provided a very effective means of acquiring information quickly and efficiently, and had no particular concerns about bias (which might arise, for example, because the companies interviewed were larger than average) since the postal questionnaire could be used to test out propositions across a much larger population of businesses.

In the event, we found that the information and evidence gathered in this first stage of the process was not, in any material way, contradicted by later information acquired or by evidence garnered from the postal survey and telephone interviews. The latter evidence was naturally much more detailed, and allowed us to address a wider range of issues, such as variations in regulatory impact according to the size of the business. In overall terms, however, the initial interviews, supported by desk research on the industry and on regulations applicable to it, provided a remarkably good guide to the central issues.

Summary points from the notes of the initial interviews are provided at Annex 5. Specific information/findings that, because they significantly influenced the conduct of the rest of the research, are of particular note here included:

- A very detailed breakdown of regulatory compliance costs was provided by one of the first companies visited. This was of particular assistance in helping to frame

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questions concerned with time costs, equipment costs, administrative charges and fees, etc.

- There were early and unprompted references to the difficulties caused by regulatory uncertainty. Among other things, it appeared that, even for companies that positively sought to comply with regulatory requirements, there was considerable uncertainty as to what conduct would, in fact, ensure compliance, both now and in the near future.
- Considerable emphasis was placed on the competitive problems caused for compliant companies by variations in compliance and enforcement. In part, the concerns were the expected ones: 'things are done differently in France, the Czech Republic, India, China, etc. and this caused loss of business to the UK'. More interesting for the current study were references to loss of business to UK competitors who allegedly took rather less notice of the regulatory framework than companies seeking to be compliant.
- Environmental regulation in general, and the impending introduction of the IPPC regulations in particular, was a major preoccupation throughout the industry. On one side of the equation, this alerted us again to the danger that attitudes to IPPC might come to unduly influence results, and hence of the need to design the questionnaire in a way that would prevent environmental issues spilling over into other areas. On the other side of the equation, more detailed analysis of the information acquired concerning IPPC indicated that a number of the central concerns of businesses were of a general nature, in the sense that they were by no means special characteristics of the IPPC process (although IPPC represented a particularly importance manifestation of those concerns). Specifically, the concerns were about high time costs, administrative fees, costs of learning, and regulatory uncertainty, particularly concerning the definition and effects of thresholds and the future enforcement of environmental policy. From the research perspective, then, the very fact that the IPPC process represented a major change to the industry helped throw light on a number of major issues that can be expected to be of general significance but which might have been less easily identifiable in other contexts.
- Most segments of the surface engineering are characterised by very volatile demand and short order-turnaround times. Production therefore has to respond very quickly/flexibly to orders. The impact of regulations that reduce flexibility, or raise its costs, is therefore likely to be greater in this industry than in many others. One issue that emerged at the outset, which we had not anticipated, was the potential difficulty of securing overtime working in some periods, as a result of the way in which qualifications for tax credits are determined, combined with the underlying high marginal rates of tax/withdrawal, can lead to incentives not to work extra hours.

- Low profit margins in the industry meant that little new entry could be expected, and little had appeared to have occurred over recent years. Potential issues concerning the impact of regulation on barriers to entry did not, therefore, appear to be significant in surface engineering.
- We found that trade associations could and did play a major role in mitigating regulatory compliance costs for their members. A good example was an arrangement for the provision of on-call legal advice on employment matters to SEA members. The advice was provided on a cost-per-minute basis, but the charges were paid by the SEA from membership subscriptions. In this way, the SEA could obtain competitive rates by exercising buying power, whilst simultaneously providing low-cost, mutual insurance to members (on numbers that we were shown by the SEA, the average 'cost' per member appeared to be no more than about £15 per annum). Although methods of mitigating compliance costs are not part of the current study, this and other types of 'club' arrangement are indicative that, like other costs, such costs are not totally beyond the control of businesses: market arrangements can emerge which can reduce compliance costs. These methods serve as a reminder that costs imposed by regulation can be affected by factors other than the nature of the regulatory arrangements themselves.

### 3.3 Supplementary Contact and Meetings with the Environment Agency

As highlighted above, it was clear from the initial interviews that the impending introduction of the IPPC regulations was a major preoccupation throughout the industry. Given this, we considered it particularly important that we had a clear understanding of the IPPC arrangements, and of some of the specific issues that were being raised by different firms. In order to gain such an understanding we:

- Undertook desk research on the IPPC regulations;
- Sought clarification from the Environment Agency on a small number of specific points;
- Met with a group of Environment Agency officials with responsibilities for the surface engineering sector;
- Attended two workshops organised by the Environment Agency to present information on IPPC to businesses in the surface engineering sector.

These activities proved useful in a number of ways. In addition to technical clarification, talking to Agency officials provided a degree of triangulation on a number of points -- i.e. gave us a different information source that could be used to confirm or to question information coming from businesses -- and also allowed us to form a reasonably clear view on the likely average cost levels of registration. Given that we

had been presented with very negative views of the Environment Agency in one or two of the initial interviews, such cross-checking of information was considered to be particularly important. It also facilitated the treatment of IPPC matters in a relatively specific and focused manner in the postal questionnaire.

### 3.4 The Postal Questionnaire

#### (a) Questionnaire design

The questionnaire design process was based, in the first instance, on (a) the 'desk analysis' of the different potential impacts of regulation on business, as summarised in section 2 above, and (b) the information acquired from the first round of face-to-face interviews.

Commencing with the desk analysis, for each potential category of regulatory impact we sought to identify key types of information that would assist subsequent evaluation. On the basis, an initial 'long list' of basic questions/question areas was developed.

In considering how best to develop this long list, specific and detailed attentions was paid to the set of trade-offs associated with the length and complexity of the final questionnaire. The following factors were particularly relevant in this development process:

- The length and complexity of a questionnaire could be expected significantly to affect the response rate. Other things equal, the longer and more complex the questionnaire, the lower would likely be the level of response. A more complex questionnaire might also give rise to a greater potential for materially different interpretations of questions by respondents.
- A relatively longer and more complex questionnaire could allow for a wider range of issues to be explored, and for more detailed aspects of specific issues to be examined.

Heavily influenced by the positive results from the early face-to-face interviews, we eventually came to the view that a fairly long, and, at least in part, relatively complex questionnaire was preferable. Specific factors of importance in reaching this decision were:

- The importance of addressing effects of regulation wider than 'routine' compliance costs. Apart from being an explicit part of the specification for the study, the initial interviews had indicated that wider effects on business behaviour, beyond basic equipment and time cost measures, could be of considerable importance.

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- The prior existence of the Manchester Study, which had already explored time cost and fee payment issues, albeit on the basis of a much smaller sample. Again the specification required us to build on and go beyond the Manchester Study, which did not address factors such as the potential impacts of regulation on business decisions and conduct, and differences in the value of time that might be spent on compliance activities.
- The potential sample frame size was larger than we had initially expected when first examining the surface engineering industry. Thus, even taking account of the potential impact that the length and complexity of the questionnaire could have on response rates (see below), we considered that a reasonable total number of responses could be achieved.
- Confidence in getting a higher than normal response rate: The Trade Associations had been informed of the study by the DTI before we made contact. Following our subsequent initial interviews, the TAs encouraged their members to help with the study in a number of ways (including through direct TA mailing, and verbal reminders at industry meetings). An adverse factor here was that the initial interviews had indicated that a significant number of industry participants could be expected to have strongly held negative views on the impact of regulation on their business and on the sector. However, we took the view that this could be (at least partly) counteracted in two ways. First, in the covering letter that accompanied the questionnaire, we emphasised the potential value to businesses of participating in this study, given that it was a clear opportunity for their views (or their silence) to be communicated to a part of government that has an interest in improving the efficiency of regulation. Second, we stressed that the opportunity had extra value because RIU/CO had requested the study of only one industry, surface engineering. By implication, this then was a 'special' study, and because it was of only one industry (and the sample was therefore limited), *individual* businesses would have a better than normal chance of getting their voices heard. We stress these points, and particularly the second, since we suspect that a similar line could not be taken with any credibility if the approach were rolled out across UK industry more generally.
- The study was a pilot. An important aim of the questionnaire was, therefore, to test the extent to which useful information could be generated in relation to a wide range of issues that had been identified as potentially relevant. We therefore wanted both to push parts of the questionnaire to perceived limits of complexity and, at the same time, to vary the content in a way that would make some parts much simpler to answer than others, subject, of course, to not creating excessive risks in terms of eventual sample size. It was explicitly anticipated, that this course of action would lead to the return, in some cases, of only partially completed questionnaires, and partial completion was encouraged when the alternative might have been no response.

Whilst we took the view that it was reasonable and desirable to have a relatively long and complex questionnaire, we remained conscious throughout of the importance of

limiting length and complexity where feasible (i.e. where it was unlikely to generate sufficient in the way of valuable information). In particular, it was clear that the questionnaire itself could be understood by recipients as an additional source of regulatory burdens for businesses, and that this perception could in turn be expected to have a negative impact on response rates.

Given these considerations, each question area was examined by asking: Could the information being sought be generated, or reasonably approximated, at lower cost by other means? At the level of each individual question, it was asked: what is the purpose of this question, and what are we seeking to learn?

These questions led to the view that a 'benchmarking' approach could usefully be taken in a number of areas. That is, rather than asking businesses, to provide an estimate of something, relevant estimates could be obtained from other sources.

The most important question to which this approach was applied concerned the valuation of time to be used when mapping the number of hours spent dealing with regulation into a monetary value. In the Manchester study, respondents had been asked to provide their own valuations for this time, and we observed that there was a significant spread in the valuations used. Whilst this might have reflected real differences in the value of time to different businesses, we suspected that it was more likely to have been the result of random (and unwanted) variances in the implicit accounting assumptions used to value time. Such variance could, however, be reduced, and a difficult and superfluous question deleted, by applying a common rate based upon estimates of the value of time drawn from market evidence.

The areas in which the benchmarking approach was judged appropriate were:

- PAYE, VAT, and other relatively 'routine' tasks.
- Some of the costs of dealing with employment regulation. For example, the helpline service organised and provided to its members by the SEA.
- The value of time of senior management and (separately) of other employees required to devote effort to regulatory compliance.

When assessing whether particular issues should be covered by the questionnaire, we also evaluated the relative materiality of different question areas, and the likely usefulness of the information that could be expected to be generated them. Since the study was focused on a particular industry, and therefore since not all areas of regulation would necessarily have a material impact on that industry, the option of not addressing certain areas of regulation was available (and we note that this option would likely not be available if a single questionnaire were to be rolled out across a range of industries).

This could shorten the questionnaire and/or leave more space for detailed probing of those regulatory impacts considered likely to be of greater importance in surface engineering.

Such pre-selection clearly needed both to be applied cautiously and to be subject to *ex post* validation, which was done at the final interview stage. For the exercise, we therefore relied heavily on information acquired from businesses in the initial face-to-face interviews. That is, we were careful not to substitute our own views on what was and was not likely to be important for the views of businesses in the industry concerned: the latter were taken to be decisive.

Proceeding in this way, the initial interviews led us to conclude that the following regulatory areas could be expected to be of limited importance in surface engineering:

- Minimum wage legislation.
- The Working Time Directive (given the opt-out options).
- The provision of stakeholder pensions.
- Product standards.
- HM customs regulations in relation to exports/imports (but not VAT).

Another highly significant factor when considering the design of the questionnaire was the prominence given in the interviews to environmental and health and safety regulation in general, and to the impending implementation of Integrated Pollution Prevention and Control (IPPC) regulations in particular.

We included a separate section in the questionnaire for both health & safety and environmental regulation in large part so as to seek to keep these issues relatively 'contained'. The aim was to communicate not only that regulatory impacts in these areas were seen as important but also (and crucially) that they raised distinct issues and respondents should conceptually separate them from other aspects of the broader regulatory environment.

The relevant two sections of the questionnaire also sought to focus attention primarily on actual costs incurred in 2003, rather than on expectations of impending regulation. We considered that this was particularly important in the context of IPPC, as the majority of relevant costs for all but a very small number of businesses would be incurred from around the middle of 2004 onwards<sup>3</sup>. As explained earlier, we judged that the initial interviews, together with discussions with the Environment Agency, had

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<sup>3</sup> Actual costs (eg time or equipment costs) that had been incurred in 2003 in preparation for IPPC were covered by the questionnaire.

given us reasonable benchmark estimates of the likely future registration costs of IPPC, should there be a requirement to explore how compliance costs will move in the future. We were unconvinced that seeking forecasts on *expectations* of costs over and above these levels would provide any valuable, additional input.

The basic approach adopted for refining the questionnaire involved a question by question ‘out loud’ read through of each candidate question (and reworked alternative) to test for:

- clarity and precision (e.g. to minimise potential scope for differing interpretations),
- brevity (simplification being sought wherever possible), and
- potential sensitivities (that could trigger unwanted and uninformative responses)

This task involved repeated assessments of ‘what is this question asking?’, and there were several iterations of the process over a number of days.

After much discussion, we decided on an ‘attitude question’ to allow respondents to indicate their relative assessment of different types of regulation, and, in particular, allow for views on ‘problem areas’ to be signalled. A key purpose of the question was to provide a safety valve for the expression of strongly held beliefs about a particular area of regulation, and thereby reduce the risk that other responses, and particularly those requiring quantitative estimates, might be used to signal those views.

Finally, in order to explore the effect of regulation on business decisions, we used a set of Yes/No questions to allow for a quick response by the respondent, with a space provided to allow further details to be provided at the discretion of the respondent. The aim here was to provide an opportunity for more business-specific feedback on these questions, whilst at the same time limiting the ‘minimum time to complete’ so as not to discourage responses altogether.

*(b) The sample*

Contact details for members of each of the trade associations (TAs) were available from the relevant TA, and all were sent the questionnaire. In total this amounted to 458 businesses. We also compiled a list of non-trade association businesses by means of a search on the website: [www.e4subcon.com](http://www.e4subcon.com). The website provides a list of services that includes a range of surface engineering activities (e.g. anodising, plating (electro), etc.). The resulting lists were then cross-checked with trade-association membership lists to identify non-trade association businesses. Forty two businesses were selected in this way, to make up a total sample size of 500, although we later identified that three of these had recently become trade association members (because they had only recently joined, they were not on our TA lists).

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(c) *Response Levels*

As shown in Table 3.1, by the last date set for inclusion of responses in the data analysis, 105 returned questionnaires were received from the 500 questionnaires sent out: an overall response rate of 21%. Subsequently, two further, completed questionnaires were received, raising the response rate to 21.4%, and although these were later included in the database, they do not figure in any of the analysis set out in this Report.

Of the 105 responses, four were immediately classified as unusable: two of these were returned by consulting firms that did not engage in surface engineering activities; and the other two businesses had simply returned the questionnaire uncompleted (in one case with comments on the cover stating that the study would be a waste of time). This left 101 responses that could be usefully analysed in more detail.

Table 3.2 provides a breakdown of the distribution of, and responses to, the questionnaire by trade association membership, with the three 'late-joiners' referred to above re-allocated from the secondary sample of 42 to the relevant association.

It can be noted that the response rate shown for galvanisers in Table 3.2 understates the 'effective' level of response from businesses engaged in galvanising, as questionnaires were sent to a number of different plants that were included separately on the Trade Association membership list provided to us, but that were in fact part of the same company. In particular, a number of questionnaires were sent to different plants that were part of the Wedge Group or of Joseph Ash Ltd. One returned questionnaire in these cases therefore covered a number of plants. As shown in Table 3.3 below, adjusting for this, results in a response rate from businesses within the Galvanizers' Association of 31%.

<b>Postal Questionnaire</b>		<b>Table 3.1</b>
<b>Overall response rate</b>		
	<b>Number</b>	
Number of questionnaires sent out	500	
Total number of responses	105	
<b>Response rate</b>	<b>21%</b>	

*Source: RPI Survey 2004*

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**Postal Questionnaire** **Table 3.2**  
**Response rate by trade association membership**

	Number sent out	Number of responses	Response rate
Surface Engineering Association (SEA)	364	86	24%
Galvanizers' Association (GA)	55	10	18%
Thermal Sprayers' Association (TSSEA)	42	5	12%
Non-Trade Association Businesses	39	3	8%
Unknown	0	1	
<b>TOTAL</b>	<b>500</b>	<b>105</b>	<b>21%</b>

Source: RPI Survey 2004

**Postal Questionnaire** **Table 3.3**  
**Response from Galvanizers' Association members adjusted for multi-plant businesses**

	Number
Number of separate businesses that were sent the questionnaire	32
Total number of responses	10
<b>Response rate</b>	<b>31%</b>

Source: RPI Survey 2004

It can also be noted that adjusting the overall response figures shown in Table 3.1 to account for this multi-plant effect would increase the measured response rate for the postal questionnaire by one percentage point (to 22%).

*(d) The timing of responses*

The majority of the 500 questionnaires were posted on Thursday 15<sup>th</sup> January 2004, with the remainder posted the following day. The early response levels were lower than we had anticipated – we had received 38 responses by the end of the following week (i.e. by Friday 23<sup>rd</sup> January). Given this, ten days after the initial mailings, we sent a ‘prodding’ letter to all of the companies that had been sent questionnaires, thanking those that had already responded and encouraging those that had not yet responded to do so at the earliest convenience. A copy of this letter was also sent to the trade associations.

We had a considerable number of responses following the ‘prodding’ letter, such that 81 responses had been received by the end of the third week after the questionnaires had been posted. The overall response level increased more slowly thereafter, with another

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three weeks passing before 100 had been received – this was six weeks after the initial posting. The timing of responses is summarised in Table 3.4 below.

<b>Postal Questionnaire</b>		<b>Table 3.4</b>
<b>The timing of questionnaire responses</b>		
	<b>Number</b>	<b>% of Total</b>
1 week after postage	38	36%
3 weeks after postage	81	41%
6 weeks after postage	102	20%
7 weeks after postage	105	3%

*Source: RPI Survey 2004*

A notable anomaly that we identified when monitoring responses was that more than two weeks after the questionnaires had been posted we had not received a single response from a galvanising business. We subsequently contacted the Galvanizers' Association (GA) to explore possible reasons for this. The GA noted surprise at this, and said that they could circulate another set of the questionnaires to their members. The GA did this and, as indicated in the tables, we subsequently received 10 responses from their membership.

*(e) Discussion*

A number of factors that were either raised explicitly by respondents or signaled by responses taken in conjunction with the desk research highlight some of the difficulties in achieving a satisfactory response rate for a postal questionnaire. In particular:

- The questionnaire itself may be understood as yet another regulatory intrusion which adds to the burden of regulation;
- Non-response may follow from a general strategy of only doing the minimum that is legally necessary or 'staying below the radar';
- There may be a general suspicion of anything to do with government; and
- There may be a lack of belief that returning a questionnaire can have any influence at all on regulatory decisions.

One respondent returned the questionnaire not completed with the following comment:

*“This is exactly the problem we have: over 100 questions digging out financial information with little hope of anything useful coming out of it”.*

Another completed the questionnaire, but attached a letter which included the following comment:

*“I do not hold out any hope whatsoever that your questionnaire will make any difference; I think it is just window dressing...”*

These attitudes point to significant potential difficulties in ‘rolling out’ a postal questionnaire, particularly if this is perceived by industry participants to be a routinised, ‘scanning’ exercise. General postal questionnaires typically have relatively modest response rates in any case -- the social survey methodology literature suggests an indicative rate of around 10% -- but asking detailed questions about regulatory compliance costs raises difficulties that are beyond the norm. The most obvious of these is that responses might be used to tighten enforcement in general and, notwithstanding assurances concerning confidentiality, enforcement in relation to particular businesses or groups of businesses in particular.

We ultimately achieved a satisfactory response rate, and found that the responses generated an informative pool of data which potentially could be analysed in considerably greater detail than has been feasible within the constraints of this study. However, this outcome was achieved as a result of significant efforts to try to secure ‘buy in’, to develop credibility on the basis that we would take careful note of responses in our assessments; and, most important of all, the considerable support received from the relevant trade associations (as indicated, for example, by the much lower response rate -- slightly less than 8% -- from non trade association members that is shown in Table 3.2).

The final, satisfactory, overall response rate was also heavily influenced by a number of ‘prodding’ activities that were undertaken. As indicated above, these included a second letter encouraging a response and a further mail out of questionnaires by the Galvanizers’ Association. In addition, it is notable that the SEA actively encouraged its members to participate in the study in range of ways, including verbal reminders at a number of industry workshops that were taking place in the period shortly after the questionnaires had been posted. Thus, relationship and credibility building, and active encouragement (including by trade associations) appear to have been important factors in achieving a satisfactory overall response rate.

Whilst the overall response rate was satisfactory, it is possible to discern a significant bias in response levels related to firm size. Table 3.5 below presents an indicative comparison between an estimate of the number of firms in the population and the number of respondents to our questionnaire in terms of different employee number ranges. The population size numbers are taken from a 1999 SEA statistical report, and importantly do not include galvanizers. The comparison shown in the Table 3.5 therefore has clear limitations. Nevertheless, the Table does suggest that around half of

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the businesses in the underlying population have between 1 and 10 employees, that well over half of all businesses have 20 or fewer employees, and hence that, in percentage terms, the number of responses that we have had from these small firms is significantly lower than for other size bands.

**Postal Questionnaire** **Table 3.5**  
**Respondent employee numbers compared to an indicative estimate of population**

Number of Employees	Estimate of population size	Respondents to RPI postal survey	Respondents as % of population
1 to 10	1,211	15	1%
11 to 20	476	20	4%
21 to 30	204	18	9%
31 to 50	219	25	11%
51 to 75	106	10	9%
76 to 100	29	6	21%
101 to 200	44	5	11%
200+	<u>12</u>	<u>2</u>	<u>17%</u>
ALL	2,301	101	4%

Source: RPI Survey 2004 & "Surface Engineering Industry: Statistical Report 1999", Surface Engineering Association

A number of factors might be expected to have influenced this outcome. The most important of these is that the bulk of the sample comprised members of trade associations, and that the average size of trade association members can be expected to be larger than for the underlying population of businesses as a whole. That this is not the whole story, however, is indicated by Table 3.2, which shows that, for businesses that could be identified as not being trade association members (and therefore likely to be of smaller than average size, the response rate was significantly lower than for other categories.

At least two reasons can be immediately identified for expecting lower response rates from small businesses:

- The cost of participating in this type of study, relative to value added, profits, etc., is higher than for larger companies.
- Compliance levels can be expected to be lower, providing businesses with added incentives to 'stay out of the way' of any activity that may be associated with a governmental interest in regulation.

It is to be stressed that no value judgment should be attached to this latter statement. As the results of this and other studies show, the burden of full compliance is, when measured relative to the level of economic activity, significantly higher for small firms than for larger firms. And, when something is more costly (here compliance), it is to be

expected that there will be greater substitution away from it, *all other things being equal*.

For current purposes, however, the important points to note are that, whatever the cause, there is a real difficulty in securing adequate numbers of responses from small businesses to postal questionnaires, and that this is likely to be a significant, limiting factor in any larger-scale roll-out of the survey approach.

### 3.5 The Telephone Interviews

The telephone interviews, which were only started once significant numbers of responses to the postal questionnaire had been received, were, in the event, used in two distinct ways:

- A number of non-trade association businesses (which had not been previously sent the postal questionnaire) were contacted. This provided us with a way of evaluating the telephone interview/questionnaire method when considered as an alternative, stand-alone approach, and it enabled a comparison to be made with the results of the postal questionnaire in general, and with the results of the 'secondary' postal sample of non-trade association members in particular.
- A number of firms that had responded to the postal questionnaire were contacted, in which cases the focus of the interview was on following up specific issues where clarification of, or further details on, the received responses appeared likely to be potentially valuable. This provided us with a way of evaluating the telephone interview/questionnaire method when considered as a supplement or complement to the postal questionnaire approach, which was potentially capable of improving information already gathered.

### 3.6 Telephone Interviews: Non-Trade Association Businesses

#### (a) Questionnaire Design

The questionnaire used for the telephone interviews for non-trade association businesses was a shortened and slightly modified version of the postal questionnaire. Maintaining a significant set of common questions was considered important to provide for comparability of results, but it was also thought important to shorten the questionnaire in order that it would only take about 5-10 minutes of a respondent's time if brief answers were given (clearly, a phone interview covering all the questions in the postal questionnaire would have taken a considerable time). As with the postal questionnaire, the questions did, however, provide the option for a respondent to make further comments on specific issues at his/her own discretion.

The principal difference between the two questionnaires (postal/telephone) was that the telephone questionnaire did not include questions on time spent on different activities related to dealing with regulation. We took the view that reliable answers on such matters required significant reflection on the part of respondents, and that including the relevant questions would have made the telephone questionnaire both considerably more complicated for respondents, with limited prospects for obtaining robust information.

We introduced one issue that had not been covered by the postal questionnaire, by asking whether or not businesses had been visited by Health and Safety Executive and/or Local Authority Environmental Health Department Inspectors in the past year. This was motivated by some ambiguity in the possible interpretation of responses to the postal questionnaire concerning fees paid for inspections. The question was then followed by another concerned with equipment costs incurred (a matter that was covered in the postal questionnaire) in order to try to gain information about the extent to which equipment costs were triggered by visits from inspectors (an issue that, in turn, is potentially linked to matters such as regulatory risk and uncertainty). Additionally, given that the telephone questionnaire was considerably shorter than the postal questionnaire, we included a final open question to allow any other issues to be raised by the respondent that he/she considered to be of particular importance. This provided a further check -- or means of triangulation -- on the comprehensiveness of the issues covered by the other parts of the study.

*(b) The Sample*

As for the postal questionnaire, a small number of businesses were identified from the website [www.e4subcon.com](http://www.e4subcon.com). The remaining businesses in the sample were identified by means of library searches of business directories. As with the web-based searches, business details provided for the main surface engineering processes were collected and cross-checked with existing lists in order to discover additional firms for inclusion.

*(c) Response Levels*

As shown in Table 3.4, twenty telephone questionnaires were completed for this part of the telephone questionnaire process. Given that 77 businesses were contacted, it can be noted that the positive response rate of 26% was substantially higher than the response rate of 8% achieved by the postal questionnaire for non-trade association firms.

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**Telephone Questionnaire** **Table 3.6**  
**Overall response rate**

	Number
Number of businesses contacted	77
Number of completed questionnaires	20
<b>Response rate</b>	<b>26%</b>

Source: RPI Survey 2004

We found that a feature of the telephone questionnaire process was that the ‘authority’ of the questioner appeared to have a significant impact on the positive response rate. Of the 77 businesses contacted, 56 of these were contacted by a Research Assistant who achieved a positive response rate of 20%, about the same as the postal questionnaire rate for trade association members and significantly higher than the postal questionnaire rate for non trade association members. The other 21 businesses were contacted by a senior member of the team who is both considerably older and a Professor (and this title was used when making the calls). The positive response rate achieved by this senior member of the team was 43%. Whilst this higher response rate relates to contact with only 21 businesses, it is none the less strongly suggestive that significantly higher response rates can be achieved by a caller with identifiable ‘authority’.

*(d) Discussion*

Whilst the above comments indicate that relatively high response rates were achieved for the telephone questionnaire when compared with the non-trade association response rate to the postal questionnaire, experience with telephone questionnaire process suggests that the potential value of the approach would be overstated if attention were devoted to this fact alone. First, whilst a response rate of 26% is shown in Table 3.5, it should be noted that many more than 77 calls were made in order to get 20 completed questionnaires. Multiple calls – up to about 6, but frequently about 3 - were required in most cases in order to make initial contact with the most appropriate individual and/or to find a time that was convenient for them. This was the case both for those businesses that ultimately provided us with an interview and for those that didn’t. The main exceptions to this requirement for multiple calls were: 5 businesses that were part of a group that had been sent the postal questionnaire; 3 businesses that outsourced all surface engineering activities; 1 business that had recently changed name, was now a TA member, and had received a postal questionnaire. In these cases and a small number of others, only one brief call was made.

Overall, the telephone questionnaire process proved very time consuming, with considerable waiting on the phone whilst attempts were made to locate an appropriate person or ascertain a better time for calling back. The booking of a specific time for

completing the questionnaire was effective in very few cases, with for example, the relevant person being off-site or otherwise unavailable at the pre-arranged time. As a result, the arrangement (and subsequent re-arrangement) of alternative times to try calling back gave rise to slow progress in many cases. Clearly, similar disruption must have been caused for the business being contacted.

Second, an even more substantive concern with the telephone questionnaire process relates to doubts both about the appropriateness of the person with whom contact is made, and about the reliability of some of the responses given. In part, potential difficulties with the appropriateness of the person stem from the fact that much depends on who happens to answer and who happens to be available when the call is made. Additionally, the interviewers sometimes gained a clear impression, that for a number of questions, the respondent was answering from beyond their own area of competence or knowledge. More generally, the interviewers recorded their significant scepticism in relation to what appeared to be “off-the-cuff” responses to a number of specific questions.

Overall, the telephone interviews appeared to provide a reasonable basis for getting a view of the concerns and preoccupations of respondents. Indeed, whilst a defined questionnaire format was used, the interviewers reported that a significant proportion of the respondents sought to provide more generalised comments on areas that they considered to be generating significant problems for the relevant business. In this respect, then, the telephone interview approach can be viewed as (at least potentially) providing a partial substitute for the initial face-to-face interviews.

It is notable that no new issues emerged from the telephone interviews; rather they tended to confirm the centrality of the issues raised in the face-to-face interviews. Clearly, of course, new, different issues could potentially have emerged from this process, and one role of telephone interviews in any future studies could be to test out the comprehensiveness of an identified set of issues. In the particular context of the current study, the value of such 'testing' was increased by the fact that all the initial business interviews were with firms that were trade association members, whilst one tranche of telephone interviews was targeted at non-trade association members.

Another potential contribution of telephone interviews focused on non-trade association members is that they might have helped provide for a better representation of very small firms. In the event, this turned out not to be the case: as indicated by Table 3.8, there is little substantive difference between the distributions of responses by size band for the postal and telephone samples. *Prima facie*, this is slightly surprising against an expectation that non trade association businesses are smaller on average. Our interpretation of the result is that it is likely due to sample bias: that is, even when the sample is constructed from web and directory searches, there is a bias toward identifying businesses that are larger than the average. Irrespective of the correctness or otherwise of that interpretation, however, the general implication, which is of considerable importance in relation to the objectives of this study, is that it can be extremely difficult to achieve adequate numbers of responses from very small

businesses, whether the approach be based upon postal questionnaires or telephone interviews.

**Postal & Telephone Questionnaires** **Table 3.7**  
**Respondent employee numbers comparing postal and telephone questionnaires**

<b>Number of Employees</b>	<b>Respondents to RPI postal survey</b>	<b>% of Total</b>	<b>Respondents to telephone survey</b>	<b>% of Total</b>
1 to 10	15	15%	3	15%
11 to 20	20	20%	6	30%
21 to 30	18	18%	1	5%
31 to 50	25	25%	5	25%
51 to 75	10	10%	0	0%
76 to 100	6	6%	1	5%
101 to 200	5	5%	3	15%
200+	2	2%	1	5%
ALL	101	100%	20	100%

*Source: RPI Survey 2004*

### 3.7 Follow-up telephone questions for respondents to the postal questionnaire

On examining the responses to the postal questionnaire, we identified a few specific areas where more detailed probing of the written responses appeared likely to be of further value. In particular, we developed follow-up questions relating to:

- Examples given by respondents of situations in which regulation had had impacts on particular decisions. The principal aims here were (a) to ensure that we had properly understood the comments made (which were typically very brief, not least because the questionnaire design intentionally did not invite discursive answers), and (b) to acquire additional information about the particular examples given in responses, so as better to appreciate the nature of the regulatory impacts.
- The influences that had triggered significant expenditures on equipment that had been identified in the responses in the areas of Health & Safety and of Environmental regulation. The principal objective in this case was to probe the extent to which factors such as inspector visits, plant obsolescence, the potential for cost savings, etc had influenced the level of equipment costs incurred.
- Potential regulatory issues associated with export activity. The initial interviews had indicated that this was not likely to be a major area for consideration in the surface engineering sector, and the 'other' categories in the postal questionnaire gave opportunities for businesses to raise customs issues in the event that they were considered significant (which, at least judging by the responses, they weren't). Nevertheless, since the level of export activity reported by at least some respondents

was higher than anticipated, it was judged appropriate to double-check that this area of regulatory activity could reasonably be set to one side for the purposes of the current study.

These were very limited objectives, precisely because the postal questionnaire had itself proved to be more informative than anticipated. Indeed, if the study had been concerned only with the impact of regulation in the surface engineering industry, the exercise would likely have been judged not to merit the extra costs. Since, however, the primary purpose is to assess the feasibility of research methods, we embarked upon a further, small scale telephone interview exercise.

The original intention was to conduct about 20 interviews but, in response to the information becoming available, we applied a 'stopping rule' at a total of 7 successes: the incremental information did not appear, at that point, to justify the further cost. The outcomes can be summarised as follows:

- It required contact with 12 businesses to yield 7 interviews, a response rate of 58%, much the highest of the various approaches. This is unsurprising in that the businesses approached had already indicated a willingness to participate by responding in detail to the postal questionnaire (the approaches were, for example, biased towards respondents who had given more detail than average on the impact of regulation on business decisions -- many respondents having given no specific details in response to the relevant questions in the postal questionnaire). That is, we were working with a pre-selected sample. In addition, it was possible, in making contact to communicate that the request was to talk about something specific and relevant to the particular business -- it was not a 'general' interview that was being sought -- and that the conversation could be brief.
- Whilst clarification of responses is feasible, it proved difficult to achieve much extra in the way of additional information about the impacts of regulations on business decisions. We suspect that this is in large part attributable to a requirement that there be some opportunity for reflection in order for the relevant type of question to be answered in a satisfactory way (business decisions and strategies are influenced by a range of factors, of which regulations are just one, so there is some disentangling to be done in deciding what precisely has had precisely what effect). In general, then, telephone approaches do not work well when there is no simple, off-the-cuff answer that can be given.
- In relation to Health & Safety and Environmental inspections, the additional interviews provided one, interesting and informative, example of how such inspections can have a very major impact on costs. The ability of the respondent to cite a level of cost, however, was clearly related to the extraordinary level of cost that was imposed as a result of the inspection. In general, and consistent with both the findings from the telephone interviews of non trade association members and the proposition that reliable quantification requires a period for thought, our view of the additional interviews is that they are unsuitable as a means of acquiring systematic,

reliable, information about either compliance cost levels or the impact of regulation on business decisions.

- Similarly in relation to customs regulations, whilst we identified one respondent who had encountered non-trivial difficulties, the responses served to confirm that, in surface engineering, significant regulatory impacts from this source were isolated occurrences. That is, the initial interviews and postal questionnaires had already provided an accurate indication of the materiality of customs regulations.

### 3.8 The Final Face-to-Face Interviews

At the outset of the study, we had anticipated that there might potentially be significant difficulties in interpreting numbers given by respondents in relation to questions asking about levels of expenditure and time devoted to dealing with regulatory matters. One major concern was potential upward bias in estimates, resulting for example from a significant fraction of the responses being influenced by political attitudes. It was therefore planned that a small number of final, face-to-face interviews would be conducted in order to acquire information that might be required to 'normalise' the distribution of quantitative estimates of compliance costs, should this prove to be necessary.

By the final interview stage, however, these potential difficulties had not materialised to any discernible extent. Thus:

- The detailed cost and time breakdowns provided to us by one of the businesses interviewed in the early stages of the study -- which had clearly taken some time and effort to produce -- turned out, after analysis of the postal questionnaire responses, to provide the kind of benchmark that we had anticipated would require a final set of interviews to establish.
- There was only a very small number of 'outlying' responses to the postal questionnaire, and these could relatively easily be distinguished from the rest (and omitted from the quantification exercises -- see section 4).

Given these points, the final interview process comprised the following activities:

- A second interview with the business that had provided the initial, detailed quantification of compliance costs, with a view to discussing a small number of outstanding issues.
- A 'focus group' meeting that included representatives from five businesses and from the trade association of which they were each a member. All of these businesses had responded to the postal questionnaire.

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- We sought to organise an additional focus group meeting with a small group of members from another trade association. In the event, this was cancelled because only one company would have been able to attend at the designated time. In view of the project timetable and the limited time to re-arrange the meeting, it was agreed with the intending participants that any outstanding issues could be dealt with by telephone.

As explained above, in view of the quality and quantity of information gathered from the initial interviews and the postal questionnaire responses, the final interviews were less critical than expected. Their principal purpose was therefore adjusted from being one of acquiring additional information to 'normalise' postal questionnaire responses to one of 'checking' that views we had reached on certain types of regulation were robust.

This checking exercise was undertaken during the group meeting by putting forward a series of propositions for comment and discussion. These propositions included the following:

- That the minimum wage has not been a major issue in the surface engineering industry to date, although there are some concerns that it may have an impact if the level was to be increased. Does that seem a reasonable statement of the situation?
- That the Working Time Directive has not had a major impact on surface engineering firms given the opt-out arrangements that are available. Does that seem a reasonable statement of the situation?
- That whilst product standards are an important factor in the surface engineering industry, they are principally driven by customers rather than by regulation. Do you agree or disagree?
- Respondents to the postal questionnaire have made very limited references to regulatory burdens associated with export arrangements, and where these issues have been raised they have typically related to infrequent or unusual orders. Do you consider regulatory issues related to exports to be a major issue?

There was significant discussion on all these points, but no substantive dissent from the propositions themselves. The major and consistent concern was that the policy positions might change in the future, in ways that would raise compliance costs, not that regulations in the identified areas were particularly burdensome today.

The remainder of the time at the focus group was directed towards seeking to explore the extent to which regulation, the time spent dealing with it, and the distraction that it caused, had material impacts on the way in which managers viewed their business and their working activity. A key issue explored was the extent to which regulation might have an impact on entrepreneurship, as discussed in section 2, and on business expansion, investment and innovation in particular.

## SECTION 4

### STUDY RESULTS: THE IMPACT OF REGULATION IN THE SURFACE ENGINEERING SECTOR

In this section we present some preliminary estimates of the cumulative impact of regulation on businesses operating in the surface engineering sector, together with one or two other results from the survey work. The results and estimated impacts detailed in this section are based primarily upon the 102 postal survey responses that were available at the time of analysis (four of which were judged unusable), supplemented where appropriate with outcomes from the telephone interviews. In addition, we have included discussion of some specific issues and examples that were raised during the course of the interviews we conducted with owners and senior managers of companies operating in this sector.

It is emphasised that the results shown below, and also in Annex 2, far from exhaust the possible assessments that might be made from the database constructed from the available information. Since the primary aim of the study was to assess the feasibility and potential value of methods estimating regulatory impacts, the material that follows should be read as indicative of the possibilities, not as a comprehensive exploration of the information that is now available. The results should also be regarded as provisional, in that calculations have been made without careful attention to effects arising from missing data for some questions and respondents (only obvious anomalies have been discounted at this stage). Nor has any attempt been made to explore differences between different segments of the surface engineering industry: all calculations have been made on an aggregate basis.

The discussion focuses to a significant degree on the cost of time allocated to dealing with regulation. The questionnaire distinguished between senior management time and employee time, and the costs figures are derived by applying separate 'value of time' numbers to each. The valuations adopted in producing the results shown below were £200 p.d. and £100 p.d. respectively. Although we are of the view that these are not unreasonable numbers, there is clearly scope for more refined determination of the appropriate valuations and given the underlying data, sensitivity analysis would be an extremely straightforward exercise.

#### 4.1 General characteristics of completed postal survey responses

Before assessing the impact of the different categories of regulation on businesses in the surface engineering sector, it is useful to detail some of the general characteristics of the companies that responded to the postal survey. A larger set of descriptive statistics for the postal survey are contained in Annex 2.

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As can be seen from Table 4.1 below, the total number of companies who responded to the survey questionnaire was 102 of which 98 companies completed the majority of the questionnaire. The large majority of the companies that responded (87%) are limited companies, and approximately 40% of these companies belong to a group of companies, especially high turnover companies. Almost all of the companies that responded to the postal survey were members of a trade association.

In terms of size, the companies that we surveyed had a combined annual turnover in 2003 of £345.4 million and spent £105.4 million on materials. The companies collectively had 3,828 full-time and 154 part-time employees at the end of 2003.

The results of the postal survey are presented in this section and in Annex 2 on the basis of size of company (i.e. low, medium and high) as measured by turnover. The companies have been classified on the basis of a roughly equal percentile distribution. Based on this distribution 32 companies are classified as low turnover, 32 are classified as medium turnover and 30 companies are classified as high turnover companies. When reviewing the results of the postal survey by turnover size, it should be noted that 4 companies who responded to the survey did not provide details as to their turnover level. This means that the aggregate responses shown in the low, medium and high turnover columns do not equate to the combined response figure.

**The Impact of Regulation on the Surface Engineering Sector** **Table 4.1**  
**General characteristics of postal respondents**

	Number	By Turnover		
		Low	Medium	High
Number of companies responding	98	32	32	30
<u>General characteristics</u>				
Limited companies	87	26	31	27
Member of a group of companies	39	8	14	16
Member of a trade association	94	31	30	30
<u>Turnover and size</u>				
Combined annual turnover	£345,424,388	£19,080,000	£50,694,388	£275,650,000
Average annual turnover	£3,674,728	£596,250	£1,584,200	£9,188,333
Combined cost of materials	£105,439,450	£4,281,000	£10,180,450	£90,978,000
Average cost of materials	£1,226,040	£152,893	£328,402	£3,369,556
<u>Employment in 2003</u>				
Combined full-time employees	3,828	414	1,007	2,307
Average full-time employees	39	13	31	77
Combined part-time employees	154	33	60	54
Average part-time employees	2	1	2	2

Source: RPI Survey 2004

## 4.2 PAYE, VAT, Corporation tax and Customs and Excise

The responses of the postal and telephone surveys indicate that PAYE, VAT and more general employment regulations impacted all of the companies surveyed to some degree. While this finding is hardly unexpected, two important observations emerge about the impact of these regulations on companies in this sector.

The first is that, on the whole, the majority of companies interviewed appeared to raise no specific issues or problems with respect to these areas of regulation and found them to be fairly 'routine' in their application and compliance requirements. The second, and possibly related, observation is that a number of companies surveyed employ the services of an external accountant to undertake the various activities which are required in order to comply with elements of these regulations. As can be seen from Table A2.10 in Annex 2 some 62 companies indicated that they employ an external accountant to prepare their corporation tax calculation, while 40 companies use the services of an external accountant for dealing with issues relating to company expenses.

A possible explanation therefore for why the companies surveyed did not appear to have any substantive issues relating to complying with PAYE, VAT and some elements of employment regulations is that the responsibility for compliance with these regulations is effectively outsourced by these companies to third parties such as accountants.

In terms of time spent complying with these regulations, Table 4.2 below shows the imputed time-cost by both staff and management in complying with and implementing regulations relating to PAYE, VAT and corporation tax in 2003.

*Prima facie*, the numbers may look relatively low, particularly when expressed as a percentage of turnover. A more appropriate denominator, however, might be value added, which, when aggregated over all companies, provides a much better representation of contribution to GDP than does turnover. Value added figures are more difficult to ascertain (which is why we did not ask for this information on the questionnaire) but, as a rough benchmark might, for surface engineering be estimated as equal to approximately 50% - 60% of turnover. Thus the ratio of imputed time costs to value added can be expected to be up to twice as high as the percentages on turnover shown in Table 4.2. This point also applies to all other similar tables that are presented below.

Costs per employee are also a very useful figure to examine. For an employee with wages/salary of £15,000 per annum, the sample average, imputed time cost of £320 equates to an increment in the Employers National Insurance Contribution of a little over 2%. For a small firm, the numbers equate to an NI increment of over 3%. This equivalence provides a way of translating the industry numbers presented here into a more macro-economic context, and, as should be obvious, the burden of regulatory compliance is by no means trivial, even for such familiar exercises as PAYE, VAT and corporation tax accounting.

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**The Impact of Regulation on the Surface Engineering Sector** **Table 4.2**  
**Time cost for management & staff with PAYE, VAT and Corporation tax in 2003**

	Total Cost (£)	By Turnover		
		Low (£)	Medium (£)	High (£)
<u>Senior management/executives on EXISTING regulations</u>				
Total cost	383,600	28,000	102,400	253,200
Average cost per firm	4,856	1,037	4,096	9,378
<u>Senior management/ executives on NEW regulations</u>				
Total cost	46,300	14,700	16,400	13,200
Average cost per firm	565	507	656	489
<u>Other staff on EXISTING regulations</u>				
Total cost	465,200	90,600	49,400	325,200
Average cost per firm	6,552	3,775	2,245	13,008
<u>Other staff on External training courses</u>				
Total cost	10,800	800	2,200	7,800
Average cost per firm	154	35	96	325
<u>Other staff on internal training/awareness courses</u>				
Total cost	37,800	18,000	10,000	9,800
Average cost per firm	491	692	370	408
<b>Total cost</b>	<b>£943,700</b>	<b>£152,100</b>	<b>£180,400</b>	<b>£609,200</b>
<b>Average cost per firm</b>	<b>£12,618</b>	<b>£6,046</b>	<b>£7,463</b>	<b>£23,608</b>
<b>Cost as a % of turnover</b>	<b>0.3%</b>	<b>0.8%</b>	<b>0.4%</b>	<b>0.2%</b>
<b>Annual Cost per full-time employee</b>	<b>£320</b>	<b>£467</b>	<b>£237</b>	<b>£307</b>

Source: RPI Survey 2004

(a) *Customs & Excise*

Just under half the companies who responded to the postal survey (42%) indicated that they have exported goods, and thus been impacted to some degree by customs and excise regulations. In particular, the majority of high turnover companies surveyed have been involved in export activity.

The majority of companies interviewed who had been involved in exporting indicated that they had no major problems with the operation of these regulations, although there were some who noted that the form filling requirements were time-consuming. In particular, the VAT form requirements were seen as significant when the job involved importing a product that was worked on and then, later, exported. Similarly, where the destination of exports was outside the European Community this was seen as adding an additional burden in terms of compliance. In particular, one company we interviewed noted that they had only a brief encounter with customs and excise in the recent past,

but found the ‘form-filling’ requirements so onerous that they would think twice before taking on an export job again.

Compliance associated with VAT accounting should already have been captured by the VAT question, and we doubt that explicit inclusion of a question or question about export procedures (which would have added to the length questionnaire) would have led to responses that would materially have affected the overall, imputed time cost estimates.

### 4.3 Employment regulations

There were a number of different impacts of employment regulations identified during the postal and telephone surveys and interviews. As shown in Table 4.1 above, the companies who responded to the postal survey collectively employed 3,828 full-time staff and 154 part-time staff at the end of 2003 with an average of 39 full-time employees per company.

The first impact, which was identified as a significant issue during the interview stage, was the effect of regulations relating to involuntary employee dismissals. It was noted in particular that employees who were dismissed were encouraged to ‘try-out’ any potential claim against the employer for unfair dismissal. In particular, the view was expressed that this was encouraged by elements of the legal profession who advertise a ‘no-win, no-fee’ opportunity to bring a case. This impact was thought to be amplified by the fact that, while in many cases it was effectively costless for the dismissed employee to bring a case (with lawyers fees often being paid for under legal aid schemes), the costs incurred by the employer can be substantial even in cases which appear unlikely to succeed. An example given by one respondent was of a recent case where he claims to have ‘won’ but notes that it still cost him in excess of £20,000 in legal costs.

The results of the postal survey indicate that 18% of companies were involved in disputes with employees in 2003, of which 12 companies were involved in formal proceedings (see Table A2.8 in Annex 2). Some 59% of companies also indicated that they had been influenced in their hiring/firing decisions by the potential effect of employment regulations.

A second impact of employment regulations identified at all stages of the survey and interviews involves the disincentive effect of tax credit or benefit schemes (such as the family tax credit system or employees with salary attachments) on the ability of employers to secure overtime from particular employees. Table A2.31 in Annex 2 shows that some 49% of postal survey respondents indicated that PAYE arrangements had affected their ability to secure overtime from staff in the past. In addition, a number of specific examples of cases were noted throughout the interviews where employees were unwilling to work overtime because of potential negative impacts it would have on other benefits that they receive. Given both the characteristics of the workforce typically employed in the surface engineering sector (there is a large component of

relatively unskilled labour on very modest wages liable to be subject to marginal tax rate adjustments), and the characteristics of the production process (the need to secure extra labour at very short notice to respond to fluctuations in order volumes) this impact of employment regulation was seen to be significant by a number of the companies surveyed.

A third specific impact of employment regulations identified during the study relates to the amount of time, and time cost, involved in keeping abreast of new regulations and changes to existing regulations. The results of the postal survey indicate that on average 5 senior management/executive days a year are (i.e. about 2% of total available time) spent keeping up to date with new regulatory requirements. This issue was specifically raised during one interview when it was noted that in the last two week period the senior manager/executive had received 6 separate notifications regarding changes to employment regulations (e.g. new or changing regulations relating to paid holiday entitlement, no surprises culture, anti-discrimination, equal work pay queries, statutory leave for family crisis and verbal warnings).

In terms of time spent complying with employment regulations, Table 4.3 below shows the estimated time spent and imputed time-cost by staff and management in both complying with and understanding and implementing employment regulations.

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**The Impact of Regulation on the Surface Engineering Sector** **Table 4.3**  
**Time cost for management & staff with employment regulation in 2003**

	Total Cost (£)	By Turnover		
		Low (£)	Medium (£)	High (£)
<u>Senior management/executives on EXISTING regulations</u>				
Total cost	133,200	28,400	46,000	58,800
Average cost per firm	1,708	1,092	1,704	2,352
<u>Senior management/ executives on NEW regulations</u>				
Total cost	74,800	16,200	26,200	28,400
Average cost per firm	935	579	1,048	1,092
<u>Other staff on EXISTING regulations</u>				
Total cost	100,200	8,200	14,600	77,400
Average cost per firm	1,474	357	664	3,365
<u>Other staff on External training courses</u>				
Total cost	19,200	1,200	4,200	13,800
Average cost per firm	263	50	175	552
<u>Other staff on internal training/awareness courses</u>				
Total cost	62,800	9,600	14,200	30,000
Average cost per firm	816	384	546	1,200
<b>Total cost</b>	<b>£390,200</b>	<b>£63,600</b>	<b>£105,200</b>	<b>£208,400</b>
<b>Average cost per firm</b>	<b>£5,195</b>	<b>£2,461</b>	<b>£4,136</b>	<b>£8,562</b>
<b>Cost as a % of turnover</b>	<b>0.1%</b>	<b>0.4%</b>	<b>0.3%</b>	<b>0.1%</b>
<b>Annual Cost per full-time employee</b>	<b>£132</b>	<b>£190</b>	<b>£131</b>	<b>£111</b>

Source: RPI Survey 2004

#### 4.4 Fire regulations

The results of the postal survey indicate that on average firms in the surface engineering sector incurred fire equipment costs of £2,268 and made payments £1,487 for external assistance with fire regulations in 2003. Table 4.4 below shows the estimated time spent and imputed time-cost by staff and management on external training courses and in being familiar with existing and new fire regulations and Table 4.5 shows the cost of equipment and other costs associated with fire regulations.

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**The Impact of Regulation on the Surface Engineering Sector** **Table 4.4**  
**Time cost for management & staff with fire regulation in 2003**

	Total Cost (£)	By Turnover		
		Low (£)	Medium (£)	High (£)
<u>Senior management/executives on EXISTING regulations</u>				
Total cost	43,300	10,300	11,000	22,000
Average cost per firm	548	396	407	846
<u>Senior management/ executives on NEW regulations</u>				
Total cost	26,100	6,200	7,500	10,400
Average cost per firm	322	230	288	385
<u>Other staff on EXISTING regulations</u>				
Total cost	31,200	4,400	7,800	19,000
Average cost per firm	452	191	355	792
<u>Other staff on External training courses</u>				
Total cost	4,700	600	1,400	1,700
Average cost per firm	67	26	61	74
<u>Other staff on internal training/awareness courses</u>				
Total cost	172,100	21,400	27,200	114,500
Average cost per firm	2,049	764	938	4,404
<b>Total cost</b>	<b><u>£277,400</u></b>	<b><u>£42,900</u></b>	<b><u>£54,900</u></b>	<b><u>£167,600</u></b>
<b>Average cost per firm</b>	<b>£3,438</b>	<b>£1,607</b>	<b>£2,049</b>	<b>£6,501</b>
<b>Cost as a % of turnover</b>	<b>0.1%</b>	<b>0.3%</b>	<b>0.1%</b>	<b>0.1%</b>
<b>Annual Cost per full-time employee</b>	<b>£87</b>	<b>£124</b>	<b>£65</b>	<b>£85</b>

Source: RPI Survey 2004

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**The Impact of Regulation on the Surface Engineering Sector** **Table 4.5**  
**Equipment cost & other payments associated with fire regulation in 2003**

	Total Cost (£)	By Turnover		
		Low (£)	Medium (£)	High (£)
<u>Equipment Costs</u>				
Total costs	131,530	25,650	24,380	75,000
Average cost per firm	2,268	1,350	1,219	4,167
<u>Payments for External Assistance</u>				
Total costs	31,225	9,050	10,550	11,625
Average cost per firm	1,487	823	2,110	2,325
<b>Total cost</b>	<b><u>162,755</u></b>	<b><u>34,700</u></b>	<b><u>34,930</u></b>	<b><u>86,625</u></b>
<b>Average cost per firm</b>	<b>3,755</b>	<b>2,173</b>	<b>3,329</b>	<b>6,492</b>
<b>Cost as a % of turnover</b>	<b>0.1%</b>	<b>0.4%</b>	<b>0.2%</b>	<b>0.1%</b>
<b>Annual Cost per full-time employee</b>	<b>£95</b>	<b>£168</b>	<b>£106</b>	<b>£84</b>

Source: RPI Survey 2004

This area of regulation was also viewed as being fairly ‘routine’ in the interviews we conducted, with only relatively minimal impact on companies in terms of time and cost. Although it was noted by a small number of respondents that in recent years there has been a gradual increase in the requirements imposed by insurance companies in relation to fire risk, which has required some companies to purchase new equipment and install additional lighting etc. This requirement of the insurance companies was seen by some to be the result not so much of an increasing fire risk in the surface engineering sector, or indeed of any large claims, but rather as a result of a general economy-wide tightening up of insurance policies. An alternative explanation is that increasingly stringent regulatory requirements provide insurance companies with an opportunity to insist on additional expenditures by businesses, thereby reducing risks without any corresponding downward adjustments in premiums (premiums tending to rise rather than fall). Since the relevant expenditures do then impose a financial burden of firms without any compensating reductions in insurance costs, they can therefore be viewed, at least to a first approximation, as a regulatory impact, albeit one that arises from particular conduct and circumstances in the insurance market.

Whether or not such changes in insurance companies requirements would have occurred in the absence of tightening regulations is, however, uncertain, and is a particular manifestation of a general *counterfactual* issue: what would the situation have looked like in the absence of the relevant regulations. In the questionnaire, businesses were asked to indicate expenditures that they considered were attributable to regulation, which, in the event, may be over-inclusive (e.g. include expenditures that would anyway have been made because of changing insurance requirements that are independent of

regulation) or under-inclusive (e.g. exclude expenditures to satisfy insurance requirements that, but for regulation, would have been less onerous). Whilst recognising the inevitable uncertainty, the best estimates available are those of the businesses themselves.

#### 4.5 Health & Safety regulations

As noted elsewhere in this report, one of the main areas of concern noted by the companies surveyed relates to the implementation and *enforcement* of health & safety regulations. Table 4.6 below details the results of the postal survey as to the estimated cost of health & safety regulations in terms of time costs, and again the numbers are non-trivial, averaging £306 per employee per year. Table 4.7 shows the costs of equipment and other payments made associated with health and safety regulations in 2003.

As shown in Table 2.16 in Annex 2, the results of the postal survey indicate that 30% of companies surveyed have incurred substantially higher costs of complying with health & safety regulations in 2003 as compared with previous years.

A number of specific issues were raised during the survey and interviews regarding the enforcement of health & safety regulations. While the results of the postal survey indicate that only 3 companies were charged for site visits by the HSE in 2003 (all of which were high turnover companies) the impact of HSE regulations appear to lie not so much in their direct enforcement but in issues relating to uncertainty as to what being compliant actually means in practice.

As is the case with the operation and enforcement of environment regulation discussed below, a number of companies surveyed noted that there appears to be an element of randomness in both the selection of companies to be visited by HSE and also in the enforcement of particular regulations in similar contexts. One executive we spoke to noted that this created the feeling in many businesses that despite their efforts to be compliant with health & safety regulations they could still potentially be 'sitting on a time-bomb'. A specific example given by one telephone respondent involved a situation where he was visited by a 'new' HSE enforcement officer (i.e.: not his usual HSE officer) who upon inspecting the premises required him to demolish a section of wall which he estimates cost him in the vicinity of £100,000, and it was noted that in previous visits by the HSE they had never raised any specific problems with the site.

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**The Impact of Regulation on the Surface Engineering Sector** **Table 4.6**  
**Time cost for management & staff with Health & Safety regulation in 2003**

	Total Cost (£)	By Turnover		
		Low (£)	Medium (£)	High (£)
<u>Senior management/executives on EXISTING regulations</u>				
Total cost	313,100	40,100	88,200	184,800
Average cost per firm	3,865	1,485	3,267	6,844
<u>Senior management/ executives on NEW regulations</u>				
Total cost	115,600	22,800	32,800	56,000
Average cost per firm	1,376	814	1,215	2,000
<u>Other staff on EXISTING regulations</u>				
Total cost	207,800	14,200	18,400	175,200
Average cost per firm	3,056	617	876	7,300
<u>Other staff on External training courses</u>				
Total cost	61,600	2,800	17,800	28,600
Average cost per firm	811	117	685	1,144
<u>Other staff on internal training/awareness courses</u>				
Total cost	254,450	30,600	75,800	139,050
Average cost per firm	2,959	1,177	2,369	5,150
<b>Total cost</b>	<b>£952,550</b>	<b>£110,500</b>	<b>£233,000</b>	<b>£583,650</b>
<b>Average cost per firm</b>	<b>£12,067</b>	<b>£4,210</b>	<b>£8,411</b>	<b>£22,438</b>
<b>Cost as a % of turnover</b>	<b>0.3%</b>	<b>0.7%</b>	<b>0.5%</b>	<b>0.2%</b>
<b>Annual Cost per full-time employee</b>	<b>£306</b>	<b>£325</b>	<b>£267</b>	<b>£292</b>

Source: RPI Survey 2004

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**The Impact of Regulation on the Surface Engineering Sector** **Table 4.7**  
**Equipment cost & other payments associated with HSE regulation in 2003**

	Total Cost (£)	By Turnover		
		Low (£)	Medium (£)	High (£)
<u>Equipment Costs</u>				
Total costs	498,930	57,050	143,053	298,827
Average cost per firm	7,560	2,593	7,153	12,451
<u>Payments for HSE site visits</u>				
Total costs	11,000	0	0	11,000
Average cost per firm	3,667	0	0	3,667
<u>Payments for External Assistance</u>				
Total costs	193,266	21,600	67,441	104,225
Average cost per firm	3,865	1,543	3,967	5,486
<b>Total cost</b>	<b><u>703,196</u></b>	<b><u>78,650</u></b>	<b><u>210,494</u></b>	<b><u>414,052</u></b>
<b>Average cost per firm</b>	<b>15,092</b>	<b>4,136</b>	<b>11,120</b>	<b>21,603</b>
<b>Cost as a % of turnover</b>	<b>0.4%</b>	<b>0.7%</b>	<b>0.7%</b>	<b>0.2%</b>
<b>Annual Cost per full-time employee</b>	<b>£382</b>	<b>£320</b>	<b>£353</b>	<b>£281</b>

Source: RPI Survey 2004

The effect of this feeling of *ex post* uncertainty as to how the health and safety regulations will be enforced was seen to make companies hesitant to expand their businesses or engage in other surface engineering processes. One specific example noted during the interviews involved a reluctance on the part of some companies to engage in processes (such as cadmium plating) which might require firms to register themselves under the COMAH regulations, which would therefore open up the rest of their activities for potential scrutiny by the HSE on a regular basis.

A further issue relating to the enforcement of health & safety regulations identified during the study was the potential asymmetric impact it may have on new entry into the sector and/or the construction of modern greenfield plants by established companies. It was noted that while the HSE often exercises its discretion in implementing a new regulation to accommodate the specific situation of existing companies/plants by requiring only modest changes, this was not seen as the case for new entrants/plants who would be required to invest in all the necessary equipment in order to be compliant.

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## 4.6 Environmental Regulation

The area of regulation most frequently cited by those surveyed and interviewed as being of the most concern in terms of its potential impact on this sector was the area of environmental regulation. Table 4.8 below details the results of the postal survey as to the estimated cost of environmental regulations in terms of time costs and Table 4.9 provides the results in relation to equipment costs and other payments.

<b>The Impact of Regulation on the Surface Engineering Sector</b>					<b>Table 4.8</b>
<b>Time cost for management &amp; staff with Environmental regulation in 2003</b>					
	<b>Total Cost (£)</b>	<b>By Turnover</b>			
		<b>Low (£)</b>	<b>Medium (£)</b>	<b>High (£)</b>	
<u>Senior management/executives on EXISTING regulations</u>					
Total cost	354,100	67,700	140,200	146,200	
Average cost per firm	4,266	2,418	5,007	5,415	
<u>Senior management/ executives on NEW regulations</u>					
Total cost	308,100	98,900	80,000	125,200	
Average cost per firm	3,583	3,410	2,857	4,471	
<u>Other staff on EXISTING regulations</u>					
Total cost	242,200	29,400	37,600	175,200	
Average cost per firm	3,460	1,225	1,709	7,300	
<u>Other staff on External training courses</u>					
Total cost	40,400	11,200	14,800	13,800	
Average cost per firm	539	467	569	575	
<u>Other staff on internal training/awareness courses</u>					
Total cost	281,300	31,900	103,400	137,000	
Average cost per firm	3,389	1,139	3,693	5,269	
<b>Total cost</b>	<b><u>£1,226,100</u></b>	<b><u>£239,100</u></b>	<b><u>£376,000</u></b>	<b><u>£597,400</u></b>	
<b>Average cost per firm</b>	<b>£15,237</b>	<b>£8,659</b>	<b>£13,835</b>	<b>£23,030</b>	
<b>Cost as a % of turnover</b>	<b>0.4%</b>	<b>1.5%</b>	<b>0.9%</b>	<b>0.3%</b>	
<b>Annual Cost per full-time employee</b>	<b>£386</b>	<b>£669</b>	<b>£440</b>	<b>£299</b>	

Source: RPI Survey 2004

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**The Impact of Regulation on the Surface Engineering Sector** **Table 4.9**  
**Equipment cost & other payments associated with Environmental regulation in 2003**

	Total Cost (£)	By Turnover		
		Low (£)	Medium (£)	High (£)
<u>Equipment Costs</u>				
Total costs	928,918	99,600	92,900	307,168
Average cost per firm	10,556	5,859	4,645	21,941
<u>Payments to Environment Agency for site visits</u>				
Total costs	28,750	500	10,000	18,250
Average cost per firm	3,594	500	10,000	3,042
<u>Payments for External Assistance</u>				
Total costs	201,593	24,000	49,017	118,576
Average cost per firm	4,800	3,000	2,883	7,411
<b>Total cost</b>	<b>1,159,261</b>	<b>124,100</b>	<b>151,917</b>	<b>443,994</b>
<b>Average cost per firm</b>	<b>18,949</b>	<b>9,359</b>	<b>17,528</b>	<b>32,393</b>
<b>Cost as a % of turnover</b>	<b>0.5%</b>	<b>1.6%</b>	<b>1.1%</b>	<b>0.4%</b>
<b>Annual Cost per full-time employee</b>	<b>£480</b>	<b>£723</b>	<b>£557</b>	<b>£421</b>

Source: RPI Survey 2004

The results of the postal and telephone surveys indicate that the costs incurred by companies in this sector for external assistance, EA site visits and in purchasing equipment costs related to environmental regulation were the highest of any of the various areas of regulation.

The impacts of environmental regulation identified by respondents can be broadly categorised into impacts created through environment policy, and impacts relating to the enforcement of environmental regulations. In relation to environment policy it was noted by some companies surveyed that there was a continuing failure on the part of policy makers in developing regulations to consider the potential impact of environmental regulations on different sized firms within the sector. This is reflected in the results of the postal survey shown in Table 4.8 which shows that the average time cost of environmental regulations for low turnover firms either as a percentage of turnover, or per full-time employee, in 2003 was greater than that of medium or high turnover firms.

While there is a general tendency throughout the survey results for the costs of regulation as a percentage of turnover to fall significantly with company size – and similarly for costs per employee, although to a lesser extent at larger sizes in that labour productivity appears to increase significantly with size in this range – the effect is particularly pronounced for environmental regulation. For example, it can be noted, from

Table 4.8 that imputed time costs as a percentage of turnover are around five times as high for the firms in the lowest size band than they are for firms in the largest size band.

A further, and related, impact generated by environmental policy raised during the interviews is that in certain areas regulations are drafted in a way which can encourage 'loop-holes' to develop in the implementation of the regulations. It was noted that this has the potential effect of creating asymmetries between firms with similar characteristics operating in the sector. The IPPC regulations in particular were seen as being an example of a policy that will create competitive asymmetries in the sector. One company said that its customers are already adopting a policy of switching production to companies that are below the threshold for IPPC registration, in order to counter anticipated price increases by those companies required to register under IPPC.

The potential impact of environmental regulation caused by the enforcement practice of the Environment Agency was also frequently cited as being of concern to companies in this sector in both the interviews and the surveys. In particular, there was a perception by some companies that there was a definite bias in the enforcement behavior of the Environment Agency in relation to companies that are known to comply with regulations as compared to those companies that are typically non-compliant or keep themselves 'below the radar'. One example quoted during the interviews was of a company that had continually lost business to a competitor who was able to offer cheaper prices per unit because it had not installed the appropriate effluent disposal system and was tipping the waste down the drain. Although this behavior was brought to the attention of the Environment Agency it took 9 months for any action to be taken. In this case the relevant trade association was also notified and it was found that smaller companies were not experiencing the same level of inspections from the Environment Agency as larger companies because of staff restrictions at the Agency.

Notwithstanding these last points, we note again that Table 4.8 shows a particularly heavy burden falling on smaller companies. To the extent that this average contains any businesses that are lax in their attitudes to compliance, the implication is that the relative burden on those small companies that are more diligent in these matters will be higher still.

#### **4.7 Combined time costs**

Table 4.10 below details the combined time costs of senior management and other staff on all regulations considered in the study in 2003. It shows that the impact of all the regulations combined in terms of time cost amounted to an average cost per firm in 2003 of £49,956. This equates to approximately 1.3% of turnover, or a cost of £1,266 per full-time employee.

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**The Impact of Regulation on the Surface Engineering Sector** **Table 4.10**  
**Combined time cost of regulations in 2003**

	<u>By Turnover</u>			
	Number	Low	Medium	High
<u>PAYE, VAT Corporation Tax</u>				
Total cost	<u>£943,700</u>	<u>£152,100</u>	<u>£180,400</u>	<u>£609,200</u>
Average cost per firm	£12,618	£6,046	£7,463	£23,608
Cost as a % of turnover	0.27%	0.80%	0.36%	0.22%
Annual Cost per full-time employee	£320	£467	£237	£307
<u>Employment Regulation</u>				
Total cost	<u>£390,200</u>	<u>£63,600</u>	<u>£105,200</u>	<u>£208,400</u>
Average cost per firm	£5,195	£2,461	£4,136	£8,562
Cost as a % of turnover	0.14%	0.41%	0.26%	0.09%
Annual Cost per full-time employee	£132	£190	£131	£111
<u>Fire Regulation</u>				
Total cost	<u>£277,400</u>	<u>£42,900</u>	<u>£54,900</u>	<u>£167,600</u>
Average cost per firm	£3,438	£1,607	£2,049	£6,501
Cost as a % of turnover	0.09%	0.27%	0.13%	0.07%
Annual Cost per full-time employee	£87	£124	£65	£85
<u>Health &amp; Safety Regulation</u>				
Total cost	<u>£952,550</u>	<u>£110,500</u>	<u>£233,000</u>	<u>£583,650</u>
Average cost per firm	£12,067	£4,210	£8,411	£22,438
Cost as a % of turnover	0.33%	0.71%	0.53%	0.24%
Annual Cost per full-time employee	£306	£325	£267	£292
<u>Environment regulations</u>				
Total cost	<u>£1,226,100</u>	<u>£239,100</u>	<u>£376,000</u>	<u>£597,400</u>
Average cost per firm	£15,237	£8,659	£13,835	£23,030
Cost as a % of turnover	0.41%	1.45%	0.87%	0.25%
Annual Cost per full-time employee	£386	£669	£440	£299
<u>Other regulations</u>				
Total cost	<u>£74,800</u>	<u>£12,600</u>	<u>£2,600</u>	<u>£59,600</u>
Average cost per firm	£1,402	£639	£169	£3,184
Cost as a % of turnover	0.04%	0.11%	0.01%	0.03%
Annual Cost per full-time employee	£36	£49	£5	£41
<b><u>TOTAL COST</u></b>				
<b>Total cost</b>	<b><u>£3,864,750</u></b>	<b><u>£620,800</u></b>	<b><u>£952,100</u></b>	<b><u>£2,225,850</u></b>
<b>Average cost per firm</b>	<b>£49,956</b>	<b>£23,624</b>	<b>£36,064</b>	<b>£87,323</b>
<b>Cost as a % of turnover</b>	<b>1.3%</b>	<b>3.7%</b>	<b>2.2%</b>	<b>0.9%</b>
<b>Annual Cost per full-time employee</b>	<b>£1,266</b>	<b>£1,826</b>	<b>£1,146</b>	<b>£1,136</b>

Source: RPI Survey 2004

Of particular note is the difference in the distribution of the time costs among low, medium and high turnover firms. Table 4.10 shows that while time costs associated with regulation represented almost 3.7% of the turnover of smaller companies, these same costs represented only 0.9% of turnover for high turnover firms.

In relation to time costs per employee, the relationship with business size is slightly different. The per-employee cost is little different between the middle and upper size bands – and we suggest that this may be due to a strong, positive relationship between size and labour productivity in this range – but is much higher (by over 50%) for smaller companies.

#### **4.8 Combined equipment costs and fee payments**

Table 4.11 pulls together the various expenditures on equipment, regulatory payments and professional fees reported in responses to the postal questionnaire. As for time cost, environmental regulation imposes the highest costs on businesses, although health and safety regulation is not too far behind. There is also a much more marked relationship between costs per employee and business size for employment regulation than for health and safety regulation. As in relation to imputed time costs, the burden on small firms appears to be particularly high.

The headline findings from the responses are:

- Average expenditures as a percentage of turnover is 1.0% (compared with 1.3% for time costs).
- Average expenditure per employee is £958 (compared with £1,266 for time costs).

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**The Impact of Regulation on the Surface Engineering Sector** **Table 4.11**  
**Combined Equipment costs & payments associated with specific regulations in 2003**

	<u>By Turnover</u>			
	Number	Low	Medium	High
<u>Fire Regulation</u>				
Total cost	<u>£162,755</u>	<u>£34,700</u>	<u>£34,930</u>	<u>£86,625</u>
Average cost per firm	£3,755	£2,173	£3,329	£6,492
Cost as a % of turnover	0.1%	0.4%	0.2%	0.1%
Annual Cost per full-time employee	£95	£168	£106	£84
<u>Health &amp; Safety Regulation</u>				
Total cost	<u>£703,196</u>	<u>£78,650</u>	<u>£210,494</u>	<u>£414,052</u>
Average cost per firm	£15,092	£4,136	£11,120	£21,603
Cost as a % of turnover	0.4%	0.7%	0.7%	0.2%
Annual Cost per full-time employee	£382	£320	£353	£281
<u>Environment regulations</u>				
Total cost	<u>£1,159,261</u>	<u>£124,100</u>	<u>£151,917</u>	<u>£443,994</u>
Average cost per firm	£18,949	£9,359	£17,528	£32,393
Cost as a % of turnover	0.5%	1.6%	1.1%	0.4%
Annual Cost per full-time employee	£480	£723	£557	£421
<b>TOTAL COST</b>				
<b>Total cost</b>	<u>£2,025,212</u>	<u>£237,450</u>	<u>£397,341</u>	<u>£944,671</u>
<b>Average cost per firm</b>	£37,796	£15,668	£31,977	£60,488
<b>Cost as a % of turnover</b>	1.0%	2.6%	2.0%	0.7%
<b>Annual Cost per full-time employee</b>	£958	£1,211	£1,016	£787

*Source: RPI Survey 2004*

#### 4.9 Total costs of regulation

Combining the estimated time costs and expenditures on equipment, regulatory payments and professional fees leads to the estimates shown in Table 4.12. Costs normalized for firm size, whether measured by turnover or number of employees, are highest for compliance with environmental regulation, followed by health and safety regulation. These two policy areas are well ahead of the rest in terms of the costs that they impose.

Averaged across all responses, the cost-to-turnover percentage is 2.3%, which we suggest might signify a cost to value added ratio of somewhere in the region of 4% to 5% (a figure that can be used to estimate the regulatory burden in relation to the industry contribution to GDP).

The average cost per employee is £2,224. Thus, although the cost-to-turnover ratio may look small, the cost per employee estimate indicates that, in fact, the responses signal a substantial burden on business. In effect, the numbers indicate that the combined regulatory costs identified in the surveys add up to over £40 per week per employee.

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**The Impact of Regulation on the Surface Engineering Sector** **Table 4.12**  
**Combined equipment costs, payments and time cost of regulations in 2003**

	<b>By Turnover</b>			
	<b>Number</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>
<b><u>PAYE, VAT Corporation Tax</u></b>				
Total cost	<u>£943,700</u>	<u>£152,100</u>	<u>£180,400</u>	<u>£609,200</u>
Average cost per firm	£12,618	£6,046	£7,463	£23,608
Cost as a % of turnover	0.27%	0.80%	0.36%	0.22%
Annual Cost per full-time employee	£320	£467	£237	£307
<b><u>Employment Regulation</u></b>				
Total cost	<u>£390,200</u>	<u>£63,600</u>	<u>£105,200</u>	<u>£208,400</u>
Average cost per firm	£5,195	£2,461	£4,136	£8,562
Cost as a % of turnover	0.14%	0.41%	0.26%	0.09%
Annual Cost per full-time employee	£132	£190	£131	£111
<b><u>Fire Regulation</u></b>				
Total cost	<u>£440,155</u>	<u>£77,600</u>	<u>£89,830</u>	<u>£254,225</u>
Average cost per firm	£7,193	£3,780	£5,378	£12,992
Cost as a % of turnover	0.20%	0.63%	0.34%	0.14%
Annual Cost per full-time employee	£182	£292	£171	£169
<b><u>Health &amp; Safety Regulation</u></b>				
Total cost	<u>£1,655,746</u>	<u>£189,150</u>	<u>£443,494</u>	<u>£997,702</u>
Average cost per firm	£27,158	£8,346	£19,531	£44,042
Cost as a % of turnover	0.74%	1.40%	1.23%	0.48%
Annual Cost per full-time employee	£688	£645	£621	£573
<b><u>Environment regulations</u></b>				
Total cost	<u>£2,385,361</u>	<u>£363,200</u>	<u>£527,917</u>	<u>£1,041,394</u>
Average cost per firm	£34,186	£18,018	£31,364	£55,424
Cost as a % of turnover	0.93%	3.02%	1.98%	0.60%
Annual Cost per full-time employee	£866	£1,393	£997	£721
<b><u>Other regulations</u></b>				
Total cost	<u>£74,800</u>	<u>£12,600</u>	<u>£2,600</u>	<u>£59,600</u>
Average cost per firm	£1,402	£639	£169	£3,184
Cost as a % of turnover	0.04%	0.11%	0.01%	0.03%
Annual Cost per full-time employee	£36	£49	£5	£41
<b><u>TOTAL COST</u></b>				
<b>Total cost</b>	<b><u>£5,889,962</u></b>	<b><u>£858,250</u></b>	<b><u>£1,349,441</u></b>	<b><u>£3,170,521</u></b>
<b>Average cost per firm</b>	<b>£87,752</b>	<b>£39,291</b>	<b>£68,041</b>	<b>£147,811</b>
<b>Cost as a % of turnover</b>	<b>2.3%</b>	<b>6.4%</b>	<b>4.2%</b>	<b>1.6%</b>
<b>Annual Cost per full-time employee</b>	<b>£2,224</b>	<b>£3,037</b>	<b>£2,162</b>	<b>£1,922</b>

Source: RPI Survey 2004

#### 4.10 Regulatory uncertainty

A major impact of regulation on businesses in this sector, whose implications recurred throughout the various stages of the study, was the effect that regulatory uncertainty had on the decisions of owners or senior management. As discussed above, this regulatory uncertainty could be broadly categorised as taking two forms: uncertainty as to how regulations might change in the future and uncertainty as to how regulations might be enforced in practice.

As shown in Table A2.37 in Annex 2, the results of the postal survey indicate that 68% of companies consider that their investment decisions have been affected because of the potential for regulatory change in this sector. An even greater proportion, 71%, indicated that their business decisions have been materially affected because of uncertainty as to how regulations would be enforced (see Table A.2.40 in Annex 2).

These responses appear highly plausible in the light of the general discussion of the issue in section 2, and of complexity and change in the regulatory environment. The position in relation to the IPPC regulations is a particularly stark example. Although the regulations have been long foreshadowed, and are to be introduced into the sector in a matter of months, at the time of writing this report there is still substantial uncertainty (in the strict sense of this term -- information not available today but that is expected to become available soon) about the precise form of the regulations, and even greater uncertainty about enforcement.

The questionnaire has been able to identify the existence and prevalence of effects arising from regulatory uncertainty, and it can reasonably be inferred that the effects on investment are negative (there is value in waiting). The results of the postal survey also indicate, interestingly, that the impacts of regulatory uncertainty may be particularly significant for the business decisions of medium turnover companies (with a turnover between £0.9 million and £2 million) compared with both smaller and larger businesses: see, for example, Tables A2.30 to A2.40. This is different from the more normal pattern, in which the highest burden of regulation, relative to turnover, tends to fall on the smallest companies.

If the result is robust, it may be the result of the interaction of two factors: general scale economies in compliance and a correlation between approaches to compliance and size of business. For example, a larger proportion of small companies may (not unreasonably) take the view that it is not possible to attempt to keep pace with complexity and change in regulation, and therefore take a relatively 'passive' strategic position (e.g. treat regulatory change as background noise and ignore it as best they can). Medium size companies may take a more 'active' position, seeking to understand both current and future regulatory developments and their implications, in which case they will be more conscious of the fact that there is value in waiting (to learn more) and hence more sensitive to change and uncertainty. On the other hand, such businesses benefit less from scale economies in compliance than firms in the largest turnover band.

The questionnaire, as constructed, is not conducive to quantification of the effects on variables such as levels of investment. It is possible that alternative questionnaire designs could go further in this direction although, given the need for detailed questioning on a number of specific points, the exercise would be difficult to combine with a general survey of the overall burden of regulation (the approach that this study seeks to evaluate).

There are also other approaches to quantification, such as more direct studies of the levels of investment, productivity growth, etc. in the industry as a whole and of the factors that appear to influence them. In this context, we note that the significance and timing of the introduction of the IPPC regulations in the sector provides a potential 'natural experiment' that could be used to explore the impact of regulatory uncertainty on economic performance.

#### **4.11 Effects on business behaviour**

In addition to the effects on business behaviour caused by regulatory uncertainty, the results of the surveys and interviews also indicate that some regulations are having more direct impacts on both the short term (day-to-day) and longer term supply and investment decisions of firms in this sector.

In terms of short term impacts on business behaviour, Table A2.32 in Annex 2 shows that 41% of respondents to the postal survey indicated that they had previously declined an order because of the operation of a particular regulation; whilst 35% of companies indicated that they had lost business in the past because of the operation of a particular regulation (see Table A2.33 in Annex 2).

Table A2.34 in Annex 2 shows that some 46% of respondents indicated that they ceased a production activity in the past because of the operation of a particular regulation. The survey also shows that some 62% of companies anticipate ceasing a production activity in the near future because of operation of a particular regulation. Again, the survey results indicate that the impact of these regulations can be seen as being disproportionately skewed against medium sized firms.

In terms of longer-term impacts of regulation, Table A2.35 in Annex 2 shows that some 61% of survey respondents indicated that they have been deterred in the past from engaging in other surface engineering activities because of a regulation. Similarly, 56% of companies surveyed indicated that they have been deterred in pursuing other business activities because of a regulation (see Table A2.36 in Annex 2). These impacts of regulation on the longer term expansion and entry decisions of firms operating in this sector was confirmed during the initial interviews, where it was explained to us that expansion or new entry into the sector is being prevented by the operation of particular areas of regulation.

As in relation to regulatory uncertainty, more precise quantification of the significance of these effects is difficult on the basis of the 'general' survey approach under investigation. The final interviewing stage did, however, uncover some indirect evidence. We were told that, in evaluating investment decisions, a typical payback period used in the calculations was 3 years, and that this compared with substantially longer payback periods -- up to 10 years -- used by businesses in Germany.

It is impossible, on the information available, to estimate how much of such a difference in payback periods (implicit discount rates) is attributable to regulatory effects, and hence impossible to quantify the impact of regulation. Uncertainty is, however, known to be a major influence on investment decisions generally, and the results of the survey and interview work that we have undertaken signal that regulatory uncertainty is a major issue in the surface engineering industry. Thus, although the reasoning is necessarily somewhat speculative, there are strong grounds for suspecting that regulation does have an appreciable effect on the level of investment.

#### 4.12 Summary

In this study we have made some preliminary progress toward estimating the cumulative impact of specific areas of regulation on businesses in the surface engineering sector on the basis of number of different information sources including face-to-face interviews, a postal survey and telephone surveys. The results detailed in this section and in Annex 2 are primarily the result of a first analysis of the postal surveys, although they have been supplemented with references to specific examples or issues drawn from the interviews and telephone surveys.

The main point to note is that, in our view, the material presented supports the view that the methods used are a feasible means of deriving estimates of the cumulative burden of regulation. In saying this, however, there are a number of qualifications to be made:

- As a result of time constraints, it has not been possible to explore the databases constructed from the questionnaire responses and telephone interviews in a detailed way. The results quoted are based on simple aggregations, and it may turn out, for example, that relationships between regulatory burdens and size of business turn out to be more complex when account is taken of the fact that the database comprises responses from businesses engaged in a range of different activities (electroplating, thermal spraying, galvanising, etc.) Even given the existing data, therefore, the Tables provided should not be regarded as definitive.
- The postal questionnaire has been used to derive estimates of the burden of regulation, expressed as a cost in relation to turnover and employee numbers, and has provided insights into both (a) the contribution of different areas of regulation to this total and (b) the relationship between regulatory compliance costs and size of business. It was, on the other hand, much less useful in addressing a range of relevant problems and issues, including: ensuring adequate coverage of the position

of very small firms; assessing the extent and implications of differential levels of enforcement and compliance; evaluating the impact of regulation on entrepreneurship and business culture more generally; and quantitatively evaluating the impact of regulation on business expansion, investment, productivity and innovation.

- There is a more open question as to whether the bulk of the more routine results could have been achieved more quickly and less intrusively, at lower cost, and whether the incremental information provided by the postal survey (interesting though it has proved to be) merits the additional cost.

Bearing these qualifications in mind, it can nevertheless be said that the results of the study, taken together, provide evidence supporting the following propositions of the following:

- There are some areas of regulation that are viewed as fairly ‘routine’ and not particularly burdensome in terms of impacts on time or behaviour. Examples include tax, VAT, customs and excise and some areas of employment regulation
- Many companies surveyed raised concerns about aspects of employment regulation in regard to requirements for hiring/firing and dispute resolution requirements
- Threshold effects of regulation are influencing behaviour in this sector, particularly in the areas of employment regulations (such as family tax credit scheme) and environmental regulations (e.g.: IPPC)
- Some areas of regulation are “decision influencing” in terms of the uncertainty that they create both in terms of future changes to policy or policy implementation, but also in regard to how these regulations will be enforced in practice. This was particularly the case in relation to health & safety regulation and environmental regulation.
- Environmental regulation is the area making the single biggest contribution to compliance costs in surface engineering, followed by health and safety regulation.
- There are economies of scale in regulatory compliance: relative to the level of business activity, compliance costs are highest for smaller firms. The incentives for non-compliance are therefore also likely to be greatest for these firms, which may be reinforced by the associated costs and difficulties in enforcement.
- Middle-sized firms may suffer most from regulatory uncertainty, and hence it is the business planning of this category of business that may be most adversely affected by complexity and change in the regulatory environment.

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- Considered in conjunction, the above two propositions imply that the current regulatory environment may be positively encouraging passive, "lie low" business strategies among smaller firms rather than encouraging expansion and innovation.
- Whilst the overall cost burden on businesses in surface engineering may appear relatively low in relation turnover -- the preliminary bottom-line figure is 2.3% -- the impact is nevertheless substantial: over £2,200 per full-time employee per annum.

## SECTION 5

### OVERALL ASSESSMENT AND CONCLUSIONS

#### 5.1 Assessment of methods

*Young man and old man sitting on a park bench.*

*Young man: Do you believe in baptism by total immersion?*

*Old man: Yes, of course I do; I've seen it done.*

Taken in conjunction with the earlier Manchester study, it can be confidently concluded that a combined postal, telephone and interview approach is a feasible way of determining/estimating the impact of regulation on businesses.

No survey work is ever exact or fully comprehensive, but, in our view, the information gathered in the study is sufficient to provide an informed view, underpinned by substantial quantification, of regulatory impacts in surface engineering.

Each element of the approach -- postal, telephone, and interview -- yielded information, and none was completely redundant.

The key questions therefore surround efficacy/effectiveness, rather than feasibility.

A full assessment of efficacy requires an exercise similar to a RIA. The difficulty for us here is that we do not have clear sight of the purposes and objectives which the gathering of information, and analysis of that information, might in the future be required to serve. It could, for example, serve general monitoring purposes or be used to identify problem areas. On the other hand, it might be used in assessing potential reforms in a particular area of regulation, where there are already known problems.

The point is important because effectiveness of alternative approaches will vary according to objectives. A relatively general approach, covering a range of regulatory activities -- of the type that we were asked to investigate and have therefore implemented -- will tend to be more suitable for monitoring and identification purposes. A more targeted approach might be more effective where reform of a specific area of regulation is on the agenda.

In this assessment, therefore, we take the 'general approach' as a given, and consider a number of its more specific aspects, particularly:

- the quantities, types and accuracies of information obtained from different parts of the exercise
- the costs of this type of exercise

- factors that might be expected to affect the value and costs of information discovered if the approach were rolled-out, on a much larger scale, to a range of industries.

(a) *The informativeness of the different elements of the approach*

We conclude that the highest ratio of information to cost is provided by face-to-face interviews. In this study the initial interviews were unstructured (unlike in the Manchester work), and they were used chiefly to inform the development of the postal questionnaire. Combined with desk research, our assessment is that, although few in number, the interviews gave us very good sight of the impact of regulation in the sector. It was possible to determine, very quickly, which aspects of regulation were more burdensome and which were less burdensome (a mapping that can be expected to vary from industry to industry). An initial, detailed quantitative breakdown of compliance costs was provided by one extremely helpful company, but, in addition to this information (similar to the outputs from the Manchester study), it was possible to explore the range of ways regulation might affect business incentives, operations, and strategies.

Postal questionnaire responses added to this initial view in significant ways, although the more general applicability of this finding is in our view subject to significant caveats.

The Manchester study found wide, inter-company variations in estimates of compliance costs, and it might be anticipated that a large-scale postal questionnaire would have value in providing more robust estimates of average values. Our results indicate that this is valid to some extent, but a number of important limiting factors should be taken into account. The most important is that the extra information obtained in this way may be rather limited. Variations in estimated costs appear to arise from two major factors:

- Underlying differences in the business positions, and
- Variations in the responses (i.e. different people, asked the same question in similar circumstances, giving different answers).

In relation to the first of these, large scale postal questionnaires pick up a larger range of individual circumstances, but it by no means immediately clear that much would be added to a targeted interview approach that deliberately seeks information from businesses known, from desk research, to face different circumstances. In our view, the value of the results of our postal questionnaire was significantly influenced by way in which it was constructed, which – following the initial interviews – aimed to constrain respondents in particular ways on some questions, whilst allowing more general concerns to be presented in other questions (e.g. the attitude question).

There is the further problem that, based on our results, response rates from small companies can be expected to be very low. It may, in practice, therefore be extremely

difficult to find sample frames large enough to obtain response levels that add anything very much to targeted interviews.

In relation to the second source of variation, our considered view is that this variation is likely to be higher in postal responses, and higher still in telephone interviews. We found telephone interviews to be the least informative of the strands of the study. Responses appeared to be more 'off-the-cuff' than for postal questionnaires, and, being more intrusive to respondents, the range of feasible questions is more limited.

Notwithstanding the above points with respect to biases that can be expected to affect cost estimates, our view is that the postal questionnaire did generate valuable additional information. However, we would urge considerable caution in seeking to generalise from this finding in a straightforward manner. In order to elaborate the reasons for this, it is useful to turn to the matter of the costs imposed on respondents by different approaches.

*(b) Costs*

Apart from the costs of conducting surveys, account must be taken of the costs imposed on respondents. Whilst face-to-face interviews are the most costly 'per case', we found businesses quite willing to give up their time. One reason for this is that such interviews are more of a two-way process, and there may be a perception that businesses get something back from the dialogue (there may also be therapeutic effects).

The costs imposed by responding to a postal questionnaire are within the control of the respondent -- it can be handled very quickly, or more thoughtfully -- and depend in part on the length and complexity of the questionnaire itself. A common response of businesses is that such questionnaires are just another box-ticking exercise instituted by government, which will affect nothing. That is, there is a perception that the exercise is just another example of more regulation, and the fact that the questions are about regulation is of no help here.

As recorded above, we eventually achieved a very good response rate -- well in excess of the 10% figure sometimes cited as a reasonable expectation -- but we have doubts that anything like such a rate could be achieved in a much wider exercise, particularly in sectors where trade association coverage is not so comprehensive. One of the central difficulties is that investigations of the effects of regulation can raise very sensitive issues for businesses, particularly among smaller firms. They can easily be read as investigations of compliance; and since any well conducted survey will inevitably throw some light on compliance issues, even if that is not a central aim, such an interpretation is not irrational.

The difficulties are heightened for telephone interviews. In this case, the respondent potentially has much less 'control' over his/her answers and over the time at which the answers are provided. We found the greatest defensiveness and resistance in conducting

this part of the study, and conclude that it is the most costly of the methods of acquiring useful information.

Thinking about the total time costs imposed on businesses by the study, we are of the view that, converted into a monetary value, they are not particularly high. A simple costing exercise suggests that they are significantly less, for example, than the costs of the project itself.

Although more speculative, the bigger concern arises from the potential effect on attitudes and the consequential effects of changes in attitudes. As already said, respondents see this kind of exercise as "just more regulation" of a kind that has no useful effects. Businesses do not generally understand the position of the RIU: it is just seen as part of government, adding to burdens. To the extent that there is any appreciation of RIU involvement by respondents, we suggest that there is risk of a negative effect on reputation by association.

(c) *Recommendations/suggestions*

If the RIU does decide to conduct further research of this kind, we have a number of suggestions to make, based upon experience gained from the current study.

1. The projects should have clearly defined objectives. Research can then be tailored more specifically to the relevant objectives, to achieve better value information for a given cost.
2. It would be beneficial if the work could be linked to possible future actions that might, depending upon findings, be taken. If these could be signaled to businesses, more information is likely to be forthcoming.
3. In a range of regulatory areas -- PAYE, VAT, employment, etc. -- regulatory impacts are likely to be broadly similar across sectors. It is not clear to us that repeatedly asking similar questions will add very much. Moreover, a number of costs can be estimated from market benchmarks (e.g. accountants fees) and simple characteristics of firms (e.g. number of employees) at significantly lower cost.
4. In other areas of regulation, investigation might usefully be based upon the impact of particular policies (e.g. IPPC), and therefore work with multi-industry samples -- rather than be industry/sector based.
5. Particular attention should be given to *variations* in the impact of regulation on different businesses. The average, overall burden of regulation can (as the results of the current study confirm) mask very considerable variations in effects, depending upon particular business circumstances, compliance options and strategies, etc. As well as raising issues of fairness, such variations can have

very material effects on the ways in which businesses compete and markets perform.

6. Consideration be given to an approach that focuses first upon a combination of desk-research and face-to-face interviews, and then uses a relatively limited and focused postal questionnaire to test general propositions that arise from the case study material (e.g. do you agree that ...). Depending upon objectives, this might be an efficient and effective approach in many circumstances.

## 5.2 Results for surface engineering

The principal objective of the study was to assess a methodology, but the work has, in the event, produced a database for surface engineering that we believe contains a considerable amount of valuable information on regulatory impacts.

It has not been possible to explore the possible implications of the data in any great detail, but here we highlight a number of notable results:

1. Headline numbers for the compliance costs of regulation suggest 'burdens' equal to around 2.3% of turnover, equivalent to £2,224 p.a. per full time employee.
2. The cost of time spent dealing with regulatory matters is a major contributor to the overall cost of regulation, accounting for well over 50% of that latter cost.
3. Respondents appeared more negative about regulation than they did in the Manchester study. Whilst the objectives of regulation were accepted as legitimate, the perception is that policy implementation and enforcement is, given the objectives, disproportionate.
4. There was also great concern in the sector about variations in the impact among businesses. We consider this a rational position, since such variations cause differentials in the competitive positions of individual businesses (in ways that a common, average burden does not).
5. Regulatory uncertainty was a very major issue. Such uncertainty stemmed from the sheer volume and complexity of regulation, its rate of change, and, perhaps most important of all, in variations in enforcement.
6. Similarly, compliance was a big issue for businesses in the industry. We found a perception that competitive advantage could be gained from non-compliance, which is generally much easier at small scale.
7. For compliant businesses, there is strong evidence of economies of scale in regulatory costs. Thus, the ratio of compliance costs to turnover is substantially

lower for larger firms than for smaller firms. Relative to their levels of activity, therefore, small firms face a particularly high burden of regulation.

8. On the other hand, there is evidence suggesting that regulatory uncertainty might have its greatest impact on medium-sized businesses. If corroborated, the impact of regulation on investment and business expansion among this key group of firms might be particularly problematic.
9. The evidence is consistent with the proposition that the regulatory environment encourages passive, 'lie low' strategies on the part of small businesses and, by the same token, discourages expansion, growth and innovation. Put another way, regulation may have the unintended, adverse consequence of creating barriers to expansion at small scale.

# ANNEX 1

## ANNEX 1 SURFACE ENGINEERING SECTOR OVERVIEW

### 1.1 Definition

Surface Engineering encompasses a broad variety of technologies designed to modify the surface properties of metallic and non-metallic components for specific and occasionally unique engineering functions. Surface Engineering has an impact on practically all manufactured items spanning from radiators to compact discs, that have had their surfaces “engineered”. These surface modifications can be broadly classified into processes that:

- Improve corrosion and resistance to extend useful life
- Improve the aesthetic appearance of components
- Impart special properties that may reduce wear resistance and frictionality
- Improve the functionality of a product, e.g. non-stick frying pans
- Improve electrical conductivity and solderability
- Metalise plastic components surfaces

### 1.2 Profile of the Industry

#### (a) Process Types

A general overview of the processes adopted in the industry is given in Figure A1.1

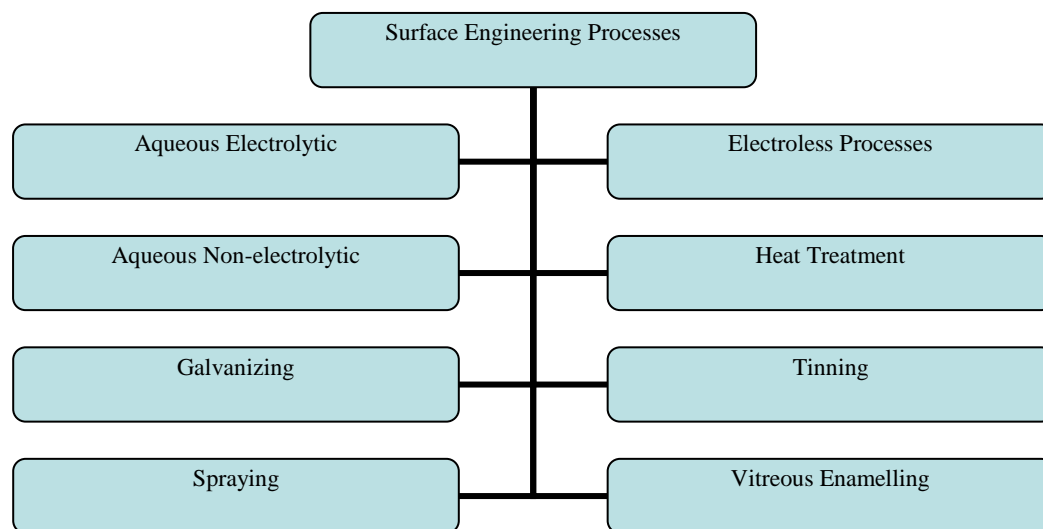


Figure 1.1 Key Surface Engineering Processes  
Source: Surface Engineering Association (SEA)

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A report by the Surface Engineering Association, considered both in house and sub-contract installations found, that there were between 2300 and 2500 sites carrying out one or more of the processes investigated. The processes incorporated in Table A1.1 capture the key engineering techniques of the sector that are highlighted in Figure 1.1

<b>Surface Engineering Sector</b>		<b>Table A1.1</b>
<b>Number of sites in each sub-sector</b>		
	<b>Number of sites</b>	
Electroplating	800 - 1000	
Painting & powder coating	1100 - 1300	
Heat treatment sites	200 - 270	
Anodising sites	<u>200 - 300</u>	
<b>TOTAL</b>	<b>2600</b>	

*Source: "Surface Engineering Industry: Statistical Report 1999", Surface Engineering Association*

*(b) Ownership Structure*

The UK Surface engineering industry can generally be classified into two main categories, "in house" and sub contract installations. The "in house" installations normally adopt surface engineering as part of a larger manufacturing process whilst in the sub contract sector this is the core activity. The in house sites are significantly larger than the sub contract firms but smaller in terms of sites, this is highlighted in Table A1.2, which includes the number of firms involved with the electronics sector.

<b>Surface Engineering Sector</b>		<b>Table A1.2</b>
<b>Ownership structure - General Metal Finishing</b>		
	<b>Number of sites</b>	
In-house	350	
Sub-contract	<u>650</u>	
<b>TOTAL</b>	<b>1,000</b>	

*Source: EA sector guidance 2001*

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(c) *Size of Companies*

The SEA survey shows that the Surface Engineering sector employees between 46,000 and 50,000 people. The Surface Engineering sector consists principally of small to medium sized enterprises, with a concentration of small firms; over half the sites employ fewer than 10 people, Table A1.3.

<b>Surface Engineering Sector</b>		<b>Table A1.3</b>
<b>Size measured by employment</b>		
<b>Number of Employees</b>	<b>Number of sites (%)</b>	
1 to 10	52	
11 to 20	29	
21 to 30	11	
31 to 50	5	
51 to 75	2	
76 to 100	1	
101 to 200	-	

*Source: EA sector guidance 2001*

(d) *Company Location*

The smaller companies have tended to predominate the sector essentially on a traditional basis. From the early 1800s early forms of surface engineering were adopted for decorative reasons, but as the industrial age expanded these innovative processes were being utilized for specific manufacturing and engineering applications. Companies in this sector have developed in support of local engineering companies, which were established within fairly small manufacturing catchment areas. An example of this is automotive supply in the West Midlands.

There has been a tendency for companies to work within supply chains within a 30 mile radius but with the increased specialisation and globalisation this trend is slowly shifting. The largest concentration of sites in the UK is in the London region, 29% and the Midlands with 28%. The Midlands accommodates the majority of larger sites whilst the smaller sites and specialist paint shops are situated in the London region.

An array of industries are serviced by the surface engineering sector, this includes the automotive, aircraft, aerospace, electronics and construction industries. High growth areas include the automotive sector, where consumer demand for vehicles less vulnerable to decay has led to an increase in coatings usage. The increase in powder coatings usage has also been fuelled by demand from the aerospace and consumer retail sectors. The growth in the number of powder coaters is expected due to lower barriers to entry compared to other sectors, such as electroplating.

### 1.3 Trade Association Structure

The industry is served by a number of well established and active trade associations. As the diagram below illustrates, Figure 1.2, the Surface Engineering Association is an umbrella association, incorporating the BSTSA, MFA, CHTA and PPFA. The TSSEA and HDG are the other principal trade associations.

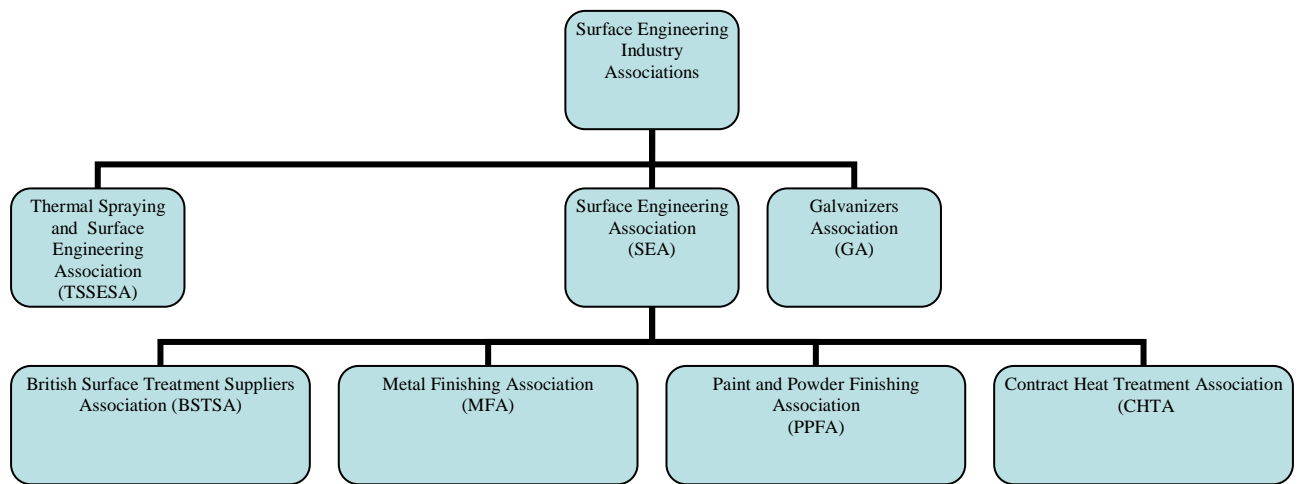


Figure 1.2 Trade Association Structure

# ANNEX 2

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**ANNEX 2**  
**RESULTS FROM POSTAL SURVEY**

**The Impact of Regulation on the Surface Engineering Sector**  
**Legal Form of Companies**

**Table A2.1**

	Number	% of Total	By Turnover		
			Low	Medium	High
Limited	87	89%	26	31	27
Division of Limited	1	1%	1	0	0
Partnership	3	3%	2	1	0
Plc	4	4%	1	0	2
Sole Trader	1	1%	1	0	0
No response	<u>2</u>	<u>2%</u>	<u>1</u>	<u>0</u>	<u>1</u>
<b>TOTAL</b>	<b>98</b>	<b>100%</b>	<b>32</b>	<b>32</b>	<b>30</b>

Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004

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**The Impact of Regulation on the Surface Engineering Sector  
Member of Group of Companies**

**Table A2.2**

	Number	% of Total	By Turnover		
			Low	Medium	High
Yes	39	40%	8	14	16
No	57	58%	24	18	14
No response	2	2%	0	0	0
TOTAL	98	100%	32	32	30

Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004

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**The Impact of Regulation on the Surface Engineering Sector  
Trade Association Membership**

**Table A2.3**

	Number	% of Total	By Turnover		
			Low	Medium	High
Yes	94	96%	31	30	30
No	3	3%	1	2	0
No response	1	1%	0	0	0
<b>TOTAL</b>	<b>98</b>	<b>100%</b>	<b>32</b>	<b>32</b>	<b>30</b>

Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004

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**The Impact of Regulation on the Surface Engineering Sector** **Table A2.4**  
**Number of full time and part time employees at the end of 2003**

	<b>FULL-TIME EMPLOYEES</b>				<b>PART-TIME EMPLOYEES</b>			
	<b><u>By Turnover</u></b>				<b><u>By Turnover</u></b>			
	<b>Total</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>	<b>Total</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>
Count of responses	<u>98</u>	<u>32</u>	<u>32</u>	<u>30</u>	<u>98</u>	<u>32</u>	<u>32</u>	<u>30</u>
Total number of employees	3,828	414	1,007	2,307	154	33	60	54
Average no. of employees	39	13	31	77	2	1	2	2
Max no. of employees	225	24	55	225	10	4	7	10
Min no. of employees	2	2	2	20	0	0	0	0

*Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004*

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**The Impact of Regulation on the Surface Engineering Sector** **Table A2.5**  
**Number of NEW full time and part time employees at the end of 2003 (Jan 1st - Dec 31st)**

	FULL-TIME EMPLOYEES				PART-TIME EMPLOYEES			
	<u>By Turnover</u>				<u>By Turnover</u>			
	Total	Low	Medium	High	Total	Low	Medium	High
Count of responses	<u>98</u>	<u>32</u>	<u>32</u>	<u>30</u>	<u>98</u>	<u>32</u>	<u>32</u>	<u>30</u>
Total number of employees	583	47	109	423	13	3	2	6
Average no.of employees	6.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2
Max no. of employees	215	8	21	215	2	1	1	2
Min no. of employees	0	0	0	0	0	0	0	0

Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004

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**The Impact of Regulation on the Surface Engineering Sector** **Table A2.6**  
**Voluntary departing full time and part time employees in 2003 (Jan 1st - Dec 31st)**

	<b>FULL-TIME EMPLOYEES</b>				<b>PART-TIME EMPLOYEES</b>			
	<b><u>By Turnover</u></b>				<b><u>By Turnover</u></b>			
	<b>Total</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>	<b>Total</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>
Count of responses	<u>98</u>	<u>32</u>	<u>32</u>	<u>30</u>	<u>98</u>	<u>32</u>	<u>32</u>	<u>30</u>
Total number of employees	351	34	105	201	15	4	4	5
Average no.of employees	3.6	1.1	3.3	6.7	0.2	0.1	0.1	0.2
Max no. of employees	30	5	30	26	2	2	2	2
Min no. of employees	0	0	0	0	0	0	0	0

*Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004*

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**The Impact of Regulation on the Surface Engineering Sector** **Table A2.7**  
**Involuntary departing full time and part time employees in 2003 (Jan 1st - Dec 31st)**

	<b>FULL-TIME EMPLOYEES</b>				<b>PART-TIME EMPLOYEES</b>			
	<b><u>By Turnover</u></b>				<b><u>By Turnover</u></b>			
	<b>Total</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>	<b>Total</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>
Count of responses	<u>98</u>	<u>32</u>	<u>32</u>	<u>30</u>	<u>98</u>	<u>32</u>	<u>32</u>	<u>30</u>
Total number of employees	212	7	53	152	0	0	0	0
Average no.of employees	2.2	0.2	1.7	5.1	0.0	0.0	0.0	0.0
Max no. of employees	77	2	9	77	0	0	0	0
Min no. of employees	0	0	0	0	0	0	0	0

*Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004*

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**The Impact of Regulation on the Surface Engineering Sector  
Number of disputes with employees in 2003**

**Table A2.8**

	Number	% of Total	By Turnover		
			Low	Medium	High
Yes	18	18%	3	7	4
No	78	80%	29	25	22
No response	2	2%	0	0	0
TOTAL	98	100%	32	32	26
Disputes ending in formal proceedings	12		3	3	6

Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004

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**The Impact of Regulation on the Surface Engineering Sector** Table A2.9  
**Annual turnover and Cost of materials**

	ANNUAL TURNOVER				COST OF MATERIALS			
	Total	Low	Medium	High	Total	Low	Medium	High
Count of responses	<u>98</u>	<u>32</u>	<u>32</u>	<u>30</u>	<u>98</u>	<u>32</u>	<u>32</u>	<u>30</u>
Total Value	345,424,388	19,080,000	50,694,388	275,650,000	105,439,450	4,281,000	10,180,450	90,978,000
Average value	3,674,728	596,250	1,584,200	9,188,333	1,226,040	152,893	328,402	3,369,556
Max value	90,000,000	900,000	2,000,000	90,000,000	40,000,000	700,000	1,000,000	40,000,000
Min value	300,000	300,000	970,000	2,100,000	0	20,000	30,000	0

Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004

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**The Impact of Regulation on the Surface Engineering Sector** **Table A2.10**  
**Number of companies who exported goods and exports as a % of turnover**

	Number	% of Total	By Turnover		
			Low	Medium	High
Yes	41	42%	9	10	22
No	54	55%	23	22	8
No response	<u>3</u>	<u>3%</u>	<u>0</u>	<u>0</u>	<u>0</u>
TOTAL	98	100%	32	32	30
<u>Exports as a % of turnover</u>					
Number of companies which export	<u>41</u>		<u>9</u>	<u>10</u>	<u>22</u>
Average % of turnover	23%		18%	15%	29%
Max % of turnover	80%		50%	60%	80%
Min. % of turnover	0%		0%	1%	2%

Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004

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**The Impact of Regulation on the Surface Engineering Sector  
Number of firms who use the services of an external accountant**

**Table A2.11**

	Number	By Turnover		
		Low	Medium	High
Auditing	91	30	31	29
Payroll	16	7	3	5
Corporation tax	62	20	24	17
Company Expenses	40	17	17	5

Source: RPI Survey 2004

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**The Impact of Regulation on the Surface Engineering Sector** **TableA2.12**  
**Payments for external assistance with health & safety and fire regulations in 2003**

	<b>Fire Assistance</b>				<b>Health &amp; Safety Assistance</b>			
	<b>By Turnover</b>				<b>By Turnover</b>			
	<b>Total</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>	<b>Total</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>
No.of companies	<u>24</u>	<u>11</u>	<u>6</u>	<u>7</u>	<u>56</u>	<u>15</u>	<u>18</u>	<u>22</u>
Total costs	31,225	9,050	10,550	11,625	193,266	21,600	67,441	104,225
Average cost	1,487	823	2,110	2,325	3,865	1,543	3,967	5,486
Max. cost	5,000	2,500	5,000	3,425	35,500	4,500	20,000	35,500
Min. cost	100	100	550	400	200	200	500	400

*Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004*

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The Impact of Regulation on the Surface Engineering Sector  
Payments to HSE for site visits in 2003

Table A2.13

	Health & Safety Assistance			
	Total	By Turnover		
		Low	Medium	High
No.of companies visited by HSE	3	0	0	3
Total costs for site visits	11,000	0	0	11,000
Average cost per firm	3,667	0	0	3,667
Max. cost	8,500	0	0	8,500
Min. cost	1,000	0	0	1,000

Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004

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**The Impact of Regulation on the Surface Engineering Sector** **Table A2.14**  
**Number of companies who are registered for COMAH and tier level**

	Number	% of Total	By Turnover		
			Low	Medium	High
Yes	7	7%	2	0	5
No	90	92%	30	32	25
No response	1	1%	0	0	0
TOTAL	98	100%	32	32	30
<u>Tier Level</u>					
Lower	7		2	0	5

Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004

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**The Impact of Regulation on the Surface Engineering Sector** **Table A2.15**  
**Equipment costs for health & safety and fire regulations in 2003**

	Fire Equipment <u>By Turnover</u>				Health & Safety Equipment <u>By Turnover</u>			
	Total	Low	Medium	High	Total	Low	Medium	High
No. of companies	<u>58</u>	<u>19</u>	<u>20</u>	<u>18</u>	<u>67</u>	<u>22</u>	<u>20</u>	<u>25</u>
Total costs	131,530	25,650	24,380	75,000	498,930	57,050	143,053	298,827
Average cost	2,268	1,350	1,219	4,167	7,560	2,593	7,153	12,451
Max. cost	30,000	7,000	3,000	30,000	100,000	20,000	32,003	100,000
Min. cost	100	100	234	200	200	200	400	500

Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004

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**The Impact of Regulation on the Surface Engineering Sector  
Equipment costs higher/lower than previous 3 or 4 years**

**Table A2.16**

	Number	% of Total	By Turnover		
			Low	Medium	High
<u>Costs differ from previous years</u>					
Yes	41	42%	12	15	14
No	43	44%	15	14	14
No response	14	14%	5	3	2
TOTAL	98	100%	32	32	30
<u>Costs higher/lower</u>					
Substantially higher	29	30%	8	10	11
Substantially lower	8	8%	3	2	3
No	28	29%	9	8	11
No response	32	33%	11	12	5
Yes	1	1%	1	0	0
TOTAL	98	100%	32	32	30

Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004

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**The Impact of Regulation on the Surface Engineering Sector** **Table A2.17**  
**Payments for external assistance for assistance with environmental regulations in 2003**

	Total	By Turnover		
		Low	Medium	High
No.of companies using external assistance	<u>43</u>	<u>9</u>	<u>17</u>	<u>16</u>
Total costs	201,593	24,000	49,017	118,576
Average cost per firm	4,800	3,000	2,883	7,411
Max. cost	50,000	6,000	8,000	50,000
Min. cost	500	1,000	500	500

Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004

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**The Impact of Regulation on the Surface Engineering Sector** **Table A2.18**  
**Payments to Environment Agency for site visits in 2003**

	Total	By Turnover		
		Low	Medium	High
No. of companies visited by EA	8	1	1	6
Total costs for site visits	28,750	500	10,000	18,250
Average cost per firm	3,594	500	10,000	3,042
Max. cost	10,000	500	10,000	8,000
Min. cost	500	500	10,000	600

Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004

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**The Impact of Regulation on the Surface Engineering Sector  
Equipment costs for environment regulations in 2003**

**Table A2.19**

	Total	By Turnover		
		Low	Medium	High
No.of companies incurring equipment costs	<u>91</u>	<u>17</u>	<u>22</u>	<u>15</u>
Total costs	928,918	99,600	92,900	307,168
Average cost per firm	10,556	5,859	4,645	21,941
Max. cost	162,000	40,000	15,000	162,000
Min. cost	500	500	500	500

Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004

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**The Impact of Regulation on the Surface Engineering Sector** **Table A2.20**  
**Environment equipment costs higher/lower than previous 3 or 4 years**

	Number	% of Total	By Turnover		
			Low	Medium	High
<u>Costs differ from previous years</u>					
Yes	37	38%	13	11	12
No	45	46%	12	20	13
No response	<u>16</u>	<u>16%</u>	<u>7</u>	<u>1</u>	<u>5</u>
TOTAL	98	100%	32	32	30
<u>Costs higher/lower</u>					
Substantially higher	23	23%	9	7	7
Substantially lower	11	11%	4	3	3
Higher/Lower	1	1%	0	0	1
No	39	40%	12	17	10
No response	<u>24</u>	<u>24%</u>	<u>7</u>	<u>5</u>	<u>9</u>
TOTAL	98	100%	32	32	30

Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004

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**The Impact of Regulation on the Surface Engineering Sector** **Table A2.21**  
**Number of companies eligible for CCL agreements**

	Number	% of Total	By Turnover		
			Low	Medium	High
Yes	67	68%	19	24	22
No	28	29%	12	7	8
No response	<u>3</u>	<u>3%</u>	<u>1</u>	<u>1</u>	<u>0</u>
TOTAL	98	100%	32	32	30
<u>Member of Trade Association Agreement</u>					
Yes	42	43%	8	17	15
No	51	52%	22	13	15
No response	<u>5</u>	<u>5%</u>	<u>2</u>	<u>2</u>	<u>0</u>
TOTAL	98	100%	32	32	30

Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004

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**The Impact of Regulation on the Surface Engineering Sector  
Expected IPPC classification**

**Table A2.22**

	Total	% of Total	By Turnover		
			Low	Medium	High
A1	30	31%	10	6	12
A2	11	11%	1	4	6
B	11	11%	5	2	4
No response	20	20%	6	9	3
Not covered	16	16%	5	7	4
unsure	8	8%	5	2	1
A	<u>2</u>	<u>2%</u>	<u>0</u>	<u>2</u>	<u>0</u>
TOTAL	98	100%	32	32	30
<u>Expected High IPPC Costs</u>					
Yes	46	47%	13	19	13
No	42	43%	14	12	15
No response	<u>10</u>	<u>10%</u>	<u>5</u>	<u>1</u>	<u>2</u>
TOTAL	98	100%	32	32	30

Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004

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**The Impact of Regulation on the Surface Engineering Sector** **Table A2.23**  
**Employee days spent on external training courses (days per annum)**

	COMPLETED RESPONSES			
	Total	By Turnover		
		Low	Medium	High
<u>PAYE, VAT Corporation Tax</u>				
Number of firms responding	<u>70</u>	<u>23</u>	<u>23</u>	<u>24</u>
Total number of days	54	4	11	39
Average number of days	0.8	0.2	0.5	1.6
Max. number of days	15	2	2	15
Min. number of days	0	0	0	0
<u>Employment Regulation</u>				
Number of firms responding	<u>73</u>	<u>24</u>	<u>24</u>	<u>25</u>
Total number of days	96	6	21	69
Average number of days	1.3	0.3	0.9	2.8
Max. number of days	26	4	5	26
Min. number of days	0	0	0	0
<u>Fire Regulation</u>				
Number of firms responding	<u>71</u>	<u>23</u>	<u>23</u>	<u>24</u>
Total number of days	24	3	7	8.5
Average number of days	0.3	0.1	0.3	0.4
Max. number of days	5	2	2	5
Min. number of days	0	0	0	0
<u>Health &amp; Safety Regulation</u>				
Number of firms responding	<u>76</u>	<u>24</u>	<u>26</u>	<u>25</u>
Total number of days	308	14	89	143
Average number of days	4.1	0.6	3.4	5.7
Max. number of days	62	4	30	20
Min. number of days	0	0	0	0
<u>Environment regulations</u>				
Number of firms responding	<u>75</u>	<u>24</u>	<u>26</u>	<u>24</u>
Total number of days	202	56	74	69
Average number of days	2.7	2.3	2.8	2.9
Max. number of days	20	20	12	13
Min. number of days	0	0	0	0
<u>Other regulations</u>				
Number of firms responding	<u>59</u>	<u>21</u>	<u>17</u>	<u>21</u>
Total number of days	99	40	3	56
Average number of days	1.7	1.9	0.2	2.7
Max. number of days	36	28	3	36
Min. number of days	0	0	0	0

Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004

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**The Impact of Regulation on the Surface Engineering Sector** **Table A2.24**  
**Payments made for external training courses for employees (£ per annum)**

	COMPLETED RESPONSES			
	Total	<u>By Turnover</u>		
		Low	Medium	High
<u>PAYE, VAT Corporation Tax</u>				
Total cost	35,185	1,000	26,305	7,880
Average cost	496	43	1,096	328
Max. cost	25,000	500	25,000	3,000
Min. cost	0	0	0	0
<u>Employment Regulation</u>				
Total cost	19,680	400	5,340	13,940
Average cost	270	17	223	558
Max. cost	7,000	400	2,000	7,000
Min. cost	0	0	0	0
<u>Fire Regulation</u>				
Total cost	2,935	795	920	570
Average cost	43	35	42	25
Max. cost	650	500	500	300
Min. cost	0	0	0	0
<u>Health &amp; Safety Regulation</u>				
Total cost	41,637	2,200	9,972	25,688
Average cost	570	96	416	1,028
Max. cost	6,000	1,000	2,000	6,000
Min. cost	0	0	0	0
<u>Environment regulations</u>				
Total cost	38,065	12,150	11,990	13,630
Average cost	514	506	480	568
Max. cost	6,000	6,000	2,500	3,000
Min. cost	0	0	0	0
<u>Other regulations</u>				
Total cost	10,700	2,650	1,500	6,550
Average cost	181	133	88	298
Max. cost	3,600	1,500	1,500	3,600
Min. cost	0	0	0	0

Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004

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**The Impact of Regulation on the Surface Engineering Sector** **Table A2.25**  
**Employee days spent on internal training/awareness courses in 2003**

	COMPLETED RESPONSES			
	Total	By Turnover		
		Low	Medium	High
<u>PAYE, VAT Corporation Tax</u>				
Number of firms responding	<u>77</u>	<u>26</u>	<u>27</u>	<u>24</u>
Total number of days	189	90	50	49
Average number of days	2	3	2	2
Max. number of days	30	30	20	24
Min. number of days	0	0	0	0
<u>Employment Regulation</u>				
Number of firms responding	<u>77</u>	<u>25</u>	<u>26</u>	<u>25</u>
Total number of days	314	48	71	150
Average number of days	4	2	3	6
Max. number of days	50	10	10	50
Min. number of days	0	0	0	0
<u>Fire Regulation</u>				
Number of firms responding	<u>84</u>	<u>28</u>	<u>29</u>	<u>26</u>
Total number of days	861	107	136	573
Average number of days	10	4	5	22
Max. number of days	216	35	30	216
Min. number of days	0	0	0	0
<u>Health &amp; Safety Regulation</u>				
Number of firms responding	<u>86</u>	<u>26</u>	<u>32</u>	<u>27</u>
Total number of days	1,272	153	379	695
Average number of days	15	6	12	26
Max. number of days	100	35	100	100
Min. number of days	0	0	0	0
<u>Environment regulations</u>				
Number of firms responding	<u>83</u>	<u>28</u>	<u>28</u>	<u>26</u>
Total number of days	1,407	160	517	685
Average number of days	17	6	18	26
Max. number of days	300	30	200	300
Min. number of days	0	0	0	0
<u>Other regulations</u>				
Number of firms responding	<u>50</u>	<u>17</u>	<u>15</u>	<u>18</u>
Total number of days	4	0	0	4
Average number of days	0	0	0	0
Max. number of days	4	0	0	4
Min. number of days	0	0	0	0

Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004

FINAL REPORT

**The Impact of Regulation on the Surface Engineering Sector** Table A2.26  
**Senior Management/Executive days spent on EXISTING regulatory requirements in 2003**

	COMPLETED RESPONSES			
	Total	Low	By Turnover	
Medium			High	
<u>PAYE, VAT Corporation Tax</u>				
Number of firms responding	79	27	25	27
Total number of days	1,918	140	512	1,266
Average number of days	24	5	20	47
Max. number of days	1,000	30	100	1,000
Min. number of days	0	0	0	0
<u>Employment Regulation</u>				
Number of firms responding	78	26	27	25
Total number of days	666	142	230	294
Average number of days	9	5	9	12
Max. number of days	100	30	60	100
Min. number of days	0	0	0	0
<u>Fire Regulation</u>				
Number of firms responding	79	26	27	26
Total number of days	217	52	55	110
Average number of days	3	2	2	4
Max. number of days	20	6	10	20
Min. number of days	0	0	0	0
<u>Health &amp; Safety Regulation</u>				
Number of firms responding	81	27	27	27
Total number of days	1,566	201	441	924
Average number of days	19	7	16	34
Max. number of days	300	30	200	300
Min. number of days	0	0	0	0
<u>Environment regulations</u>				
Number of firms responding	83	28	28	27
Total number of days	1,771	339	701	731
Average number of days	21	12	25	27
Max. number of days	300	100	300	200
Min. number of days	0	0	0	0
<u>Other regulations</u>				
Number of firms responding	50	17	15	18
Total number of days	52	10	10	32
Average number of days	1	1	1	2
Max. number of days	30	10	10	30
Min. number of days	0	0	0	0

Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004

FINAL REPORT

**The Impact of Regulation on the Surface Engineering Sector** **Table A2.27**  
**Other staff days spent on EXISTING regulatory requirements in 2003**

	COMPLETED RESPONSES			
	Total	<u>By Turnover</u>		
		Low	Medium	High
<u>PAYE, VAT Corporation Tax</u>				
Number of firms responding	71	24	22	25
Total number of days	2,326	453	247	1,626
Average number of days	33	19	11	65
Max. number of days	1,000	104	120	1,000
Min. number of days	0	0	0	0
<u>Employment Regulation</u>				
Number of firms responding	68	23	22	23
Total number of days	501	41	73	387
Average number of days	7	2	3	17
Max. number of days	200	22	30	200
Min. number of days	0	0	0	0
<u>Fire Regulation</u>				
Number of firms responding	69	23	22	24
Total number of days	156	22	39	95
Average number of days	2	1	2	4
Max. number of days	24	10	10	24
Min. number of days	0	0	0	0
<u>Health &amp; Safety Regulation</u>				
Number of firms responding	69	24	21	24
Total number of days	1,039	71	92	876
Average number of days	15	3	4	37
Max. number of days	200	20	30	200
Min. number of days	0	0	0	0
<u>Environment regulations</u>				
Number of firms responding	70	24	22	24
Total number of days	1,211	147	188	876
Average number of days	17	6	9	37
Max. number of days	300	85	120	300
Min. number of days	0	0	0	0
<u>Other regulations</u>				
Number of firms responding	52	18	16	18
Total number of days	143	3	0	140
Average number of days	3	0	0	8
Max. number of days	140	3	0	140
Min. number of days	0	0	0	0

Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004

FINAL REPORT

**The Impact of Regulation on the Surface Engineering Sector** **Table A2.28**  
**Senior Management/Executive days spent on NEW regulatory requirements in 2003**

	COMPLETED RESPONSES			
	Total	By Turnover		
		Low	Medium	High
<u>PAYE, VAT Corporation Tax</u>				
Number of firms responding	82	29	25	27
Total number of days	232	74	82	66
Average number of days	3	3	3	2
Max. number of days	20	15	20	12
Min. number of days	0	0	0	0
<u>Employment Regulation</u>				
Number of firms responding	80	28	25	26
Total number of days	374	81	131	142
Average number of days	5	3	5	5
Max. number of days	50	15	50	20
Min. number of days	0	0	0	0
<u>Fire Regulation</u>				
Number of firms responding	81	27	26	27
Total number of days	131	31	38	52
Average number of days	2	1	1	2
Max. number of days	20	6	5	20
Min. number of days	0	0	0	0
<u>Health &amp; Safety Regulation</u>				
Number of firms responding	84	28	27	28
Total number of days	578	114	164	280
Average number of days	7	4	6	10
Max. number of days	50	20	50	50
Min. number of days	0	0	0	1
<u>Environment regulations</u>				
Number of firms responding	86	29	28	28
Total number of days	1,541	495	400	626
Average number of days	18	17	14	22
Max. number of days	150	150	150	150
Min. number of days	0	0	0	0
<u>Other regulations</u>				
Number of firms responding	54	19	16	19
Total number of days	76	10	0	66
Average number of days	1	1	0	3
Max. number of days	50	10	0	50
Min. number of days	0	0	0	0

Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004

FINAL REPORT

**The Impact of Regulation on the Surface Engineering Sector** **Table A2.29**  
**Balance of regulation (score out of 10, where a higher score means more reasonable)**

	<b>COMPLETED RESPONSES</b>			
	<b>Total</b>	<b>By Turnover</b>		
		<b>Low</b>	<b>Medium</b>	<b>High</b>
<u>PAYE, VAT Corporation Tax</u>				
Number of firms responding	<u>82</u>	<u>26</u>	<u>27</u>	<u>28</u>
Average score	5.7	5.9	5.5	5.8
Max.score	10.0	10.0	9.0	10.0
Min. score	0.0	0.0	0.0	1.0
<u>Employment Regulation</u>				
Number of firms responding	<u>85</u>	<u>28</u>	<u>30</u>	<u>26</u>
Average score	4.4	5.4	4.0	4.0
Max.score	10	10	8	8
Min. score	0	0	0	0
<u>Fire Regulation</u>				
Number of firms responding	<u>88</u>	<u>28</u>	<u>30</u>	<u>29</u>
Average score	6.6	6.8	6.5	6.5
Max.score	10.0	10.0	10.0	10.0
Min. score	0.0	0.0	1.0	2.0
<u>Health &amp; Safety Regulation</u>				
Number of firms responding	<u>88</u>	<u>28</u>	<u>30</u>	<u>29</u>
Average score	5.4	5.6	5.1	5.3
Max.score	10.0	10.0	9.0	10.0
Min. score	1.0	1.0	1.0	1.0
<u>Environment regulations</u>				
Number of firms responding	<u>87</u>	<u>28</u>	<u>30</u>	<u>28</u>
Average score	3.9	3.8	3.5	4.1
Max.score	10.0	10.0	9.0	8.0
Min. score	0.0	1.0	0.0	1.0

Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004

**FINAL REPORT**

**The Impact of Regulation on the Surface Engineering Sector** **Table A2.30**  
**Have employment regulations affecting a hiring or firing decision**

	Number	% of Total	By Turnover		
			Low	Medium	High
Yes	58	59%	12	23	21
No	34	35%	19	8	7
No response	6	6%	1	1	2
TOTAL	98	100%	32	32	30

Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004

FINAL REPORT

**The Impact of Regulation on the Surface Engineering Sector** **Table A2.31**  
**Have PAYE arrangements affected your ability to secure overtime from your employees**

	Number	% of Total	By Turnover		
			Low	Medium	High
Yes	48	49%	14	19	14
No	41	42%	16	12	12
No response	9	9%	2	1	4
TOTAL	98	100%	32	32	30

Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004

**FINAL REPORT**

**The Impact of Regulation on the Surface Engineering Sector** **Table A2.32**  
**Have you ever declined orders because of the operation of a particular regulation**

	Number	% of Total	By Turnover		
			Low	Medium	High
Yes	40	41%	10	17	13
No	53	54%	20	15	16
No response	<u>5</u>	<u>5%</u>	<u>2</u>	<u>0</u>	<u>1</u>
TOTAL	98	100%	32	32	30

Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004

FINAL REPORT

**The Impact of Regulation on the Surface Engineering Sector**  
**Have you ever lost business because of the operation of a particular regulation**

**Table A2.33**

	Number	% of Total	By Turnover		
			Low	Medium	High
Yes	34	35%	7	14	13
No	58	59%	22	18	16
No response	6	6%	3	0	1
TOTAL	98	100%	32	32	30

Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004

FINAL REPORT

**The Impact of Regulation on the Surface Engineering Sector** **Table A2.34**  
**Ceased a production activity because of the operation of a particular regulation**

	Number	% of Total	By Turnover		
			Low	Medium	High
Yes	45	46%	13	19	13
No	51	52%	19	13	17
No response	2	2%	0	0	0
TOTAL	98	100%	32	32	30
<u>Do you anticipate such a situation is likely to arise in the near future?</u>					
Yes	61	62%	19	22	20
No	30	31%	12	8	9
No response	7	7%	1	2	1
TOTAL	98	100%	32	32	30

Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004

FINAL REPORT

**The Impact of Regulation on the Surface Engineering Sector** Table A2.35  
**Have a regulation ever deterred you from engaging in other surface engineering processes**

	Number	% of Total	By Turnover		
			Low	Medium	High
Yes	60	61%	20	21	18
No	36	37%	12	11	12
No response	2	2%	0	0	0
TOTAL	98	100%	32	32	30

Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004

FINAL REPORT

**The Impact of Regulation on the Surface Engineering Sector** **Table A2.36**  
**Have a regulation ever prevented you from pursuing other business opportunities**

	Number	% of Total	By Turnover		
			Low	Medium	High
Yes	55	56%	18	21	15
No	41	42%	14	11	15
No response	2	2%	0	0	0
TOTAL	98	100%	32	32	30

Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004

**FINAL REPORT**

**The Impact of Regulation on the Surface Engineering Sector** **Table A2.37**  
**Investment decisions affected by uncertainty about regulatory change in near future**

	Number	% of Total	By Turnover		
			Low	Medium	High
Yes	67	68%	22	27	17
No	28	29%	10	5	12
No response	3	3%	0	0	1
<b>TOTAL</b>	<b>98</b>	<b>100%</b>	<b>32</b>	<b>32</b>	<b>30</b>

Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004

**FINAL REPORT**

**The Impact of Regulation on the Surface Engineering Sector** **Table A2.38**  
**Brought forward investment in new production technology to comply with regulations**

	Number	% of Total	By Turnover		
			Low	Medium	High
Yes	45	46%	15	14	16
No	51	52%	17	18	14
No response	<u>2</u>	<u>2%</u>	<u>0</u>	<u>0</u>	<u>0</u>
TOTAL	98	100%	32	32	30

Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004

**FINAL REPORT**

**The Impact of Regulation on the Surface Engineering Sector** **Table A2.39**  
**Restricted in the introduction of specific technology as a result of environment regulation**

	Number	% of Total	By Turnover		
			Low	Medium	High
Yes	37	38%	11	12	13
No	58	59%	21	20	16
No response	<u>3</u>	<u>3%</u>	<u>0</u>	<u>0</u>	<u>1</u>
TOTAL	98	100%	32	32	30

Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004

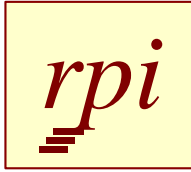
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**The Impact of Regulation on the Surface Engineering Sector** **Table A2.40**  
**Business decisions materially affected by uncertainty about regulatory enforcement**

	Number	% of Total	By Turnover		
			Low	Medium	High
Yes	70	71%	25	25	20
No	26	27%	7	7	10
No response	<u>2</u>	<u>2%</u>	<u>0</u>	<u>0</u>	<u>0</u>
TOTAL	98	100%	32	32	30

Source: RPI Postal Survey of 102 companies in the surface engineering sector, 2004

# ANNEX 3



**Regulatory Policy Institute**  
31-33 Westgate  
Oxford OX1 1NZ  
Tel: +44 (0)1865 792858  
Fax: +44 (0)1865 241885  
[www.rpieurope.org](http://www.rpieurope.org)

**Name of respondent:** \_\_\_\_\_

**Position:** \_\_\_\_\_

**Name of Company:** \_\_\_\_\_

**Please note that the purpose of this study is to assess the overall burden of regulation on business and is not concerned with the position of any specific business. We will ensure that information received cannot be attributed to named or identifiable individuals or companies**

**FINAL REPORT**

## The Impact of Regulation on Businesses in the Surface Engineering Sector

### Survey Questionnaire

#### Part 1: General information concerning your company

*Before moving on to questions more directly concerned with the burden of regulation, we would be grateful if you would spend a few minutes answering some more general questions about your company that are of relevance for comparative purposes.*

**1.1 Please indicate which of the following surface engineering activities your business undertakes. Please mark the second column if the activity represents a relatively minor part of your business.**

	Yes	Yes, but minor		Yes	Yes, but minor
Anodising	<input type="checkbox"/>	<input type="checkbox"/>	Heat Treatment	<input type="checkbox"/>	<input type="checkbox"/>
Coating	<input type="checkbox"/>	<input type="checkbox"/>	Spraying	<input type="checkbox"/>	<input type="checkbox"/>
Electroplating	<input type="checkbox"/>	<input type="checkbox"/>	Equipment Supply	<input type="checkbox"/>	<input type="checkbox"/>
Galvanising	<input type="checkbox"/>	<input type="checkbox"/>	Other	<input type="checkbox"/>	<input type="checkbox"/>

*Please Specify* \_\_\_\_\_

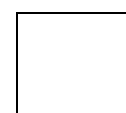
**1.2 Please specify the legal form of your company:**

Sole Trader	<input type="checkbox"/>	Limited Company	<input type="checkbox"/>
Partnership	<input type="checkbox"/>	Other	<input type="checkbox"/>

*Please Specify*

**1.3 Are you are a member of a group of companies?**      Yes          No   

**1.4 Are you a member of a trade association?**      Yes          No   



**FINAL REPORT**

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**1.5 How many employees did your company have at the end of 2003?**

Full Time \_\_\_\_\_ Part Time \_\_\_\_\_

**1.6 How many new employees joined your workforce in 2003 (Jan 1st-Dec 31st)?**

Full Time \_\_\_\_\_ Part Time \_\_\_\_\_

**1.7 How many employees left your workforce in 2003 (Jan 1st-Dec 31st)?**

	Full Time	Part Time
Voluntarily:	_____	_____
Dismissals:	_____	_____

**1.8 Did you have any disputes with departing employees in 2003?**

Yes  No

If yes, how many of these disputes resulted in formal proceedings? \_\_\_\_\_

**1.9 Please give a rough indication of:**

Your company's annual turnover? £ \_\_\_\_\_

Your annual cost of bought in materials? £ \_\_\_\_\_

*Note: Our interest here is not in the detail of your individual financial accounts, but rather in getting approximate figures for comparative purposes.*

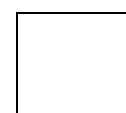
**1.10 Did you company export goods in 2003? Yes  No**

If yes, roughly what proportion of your turnover did exports account for in 2003? \_\_\_\_\_ %

**1.11 Please specify which of the following activities you use an external accountant (or other firm) for:**

Auditing	<input type="checkbox"/>	Corporation Tax	<input type="checkbox"/>
Payroll	<input type="checkbox"/>	Company Expenses (P11D)	<input type="checkbox"/>
VAT	<input type="checkbox"/>	Other	<input type="checkbox"/>

*Please Specify*



**FINAL REPORT**

**Part 2: Health & Safety and Fire regulations**

**2.1 Did you pay for external assistance/consultancy when dealing with the following types of regulation in 2003. Where you did use such assistance, please provide an approximate estimate of payments for 2003.**

	Yes	No	Estimate of payments for 2003
Fire Regulation	<input type="checkbox"/>	<input type="checkbox"/>	£ _____
Health and Safety Regulation	<input type="checkbox"/>	<input type="checkbox"/>	£ _____

**2.2 Did you make any payments to the Health and Safety Executive for site visits in 2003 (January 1st – December 31st)?**

Yes  No

If yes, could you estimate the approximate size of the payments £ \_\_\_\_\_

**2.3 Is your business COMAH registered?** Yes  No

If yes, which tier? Top  Lower

**2.4 Did you incur any equipment costs in 2003 to comply with Health & Safety and Fire regulations? Where you did incur such costs, please provide an approximate estimate.**

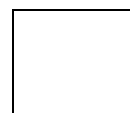
	Yes	No	Estimate of costs
Fire Regulation	<input type="checkbox"/>	<input type="checkbox"/>	£ _____
Health and Safety Regulation	<input type="checkbox"/>	<input type="checkbox"/>	£ _____

**2.5 Were these equipment costs for 2003 substantially higher or lower than those in any of the previous 3 or 4 years?**

Yes  No

If yes, were they: Substantially Higher  Substantially Lower

Could you provide further details \_\_\_\_\_



FINAL REPORT

**Part 3: Environmental Regulation**

**3.1 Did you pay for external assistance/consultancy in dealing with environmental regulation in 2003 (January 1<sup>st</sup> – December 31<sup>st</sup>)?**

Yes  No

If yes, could you estimate the approximate size of the payments £ \_\_\_\_\_

**3.2 Did you make any payments to the Environment Agency for site visits in 2003 (January 1<sup>st</sup> – December 31<sup>st</sup>)?**

Yes  No

If yes, could you estimate the approximate size of the payments £ \_\_\_\_\_

**3.3 Did you incur any equipment costs in 2003 to comply with environmental regulation?**

Yes  No

If yes, could you estimate the approximate size of your costs incurred in the table below:

	Estimated Cost for 2003
Energy Saving Equipment	£ _____
Water-use reduction equipment	£ _____
Effluent quality management	£ _____
Other ( <i>please specify</i> ): -----	£ _____

**3.4 Were these equipment costs for 2003 substantially higher or lower than those in any of the previous 3 or 4 years?**

Yes  No

If yes, were they: Substantially Higher  Substantially Lower

Could you provide further details -----  
-----

**3.5 Is your business eligible to join an industry agreement in order to reduce your Climate Change Levy payments?**

Yes  No

If yes, are you currently a member of such an agreement? Yes  No

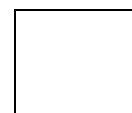
**3.6 Looking ahead to the introduction of IPPC, which category do you expect to be classified as?**

A1  A2  B

**3.7 Are there particular characteristics of your business that lead you to expect that you will face unusually high IPPC registration/compliance costs?**

Yes  No

If yes, could you provide further details -----  
-----



**FINAL REPORT**

**Part 4: Working time absorbed as a result of regulation**

*In this section we firstly ask about employee time spent on training/awareness-raising before asking about senior management/executive time.*

**4.1 Please provide an estimate of employee time spent attending external training courses related to regulation and, if possible, an estimate of payments made for those courses.**

	Employee time at external courses (days per year)	Payments for external course
PAYE, VAT, Corporation Tax, Auditing, Expenses etc.	_____	£ _____
Employment Regulation	_____	£ _____
Fire Regulation	_____	£ _____
Health and Safety Regulation	_____	£ _____
Environmental Regulation	_____	£ _____
Other ( <i>please specify</i> )	_____	£ _____
-----	_____	£ _____

**4.2 Please estimate the number of employee days spent in 2003 on internal training/awareness-raising as a result of regulation**

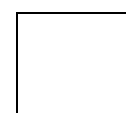
Number of working days in 2003

PAYE, VAT, Corporation Tax, Auditing, Expenses etc.	_____
Employment Regulation	_____
Fire Regulation (including fire drills)	_____
Health and Safety Regulation	_____
Environmental Regulation	_____
Other ( <i>please specify</i> ):	_____
-----	_____

**4.3 Please estimate the amount of time spent by senior management/executives and other staff in 2003 dealing with existing regulatory requirements?**

*Please do not include time spent keeping up-to-date with new regulations as this is dealt with in question 4.4 below.*

	<u>Number of days in 2003</u>	
	Senior Management/Executives	Other Staff
PAYE, VAT, Corporation Tax, Auditing, Expenses etc.	_____	_____
Employment Regulation	_____	_____
Fire Regulation	_____	_____
Health and Safety Regulation	_____	_____
Environmental Regulation	_____	_____
Other ( <i>please specify</i> )	_____	_____



**FINAL REPORT**

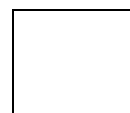
**4.4 Please estimate how much of your senior management/executives time in 2003 was occupied keeping abreast of new regulations, and working out their implications for your business?**

	Number of days in 2003
PAYE, VAT, Corporation Tax, Auditing, Expenses etc.	_____
Employment Regulation	_____
Fire Regulation	_____
Health and Safety Regulation	_____
Environmental Regulation	_____
Other ( <i>please specify</i> )	_____
-----	_____

**4.5 Thinking about the time you spend dealing with regulation and taking account of what it is that various regulations are intended to do, how reasonable a balance do you think is currently being struck?**

*Please mark each area of regulation out of 10, where a higher score means more reasonable and a lower score means less reasonable.*

PAYE, VAT, Corporation Tax, Auditing, Expenses etc.	_____ /10
Employment Regulation	_____ /10
Fire Regulation	_____ /10
Health and Safety Regulation	_____ /10
Environmental Regulation	_____ /10
Other ( <i>please specify</i> )	_____ /10
-----	_____ /10



**FINAL REPORT**

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**Part 5: Effects of Regulation on Business Decisions**

*After each question in this section there is a space for you to provide details should you wish to do so.*

**5.1 Have employment regulations ever affected a hiring or firing decision you have made?**

Yes  No

Comments

---

**5.2 Have the PAYE arrangements (including tax credits) ever affected your ability to secure overtime working from your employees?**

Yes  No

Comments

---

**5.3 Have you ever declined orders because of the operation of a particular regulation?**

Yes  No

Comments

---

**5.4 Have you ever lost business as a result of the operation or enforcement of a particular regulation?**

Yes  No

Comments

---

**5.5 a) Have you ever ceased a production activity as a result of the operation of a particular regulation?**

Yes  No

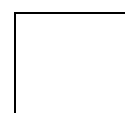
Comments

**b) Do you anticipate that such a situation is likely to arise in the near future?**

Yes  No

Comments

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**FINAL REPORT**

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**5.6 Has regulation ever deterred you from engaging in other Surface Engineering processes?**

Yes  No

Comments

---

**5.7 Has regulation ever prevented you from pursuing other business opportunities?**

Yes  No

Comments

---

**5.8 Have your investment decisions ever been affected by uncertainty about how regulations may change in the near future?**

Yes  No

Comments

---

**5.9 Have you ever brought forward investment in a new production technology in order to comply with regulation?**

Yes  No

Comments

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**5.10 Have you ever been restricted in the introduction of a specific technology as a result of environmental regulation?**

Yes  No

Comments

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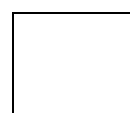
**5.11 Have your business decisions ever been materially affected by uncertainty with respect to the way in which existing regulations may be enforced?**

Yes  No

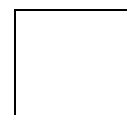
Comments

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**END**



# **ANNEX 4**



**FINAL REPORT**

**Name of Company:** \_\_\_\_\_

I am calling from the Regulatory Policy Institute, we are conducting a study to help the Cabinet Office and DTI understand the burden of regulation on businesses in the surface engineering sector. In order to do this, we are trying to get views on this problem from a wide range of businesses within the sector, and were hoping that [you/your Managing Director or another senior manager] might be able to spend 5-10 minutes, either now, or at another convenient time, to provide some input into the study.

The study is not concerned with the position of any specific business, and we will ensure that any information that you provide cannot be attributed to your company or to any identifiable individual. Would now be a convenient time, or would it be better to arrange another time for us to call you?

The survey is in 4 parts

- General business information
- Employment Issues
- HSE and Environment
- Impact of regulations on your business

**Before turning to issues of regulation, could you tell me which, if any, of the following surface engineering activities your business undertakes?**

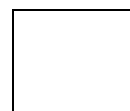
**[no prompt for minor, but tick it if the respondent indicates that this is the case]**

	Yes	Yes, but minor		Yes	Yes, but minor
Anodising	<input type="checkbox"/>	<input type="checkbox"/>	Heat Treatment	<input type="checkbox"/>	<input type="checkbox"/>
Coating	<input type="checkbox"/>	<input type="checkbox"/>	Spraying	<input type="checkbox"/>	<input type="checkbox"/>
Electroplating	<input type="checkbox"/>	<input type="checkbox"/>	Equipment Supply	<input type="checkbox"/>	<input type="checkbox"/>
Galvanising	<input type="checkbox"/>	<input type="checkbox"/>			

**Are there any other activities that you undertake that are not captured by that list?**

Other

*Please Specify* \_\_\_\_\_



**FINAL REPORT**

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**Can we firstly consider employment regulation:**

**1. How many employees does your company have at the moment?**

Total \_\_\_\_\_

**Are these all full-time?**

Full Time \_\_\_\_\_

Part Time \_\_\_\_\_

**2. Have you had any disputes with departing employees in the past year or so?**

Yes  No

[If yes] **could you give further details?**

*Prompt: did any result in formal proceedings, if so, could you give a rough estimate of costs?*

**3. Have employment regulations ever affected a hiring or firing decision you have made?**

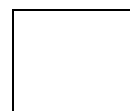
Yes  No

[could you give a few details?]

**4. Have the PAYE arrangements (including tax credits) ever affected your ability to secure overtime from your employees?**

Yes  No

[could you give a few details?]



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## Could we turn now to Health & Safety and Environmental Regulation?

**5. Have you had any visits from the Health and Safety Executive or the Local Authority Environmental Health Department in the past year or so?**

HSE

*[If yes to either, ask question 6]*

LAEHD

Neither

*[If 'neither', go to question 7 – next page]*

**6. Did these visits result in you incurring equipment costs or other costs?**

Yes  No

[If yes]

**Roughly how much would you say these costs amounted to?**

	Yes	No	Estimate of costs
Health and Safety Regulation	<input type="checkbox"/>	<input type="checkbox"/>	£ _____
Environmental Regulation	<input type="checkbox"/>	<input type="checkbox"/>	£ _____

[note comments]

**In addition to this, Did you incur any other equipment costs to comply with Health and Safety and Environmental Regulation in the past year or so?**

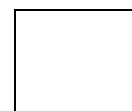
	Yes	No	Estimate of costs
Health and Safety Regulation	<input type="checkbox"/>	<input type="checkbox"/>	£ _____
Environmental Regulation	<input type="checkbox"/>	<input type="checkbox"/>	£ _____

[If yes]

**Roughly how much would you say these additional costs amounted to?**

[note comments]

**[go to Question 8]**



**FINAL REPORT**

*[go straight to qu 8 if qu 6 has already been asked]*

**7. Did you incur any equipment costs in the past year or so to comply with Health and Safety and Environmental regulation?**

	Yes	No	Estimate of costs
Health and Safety Regulation	<input type="checkbox"/>	<input type="checkbox"/>	£ _____
Environmental Regulation	<input type="checkbox"/>	<input type="checkbox"/>	£ _____

[If yes]

**Roughly how much would you say these costs amounted to?**

[note comments]

**8. Have you used external assistance/consultancy when dealing Health and Safety or Environmental regulation?**

	Yes	No	Estimate of payments
Health and Safety Regulation	<input type="checkbox"/>	<input type="checkbox"/>	£ _____
Environmental Regulation	<input type="checkbox"/>	<input type="checkbox"/>	£ _____

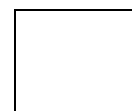
[For each answered yes, go back to table and ask:]

**Roughly how much did you spend on such assistance in the last year?**

**9. Have you used external assistance/consultancy when dealing with any of the following other types of regulation?**

	Yes	No	Estimate of payments
Employment Regulation	<input type="checkbox"/>	<input type="checkbox"/>	£ _____
Fire Regulation	<input type="checkbox"/>	<input type="checkbox"/>	£ _____
PAYE, VAT, Corporation Tax Auditing, Expenses etc	<input type="checkbox"/>	<input type="checkbox"/>	£ _____

[For each answered yes, go back to table and ask:]



**FINAL REPORT**

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**Roughly how much did you spend on such assistance in the last year?**

**I would now like to ask a few questions about the impact of Regulation on your Business Decisions**

**10. Have you ever declined orders or lost business because of the operation of a particular regulation?**

Yes  No

[Comments: could you give a few details?]

**11. Has regulation ever deterred or prevented you from pursuing other business opportunities?**

Yes  No

[Comments: could you give a few details?]

**12. Have you ever ceased a production activity as a result of the operation of a particular regulation?**

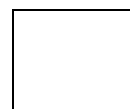
Yes  No

[Comments: could you give a few details?]

**Do you anticipate that such a situation is likely to arise in the near future?**

Yes  No

[Comments: could you give a few details?]



**FINAL REPORT**

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**13. Have your business decisions ever been affected by uncertainty about how regulations may change in the near future?**

Yes  No

[Comments: could you give a few details?]

**14. Have your business decisions ever been materially affected by uncertainty with respect to the way in which existing regulations may be enforced?**

Yes  No

[Comments: could you give a few details?]

**15. This is an attitudinal question. Thinking about the time you spend dealing with regulation and taking account of what it is that various regulations are intended to do, how reasonable a balance do you think is currently being struck in the following areas of regulation?**

*As I read out each area of regulation, could you mark them out of 10, where a higher score means more reasonable and a lower score means less reasonable.*

PAYE, VAT, Corporation Tax, Auditing, Expenses etc.	_____ /10
Employment Regulation	_____ /10
Fire Regulation	_____ /10
Health and Safety Regulation	_____ /10
Environmental Regulation	_____ /10
Other ( <i>please specify</i> ) -----	_____ /10



**FINAL REPORT**

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16. **Finally, are there any issues that haven't been touched upon in the previous questions that you think are of particular importance when assessing the burden of regulation on your business?**

Yes  No

[Comments: could you give a few details?]

**Thank you very much for your time, which has provided a valuable input into our study. Following the completion of our work in April, we will be making available a summary the RPI's views on the relevant issues to all participants. Would you like us to forward you a copy of this?**

Yes  No

[If yes:]

**Who should we mark it for the attention of:**

**Name:** \_\_\_\_\_

**Position:** \_\_\_\_\_

Once again, many thanks. Goodbye.

