

# LANTRA

## A Synopsis of the Skills Issues Facing Land-based Engineering

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## Key statistics

		Manufacturing	Wholesale	Rental	Total
	Total number of employees	9,810	16,500	1,615	27,925
	Number of business units	1,090	1,620	405	3,115
English region	North East	25	40	10	75
	North West	90	120	35	245
	Yorkshire and Humber	125	130	25	280
	East Midlands	115	180	25	320
	West Midlands	100	145	35	280
	East	150	195	50	395
	London	5	45	20	70
	South East	80	165	40	285
	South West	140	195	45	380
	England	<b>805</b>	<b>1175</b>	<b>285</b>	<b>2,265</b>
Nation	Wales	<b>45</b>	<b>85</b>	<b>35</b>	<b>165</b>
	Scotland	<b>120</b>	<b>165</b>	<b>60</b>	<b>345</b>
	Northern Ireland	<b>95</b>	<b>150</b>	<b>25</b>	<b>270</b>
	Turnover (2007) £million	£698	£2,002	£166	£2,866
Size of business	0-4 employees	70%	52%	79%	-
	5-9 employees	15%	18%	12%	-
	10-19 employees	8%	17%	8%	-
	20-49 employees	5%	10%	1%	-
	50-99 employees	1%	1%	0%	-
	100-249 employees	1%	1%	0%	-
	Over 250 employees	1%	1%	0%	-

## Key findings

### Top three skills required by employers:

- 'Specialist technical skills' (68%)
- 'Computer literacy' (48%)

### Qualifications

- 45% of employers prefer apprenticeship
- 20% want a foundation degree
- 3% favour the diploma route

### Skill shortages

- 45% of businesses have shortages
- Predominantly in 'servicing'
- Inability to recruit technicians

### Employers stated:

- "Lack of people interested in sector"
- "We have uncompetitive salaries"
- "No young skilled people in industry"

## Introduction

A skills shortage has occurred within the land-based engineering industry. Through research such as this we can establish what the shortages are and then champion the education and training which is relevant to the industry. This research also focuses on addressing the issues of recruitment and retention. Our continuing research, in collaboration with leading industry bodies, ensures these issues are at the forefront of the skills agenda.

*The land-based engineering industry traditionally suffers from an ageing workforce, staff recruitment and retention issues and a poor image*

The central aim of this ESF supported research is to assist Lantra in helping to create a sustainable, productive and skilled land-based engineering industry.

## Methodology

To update our intelligence and awareness of the issues facing the industry we developed a survey in conjunction with industry leaders. To ensure we achieved maximum representation and delivery of the survey, Lantra engaged with key dealerships and industry representative bodies.

A database of almost 3,000 businesses was catalogued to ensure our online and paper survey reached as many businesses as possible. We secured the responses of over 200 businesses; a 15% return, which is a typical response rate.

*Research was carried out in conjunction with industry, AEA and BAGMA*

Please see page 13 for a graphical representation, as plotted by the business postcode, of all 3,000 businesses that were contacted for the purposes of the survey.

## Secondary research findings

Before the findings of the survey are realised it is considered appropriate to outline the profile of the industry according to national data sources.

Within national data sources, industries are disaggregated and categorised using Standard Industrial Classification (SIC) codes. Using 2003 SIC codes<sup>1</sup> the land-based engineering industry is visible within the following four codes:

**Table 1 SIC codes (2003) pertaining to land-based engineering**

SIC	Descriptor
(2931)	<b>Manufacture</b> of agricultural tractors
(2932)	<b>Manufacture</b> of other agricultural and forestry machinery
(5188)	<b>Wholesale</b> of agricultural machinery, accessories and implements, inc. tractors
(7131)	<b>Renting</b> of agricultural machinery and equipment

The aforesaid SIC codes overlap all the sub-industries within land-based engineering<sup>2</sup> therefore it is not possible to present one particular SIC code as representative of one sub-industry. Therefore it is sensible to review the SIC land-based engineering data in relation to *manufacturing*, *wholesale* and *renting*.

### Number of businesses

Utilising data from the 2007 Inter Departmental Business Register<sup>3</sup> (IDBR) shows that there are over 3,000 UK business units across the four SIC codes.<sup>4</sup> Business units associated with *wholesale* account for 52%, *manufacturing* 35% and *rental* 13%.

There are almost 2,000 agricultural wholesalers across the UK

### Business size

Using IDBR figures shows that there are 27,925 land-based engineering employees within the UK across *wholesale* (59%), *manufacturing*, (35%) and *rental* (6%).

<sup>1</sup> The year 2003 refers to the year of the SIC classification and not the associated data

<sup>2</sup> Such as agricultural engineering, lawn and garden, forestry, dairy and irrigation, fabrication and blacksmiths and professional ground care.

<sup>3</sup> The main administrative sources for the IDBR are VAT trader and PAYE employer information passed to the Office of National Statistics by HM Revenue & Customs

<sup>4</sup> Please note this excludes those which are registered as self-employed

According to the IDBR, almost two-thirds of land-based engineering businesses have 0-4 employees, whilst one third have 5-19 employees. The predominance of micro-businesses in land-based engineering is highlighted by the fact that less than 2% of all businesses have over 50 employees.

*Renting* is an area which has the largest number of micro-businesses with almost 80% of businesses employing less than five employees.

Dealerships and individuals identified and documented as providing sales and technical support number 2,691 in the UK operating from 3,079 sites.

The aforesaid figures do not represent the full complement of businesses involved and further research is required to establish a better picture of employers and individuals employed within the industry. There are a considerable number of businesses operating as sub-dealers, sub-contractors and self-employed mobile operations that operate under the radar.

The existence of these businesses which hold no major franchise and do not subscribe to a trade association raises the question of how educational matters and the opportunities to upskill the workforce can be brought before them.

It is likely that communication, training provision and involvement with larger numbers of employers will become more difficult in future as manufacturers seek to expand dealers' trading territories and reduce/rationalise the accounts that they deal with.

## Location

Across the UK, three out of every four land-based engineering businesses are located in England. Within England there is no one region which has a saturation of land-based engineering businesses; there is reasonable coverage in every region. The South East and South West have a slight predominance (almost a quarter) whilst London and the North East have considerably smaller numbers (2% each).

*11% of the industry is located in Scotland; Northern Ireland 9% and Wales 5%*

## Turnover

Land-based engineering businesses do not feature predominantly in just one or two turnover bands; there is a wide distribution of businesses that earn less than £50,000 to over £5 million. A good example of this is that the same percentage of businesses (16%) earn up to £49,999 per year as those that earn over £5 million.

Furthermore, the IDBR statistics show that collectively the businesses within *manufacture*, *wholesale* and *retail* produce turnover in excess of £2.8 billion per annum.

## Age of business

The IDBR statistics demonstrate that the majority (66%) of land-based engineering businesses are over 10 years old. Whilst this is positive in the respect that the industry is made up of mature, established businesses, it also shows that there are very few start-up businesses. This will have a huge impact on the future sustainability of the industry.

1 in 10 land-based engineering businesses are less than 2 years old

The aforesaid point is especially pertinent for the area of manufacturing. The areas of *rental* and *wholesale* are in a stronger position with a healthier balance of old and new businesses.

## Primary research findings

The following section shall express the findings of Lantra's survey. Comparisons with national data sources will be made and deductions conveyed. This section follows the order in which the sections are distributed in the survey.

### About the business

The locations of the businesses which responded to the survey concur with the distributions reported in national data sources. From reviewing secondary and primary data it can be deduced that 75% of land-based engineering businesses are situated in England, whilst 10-15% are within Scotland. Using the data an informed estimation can be made which places the volume of the industry within Wales and Northern Ireland at 5% respectively. Please see page 12 for a graphical representation as plotted by the business postcode of those responding to the survey.

Businesses were asked which sub-industries they operated within and, affording them the choice to tick more than one category, the top two reported industries by some margin were 'agricultural engineering' (66%) and 'lawn and garden' (64%). 'Professional ground care' accounted for 34% whilst the other three sub-industries<sup>5</sup> were much smaller in size.

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<sup>5</sup> Fabrication and blacksmiths' (16%), 'forestry' (15%) and 'dairy and irrigation' (5%)

An overwhelming 85% of those that responded to the survey are members of trade associations. A total of 17 associations were reported by those surveyed. These are:

**Table 2 Employer representative bodies associated with land-based engineering**

1	Agricultural Engineering Association	10	Institution of Agricultural Engineers
2	AMADA	11	Institute of Groundsmanship
3	British Agricultural and Garden Machinery Association	12	Institute of Welding Distributors
4	British and International Golf Greenkeepers Association	13	Lantra Sector Skills Council
5	British Hardware Federation	14	National Farmers' Union
6	Federation of Small Businesses	15	National Proficiency Tests Council
7	Freight Transport Association	16	Retail Motor Industry Federation
8	Guild of Master Craftsman	17	Scottish Plant Owners Association
9	Hire Association		

*Any conclusions must be communicated to the wealth of associations with land-based engineering interests*

Please see page 14 for a breakdown of what each association does including website addresses.

The breadth of associations is a positive sign that land-based engineering businesses have considerable resources to tap into regarding information, advice and guidance. Conversely it may also be construed as a negative force because of the pluralism of associations which may have different standpoints on what is good for the short- and long-term future of the industry.

Reviewing the annual turnover of those surveyed shows that the income generated varies from £10,000 to over £5 million. This is a result of an industry which has a broad spectrum of businesses concerning size, scope and maturity. The findings of the survey agree with national data sources, for example there is a direct parallel in that the same percentage of businesses (14%) earn up to £49,999 per year as those that earn over £5million.

## Workforce

Almost half of those surveyed have less than 10 employees, which is a finding also present in national data sources. This is confirmation that the industry predominantly comprises small- to medium-size businesses with a *mean* business size of 2.6 employees.

*Businesses with over 50 employees account for just 1 in 10 of all businesses*

Those surveyed were asked to indicate, in percentages, what their workforce is made up of and the majority of responses indicated that 'servicing', 'parts', 'sales' and 'management' each occupy 25% of their business. A few chose the 'Other' category and then specified 'administration' or 'clerical'. The results of this question demonstrate that land-based engineering businesses have a healthy balance of highly skilled staff in different genres. The challenge for management

arises when one person leaves as it is difficult to recruit and replace that skilled person.

The industry is largely made up of full-time employees which account for four out of every five employees. The majority of businesses also reported that technicians account for, on average, between 25% and 50% of their respective workforce. The significance of technicians to the industry cannot be understated; only 1 in 10 of those surveyed reported that technicians account for less than 25% of their workforce.

Anecdotal evidence portrays a land-based engineering industry with an ageing workforce, however this report only partially supports that. Reviewing the statistics does demonstrate a propensity for businesses to have older employees but there are also a number of employees that are below the age of 25. When asked, 15% of businesses reported that their staff aged 16-25 consist of at least a quarter to half of their entire workforce, however this figure maybe skewed by a predominance of smaller businesses with less than 10 employees.

Although the industry does have proportionally more people aged over 40 than under, encouragingly there is a sign that a third of businesses reported that no members of staff left their business in the last year.

*'We find it very difficult to recruit agricultural/ground care technicians. They either leave the industry or further their career in a servicing role'*

Verbatim comment

However anecdotal evidence suggests that recruitment and retention is a big issue within the industry due to a lack of people management skills along with a poor industry image and pay. Therefore the impact of staff leaving is effectively trebled because of the difficulty of attracting and replacing skilled staff.

Comments from the survey which support the notion that recruitment is difficult include:

- *Pay and conditions compared to other similar trades. Lifestyle choices (hours too long)*
- ***Lack of technically minded recruits willing to take on a career in agriculture***
- *Unable to recruit the necessary calibre of staff*
- ***Finding it very difficult to recruit young enthusiastic men to work as mechanics. Difficult to compete with better paid professions. Dirty job.***

An ageing workforce does have its benefits in that it can teach subsequent generations valuable technical and practical skills.

Lantra Sector Skills Council must ensure that the older employees are passing on skills which are relevant and applicable in a modern setting whilst ensuring that there are suitable numbers of young people in the industry in the first instance.

*'There is a lack of trained technicians in this area. Trained technicians leave to start own business and most young people want to be vehicle mechanics anyway'*

Verbatim comment

## Qualifications

Land-based engineering businesses were asked how many apprentices they currently employ and the *mean* number returned was one apprentice. Some 40% of businesses stated that they do not employ any apprentices whilst 50% reported that they have 1-3 apprentices. Further, businesses were asked how often they recruit apprentices and encouragingly 1 in 5 stated every year. A majority of 52% stated that they employ apprentices 'as required'.

A present feature of the land-based engineering industry is the wide array of in-house schemes provided by the large manufacturing franchises and delivered through a network of contracted providers. Whilst this works well for those businesses holding main franchises, this infrastructure does not assist those smaller businesses and those outside the main franchise network.

These businesses are unable to access national apprenticeships and exclusive training and therefore the industry at the moment suffers from a fractured training landscape. This situation may be supported by the introduction of the Land-based Technician Accreditation Scheme in the future. Many smaller businesses are unable to attract apprentices or fail to have an appreciation of the value of applicants who have completed the industry apprenticeship compared with diplomas compared with foundation degrees, etc.

The apprenticeship route into the industry is a feasible option in shifting the balance from an ageing workforce to one which has future sustainability. The apprenticeship would not only inject the industry with a youthful workforce but it also provides the technical skills required. Those businesses surveyed also view the apprenticeship as the route which is most fit for purpose; 40% of employers 'preferred' the modern apprenticeship in favour of the diploma route which only received 3% of support.

*'We (employers) are all at fault for not taking on more apprentices'*

Verbatim comment

Before the apprenticeship route can achieve its full potential it needs to be actively promoted to portray the industry as one which young people want to engage with. The businesses surveyed overwhelmingly agreed that the best way to do this is to target schools to inform children about the industry. Other options which received

support include helping employers with costs, offering better training facilities and having a set wage scheme.

Consideration must be given to the fact that when employers were asked if they preferred the apprenticeship or diploma route a third stated 'no preference'.

*'I've been in this trade for 25 years and it is not clear to me how a present day apprentice scheme works, what it costs, how long it takes, who and at what age group it applies to or who to enquire to'*

Verbatim comment

This indecision may be detrimental to the industry because there is confusion, and a lack of information, concerning what each route entails and what content each of the colleges is providing to meet the needs of those going through the development. The industry needs to have access to clear and comprehensive information concerning what is best for their business which will ultimately help them recruit and retain suitable highly skilled staff.

Another route into the industry is the foundation degree. A minority of 19% stated that the industry does require the foundation degree although almost 50% of responses reported 'don't know'. This is another clear indication that employers within the industry are not clear as to the educational routes into land-based engineering.

## Skills and shortages

A third of employers reported that members of their workforce are not 'proficient at their job due to a lack of skills'. When asked which skills are principally required and, affording them more than one choice, a large majority (68%) stated 'specialist technical skills'. The top three responses after this were 'computer literacy' (48%), 'customer care' (46%) and 'basic technical skills' (46%).

*'A skill level of a technician cannot be totally based on what is learnt on the apprenticeship as dealers have employees working on a very varied selection of both tractors and combines and other full ranges of machinery'*

Verbatim comment

It is quite clear that the land-based engineering industry is one which is highly skilled and therefore requires highly skilled individuals. Verbatim responses to the survey indicate that the issue with staff not having the right skills is because of the varied number of tasks that technicians are called upon to do. Their employment is not often based on one type of machine or industry area, therefore the current educational routes need to be reviewed<sup>6</sup> to see if they are offering all the skills which are needed by new employees.

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<sup>6</sup> The land-based engineering apprenticeship is due to be reviewed by Lantra in April 2009

A number of employers stated that some of their staff have been on courses that have had no minimum entry requirements which, they argue, is contributing to the skills deficit within the industry.

Almost half of businesses (45%) stated that they suffer from staff shortages and a great majority of responses indicated that the shortages are in the 'servicing', and 'parts' departments. This is not surprising considering that employers have reported in great numbers their inability to recruit and/or retain skilled parts, sales and marketing staff and technicians. Other responses stated that they suffer shortages in 'sales' but they were in a very small minority compared to those suffering shortages in servicing.

*'There is a lack of youngsters coming into the trade and a few of those that are coming into it seem not able to cope with the 'hard' work and often lack enthusiasm resulting in their departure! We have advertised several times nationally and the number of those that have applied has been extremely disappointing! There is a real requirement for these very talented people'*

Verbatim comment

When employers were asked why they suffered these shortages, every single answer was related to one of four themes;

1. Lack of people interested in the industry
2. Industry does not have enough money to pay competitive salaries
3. A real lack of relevantly skilled individuals (who will work for uncompetitive pay)
4. The image of the industry deters young people.

## Conclusions

There can be little doubt after reviewing the secondary and primary research findings that the land-based engineering industry is now suffering from not being able to attract, employ and retain enough young people over the last two decades.

In the past there has not been enough industry partnership working and investment in the future of the industry and its skill base because the industry has been preoccupied with survival.

The larger businesses in the sector and the numerous employer representative bodies have a real responsibility to ensure that smaller competitors are not frozen out of the market regarding access to customers and, equally importantly, they must all have equal access to the pool of talent that wishes to enter the industry.

The establishment of the Land-based Technician Accreditation Scheme will help improve the steps that must be taken to ensure that those who wish to enter the

industry are being provided with the right information concerning what modern employers and industry require.

The current mainstream educational routes need to be ascertained as to whether they are fit for purpose. Government funding partners, education and industry could learn some valuable lessons from the very successful in-house schemes that the larger manufacturers and businesses within the sector have developed. They are proving to be an attractive proposition for the young people entering the industry.

There is also a role for the funding agencies to ensure that their funding methodologies are not constraining in terms of meeting the needs of industry to access short relevant accredited pieces of learning as well as supporting entrants to industry who have considerable practical ability but do not have equal academic capability.

The entire industry also needs to evaluate their offer to potential employees and market this in a fresh and attractive way. At present a lot of talent is lost to the vehicle, construction and heavy goods industry, which is very damaging. Therefore marketing the industry in a positive way to the general public, parents and in schools may help to stem the current damage which poor recruitment and retention rates are causing.

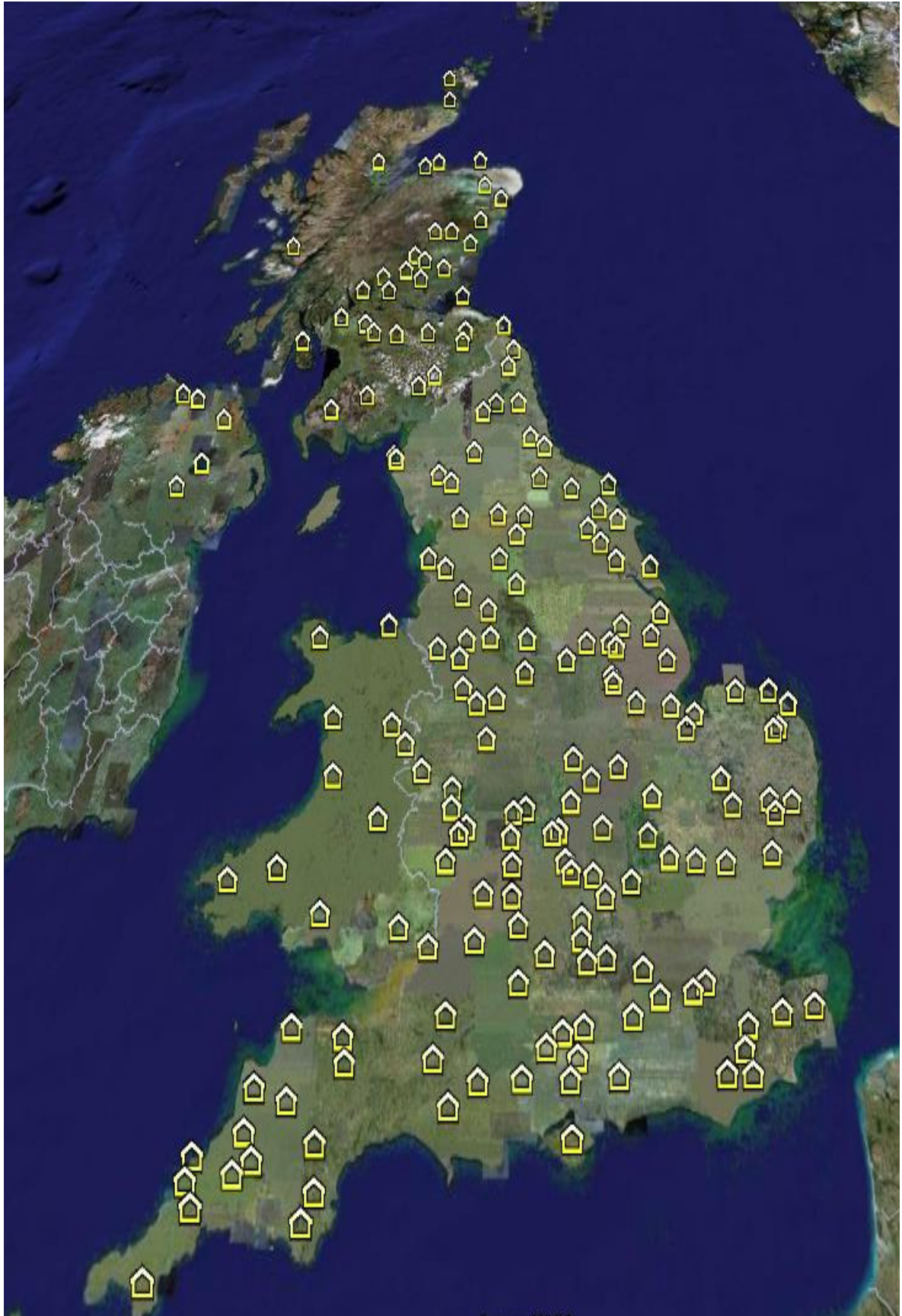
A common thread of comment received was the fact that applicants did not have the necessary skills to undertake a career in the industry. This indicated that whilst it was possible in some cases to attract people to apply for employment there was a need for education or re-training in the age groups above 16-19 years old.

The land-based service industry obviously wants ready-made technicians but is reluctant to have the financial burdens of poor productivity and high training costs. Funding or financially assisted re-training schemes may well be an area to explore.

As mentioned above, lack of management skills in the industry has an impact on both the attraction of people to the industry and recruitment and retention of staff. There is a view held by many employers that the industry does not pay enough money to enable competitive salaries to be paid and that the image of the industry is not appealing enough.

These views may well be related to the fact that poorly managed businesses have low margins, engage in little or no forward planning and have no interaction with schools, e.g. work experience schemes and school visits. This view has to be tempered with the understanding that the industry has a large number of businesses with less than 10 employees, many of which have dealer principals who are fully employed in day-to-day income earning activities rather than managing the business and promoting a professional image.

**Map 1: UK distribution of 218 land-based engineering businesses that responded to the survey**



**Map 2: UK distribution of 3,007 land-based engineering businesses that were contacted for the purposes of the survey**



## Details of land-based engineering associations

**Agricultural Engineering Association** promotes the technical, trade and commercial interests of British manufacturers and suppliers of agricultural machinery.

<http://www.aea.uk.com/>

**AMADA** is a large tool manufacturer with a UK base in Kidderminster.

<http://www.amada.co.uk/>

The **British Agricultural and Garden Machinery Association** (BAGMA) is the trade association for farm and ground care machinery dealers across the UK.

<http://www.bagma.com/>

The **British and International Golf Greenkeepers Association** represents the interests of golf greenkeepers.

<http://www.bigga.org.uk/>

**BHF Group** represents independent retailers, with dedicated specialist divisions including Agricultural Machinery.

<http://www.bhfgroup.co.uk/>

The **Federation of Small Businesses** is a member organisation which campaigns to protect the interests of its members.

<http://www.fsb.org.uk/>

The **Freight Transport Association** one of the largest trade associations in the UK representing the transport interests of some 12,000 companies.

<http://www.fta.co.uk/>

The **Guild of Master Craftsmen** assists its members to obtain extra work by increasing public perception of their skill and integrity and to help members make savings on business expenses.

<http://www.guildmc.com/>

The **Hire Association** is a leading trade association for hire and rental companies in the UK and Ireland.

<http://www.hae.org.uk/>

The **Institution of Agricultural Engineers** is the professional body for engineers, scientists, technologists and managers in agricultural and allied land-based industries.

<http://www.iagre.org/>

The **Institute of Groundsmanship** is a membership organisation that represents groundsmen, greenkeepers and all others involved in landscaping, horticulture, sports turf, and amenity turf care.

<http://www.iog.org/>

The **Association of Welding Distributors** was created to support and promote the high professional standards of its members in dealing with customers, suppliers and competitors.

[http://www.awd.org.uk/site/Open\\_area/splash/splash\\_page.html](http://www.awd.org.uk/site/Open_area/splash/splash_page.html)

**Lantra Sector Skills Council** supports the training and business development needs of employers, employees and volunteers in 17 industries within the environmental and land-based sector.

<http://www.lantra.co.uk/>

The **National Farmers' Union** represents and looks after the interests of farmers and growers in England and Wales.

<http://www.nfuonline.com/x11.xml>

The **National Proficiency Tests Council** is the largest nationally recognised awarding body within the land-based sector.

<http://www.nptc.org.uk/>

The **Retail Motor Industry Federation** represents the interests of businesses in the automotive industry in the UK.

<http://www.rmif.co.uk/>

The **Scottish Plant Owners Association** exists to protect and further the interests of plant owners in Scotland.

<http://www.spoa.org.uk/home.cfm>

## Lantra

Lantra is the Sector Skills Council supporting skills, training and workforce development for businesses in the environmental and land-based sector. We are committed to helping everyone access the training, qualifications, skills and knowledge they need for business success and to develop their career.

We are an independent, UK-wide organisation that is owned and managed by our industries, which are grouped around land management and production, animal health and welfare and environmental industries.

We lead the way in understanding our industries' future skills and business needs. We work together with trade organisations, unions, training providers, governments and many more to maximise investment in skills.

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