# The Engineering and Technology Board 2007 Survey of Registered Engineers Full Report

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## **BACKGROUND & OBJECTIVES**



# 1 Executive summary

This survey of registered engineers is the latest in a series which Electoral Reform Services (ERS) has been conducting for the Engineering Council and the Engineering and Technology Board (etb) since 1995. All the surveys have been used to collect information on earnings, and individual surveys have been used to explore issues of current interest to the Board.

Key findings from the 2007 survey are summarised below. Comparisons with 2005 have been made where relevant but should be treated with caution due to the differential weighting procedures used in 2005 and 2007.

- All sections of registration have seen a rise in total earnings of about 10% since 2005. While the increase in basic pay for Engineering Technicians has been low relative to other sections, this has been compensated for by a larger increase in overtime, bonus and commission payments.
- Median annual total earnings in 2007 were:
  - £50,000 for Chartered Engineers
  - £41,000 for Incorporated Engineers
  - £33,000 for Engineering Technicians
- The proportion of registered engineers who have their subscription and registration fees paid by their employer is gradually increasing, from 47% in 2003, to 50% in 2005 to 53% in 2007.
- The key institutions for registered engineers are the IET, the IME and the ICE.
   In addition, The Institute of Motor Industry and The Society of Operations
   Engineers are relevant to significant minorities of Engineering Technicians.
- The CEng/IEng/Eng Tech qualifications are valued by 87% or registered engineers, including 42% who value them very highly.
- There is less certainty about the value for money of the title; 71% consider it good value for money but only 28% see it as *very* good value for money.
- Over eight out of ten value their institution membership highly, including 37% who value it very highly.

# ERS RESEARCH

## **BACKGROUND & OBJECTIVES**

- Again, engineers are less positive about the value for money of their institution membership. While 69% think it is good value for money, only 15% see it as very good value for money.
- Perceptions of value for money differ widely between regions, which may reflect differential access to services. Members in Greater London, Scotland and Wales are the most positive and those in Northern Ireland the least.
- Further and higher education staff are the main source of awareness about the registration scheme for Chartered and Incorporated Engineers while for Engineering Technicians their Engineering Institutions play a more important role.
- The most significant factor in the decision to seek registration is the perception that it will help with career development. Greater professional status and recognition of skills and experience are also important.
- While the prospect of enhanced career development is a major motivation for registration, a substantial minority of almost four out of ten feel that it has had no effect on their career. A similar number, however, feel that registration has increased their employment opportunities.
- Formal recognition by employers is thought to be the most significant factor in encouraging new registrations, closely followed by the suggestion of an enhanced remuneration package. The latter is particularly favoured by Chartered Engineers, while Incorporated Engineers and Engineering Technicians are more inclined to favour recognition by employers of their particular professional development needs.
- A bare majority (56%) feel that their institutions are doing well at promoting the image and benefits of registration.
- An increasing proportion (now 70%) recognize the importance of Continuing
  Professional development (CPD) in maintaining their professional qualifications,
  although less than half (46%) claim to plan their professional development
  objectives.
- Engineering Technicians are considerably more positive than others to see the
  importance of CPD, and are more likely to plan their objectives and maintain
  formal records, although they are the section least likely to receive employer
  financial support for professional development.

## **BACKGROUND & OBJECTIVES**



## 2 Background and objectives

The Engineering and Technology Board (etb) works in partnership with business and industry, the Government, the professions and the education sector to improve the perception of science, engineering and technology (SET) in the UK and better reflect their relevance to everyday life.

The driving force behind this partnership is the desire to ensure that the supply of appropriately skilled individuals better matches and stimulates the present and future SET needs of UK plc.

The etb is financially supported through corporate membership, the registration fees of 250,000 engineers and industry sponsorship. It also receives core funding from the Department for Trade and Industry.

Since 1995, ERS Market Research has regularly been commissioned to conduct surveys of Registered Engineers by the Engineering Council (prior to 2003) and (since 2003) the etb, following its establishment to work alongside the Engineering Council UK.

The surveys have varied in length and subject matter, though they have always sought up to date information on earnings.

In addition to obtaining earnings information, the 2007 survey focussed on:

- reasons for registration with the Board
- the impact of registration on careers
- the perceived value and value for money of registration and institution membership

This report describes the findings of the 2007 survey, making comparisons with 2005 where appropriate. A brief description of the methodology is followed by the main findings in more detail, illustrated with charts and tables as appropriate. More detailed analysis of sub groups etc. can be found in the volume of computer tabulations which has been provided separately. A copy of the questionnaire and other field materials, further technical details and a profile of the sample are contained in the Appendices.



## 3 Overview of methodology

The research was carried out by means of a self-completion survey. The questionnaire was designed jointly by ERS Market Research and etb and included questions from the 2005 survey as well as some new material. A self-completion paper questionnaire was sent to 10,000t registered engineers.

Fieldwork was carried out between Tuesday, 17<sup>th</sup> July and Friday, 17<sup>th</sup> August.

Full details of the methodology and response rates are contained in Appendix 3.



# 4 Sample composition

As described in section 3 above, Incorporated Engineers and Engineering Technicians were over-sampled relative to Chartered Engineers, and new registrants were over-sampled relative to established members. The data were subsequently weighted to restore these groups to their correct proportions in the total sample.

# 4.1 Section of registration

The weighted and un-weighted samples by Section of Registration for 2005 and 2007 are shown in table 1 below.

Table 1: Section of registration

	20	05	2007		
	Un-weighted	Weighted	Un-weighted	Weighted	
Base: All Registered Engineers	(3,460)	(3,463)	(3,238)	(3,238)	
	%	%	%	%	
Chartered Engineer	53	72	53	75	
Incorporated Engineer	31	21	31	18	
Engineering Technician	16	7	16	7	



# 4.2 Date of first registration

In 2007 the data were also weighted by date of first registration to correct for the over-sampling of new registrants and the un-weighted and weighted profiles are shown in Table 2 below.

Table 2: Date of first registration

	Un-weighted	Weighted
Base: All Registered Engineers	(3,238)	(3,238)
	%	%
Registered within the last 5 years	22	16
Registered more than 5 years ago	78	84

Nearly three quarters (71%) of the weighted sample first registered more than 10 years ago, 13% first registered 5 - 10 years ago and 16% first registered within the last five years.



## 4.3 Current employment status

The distribution of the sample in terms of current employment status for 2005 and 2007 is shown in Table 3 below.

Table 3: Current employment status

	2005	2007
Base: All Registered Engineers	(3,460)	(3,238)
	%	%
Employed	75	73
Self employed (including principal or partner in a firm)	9	10
Contract worker	3	2
Retired early (before expected age)	6	7
Retired or partially retired	6	6
Unemployed and seeking re-employment	1	1
In receipt of long term sickness benefit	0	0
Student in receipt of tax free grant or on reduced pay	0	0
Not stated	0	1

Compared with 2005, there are slightly fewer employees and contract workers in the 2007 sample and slightly more self employed and early retirees.

While 1% of registered engineers were unemployed and seeking re-employment at the time of the survey, 5% had been in this situation at some time during the year ended 5 April 2007. This compares with 7% in the year ended 5 April 2005.



There is some variation in employment status by section of registration, as shown in Table 4 below.

Table 4: Current employment status by section of registration

	Chartered Engineer	Incorporated Engineer	Engineering Technician
Base: All Registered Engineers	(1,714)	(1,000)	(524)
(* = less than 0.5%)	%	%	%
Employed	73	71	76
Self employed (including principal or partner in a firm)	10	10	15
Contract worker	2	3	2
Retired early (before expected age)	7	7	3
Retired or partially retired	6	8	2
Unemployed and seeking re- employment	*	*	2
In receipt of long term sickness benefit	*	1	*
Student in receipt of tax free grant or on reduced pay	*	*	*
Not stated	1	1	1

Engineering Technicians tend to be younger than members of other sections and are less likely to be retired. Over nine in ten (91%) are either currently employed or self employed. Only 5% of Engineering Technicians are retired, compared with 13% of Chartered Engineers and 15% of Incorporated Engineers.



## 4.4 Employment sector

Respondents in 2007 (but not in 2005) were asked to identify the sector of the economy most appropriate to their employer. Five major employment sectors were listed on the questionnaire but there was an opportunity to write in other sectors. These other answers were scrutinised in the office and further sectors were created.

Table 5: Employment sector by section of membership

	Total	Chartered Engineer	Incorporated Engineer	Engineering Technician
Base: All Registered Engineers	(3,238)	(1,714)	(1,000)	(524)
	%	%	%	%
Manufacturing	21	23	18	14
Construction	20	21	17	19
Transport and Communications	16	14	18	24
Utilities	10	10	13	8
Defence*	4	4	4	5
Education*	4	5	3	3
Finance and Business	3	3	3	3
Administrative*	3	3	2	4
Gas, Oil, Petrochemicals*	3	3	3	2
Consultancy*	2	2	1	1
Other	12	11	16	15
Not stated	1	1	2	1
* = not listed on questionnaire			•	

Around one in five work in Manufacturing (21%) and Construction (20%), with a further 16% in Transport and Communications and 10% in Utilities. Other individual sectors comprise less than 5% of registered engineers.



Chartered Engineers are well represented in all sectors, with slightly more than average working in Manufacturing (23%) and Construction (21%), and slightly fewer than average in Transport and Communications (14%). Incorporated Engineers are equally likely to work in Manufacturing (18%), Construction (17%) or Transport and Communications (18%) and more likely than other sections to work in Utilities (13%). The biggest sector for Engineering Technicians is Transport and Communications, where nearly a quarter (24%) are employed.

Over half of ICE members (55%) work in the Construction industry, and four in ten IME members (41%) work in Manufacturing. The breakdown of the major sectors by institution membership is shown in the table below.

Table 6: Employment sector by institution membership

	Total	IET	ICE	IME
Base: All Registered Engineers	(3,238)	(937)	(366)	(373)
	%	%	%	%
Manufacturing	21	25	1	41
Construction	20	6	55	7
Transport and Communications	16	19	20	11
Utilities	10	13	7	11

Further details of the demographic profile of the sample are contained in Appendix 4.



## 5 Earnings

Details of basic income were collected and, separately, any overtime, bonus or commission payments. Our analysis deals briefly with these separate items below, followed by more detailed analysis of total earnings (basic income plus overtime, bonus and commission payments).

Comparisons with 2005, while shown, should be treated with caution due to the differential weighting procedures used in 2005 and 2007.

#### 5.1 Basic income

Respondents were asked to enter their gross basic annual income from employment, including any London or large town allowance, before deduction of Income Tax, National Insurance and Pension contributions, as at 5<sup>th</sup> April 2007 and excluding overtime, bonus or commission payments. The self employed were asked to provide net profit before tax for the tax year 2006/7. Mean and median basic income by section of membership, for 2005 and 2007 is shown in the table below.

Table 7: Average basic income

	Mean basic income			Median basic income		
	2005	2007	% change	2005	2007	% change
Chartered Engineer	(1,492)	(1,396)		(1,492)	(1,396)	
	£49,472	£54,116	+9.4	£43,507	£48,000	+10.3
Incorporated Engineer	(872)	(772)		(872)	(772)	
	38,272	£43,685	+14.1	£35,093	£40,000	+14.0
Engineering Technician	(477)	(444)		(477)	(444)	
	31,879	£34,518	+8.3	£30,000	£31,000	+3.3%

Mean and median basic income has increased across all three sections since 2005, with Incorporated Engineers receiving the biggest increase and Engineering Technicians the least.



## 5.2 Overtime, bonus and commission payments

Employees and contract workers were asked to supply the total amount of all overtime, bonus and commission payments received in the 12 months to 5 April 2007.

The table below compares average 2005 and 2007 overtime, bonus and commission payments among ALL employees and contract workers (i.e. including those who did not receive any such payments).

Table 8: Average annual overtime, bonus and commission payments

	2005	2007	% change
Base: all employees and contract workers			
Chartered Engineer	(1,492)	(1,315)	
	£3,595	£4,701	+30.8
Incorporated Engineer	(872)	(735)	
	£2,261	£2,929	+29.5
Engineering Technician	(477)	(422)	
	£1,888	£2,513	+33.1

Average overtime, bonus and commission payments appear to have risen substantially across all membership sections.



The following table shows mean and median bonus payments among those who received such payments.

Table 9: Average annual overtime, bonus and commission payments

		Mean bonus		Median bonus		
All employees and contract workers who received a bonus	2005	2007	% change	2005	2007	% change
Chartered Engineer	(595)	(645)		(595)	(645)	
	£8,661	£9,653	+11.5	£4,500	£5,000	+11.1
Incorporated Engineer	(299)	(318)		(299)	(318)	
	£6,287	£6,777	+7.8	£3,000	£4,000	+33.3
Engineering Technician	(170)	(185)		(170)	(185)	
	£4,975	£5,950	+19.6	£3,000	£3,726	+24.2

Overtime, bonus and commission payments have increased across the board. Engineering Technicians, who saw the smallest basic salary increase, have received the largest increase in additional payments, with a mean increase of 19.6% and an increase in the median bonus of 24.2%. The median bonus of Incorporated Engineers has, however, shot up from £3,000 in 2005 to £4,000 an increase of 33.3%.



# 5.3 Total earnings

Basic income and overtime, bonus and commission payments were combined to produce estimates of total earnings, and a comparison of the averages for 2005 and 2007 is shown in the table below.

Table 10: Average annual total earnings

	Mean total earnings		Med	ian total e	arnings	
Base: all employees, self employed and contract workers who stated an income						
	2005	2007	% change	2005	2007	% change
Chartered Engineer	(1,492)	(1,396)		(1,492)	(1,396)	
	£53,067	£58,668	+10.6	£45,500	£50,000	+9.9
Incorporated Engineer	(872)	(772)		(872)	(772)	
	£40,533	£46,543	+14.8	£37,000	£41,000	+10.8
Engineering Technician	(477)	(444)		(477)	(444)	
	£33,767	£37,636	+11.5	£31,000	£33,000	+6.5

Increases in mean total earnings since 2005 are fairly consistent across the three sections of membership. The increase in median total earnings for Engineering Technicians is markedly lower (6.5%) when compared against those of both Chartered Engineers and Incorporated Engineers, both of whom have an increase of around 10%.



The table below shows the earnings by percentile of the three sections of membership. This enables us to compare, for example, the earnings of the bottom and top 10% of earners in each group and to see the spread of earnings.

Table 11: Average annual earnings by section of membership (percentiles)

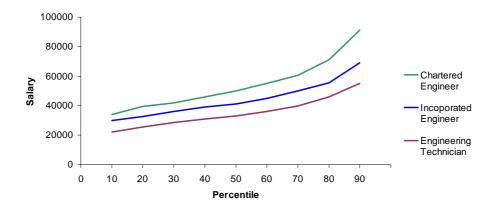
	Chartered Engineer	Incorporated Engineer	Engineering Technician
Base: all employees, self employed and contract workers who stated an income	(1,396)	(772)	(444)
	£	£	£
10th Percentile	34,000	29,849	22,000
20th Percentile	39,469	32,500	25,590
30th Percentile	42,000	36,000	28,460
40th Percentile	46,000	39,000	30,927
50th Percentile	50,000	41,000	33,000
60th Percentile	55,000	45,000	36,000
70th Percentile	60,500	50,000	39,750
80th Percentile	71,000	55,500	46,000
90 <sup>th</sup> Percentile	91,000	69,000	55,000

These figures are compared graphically in Chart 1 overleaf.



#### Chart 1

# Total earnings by percentile



Base: All employees, self employed and contract workers who stated an income (2612)

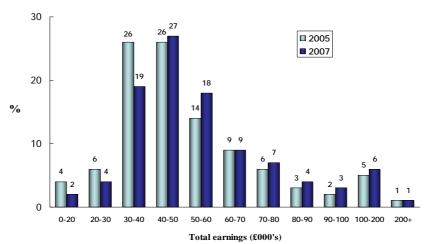
The difference in earnings between Incorporated Engineers and Engineering Technicians is similar for the lower half (up to the 50<sup>th</sup> percentile) and slightly bigger for the top half. The gap between Chartered Engineers and Incorporated Engineers shows a similar pattern, beginning to widen at the half way point. Chartered Engineers' earnings then climb more steeply from the 80<sup>th</sup> percentile, so that the top 20% of this group earn significantly more than the top 20% of the other two groups.



The following charts illustrate the earnings distribution of each section in 2005 and 2007.

#### Chart 2

# Total earnings - Chartered Engineers



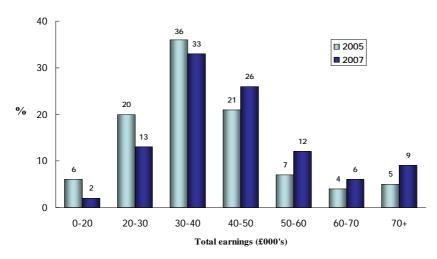
Base: All employed, self employed and contract Chartered Engineers who stated a salary 2005 (1492) 2007 (1396)

A quarter of Chartered Engineers (25%) now earn less than £40,000 p.a., compared with 36% in 2005. The proportions in the higher salary bands have correspondingly increased, with the biggest increase being in the £50,000 and £60,000 band, from 14% in 2005 to 18% in 2007.



#### Chart 3

# Total earnings – Incorporated Engineers



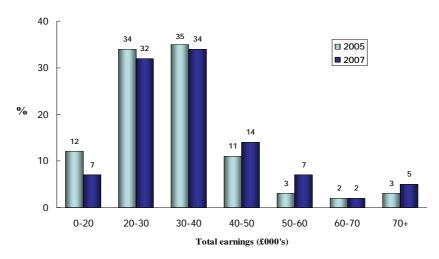
Base: All employed, self employed and contract Incorporated Engineers who stated a salary 2005 (872) 2007 (772)

A third of Incorporated Engineers (33%) earn between £30,000 and £40,000 p.a., compared with 36% in 2005. The proportion earning less than this has fallen from 26% to 15%. 15% now earn £60,000 p.a. or more, compared with 9% in 2005



#### Chart 4

# Total earnings - Engineering Technicians



Base: All employed, self employed and contract Engineering Technicians who stated a salary
2005 (477) 2007 (444)

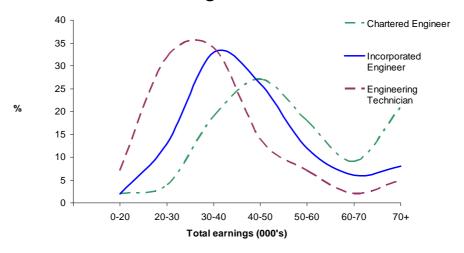
Approximately two thirds of Engineering Technicians (66%) earn between £20,000 and £40,000 p.a., slightly fewer than in 2005 (69%). The proportion earning up to £20,000 p.a. has fallen from 12% to 7% and the proportion earning over £50,000 p.a. has increased from 8% to 14%.



Chart 5 compares the earnings distribution of the three sections.

#### Chart 5

# Earnings distribution



Base: All employees, self employed and contract workers who stated an income (2612)

The distributions for Incorporated Engineers and Engineering Technicians follow a similar pattern, with the position of the Incorporated Engineers' curve, to the right of that for Engineering Technicians indicating their higher earnings potential. Both closely follow a normal distribution, with the mean salary falling close to the highest point of the curve.

The earnings of Chartered Engineers, on the other hand, show a less normal distribution with the highest point of the curve falling below the mean. The rising "tail" at the £60,000 p.a. point demonstrates that Chartered Engineers are much more likely than the other sections to have a significant proportion earning more than the average for their group.



## Walue of registration and institution membership

A section of the questionnaire dealt with respondents' views on the value of their registration and the usefulness of Institution membership.

Just over half of employees (53%) have their subscription and registration fees paid by their employer. This compares with 50% in 2005 and 47% in 2003 so appears to be gradually increasing. Chartered Engineers are more likely to have their fees paid (57%) than Incorporated Engineers (40%) and Engineering Technicians (32%). Those who have registered in the last five years are more likely than more established members to have their fees paid (59% vs. 51%).

### 6.1 Institution most relevant to work

Respondents were asked to identify, using an alphabetical list, the Institution membership most relevant to their work and the findings are shown in the tables on the following pages.

The key institutions for registered engineers are the Institution of Engineering and Technology (IET)<sup>1</sup>, which is most relevant to 27% of registered engineers, the Institution of Mechanical Engineers (IME), most relevant to 15%, and the Institution of Civil Engineers (ICE), most relevant to 14%.

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<sup>&</sup>lt;sup>1</sup> The IET has been created since 2005 by a merger of the IEE and IIE.



Table 12: Institution membership most relevant to current work

(Institutions mentioned by less than 1% in 2007 have been excluded from this table)

	2005	2007
Base: All Registered Engineers	(3,460)	(3,238)
(* = less than 0.5%)	%	%
Institution of Engineering & Technology	N/A	27
IEE	20	N/A
IIE	8	N/A
Institution of Mechanical Engineers	13	15
Institution of Civil Engineers	13	14
Institution of Chemical Engineers	5	5
Chartered Institution of Building Services Engineers	3	4
British Computer Society	4	4
Institute of Materials, Minerals & Mining	3	3
Institution of Structural Engineers	3	3
Royal Aeronautical Society	2	2
Institution of Gas Engineers & Managers	2	2
Institute of Marine Engineering, Science & Technology	2	2
Institute of Measurement & Control	1	2
Society of Operations Engineers	2	2
Energy Institute	1	1
Institution of Engineering Designers	1	1
Institute of Highway Incorporated Engineers	1	1
Institution of Highways & Transportation	1	1
Institute of the Motor Industry	*	1
Royal Institution of Naval Architects	1	1
Chartered Institution of Water & Environmental Management	2	1
Welding Institute	*	1
Not stated	10	6

The above table shows that only minor changes have occurred since 2005.



The table on the following page shows 2007 institutions analysed by section of membership.

Chartered Engineers are well represented in the major institutions. A quarter (25%) belong to the IET. They are particularly strong, relative to other sections, in the IME, to which 19% belong, the Institution of Civil Engineers (18%) and the Institution of Chemical Engineers (7%).

Four in ten (40%) of Incorporated Engineers belong to the IET and relatively few to other institutions.

Engineering Technicians are most likely to belong to the IET (23%), the Institute of Motor Industry (17%) or the Society of Operations Engineers (14%).



Table 13: Institution most relevant to current work by section of membership

(Institutions with less than 0.5% of members in any section have been excluded from this table.)

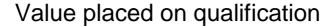
			·	
	Total	Chartered	Incorporated	Engineering
		Engineer	Engineer	Technician
Base: All Registered Engineers	(3,238)	(1,714)	(1,000)	(524)
(* = less than 0.5%)	%	%	%	%
Institution of Engineering & Technology	27	25	40	23
Institution of Mechanical Engineers	15	19	2	5
Institution of Civil Engineers	14	18	6	3
Institution of Chemical Engineers	5	7	0	0
Chartered Institution of Building Services	4	3	5	5
British Computer Society	4	5	0	0
Institute of Materials, Minerals & Mining	3	3	2	1
Institution of Structural Engineers	3	3	3	0
Royal Aeronautical Society	2	2	3	2
Institution of Gas Engineers & Managers	2	1	2	4
Institute of Marine Engineering, Science & Technology	2	1	5	1
Institute of Measurement & Control	2	2	1	1
Society of Operations Engineers	2	0	5	14
Energy Institute	1	1	1	0
Institution of Engineering Designers	1	*	3	1
Institute of Highway Incorporated Engineers	1	0	3	2
Institution of Highways & Transportation	1	1	1	*
Institute of the Motor Industry	1	0	1	17
Royal Institution of Naval Architects	1	1	0	0
Chartered Institution of Water & Environmental Management	1	1	1	*
Welding Institute	1	*	1	3
Institute of Healthcare Engineering & Estate Management	*	*	2	*
Institute of Plumbing & Heating Engineering	*	0	*	4
Not stated	6	5	9	9

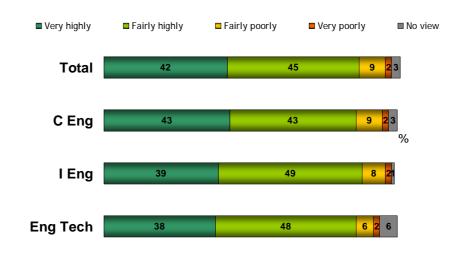


## 6.2 Value placed on qualification

Almost nine out of ten (87%) value their CEng/IEng/Eng Tech qualification highly and almost half of these (42% of the total) value it very highly. Chartered Engineers are slightly more likely than other sections to value the qualification very highly - 43% compared with 39% or Incorporated Engineers and 38% of Engineering Technicians, as shown in Chart 6.

Chart 6





How highly do you value your CEng/IEng/Eng Tech qualification? Base: All Registered Engineers (3238)

Members whose most relevant institution is the IET are less likely to rate their qualification very highly (38%) than are members of ICE (45%) or IME (44%).

Members who have registered in the last five years tend to value their qualification slightly more highly than those of longer standing, with 92% rating it either very or fairly highly, compared with 86% of other members. Half of all recently registered members (50%) place a VERY high value on their qualification, compared with 41% of others.

Employees are slightly less positive than others about the value of their qualification, with 40% rating it very highly, compared with 47% of the self employed and contract workers. There is, however, no difference between the groups in the proportion giving a positive rating (very or fairly highly).



## 6.3 Value for money of title

Respondents were told that £10 - £26 of their annual fees pays for their title and were asked to rate the value for money of their qualification. While seven in ten (71%) responded positively, only 28% consider it VERY good value, with the rest thinking it fairly good value (43%).

Chart 7

# Value for money of title



E10 - E26 of your annual fees pays for your title. How much value for money do you feel your CEng/IEng/Eng Tech qualification represents?

Base: All Registered Engineers (3238)

Incorporated Engineers have the most positive view overall, with 78% considering the qualification to be either very or fairly good value, compared with 71% of Engineering Technicians and 69% of Chartered Engineers.

Those who have registered within the last five years are more positive than others; 36% consider the qualification very good value for money and 44% think it is fairly good value. Among members of longer standing the figures are 27% and 42% respectively.

Self employed and contract workers place a higher value than others on the qualification, with 35% judging it very good value for money, compared with 28% of employees.

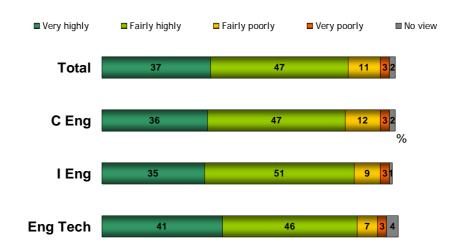


## 6.4 Value of institution membership

Over eight out ten (84%) value their institution membership highly, including 37% who value it very highly. Engineering Technicians are the most positive, with 41% valuing their institution membership very highly and a further 46% fairly highly. Incorporated Engineers (87%) are slightly more likely than Chartered Engineers (83%) to value their institution membership highly.

Chart 8

# Value of institution membership



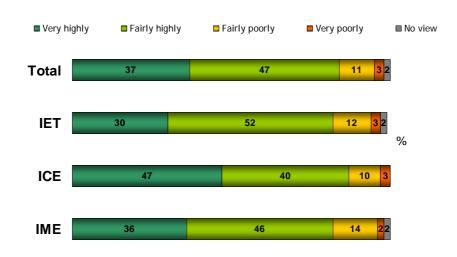
How highly do you value your institution membership? Base: All Registered Engineers (3238)



Among the Institutions, ICE members are the most positive, with 87% rating their membership highly, including 47% who rate it very highly.

Chart 9

# Value of institution membership



How highly do you value your institution membership? Base: All Registered Engineers (3238)

While overall ratings are similar for recently registered and longer standing members, those who have registered in the last five years are more inclined to rate their membership very highly (41%) than those of more than five years' standing (36%).



## 6.5 Value for money

While a majority of respondents (69%) feel their institution membership is good value for money, only 15% see it as VERY good value. Engineering Technicians are most positive; three quarters (74%) think their membership is good value for money, including 21% who think it is very good value. Chartered Engineers are least positive, with 66% rating their institution membership as good value for money and only 13% giving a VERY good value rating.

Chart 10

# Value for money of institution membership



How much value for money do you feel your institution membership represents? Base: All Registered Engineers (3238)



Seven out of ten (70%) IET members feel their membership is good value for money, compared with 63% of IME members and 62% of ICE members.

Chart 11

# Value for money of institution membership



How much value for money do you feel your institution membership represents? Base: All Registered Engineers (3238)

A slightly higher proportion of newer registrants (70%) think their institution membership is good value than those who have been registered for more than five years (68%).

Employees are less positive than those in other employment categories. Only 13% see their institution membership as very good value for money, compared with 18% of self employed and contract workers and 20% of the retired or unemployed. While those respondents who pay for their own subscription are slightly more likely than employer-funded respondents to rate their subscription very good value (16% vs 14%), they are also more likely than those who are employer-funded to see it as poor value (31% vs 26%).

There are regional differences which may reflect differential access to services. Among members in England, those in Greater London are considerably more likely than those in other regions to rate their membership good value for money (75%). Members in Wales (75%) and Scotland (71%) are also more positive than the English provinces, but in Northern Ireland only 55% think that their membership is good value for money.



## 7 Encouraging new registration

A section of the questionnaire probed sources of awareness of the registration scheme, factors influencing registration and the impact of registration on career development. It is hoped that responses to this section will provide pointers to better promotion of the registration scheme.

## 7.1 Source of awareness of registration scheme

Nearly half (42%) of all respondents first found out that engineers could become professionally registered from teaching staff during their further or higher education. While this was the most common source of information for Chartered Engineers, (46%) and Incorporated Engineers (32%), Engineering Technicians are equally likely to have been told about it by registrants at their place or work (23% mentioned each of these). The most likely source for this group was their Engineering Institution (38%).

Table 14: Source of awareness of registration scheme

	Total	Chartered Engineer	Incorporated Engineer	Engineering Technician
Base: All Registered Engineers	(3,238)	(1,714)	(1,000)	(525)
	%	%	%	%
Further or higher education teaching staff	42	46	32	23
Engineering institution	23	21	23	38
Registrants at place of work	14	10	26	23
Employer	11	10	13	10
School teaching staff	5	5	2	2
Other sources	6	7	3	5
Not stated	1	1	1	0

Just over a quarter (27%) of members of ICE learned about registration from their institution, compared with 17% of members of IET and 11% of IME members.



Findings for this question are similar for recent registrants and longer standing members, but there are some differences relating to age. Younger respondents are more likely to have heard about registration through further or higher education or school, while older members are more likely to have been informed by their institution.

Table 15 Source of awareness of registration scheme by age group

	21-34	35-44	45-54	55+
Base: All Registered Engineers	(304)	(713)	(1,022)	(1,191)
	%	%	%	%
Further or higher education teaching staff	53	46	42	36
Engineering institution	13	14	20	32
Registrants at place of work	6	11	15	16
Employer	11	12	13	9
School teaching staff	9	8	3	2
Other sources	8	7	6	4
Not stated	0	1	1	0

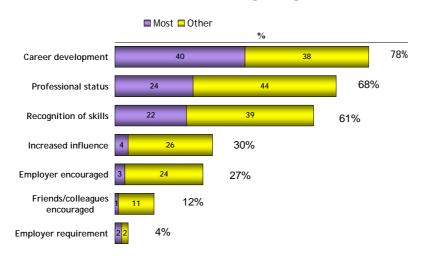


## 7.2 Significant factors in decision to seek registration

Respondents were asked to choose from a list the significant factors which had influenced their decision to seek registration and to identify the *most* significant factor. These responses are shown in Chart 12.

Chart 12

# Factors influencing registration



Which of the following were significant factors/the most significant factor in your decision to seek registration?

Base: All Registered Engineers (3238)

The most significant factor for four out of ten members (40%) and a subsidiary factor for a similar number (38%) is "I felt it would be helpful in my career development". Nearly a quarter (24%) identified the most significant factor as "I felt it would give me greater professional status" and a similar proportion (22%) chose "I wanted my professional skills and experience to be recognized". When all influencing factors are taken into account greater professional status is a factor for nearly seven out of ten (68%) and recognition of skills and experience is important for six out of ten (61%). Considerably fewer (30%) felt that it would increase their influence within their organization or industry and only 4% saw this as the most significant factor. A similar proportion (27%) had been encouraged by their employers, but only 4% indicated that registration had been an employer requirement.

The options listed for this question were different in 2007 from 2005, when respondents were asked only to select significant factors and not the MOST significant factor. While the results are not therefore directly comparable, the same proportion (78%) in 2005 and



in 2007 mentioned helpfulness in career development as a significant factor in the decision to seek registration.

Influencing factors varied to some extent according to section of registration, as shown in the table below.

Table 16: Factors influencing registration by section of registration

	Chartered Engineer	Incorporated Engineer	Engineering Technician
Base: All Registered Engineers	(1,714)	(1,000)	(524)
	%	%	%
I felt it would be helpful in my career development	79%	77%	70%
I felt it would give me greater professional status	70%	66%	62%
I wanted my professional skills and experience to be recognised	60%	63%	66%
I felt it would increase my influence within my organisation or industry	31%	27%	27%
I was encouraged to do so by my employer	31%	18%	14%
I was encouraged to do by colleagues/friends	12%	15%	13%
I was required to do so by my employer	5%	3%	1%
None of the above	1%	0%	0%
Other	3%	1%	1%
Not stated	0%	0%	0%

Chartered and Incorporated Engineers are more likely than Engineering Technicians to see registration as helpful to career development and an enhancement to their professional status, while Engineering Technicians are slightly more likely than the other sections to see registration as recognition of their professional skills and experience. Chartered Engineers are much likely than the other sections to have been encouraged to register by their employers.



While both recent registrants and those longer standing are equally likely to mention career development as a significant factor, those who have registered in the last five years are more likely also to mention other factors. Nearly three quarters of this group (74%) felt that registration would give them greater professional status and only slightly fewer (71%) saw it as a means of having their professional skills and experience recognized. Among longer standing registrants, these factors were mentioned by 67% and 59% respectively. There was also a difference in the proportions thinking that registration would increase their influence within their organisation or industry; this was mentioned by 38% of recent registrants but only 28% of others.

### 7.3 Factors likely to encourage new registrations

Respondents were asked to select from a list those factors which they felt would be most likely to encourage new registrations. Just over half (56%) feel that formal recognition by employers is a significant factor, and slightly fewer (51%) think that an enhanced remuneration package would be effective. While all sections are equally likely to mention formal recognition by employers, the enhanced remuneration package is particularly likely to be mentioned by Chartered Engineers. Four in ten (40%) think that "recognition by employers of the particularly professional development needs of professional engineers and engineering technicians" is a significant factor, and this is seen as particularly important by Engineering Technicians (53%). A full breakdown of responses by registration section is shown in the table below.



Table 17: Factors most likely to encourage new registrations

	Total	Chartered Engineer	Incorporated Engineer	Engineering Technician
Base: All Registered Engineers	(3,238)	(1,714)	(1,000)	(524)
Formal recognition by employers	56%	56%	56%	54%
Enhanced remuneration package	51%	55%	41%	30%
Recognition by employers of the particular professional development needs of professional engineers and engineering technicians	40%	37%	48%	53%
A better understanding and promotion of the benefits of registration	39%	39%	40%	42%
Other	5%	6%	3%	2%
Not stated	1%	1%	1%	1%

Overall, no one factor stands out as being particularly significant but it is clear that members think that employers should play a major role in recognising registration and rewarding accordingly.

Engineers who have been registered for less than five years are more likely than others to think that formal recognition by employers is a significant factor (63% vs. 55%) and they are also more likely to mention the need for a better understanding and promotion of the benefits of registration (48% vs.38%).

### 7.4 Impact of registration on career

We saw that nearly eight out of ten members had been influenced to register by the hope that it would be helpful in their career development. Nearly four in ten members (38%), however, feel that registration has had no impact on their career. This was particularly true for Engineering Technicians, nearly half of whom (48%) felt there had been no impact.

Just over a third (36%) believe that registration has increased their employment opportunities, a quarter (26%) that it has meant they are more valued by their employer



and colleagues, and a fifth (21%) feel that their confidence in their professional standing has enabled them to challenge or promote significant initiatives.

Increased employment opportunities are recognized most by Chartered Engineers (38%) and they are more likely than others to feel it has increased their value in the eyes of employers and colleagues. Incorporated Engineers and Engineering Technicians, on the other hand, are more likely than Chartered Engineers to feel that registration has given them confidence to challenge or promote significant initiatives.

Table 18: Impact of registration on career by section of membership

	Total	Chartered Engineers	Incorporated Engineers	Engineering Technicians
Base: All Registered Engineers	(3,238)	(1,714)	(1,000)	(524)
	%	%	%	%
It has increased my employment opportunities	36	38	34	25
It has meant I am more valued by my employer and colleagues	26	28	24	18
My confidence in my professional standing has enabled me to challenge or promote significant initiatives	21	20	24	23
I feel it hasn't had any impact	38	37	37	48
Not stated	1	1	1	1

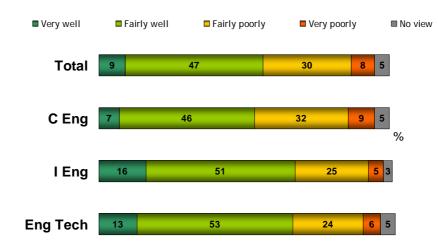


## 7.5 How well institution promoting registration

Respondents were asked to rate how well their institution is promoting the image and benefits of registration. Although a majority (56%) is positive, less than one in ten (9%) think their institution is performing VERY well in this regard.

Chart 13

## How well institution promoting registration



How well do you feel your institution is promoting the image and benefits of membership?

Base: All Registered Engineers (3238)

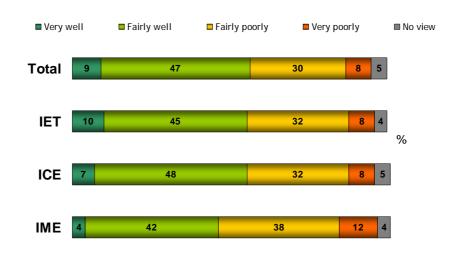
Incorporated Engineers are the most positive, with 16% giving a very well rating and a further 51% saying fairly well. Only 7% of Chartered Engineers think their institution is promoting registration very well.



These findings are reflected in the analysis by institution, shown in Chart 14. Members of the IET, to which Incorporated Engineers are most likely to belong, have given the most favourable view, while members of the IME, mainly comprising Chartered Engineers, are most negative. Half of all IME members think that the IME is promoting registration either fairly poorly (38%) or very poorly (12%).

Chart 14

# How well institution promoting registration



How well do you feel your institution is promoting the image and benefits of membership? Base: All Registered Engineers (3238)



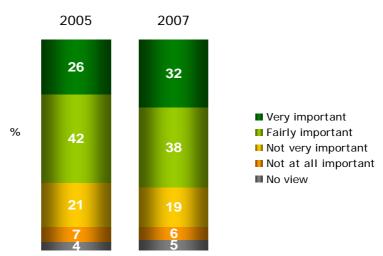
## 8 Continuing professional development

Respondents were asked about their continuing professional development activity and its importance in maintaining their professional qualifications.

Seven out of ten respondents (70%) rate CPD as important, including a third (32%) for whom it is very important. While the proportion considering CPD important has increased slightly from 68% in 2005, the proportion considering it VERY important has grown from 26% to 32%.

Chart 15





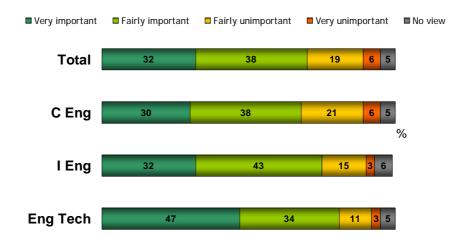
How important to you is Continuing Professional Development (CPD) in maintaining your professional qualifications, ensuring that your skills and expertise are relevant and up to date?

Base: All Registered Engineers 2005(3460)/2007(3238)



As Chart 16 below shows, CPD is significantly more important to Engineering Technicians than it is to other sections, with nearly half (47%) seeing it as very important and a further third (34%) as fairly important. Chartered Engineers are the least likely to see CPD as important (68%).

Importance of CPD by section



How important to you is Continuing Professional Development (CPD) in maintaining your professional qualifications, ensuring that your skills and expertise are relevant and up to date?

Base: All Registered Engineers (3238)

Over eight out of ten registered engineers (84%) believe that they are able to keep their engineering competence adequately up to date for their current role. Engineering Technicians (80%) and Incorporated Engineers (79%) were slightly less likely than Chartered Engineers (85%) to believe this. Nine out of ten (90%) of engineers who have registered in the last five years are confident about this, compared with 83% of those of longer standing.

Under half of all respondents (46%) claim to plan their professional development objectives, with Engineering Technicians (52%) more likely than Chartered Engineers (47%) or Incorporated Engineers (42%) to claim this. Over six out of ten (63%) of those who have registered in the last five years plan their professional development objectives, compared with only 43% of those who registered more than five years ago.



Of those who do plan their professional development objectives, nearly two thirds (64%) maintain a formal record of their professional development activities. The proportion doing this is highest among Engineering Technicians (75%) and lowest among Chartered Engineers (62%), while the more recently registered are more likely than those of longer standing to do this (73% vs. 62%).

Nearly six in ten employees (59%) are offered financial support for professional development by their employers, slightly more than in 2005 (57%). Chartered Engineers (61%) are more likely than Incorporated Engineers (56%) to receive this support and for both these groups this represents a slight increase of around two percentage points since 2005. Engineering Technicians are least likely to receive financial support and the figure of 50% receiving support has not increased since 2005.



# 9 Appendices



ppendix 1 - The questionnaire	

# THE ENGINEERING AND TECHNOLOGY BOARD

# 2007 Survey of Registered Engineers

All replies are in absolute confidence, and no attempt will be made to trace responses to individuals.

The nurnose of the questions about your

personal circumstances is to enable us to examine how attitudes differ among respondents in a number of broad groups.						
1. Please indicate your	r Section of Registr	ation:				
	Chartered Engineer	r 🗌				
Ir	ncorporated Engineer	r 🗌				
En	gineering Technician	1 🗌				
2. Which of the following best describes your current employment status? (Please tick one box only.)						
	An employee	e 🗌				
Self employed (i	ncluding principal of partner in a firm					
	Contract worker	r 🔲				
Retired early (	before expected age	)				
Retire	ed or partially retired					
Unemployed and see	eking re-employmen	t 🗌				
In receipt of long term sickness benefit						
Student receiving a tax-free grant or on reduced pay from your employer						
IF YOU ARE CURRENTLY UNEMPLOYED OR IN RECEIPT OF LONG TERM SICKNESS BENEFIT, PLEASE ANSWER ALL SUBSEQUENT QUESTIONS CONCERNING EMPLOYMENT IN RESPECT OF YOUR MOST RECENT EMPLOYMENT.  REGISTRATION ISSUES						
3. Does your employer registration fees?	pay your subscrip	tion and				
Yes	No					
4. Does your employer offer financial support for your professional development?						
Yes	No					

### YOUR INSTITUTION

5.	Please indicate from the alphabetical list below, which Institution memberships is most relevant to your work. tick one box only.)	
	Institute of Acoustics	
	Royal Aeronautical Society	
	Institution of Agricultural Engineers	
	Chartered Institution of Building Services Engineers	
	Institute of Cast Metals Engineers	
	Institution of Chemical Engineers	
	Institution of Civil Engineers	
	British Computer Society	
	Energy Institute	
	Institution of Engineering and Technology	
	Institution of Engineering Designers	
	Society of Environmental Engineers	
	Institution of Fire Engineers	
	Institution of Gas Engineers and Managers	
	Institute of Healthcare Engineering & Estate Management	
	Institute of Highway Incorporated Engineers	
	Institution of Highways & Transportation	
	Institution of Lighting Engineers	
	Institute of Marine Engineering, Science and Technology	
	Institute of Materials, Minerals and Mining	
	Institute of Measurement and Control	
	Institution of Mechanical Engineers	
	Institute of The Motor Industry	
	Royal Institution of Naval Architects	
	British Institute of Non-Destructive Testing	
	Institution of Nuclear Engineers	Ц
	Society of Operations Engineers	
	Institute of Physics	
	Institute of Physics & Engineering in Medicine	
	Institute of Plumbing and Heating Engineering	
	Institution of Railway Signal Engineers	
	Institution of Structural Engineers	
	Chartered Institution of Water and Environmental  Management	
	Institution of Water Officers	
	Welding Institute	
	5	

### THE ENGINEERING AND TECHNOLOGY BOARD 2007 Survey of Registered Engineers

### **ENCOURAGING NEW REGISTRATION**

<b>ENCOURAGING NEW REGISTRATION</b>		9. Which, if any, of the following was the single most significant factor in your decision to seek registration?			
6. When did you first become registered?		(Please tick one box only.)			
Within the past 5 years		I felt it would be helpful in my career			
5 to 10 years ago		development			
More than 10 years ago		I felt it would increase my influence within my organisation or industry			
7. How were you first made aware that engineers become professionally registered? (Please tick one box		I felt it would give me greater professional status			
I was informed by teaching staff at my school		I wanted my professional skills and experience to be recognised			
I was informed by teaching staff during my further or higher education		I was required to do so by my employer			
I was told by my employer	$H \mid$	I was encouraged to do so by my employer			
I learnt from registrants at my place of work		I was encouraged to do so by	_		
• • • •		colleagues/friends			
I was told by the engineering institution that I joined		None of the above			
Other sources (please specify below)		Other (please specify below)			
8. Which of the following were significant factors in decision to seek registration? (Please tick as many as	•	10. What impact has registration had on your (Please tick as many as apply.)	career?		
I felt it would be helpful in my career		It has increased my employment opportunities			
development  I felt it would increase my influence within my		It has meant I am more valued by my employer and colleagues			
organisation or industry		My confidence in my professional standing has			
I felt it would give me greater professional status		enabled me to challenge or promote significant			
I wanted my professional skills and experience to	_	initiatives			
be recognised		I feel it hasn't had any impact			
I was required to do so by my employer		11. In your view, which of the following factor	s would		
I was encouraged to do so by my employer		encourage new registrations? (Please tick as			
I was encouraged to do so by colleagues/friends		apply.)			
None of the above		A better understanding and promotion of the	_		
Other (please specify below)		benefits of registration			
		Formal recognition by employers			
		Recognition by employers of the particular professional development needs of professional engineers and engineering technicians			
		Enhanced remuneration package			
		Other (please specify below)			

# THE ENGINEERING AND TECHNOLOGY BOARD 2007 Survey of Registered Engineers

#### YOUR VIEWS ON REGISTRATION **CONTINUING PROFESSIONAL DEVELOPMENT** 12. How highly do you value your CEng/IEng/Eng Tech 17. How important to you is Continuing Professional qualification? Development (CPD) in maintaining your professional qualifications, ensuring that your skills and expertise are Very highly relevant and up to date? Fairly highly Very important Fairly poorly Fairly important Very poorly Fairly unimportant No view Very unimportant No view 13. £10-£26 of your annual fees pays for your title. How much value for money do you feel your CEng/IEng/Eng **Tech qualification represents?** 18. Do you believe you are able to keep your engineering competence adequately up to date for the role you have? Very good value Fairly good value Yes No Fairly poor value Very poor value 19. Do you plan your professional development objectives? No view Yes No 14. How highly do you value your institution membership? IF YOU HAVE ANSWERED 'YES' PLEASE GO TO Q20, Very highly OTHERWISE PLEASE GO TO Q21. Fairly highly 20. Do you maintain a formal record of your professional Fairly poorly development activities? Very poorly Yes No No view 15. How much value for money do you feel your institution **PERSONAL DETAILS** membership represents? 21. Are you: Very good value Male Female Fairly good value Fairly poor value Very poor value 22. Into which of the following age bands do you fall? No view 21-24 yrs 45-54 yrs 16. How well do you feel your institution is promoting the 25-34 yrs 55-64 yrs image & benefits of registration? 35-44 yrs 65 yrs + Very well Fairly well 23. Were you unemployed and seeking re-employment at any Fairly poorly

Very poorly

No view

time during the year ending 5th April 2007?

Yes

# THE ENGINEERING AND TECHNOLOGY BOARD 2007 Survey of Registered Engineers

**EMPLOYMENT GROUP** 

27. Please read through the following list and select

the one sector of the economy that is most

### INCOME

IF YOU ARE RETIRED, PARTIALLY RETIRED OR A STUDENT, PLEASE GO TO QUESTION 27.

employment, allowance, before Insurance and 2007. (Exclude payments, unear employment.)  £	ncluding ded ded ded ded ded ded ded ded ded de	oss basic annual incoming any London or larguation of Income Tax, In contributions, as at 5t vertime, bonus and compone and pension from processing the contribution of the contribution o	ge town National th April mission previous	<b>appropriate to yo</b> Tran	sport an Fii	Manufacturing Utilities Construction d Communications nance and Business please state below)	
net profit before to allowed for tax, be capital or other ex at a date other that profit before tax fo	ax for to the second se	the year 2006/07 less extre the deduction of persons. If your financial year April, please estimate yer financial year ending and 5th April 2007.	pense sonal, ends	28. Where are yo (primary place of South West	_	oyed by your emplo	yer
payments received If you are self-ent from the survey self-ent from the	rey report will be	rtime, bonus and complete 12 months to 5th April please leave this answer by the sum of answer to taken as your current riate box:	2007.  lank.  rs to	South East  Greater London East of England West Midlands East Midlands		Yorkshire & Humber North East Wales Scotland Northern Ireland	
White British Other White White and Black Caribbean White and Black African White and Asian Other Mixed Indian Pakistani		Bangladeshi Other Asian Black Caribbean Black African Other Black Chinese Any other ethnic group (Please describe)					

Thank you for your co-operation.

PLEASE RETURN YOUR COMPLETED QUESTIONNAIRE IMMEDIATELY IN THE PRE-PAID ENVELOPE PROVIDED.

Your completed questionnaire should be returned to reach ERS Market Research, Independence House, 33 Clarendon Road, London N8 0NW by no later than **Friday, August 17th 2007.** 





opendix 2	- Other	field mat	terials,	e.g. co	vering I	etters,	show ca	ards	





16<sup>th</sup> July 2007

# 2007 SURVEY OF CHARTERED ENGINEERS, INCORPORATED ENGINEERS AND ENGINEERING TECHNICIANS

Dear Registrant,

On behalf of The Engineering and Technology Board and Engineering Council UK, I would be grateful if you would help me with a survey intended to keep us up-to-date on the pattern of employment and the conditions of service in the engineering profession. This will enable us to gain detailed information about the profession, including the comparison of engineers' education, training and rewards with those of other professions. This year, we are also seeking your views on some of the registration issues that the profession faces including new registration and continuing professional development.

The survey is being conducted, as it has been for some years now, by ERS Market Research, a business of the Electoral Reform Society Limited.

Random names have been provided by Engineering Council UK from their Register and yours was amongst them. If you agree to take part, we will need to receive your completed questionnaire by 17<sup>th</sup> August 2007. Please return it to ERS in the enclosed pre-paid envelope.

I would like to stress that ERS guarantees absolute confidentiality. You will see that they do not ask for a name or address and they will not make available any information which could possibly identify you to The Engineering and Technology Board, Engineering Council UK or indeed anyone else. We shall publish a full report in September, which will be of great interest and value to the profession.

I would like to thank you, in advance, for your co-operation in this important exercise.

Yours Sincerely,

Dr John Morton Chief Executive

**Engineering and Technology Board** 



### Appendix 3 Technical Appendix

#### **Fieldwork**

10,000 questionnaires were despatched by first class post to respondents' home addresses on (despatch date). 3,238 completed questionnaires were received by ERS giving an overall response rate of 32%. This matches the response rate of 34% achieved in the 2005 survey.

Fieldwork was carried out between Tuesday, 17<sup>th</sup> July and Friday, 17<sup>th</sup> August.

#### Methodological considerations

Participation in self completion surveys is of course voluntary, and there is a risk that respondents who are either particularly committed or who have a particular axe to grind may be over-represented in the survey. However, we applied a number of factors to minimise the impact of self selected participation and respondent bias.

It is necessary to ensure that the most appropriate methodological approach is used and in this case a postal approach was employed to good effect given the profile of respondents. The content and length of interview are also critical elements to consider. They questionnaire was designed to address the issues of greatest relevance (both for the client and the respondents) while keeping the interview to an acceptable length to ensure that respondents' attention remains fresh and reflective and to minimise loss of concentration and fatigue.

It is always important to keep the wording of any statement neutral to avoid bias, especially given that opinion may potentially be influenced by the tone of any 'hot issue', on which strong opinions may have been widely discussed.

Other practical elements, such as clear and unambiguous questionnaire layout to ensure ease of completion, sufficient time to complete the survey help to boost the response rate.

A strong determinant of willingness to respond to a survey is the extent to which individuals do (or do not) feel that participation is worthwhile. Where there is a belief that responses will be considered seriously and action will follow, the response rate will be greater than where there is a belief that opinions will not be taken into account.



## Appendix 4 Sample profiles

Sample details relating to registration and employment have been provided in Section 4 of the main report. Further demographic information is provided below and additional analysis is contained in the separate volume of computer tabulations.

	2005	2007
Base: All Registered Engineers	(3460)	(3238)
	%	%
Gender		
Male	96	96
Female	4	4
Age		
21-24	*	*
25-34	7	9
34-44	24	21
45-54	33	31
55-64	36	37
65+	*	1
Ethnic Group		
White	96	86
Non-white	3	3
Not stated	1	11



Region of Primary Place of work 2007	
Base: All registered engineers	(3238)
	%
South West	11
South East	22
Greater London	11
East of England	6
West Midlands	8
East Midlands	6
North West	9
Yorkshire and Humberside	5
North East	4
Wales	3
Scotland	9
Northern Ireland	2
Not stated	3