

# **Irish and non-Irish national construction workers**

**Research on differences in approach to  
health and safety at work**

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## **The Health and Safety Authority (HSA)**

The HSA is working to create a National Culture of Excellence in Workplace Safety, Health and Welfare for Ireland. They are the state sponsored body in Ireland with responsibility for securing safety, health and welfare at work, and operate under the Safety, Health and Welfare at Work Act 2005. Working in partnership with employers and employees, it is the HSA's responsibility to ensure that safety and health in the workplace is a key priority for everyone.

## **The Institute for Employment Studies**

The Institute for Employment Studies is an independent, apolitical, international centre of research and consultancy in public employment policy and organisational human resource issues. It works closely with employers in the manufacturing, service and public sectors, government departments, agencies, and professional and employee bodies. For 40 years the Institute has been a focus of knowledge and practical experience in employment and training policy, the operation of labour markets, and human resource planning and development. IES is a not-for-profit organisation which has over 60 multidisciplinary staff and international associates. IES expertise is available to all organisations through research, consultancy, publications and the Internet.

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# Executive Summary

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The Health and Safety Authority (HSA) commissioned the Institute for Employment Studies (IES) to conduct research which examined the issues affecting the safety of non-Irish national construction workers. Research has shown that migrant workers are a high risk group as they are more likely to work in occupations/sectors where there are existing health and safety concerns. Reducing rates of injuries amongst non-Irish workers is also a specific aim for the construction industry and the HSA has already begun to provide targeted support for non-Irish national workers (eg the use of pictorial representations of hazards). This research examined the root cause(s) of the high proportion of accidents and fatalities involving non-Irish national workers in the Irish construction sector. The results will be used to inform future campaigns, training and other initiatives.

**The main finding was that most of the differences in approach and behaviour between Irish and non-Irish workers exist because, as two groups of workers, they have different personal and work characteristics, rather than because of anything to do with their nationality per se.**

## Methodology

The study included three main sources of data. These were:

- A survey of 200 construction employers. This identified employers who would allow us access to their workforce, but also gathered a range of information including their views on the safety of non-Irish workers on site.
- A survey of 600 construction workers, 300 each of Irish and non-Irish. Workers completed a paper-based survey administered across 29 different work sites in Dublin, Cork, Limerick and Galway. Surveys were provided in a range of languages and the reading level for the questionnaire was assessed at between ages 9 and 11.
- In-depth, face-to-face, interviews with 30 non-Irish national construction workers. This allowed workers with literacy issues to participate in the research, and a more in-depth exploration of issues emerging from the survey.

## Employer view

Many employers felt that there were no particular issues facing non-Irish national workers in the Irish construction industry, and rated workers' spoken English as good (although understanding of written English was seen to be a weakness). They also thought that they paid attention to health and safety on site, and did so as much as their Irish peers. Within our sample, the smaller firms had a more positive experience of working with non-Irish nationals and tended to rate both their English ability and their attention to health and safety more highly. Where there were problems with non-Irish nationals, employers often felt that these could be due to differences in the safety culture in other countries when compared to Ireland. Relatively few employers were proactive in providing support to non-Irish national workers, and when they did so this was generally to help with standards of English language rather than health and safety.

## Worker view

### Survey data

Despite being surveyed on the same sites, there were some key differences between Irish and non-Irish national workers. Non-Irish national workers more likely to be younger; have spent more time in education; be newer to the industry; less likely to be self-employed; and more likely to work on skilled jobs within civil projects.

The majority of non-Irish national workers had construction experience prior to their entry to Ireland, and had received health and safety training prior to their arrival. Whilst in Ireland, the vast majority had completed their Safe Pass training, only half claimed to have received a site induction or toolbox talk (a short briefing session held on site). Around half of non-Irish national workers claimed that they understood, at most, only half of what they heard on site, and around two-thirds could understand no more than half of what they read. Around half had completed some form of English language course, but most older workers had not received any formal instruction.

One in five non-Irish national workers felt that their bosses might prefer them to continue working even if their health and safety were at risk, a quarter felt that health and safety was not always a priority in construction in Ireland, and one-third sometimes felt pressure to work in an unsafe manner. Non-Irish national workers were more likely to feel that they were not always provided with personal protective equipment (PPE) when required, and whilst most non-Irish national workers felt respected by their co-workers, some were unsure how comfortable they would feel asking for help or raising a concern about health and safety. Non-Irish nationals were more likely to believe that they were in control of their own safety, and this 'internal focus' was found to be linked to reduced levels of accidents, all other things being equal.

The sample of non-Irish nationals were less likely to have either experienced an accident, seen a colleague have an accident or suffered a near miss whilst working in Ireland. Irish workers within this sample had a greater propensity to work on larger sites (where accident rates are higher in the survey data) and not to work on civil projects (which tend to be safer in the survey data), which goes some way to explaining this. However, non-Irish national workers do see some behaviours as less risky than their Irish peers and admitted to engaging in risk-taking behaviour on a more regular basis. Polish workers, however, were the exception and the responses of this group were often more similar to Irish than to other non-Irish national workers'. English language ability and receipt of training were related to whether non-Irish workers take risks at work. Work at height and moving goods safely both emerged as areas where more training might be of benefit.

### Interview data

Some workers had taken English courses to improve their fluency (and to get a better job) but others were unconcerned about their ability to speak or understand English, 'getting by' living and working with others who speak their language. Colleagues with better language skills were often used as a support at work and there were examples given of employers who made particular efforts in the way they communicated instructions. However, on some busy, larger sites, there often was not time to do this, with the result that some workers would try to hide their poor English. Difficulties with English were felt to put safety at risk in some cases.

Workers tended to be positive about training they had received in Ireland, but a number had experienced problems gaining timely access to some courses or had struggled with the quality of course translations. Workers tended not to feel they needed more training, although some wanted to know about safe working at height. Knowledge of worker rights was limited, but this was not seen to be important.

Overall, non-Irish nationals were positive about the treatment they received from employers and colleagues. A few identified external pressures (eg supervisors applying too much pressure to get them to work quickly) which could result in risks being taken, and accidents/near misses were often related to workers taking short cuts. Almost all of the interviewees thought that the levels of health and safety in Ireland compared favourably with those in their home countries. However, some feared the consequences of speaking out about safety issues.

Overall, therefore, the experiences of non-Irish workers in Ireland are generally positive, despite exceptions where pressures to work quickly have put workers at risk. Employers are making some allowances in their communication methods for their non-Irish workers, who are, on the whole, satisfied with the training they receive whilst in Ireland and with the safety standards in the country. It should be noted, however, that non-Irish nationals are not a homogeneous group but have as many differences in experiences, attitudes, and behaviours, as there are amongst construction workers in general, as the interviews revealed.



## Conclusions

The particular issues facing non-Irish national workers in the construction industry include:

- Many non-Irish national workers struggle with spoken and written English and employers are not always aware of the poor language skills of their workers. Whilst many employers offer support and translation services, some workers find it difficult to ask questions and/or raise concerns with employers. In emergency situations these workers could be at greater risk.
- Many non-Irish national workers receive little formal training in health and safety beyond the Safe Pass course. A minority have managed to acquire work without undertaking Safe Pass, whilst others have not been able to access a translated course in time, and therefore have taken it in English despite low levels of English ability.
- Some non-Irish national workers have little knowledge regarding workers' rights and employers' responsibilities. Rather than being concerned about their rights, workers appear grateful for the employment they have, particularly when they have had negative employment experiences in their home country.
- Many workers come to Ireland to find work due to poor economic conditions and lack of job security in their home countries. This experience of job insecurity continues to influence non-Irish nationals' behaviour on sites in a way that does not influence Irish workers: they are less likely to question unsafe practices, or raise concerns with employers or colleagues and may be more likely to undertake risky jobs when asked to do so.
- Non-Irish national workers are less likely to perceive some risky behaviours as high risk and are likely to engage in them more often. This stems in part from a different approach to health and safety in non-Irish nationals' home countries. In addition, some non-Irish nationals are prepared to take short cuts or work quickly in order to increase their earnings.
- Further investigation of the type of work that non-Irish nationals are involved in, in Ireland (which was beyond the scope of this project), would be useful in determining whether these workers are actually in the more dangerous jobs, and whether this, in itself, explains differences between them and Irish workers.



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# 1 Introduction

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## 1.1 Research objectives

The Health and Safety Authority (HSA) commissioned the Institute for Employment Studies (IES) to conduct research on the issues affecting the safety of non-Irish national construction workers.

The aims of the research were to examine the root causes of the high proportion of accidents and fatalities involving non-Irish national workers in the Irish construction sector.

It is intended that the results of this study will be used to ensure that safety awareness campaigns, and training and development initiatives may be tailored to meet the needs of those who have a different perception of risk and who engage differently in risk-taking behaviour.

## 1.2 Scope of the research

This research focuses on the differences between Irish and non-Irish nationals working in the Irish construction sector. Whilst there are references in the report to health and safety training, it was not the purpose of this research to evaluate health and safety training, either in terms of content or provision. Evidence elsewhere has pointed to the increased likelihood for migrant workers to engage in illegal work activities; this research is not intended to cover the issues relating to illegal work in construction, for non-Irish nationals or otherwise.

Although the focus of this research has been on non-Irish nationals in the construction sector, the findings are likely to be relevant to employers of non-Irish nationals in other sectors also. With increasing proportions of reported accidents across all sectors involving non-Irish nationals<sup>1</sup>, employing organisations are likely to be interested in how to support the health and safety of non-Irish nationals in all types of workplaces.

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<sup>1</sup> HSA, Summary of Workplace Injury, Illness and Fatality Statistics 2006-2007, p. 27.

## 1.3 Report structure

This report is structured as follows:

- The background to the project.
- The methodology adopted.
- The employer screening survey, including the achieved sample and findings.
- The worker survey (of both Irish and non-Irish national workers in construction), including a breakdown of the sample achieved and findings.
- The face-to-face interviews, including details of the achieved sample and findings.
- A discussion of the main themes to emerge from the research and the conclusions.

Within each of the main substantive results chapters there is a discussion of the research findings which follows the presentation of results, as well as a brief chapter summary.

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## 2 Background and Context

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The aim of this research project was to examine the root causes of the high proportion of accidents and fatalities involving non-Irish national workers in the Irish construction sector. Whilst the Central Statistics Office (CSO) estimates that non-Irish national workers make up 11 per cent of the construction workforce (31,900 workers) in 2005<sup>1</sup>, research from that year shows that non-Irish national workers in the sector are a high-risk group, with disproportionately high numbers of reported accidents and injury. Non-Irish national workers are three times more likely to be fatally injured<sup>2</sup> and according to figures for 2005, 16 per cent of all injuries reported to the Authority from the construction sector involved non-Irish national workers<sup>3</sup>.

Since then, the fatality rate for non-Irish national workers in construction has fallen, and in 2007 there were no reported fatalities for this group. However, the proportion of injuries reported by non-Irish nationals remains high, and in 2007, 15 per cent of injuries from the construction sector involved non-Irish national workers, while the number of non-Irish national workers in construction grew to 21 per cent of the construction workforce.<sup>4</sup>

### 2.1 Existing research

A number of other research projects have also identified migrant workers as a high-risk group. In the UK, research by McKay, Craw and Chopra (2006)<sup>5</sup> for the Health and Safety Executive (HSE) found that migrants are more likely to be working in occupations and sectors where there are existing health and safety concerns, whilst Ore and Stout (1997)<sup>6</sup> found that the mortality of non-

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<sup>1</sup> CSO, Statistical Release, 22 February 2007.

<sup>2</sup> HSA, Summary of Fatality, Injury and Illness Statistics 2004-2005, p. 65.

<sup>3</sup> This figure is derived from the HSA's Summary of Fatality, Injury and Illness Statistics 2005.

<sup>4</sup> CSO, Statistical Release, 8 March 2008

<sup>5</sup> McKay S, Craw M and Chopra D (2006), *Migrant workers in England and Wales: An assessment of migrant worker health and safety risks*, HSE Books.

<sup>6</sup> Ore T and Stout N (1997), 'Risk Differences in fatal occupational injuries among construction laborers in the United States, 1980-1992', *Journal of Occupational and Environmental Medicine*, 39(9) pp. 832-43.

white construction workers in the US was 27 per cent higher than for their white counterparts. Clearly, the health and safety of non-Irish national workers in the construction industry is a serious concern which warrants further investigation.

However, little research exists which specifically examines the health and safety issues affecting non-Irish national workers in the construction sector. The aim of this research project was to understand why non-Irish national workers are more at risk, and how their behaviour on site and awareness of risks compares to their Irish peers. The findings of this research project will be used to ensure that safety awareness campaigns, and training and development initiatives may be tailored to the needs of those who have a different perception of risk and who engage differently in risk-taking behaviour.

## 2.2 HSA initiatives for non-Irish nationals

The Authority has already begun to tackle some of the issues facing this group. It has created a programme of information resources aimed at non-Irish national workers and specific provisions relating to such workers have been included in the new Safety, Health and Welfare at Work Act 2005. Employers are now required under the Act to provide health and safety information in a form, manner and, as appropriate, language, that is reasonably likely to be understood by all employees. One of the HSA's recent initiatives is the Safe System of Work Plan (SSWP) for construction, which uses simple diagrams to convey hazards, and pictorially indicate the appropriate controls which need to be put in place, so that everyone on site, including those who possess little or no English, can understand what they need to do.

Television ad campaigns targeted at non-Irish nationals have been used to raise awareness of the HSA safety message.<sup>1</sup> The Construction Safety Partnership is also aiming to better address the imbalance in injury and fatalities between Irish and non-Irish. In their Construction Safety Partnership Plan for 2008–2010, goal four is to 'achieve a reduction in the high rate of injury for non-Irish national workers'.<sup>2</sup> The aim is to achieve this through three actions supported by the HSA, FAS, and ICTU:

1. Ensuring wide distribution of promotion materials for non-Irish national workers through the Safety Representative Facilitation Programme (SRFP) and Foras Áiseanna Saothair (Training and Employment Authority) Safe Pass Health and Safety Awareness Training Programme (FAS Safe Pass).
2. Promote greater uptake of training by non-Irish national workers.
3. Identify key recommendations from current HSA research on non-Irish nationals in construction for follow-up and implementation by the Construction Safety Partnership (CSP).

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<sup>1</sup> HSA online press release accessed July 14th 2008:  
[www.hsa.ie/eng/News\\_and\\_Events/Press\\_Releases\\_2008/Press\\_Releases\\_2006/Health\\_and\\_Safety\\_Prove\\_Good\\_Sports.html](http://www.hsa.ie/eng/News_and_Events/Press_Releases_2008/Press_Releases_2006/Health_and_Safety_Prove_Good_Sports.html)

<sup>2</sup> Construction Safety Partnership, 'Construction Safety Partnership Plan 2008-2010':  
[http://publications.hsa.ie/getFile.asp?FC\\_ID=566&docID=291](http://publications.hsa.ie/getFile.asp?FC_ID=566&docID=291) – Text Version

## 2.3 Safe Pass

Since 2001, construction workers in Ireland have been bound by law to pass the FAS Safe Pass Health and Safety Awareness Programme. This is a generic introduction to safe working on construction sites, which provides individuals with a basic knowledge of health and safety. Employers are duty-bound to pay for the course for their workers, although, in practice, many employers demand that workers have a Safe Pass certificate before being hired. The practical result of this practice is that most workers pay for the course themselves. Safe Pass does not relieve employers of their statutory duty to provide other appropriate health and safety training for their employees. Since its introduction, it has been recognised that many non-Irish national workers are unable to complete Safe Pass in English, so by 2003 the course was available in a range of languages. In practice, tutors arrange for interpretive services according to demand and are obliged to refer to the Code of Conduct when sourcing interpreters, which requires a check of interpreting qualifications and standards. In some cases the course exercises are translated into the workers' first language.

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## 3 Methodology

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The methodology consisted of three main elements, including:

- a screening survey of 200 construction employers
- a survey of 300 Irish and 300 non-Irish national workers
- qualitative interviews with 30 non-Irish national construction workers.

In devising our methodology, we took into consideration two issues which posed major challenges to the research: language barriers in researching individuals who may speak only a little or no English; and access to migrant workers. This section of the report details in full how the research was conducted as well as how the participants were recruited for both the surveys and in-depth interviews.

Ipsos MORI, an independent research company based in Dublin, was responsible for conducting fieldwork for the employer and worker surveys on behalf of the Institute for Employment Studies.

### 3.1 Definition of a non-Irish national construction worker

There is no one definition of a migrant worker. It is therefore important to clarify how the category of ‘non-Irish national construction worker’ was defined in this research. We included any individual who is not Irish and who came to Ireland with the specific intention of gaining employment. We specifically excluded British migrants or those whose native language is English (eg from Commonwealth countries such as Australia, New Zealand and Canada, or the United States). This research focussed on legal migrants only.

We used a broad definition of construction, as provided by the International Standard Classification of Occupations (ISCO) codes. This included any workers involved in building frame and related trades; building finishers and related trades; painters, building structure cleaners and related trades; and mining and construction labourers. We have not included office and clerical staff in this research, as the hazards they face are very different, but instead focussed on those involved in construction activities.



## 3.2 Employer survey

The initial stage of the research involved a telephone survey of 200 construction organisations. Interviewing was conducted in January and February 2008 from Ipsos MORI's dedicated telephone centre by trained Ipsos MORI interviewers.

### 3.2.1 Survey design

The purpose of the employer survey was twofold. Firstly, it was intended to gather data from employers regarding their perceptions of risk awareness and attitudes to safety among Irish and non-Irish national workers in the construction industry. This data provides a valuable context to the findings from the main survey of construction workers. Secondly, the survey was used to recruit businesses to participate in the main fieldwork stage for the worker survey. The topics covered in the employer survey included the following:

- Background information, including: confirmation that the organisation works in construction; size of workforce; number of non-Irish national workers employed for whom English is not their first language; whether the organisation works on sites with non-Irish national workers for whom English is not their first language.
- Views on levels of ability amongst non-Irish national workers to understand spoken and written English onsite.
- Views on attention to health and safety amongst non-Irish national workers on site and comparisons against Irish peers.
- Views on whether any nationalities are particularly high risk.
- Perceived barriers that non-Irish national workers face in relation to health and safety at work.
- Views on whether extra training or support is required for these workers and what would be helpful.
- Details of the site at which surveys will be distributed: number of workers onsite, proportion of non-Irish national workers, nationalities of non-Irish national workers.

At the end of the survey, companies were asked to agree to a follow-up call to arrange for an Ipsos MORI fieldworker to visit a construction site. The final questionnaire was approximately eight minutes in length. Quotas were set by business size and region, to ensure that companies of different sizes and from different regions (Dublin, Cork, Limerick, Galway) were included in the achieved sample. In order to assist comparisons in the data by company size and to take account of the fact that larger companies may have different experiences than their smaller counterparts, it was necessary to over-sample companies in the 10–49 and 50–249 employee categories respectively (ie include a higher proportion in the sample than would be the case in the general population of employers); other size bands were not over sampled.

Companies which did not employ non-Irish national workers on their construction sites were excluded from the survey.

### 3.2.2 Employer sampling

The sample for the employer survey was from two separate sources. The HSA supplied Ipsos MORI with a database of companies who had provided the HSA with Approved Forms (AF2), formal notification of construction work, which is a statutory requirement for any company engaging in work planned to exceed 30 working days or 500 worker hours. Only those companies in the database who had provided formal notification of construction planned in Dublin, Cork, Limerick and Galway during the fieldwork period were included in the sample. As the database supplied by the HSA was heavily weighted to medium and large businesses, the sample was augmented by the inclusion of smaller construction companies supplied by a business listings provider.

The sample provided by the HSA mostly identified the individuals responsible for co-ordinating the project stage of construction, whereas the sample drawn from the business listings provider did not. Where a named individual with responsibility for construction or safety was not provided, interviewers asked to speak to the person in the company responsible for health and safety in construction. Warm-up letters were sent to employers prior to the survey commencing in order to explain the aims of the research and encourage them to take part. The response rate was very high for the survey with only 20 per cent of those contacted refusing to take part (please see Appendix 7 for more details).

Of the 200 companies contacted, 87 per cent indicated that they would be happy to take part in the second stage of the research, the worker survey. Arrangements were made for site visits to be conducted on 29 sites selected from this sample by size and region. Participating employers were asked to alert their workers to the research project prior to site visits, and were provided with posters (including translated text) to help encourage participation.

## 3.3 Survey of Irish and non-Irish national construction workers

The main element of the methodology consisted of a quantitative survey of 300 Irish and 300 non-Irish national construction workers which provided a means of identifying whether hazard identification, risk perceptions and other key health and safety variables differed between the two groups.

### 3.3.1 Survey design

A paper-based self-completion survey, translated into different languages and administered onsite, was considered the most appropriate for our purposes given the lack of English proficiency amongst some non-Irish national workers. The questionnaire design consisted of a series of phases including:

- identifying pre-existing tools and scales which could be incorporated into our survey
- checking the literacy level of the survey
- translating and, in the case of the Polish version, back-translating the surveys
- piloting the survey with both Irish and non-Irish national workers and making revisions.

Throughout the design phase it was important to ensure that the questionnaire was kept short, simple and relevant to the population of interest: construction workers. For this reason, we adapted and shortened some of the pre-existing scales available. For full details of the reliability analyses please refer to Appendix 1.

The final design of the survey covered a range of topic areas including the following:

- **Demographic and background information** including: age, country of origin, length of time in Ireland, age at which they left formal education.
- **Employment variables** such as: trade, whether employee/employed/agency worker, size of employer, tenure, types of building projects worked on, whether they have any other paid jobs, average working hours per week (including overtime).
- **Previous training in health and safety:** any health and safety training prior to coming to Ireland, type of training received in Ireland, when training was last received, how well it was understood and views on how training in Ireland compares with training in their home country.
- **Risk perception** in relation to four key risks in the industry – working at heights, inappropriate use of PPE, manual handling, working around vehicles on site. In this section of the survey we drew on the approach adopted by McDonald and Hrymak (2001)<sup>1</sup> in their research for the HSA where they identified a series of high-risk situations surrounding falls from height and asked participants to express their opinions about the perception of risk (whether low, medium or high) and the frequency of such risk occurring. We used some of the items from the scale by Hoffman and Stetzer (1996)<sup>2</sup>, and included some additional items to ensure adequate coverage of the four high risk areas. To assess frequency of risks occurring we also drew on the Hoffman and Stetzer scale, adapting their five point frequency scale, to ‘never’, ‘less than once a week’, ‘once a week’, ‘more than once a week’ and ‘every weekday’.
- **Accidents in Ireland:** experience of any accidents/ill-health/near misses, reporting behaviour, levels of satisfaction with working conditions, how safe they feel on sites (and for non-Irish national workers, how safe they feel in Ireland compared with their home country).
- **Health and safety climate questions** relating to their current job: using attitude statements covering relationships with bosses and other workers, provision of adequate equipment, awareness of legislation and attitudes towards health and safety procedures. To aid with the design of this section we researched a number of health and safety climate tools including Zohar’s (2000)<sup>3</sup> Group Safety Climate tool and a short HSE safety climate tool.

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<sup>1</sup> McDonald N and Hrymak V (2001), Safety behaviour in the construction sector. Report to the Health and Safety Authority.

<sup>2</sup> Hofmann D and Stetzer A (1996), ‘A cross-level investigation of factors influencing unsafe behaviours and accidents’. *Personnel Psychology*, 49(2), pp. 307-339.

<sup>3</sup> Zohar D (2000), ‘A group-level model of safety climate: testing the effect of group climate on micro-accidents in manufacturing jobs’. *Journal of Applied Psychology*, 85(4), pp. 587-596.

- **‘Causes of accidents’ attitude scale:** to compile a scale looking at attitudes to accidents, and specifically, the causes of accidents, we researched a range of Locus of Control scales, which look at people’s beliefs about the root causes of events in their lives. The Locus of Control can either be internal (meaning one believes that one controls one’s life) or external (meaning one believes that the environment, some higher power or other people control outcomes and subsequently aspects of one’s life). We opted for an eight item scale which we adapted from the 20 item Aviation Safety Locus of Control Scale (Hunter<sup>1</sup>), using both externally-focussed and internally-focussed items. In the analysis this was split into two scales, one with an external focus and one with an internal focus. The results for each single item are also explored as these offer useful insights into workers’ specific attitudes. Please refer to Appendix 1 for more details of the scales.
- **Understanding of health and safety signage:** displaying some common construction health and safety signage and checking how well this is understood.
- **English comprehension:** including questions on understanding of spoken (non-Irish national versions only) and written English on sites, whether co-workers translate onsite, and a series of English comprehension tests. The UK’s National Institute of Adult Continuing Education (NIACE) was extremely helpful in identifying a range of relevant and appropriate tests for inclusion which assessed use of English as a foreign language, whilst retaining relevance for the construction industry. In compiling our tests we drew heavily on materials contained in ‘Build Up: ESOL for Construction’<sup>2</sup> by the UK Basic Skills Agency and ‘Materials for Embedded Learning for Trowel Occupations’<sup>3</sup> by the UK Department for Children, Schools and Families (formerly the Department for Education and Skills).

The design led to three slightly adapted versions of the survey – two English versions (one for Irish workers, one for non-Irish national workers with good English skills) and one translated version for non-Irish nationals who preferred to complete it in their own language (translated into five languages). The core of each version was kept the same to ensure equivalence and enable comparisons to be made, but some additional questions were included in the versions for non-Irish nationals, as shown in Table 3.1.

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<sup>1</sup> Hunter D (2002), Development of an Aviation Safety Locus of Control Scale. Aviation, Space and Environmental Medicine.

<sup>2</sup> The Build Up: ESOL for Construction course was developed by Louise Cottom at Peterborough Regional College as part of the Basic Skills Agency’s contribution to the Asset UK Project. The course was designed to provide students with a 60 hour general introduction to the construction industry in the UK and to develop the English language skills needed in the industry.

<sup>3</sup> The embedded materials commissioned by the DfES are designed for use by teachers from vocational, professional and community education backgrounds and for teachers with special literacy, language and numeracy backgrounds and include modules on health and safety and construction trades.

**Table 3.1: Work survey versions**

Version	Contents
English Irish workers	Core questions
English non-Irish nationals	Core questions Comparisons between Ireland and home country (eg health and safety training, views on safety on site) Understanding of spoken English on site
Translated non-Irish nationals	Core questions Comparisons between Ireland and home country (eg health and safety training, views on safety on site) Understanding of spoken and written English on site Basic English comprehension tests

*Source: IES, 2008*

Please note that all of the versions included some English comprehension tests, whilst simpler tests of English comprehension were included only in the translated non-Irish national questionnaire.

### 3.3.2 Literacy level

NIACE was subcontracted to assess the English level ability of the questionnaire. The original version was measured to be at a reading age level of 12.4 years, but alterations were made in order to bring this down to around entry level 3/level 1 of the English adult literacy standards (between reading ages 9 and 11 years, approximately). Whilst it was accepted that this would still preclude a proportion of the population who find reading at this level difficult, it was felt that this was a suitable level to achieve for our purposes given the technical nature of some of the issues covered. Additional measures during site visits, including fieldworkers providing assistance to workers in completing the survey, were adopted in order to ensure that a wider spectrum of the population was able to contribute to the research. In addition, the face-to-face interviews required no literacy skills.

Despite these other measures it is important to stress that our sample is not representative of the construction industry as a whole, as it excludes those who are unable to read and write.

### 3.3.3 Translation and back-translation

Prior to piloting, the survey was translated into two languages, Polish and Russian, using an external organisation. All translators were native language speakers with some experience or knowledge of the construction industry. A back translation of the Polish version was conducted to ensure equivalence of questions. This identified very few discrepancies, but led to minor changes. The final questionnaire was translated into the foreign languages considered most likely to be used by non-Irish national workers on construction sites, namely: Polish, Russian, Latvian, Lithuanian and Slovak.

### 3.3.4 Pilot

In December 2007, before commencing the main fieldwork, Ipsos MORI undertook a pilot of the proposed survey at a large construction site in Dublin. The pilot was organised with the agreement and assistance of the contractors responsible for the site. Self-completion questionnaires were administered to Irish and non-Irish national workers during a morning break at one of the site's dedicated canteens.

The pilot was conducted with a total of 14 construction workers: eight non-Irish national workers and six Irish workers. Following completion of the questionnaires, respondents were asked a number of questions about the survey instrument, regarding the accuracy and suitability of the language used and the ease of comprehension and completion (routing). In addition, longer qualitative interviews were conducted with relevant Irish workers, including the Site Safety Officer (following completion of the questionnaires at the same site). A number of small modifications were made to the questionnaire as a result.

### 3.3.5 Administration of survey

The self-completion survey was distributed and collected across 29 construction sites of different sizes in Dublin, Cork, Limerick and Galway by Ipsos MORI's Interviewer Quality Control Scheme (IQCS) certified fieldworkers. The majority of participating sites had agreed to the research during the employer survey. Due to difficulties in recruiting small sites through the employer survey, two smaller sites were recruited through HSA contacts.

Quotas were set to ensure that workers from a range of company and site sizes were included in the research, and to ensure that a minimum number of interviews were conducted in each of the four cities in which interviewing was conducted, as shown in Table 3.2.

**Table 3.2: Quotas for worker survey, by city**

City	Target interviews
Dublin	270
Cork	120
Limerick	105
Galway	105
<i>Total</i>	<i>600</i>

*Source: IES, 2008*

Before commencing fieldwork, interviewers were given a detailed briefing covering site safety and were equipped with Personal Protective Equipment. Interviewers administered the surveys to construction workers in a communal area on each site (eg a canteen) selected in conjunction with the Site Safety Officers, and workers were invited to take part in the research during their breaks rather than during work time. All workers who took part received two €2 National Lottery tickets as a thank you for their time.

Due to the methodology for disseminating surveys, it was not possible to calculate a response rate for this element of the research. Volunteers for the survey approached the fieldworker onsite,

rather than all workers on a site receiving a copy. It is therefore unclear how representative this survey is of workers on sites. However, reports from the fieldworkers revealed that the survey was popular and that it was relatively easy to achieve the target numbers. Recruitment and participation appeared to be uninfluenced by employers or other employees, and workers were generally very keen to take part.

### 3.3.6 Survey analysis

The analysis plan for the worker survey included using descriptive statistics to identify differences between Irish and non-Irish national workers and both univariate and multivariate techniques to test whether the groups were statistically different. Regression techniques (mainly logistic regressions) were used to examine the variables that predict particular outcomes and the 'true' effects of being a non-Irish national worker on some accident and risk behaviour variables.

## 3.4 In-depth interviews with non-Irish national construction workers

The third major element of the research project involved 30 face-to-face interviews with non-Irish national construction workers. The aims of the face-to-face interviews were twofold:

- To allow a more in-depth exploration of the issues; whilst the survey provides a useful method of comparing groups, by adopting an additional exploratory qualitative approach we aimed to uncover any unforeseen barriers.
- To provide access to 'hard to reach' sole-traders/workers within micro companies: we were aware that our methodology for the survey of conducting site visits would make it difficult to obtain the views of 'hard to reach' non-Irish national workers, such as those working as sole-traders on small domestic projects.

Interview participants were recruited by Market Research Northern Ireland, which uses recruiters based in a number of locations around the Republic of Ireland. The recruiters used informal means to get at hard to reach workers, including making contacts with intermediary groups such as community organisations and the 'snowballing technique' where recruits were asked whether any friends or family who are also non-Irish national construction workers would be willing to participate. Opt-in flyers translated into the five key languages were developed to help with this process and to ensure that workers with little or no English language skills could be included in the research (interpreters were offered where appropriate).

### 3.4.1 Discussion guide design

The interviews covered many of the same issues as those in the survey, but in more depth, and some additional issues including more complex questions around integration in the workplace, any experience of discrimination at work and awareness of rights and employer responsibilities. The Critical Incidents Technique was adopted to identify the information and constructs being used when individuals make decisions involving high-risk situations. Participants were asked to discuss previous experiences of 'high risk' situations, including near misses, and to provide details on what happened, actions taken and views on these.

An incentive of €30–40 (higher outside Dublin where recruitment was more difficult) was provided to all interview participants, as compensation for their time and involvement.

All interviews were recorded and transcribed, although in interviews where interpreters were used, transcription was used only on the questions and the translated responses. Qualitative analysis software (Atlas.ti) was used to analyse the qualitative data and ensure rigorous and systematic analysis (further details of this analysis are presented in Appendix 8).



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## 4 Employer Survey

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This section of the report details the sample achieved for the employer survey, and the findings from this element of the research.

### 4.1 Sample profile

Two hundred organisations were contacted during the screening survey. One-third (33 per cent) were micro organisations with 1–9 employees, and another one-third (33 per cent) were small organisations with 10–49 employees. In total, 14 per cent were very large, employing more than 250 employees (see Table 4.1).

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**Table 4.1: Size of company**

	Size	Frequency	Per cent
Very small	1-9 employees	66	33.0
Small	10-49 employees	65	32.5
Medium	50-249 employees	38	19.0
Large	250+ employees	28	14.0
Don't know		3	1.5
<i>Total</i>		<i>200</i>	<i>100.0</i>

*Source: IES, 2008*

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Please note that due to small numbers (in particular, on some of the variables, where only sub-groups of employers were asked) the data has not been weighted back to the population of construction companies in Ireland. It is important, therefore, to remember that the overall findings may not be representative of employers overall, but only of those in our sample. The employer survey was conducted primarily as a means to recruit companies to take part in the worker survey. These findings are indicative of employers' views only and further research may be required to fully examine the views of employers on the employment of non-Irish national workers in the industry. Where appropriate and possible, the data has been broken down by size of organisation.

### 4.1.1 Employment of non-Irish national workers

The majority of employers (58 per cent) use non-Irish national workers for whom English is not their first language, although larger organisations were much more likely to employ such workers (79 per cent of such companies did so, see Table 4.2). However, over a quarter of very small organisations (27 per cent) stated that they employ non-Irish national workers, and 69 per cent of small employers also said that they do so. Whilst not all of the employers had experience of employing non-Irish nationals, 100 per cent had worked on sites with non-Irish nationals present and therefore were able to express opinions on the health and safety issues for this group.

**Table 4.2: Frequency of employing non-Irish national workers (for whom English is not their first language), by size**

Size	Frequency	Per cent	N
Very small	18	27.3	66
Small	45	69.2	65
Medium	28	73.7	38
Large	22	78.6	28
<i>All</i>	<i>116</i>	<i>58.0</i>	<i>200</i>

Note: A minority of organisations (3) did not know their size.

Source: IES, 2008

Those organisations that did employ non-Irish nationals (for whom English was not their first language, N=116) were asked how many. The mean was 23 although the number employed depended on the size of the organisation (see Table 4.3). The median was 6 non-Irish national employees, however, 16 per cent of employers employed over 30 non-Irish national workers.

**Table 4.3: Mean number of non-Irish national workers employed, by size**

Size	Mean	N
Very small	2.3	18
Small	7.6	45
Medium	28.9	28
Large	67.0	21
<i>All</i>	<i>22.7</i>	<i>115</i>

Note: A minority of organisations (3) which did not know their size.

Source: IES, 2008

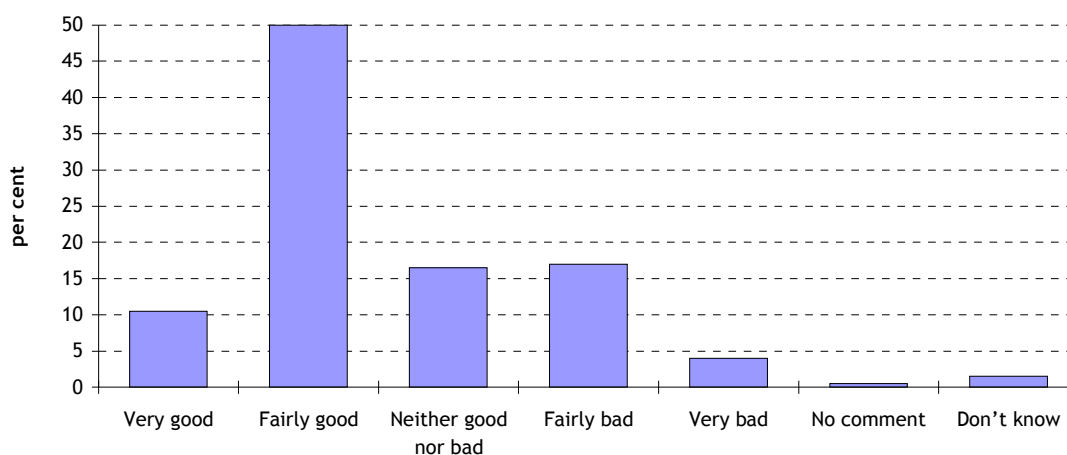
## 4.2 Employers' views

In what follows, we describe the findings from the employer survey. Due to the small number of participants, it was not possible to compare all of the variables by size of employer.

### 4.2.1 Employers' perceptions of levels of English comprehension amongst non-Irish national workers

All participant organisations (N=200) were asked to rate non-Irish national workers' ability to understand spoken English onsite. Figure 4.1 shows that around 61 per cent felt that their ability was either fairly or very good. Just over one-fifth of all of the organisations (21 per cent) felt that the ability was fairly or very poor.

**Figure 4.1: Employers' perceptions of non-Irish national workers' ability to understand spoken English on site (base=200)**

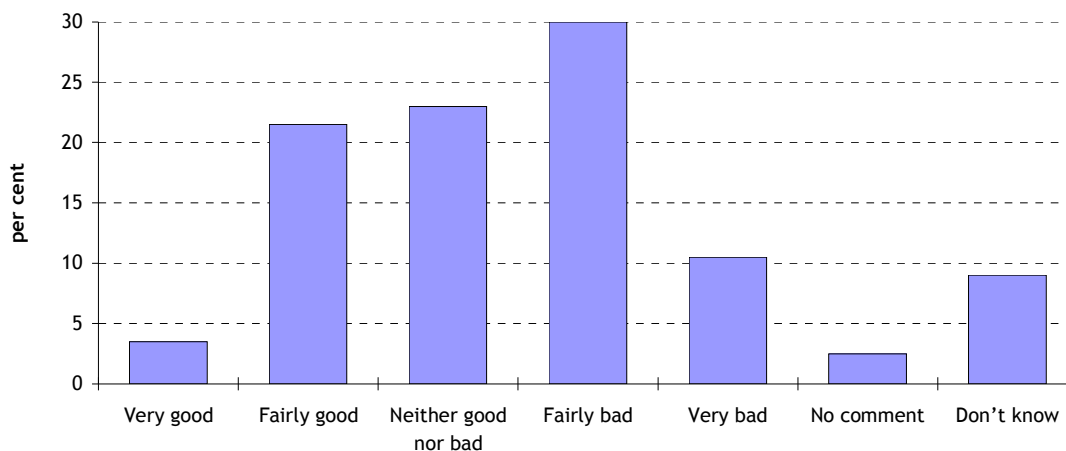


Source: IES, 2008

All organisations were asked to rate, in general, non-Irish national workers' ability to understand written English on site. Participants appeared to find this question difficult to respond to, and nine per cent stated that they did not know the answer (see Figure 4.2). Ratings on this variable were lower than for spoken English. Only a quarter (25 per cent) rated their ability as fairly good or very good, and 41 per cent rated it as bad or very bad.

Smaller employers tended to rate both the spoken and written English skills of their workers more positively. Amongst very small companies, 68 rated the spoken English, and 34 per cent rated the written English of non-Irish nationals as either very or fairly good. Amongst large employers these figures were far lower (only 46 and 15 per cent respectively). However, the number of employers in the sample is fairly small.

**Figure 4.2: Employers' perceptions of non-Irish national workers' ability to understand written English on site (base = 200)**

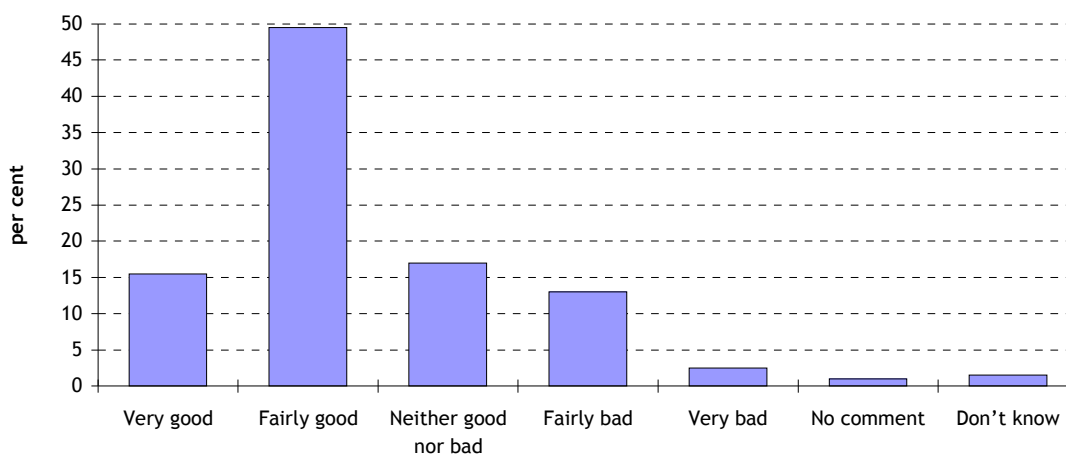


Source: IES, 2008

#### 4.2.2 Employers' perceptions of reasons for poorer health and safety record

The organisations were asked to rate non-Irish national workers' attention to health and safety on sites. As Figure 4.3 shows, the majority (65 per cent) rated this as fairly or very good. In contrast, 16 per cent rated it as fairly or very bad. The very small employers gave the highest ratings, with 76 per cent of this group rating non-Irish nationals' attention to health and safety as fairly or very good.

**Figure 4.3: Employers' perceptions of non-Irish national workers' attention to health and safety (base=200)**

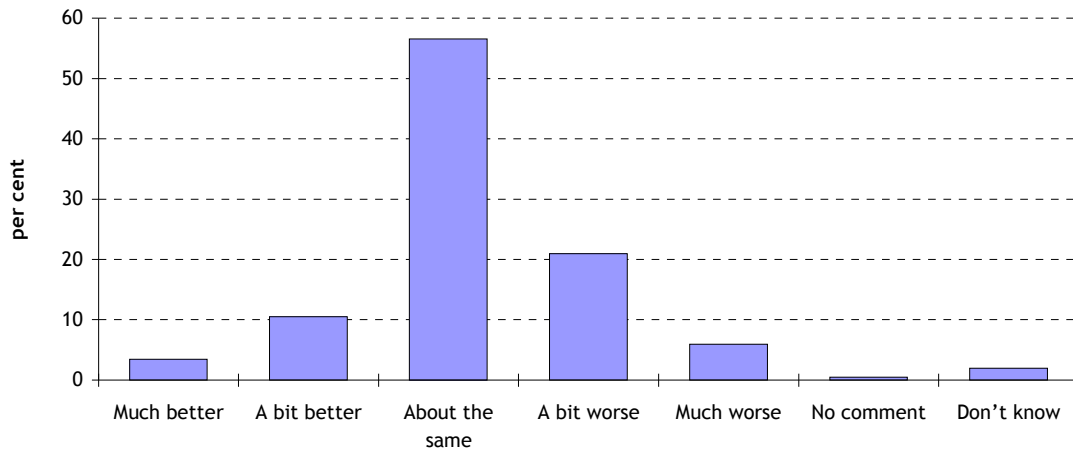


Source: IES, 2008

In comparing non-Irish national and Irish workers in their attention to health and safety, just over half of the employers thought they were about the same (57 per cent, see Figure 4.4). However, over a quarter (27 per cent) believed that the attention paid to health and safety by non-Irish national workers was a bit or much worse than by Irish workers, compared to just 14

per cent who rated it as a bit or much better. Medium-sized employers were most likely to rate non-Irish national workers' attention as worse, at 35 per cent.

**Figure 4.4: Employers' perceptions of non-Irish national workers' attention to health and safety compared to Irish workers (base=200)**



Source: IES, 2008

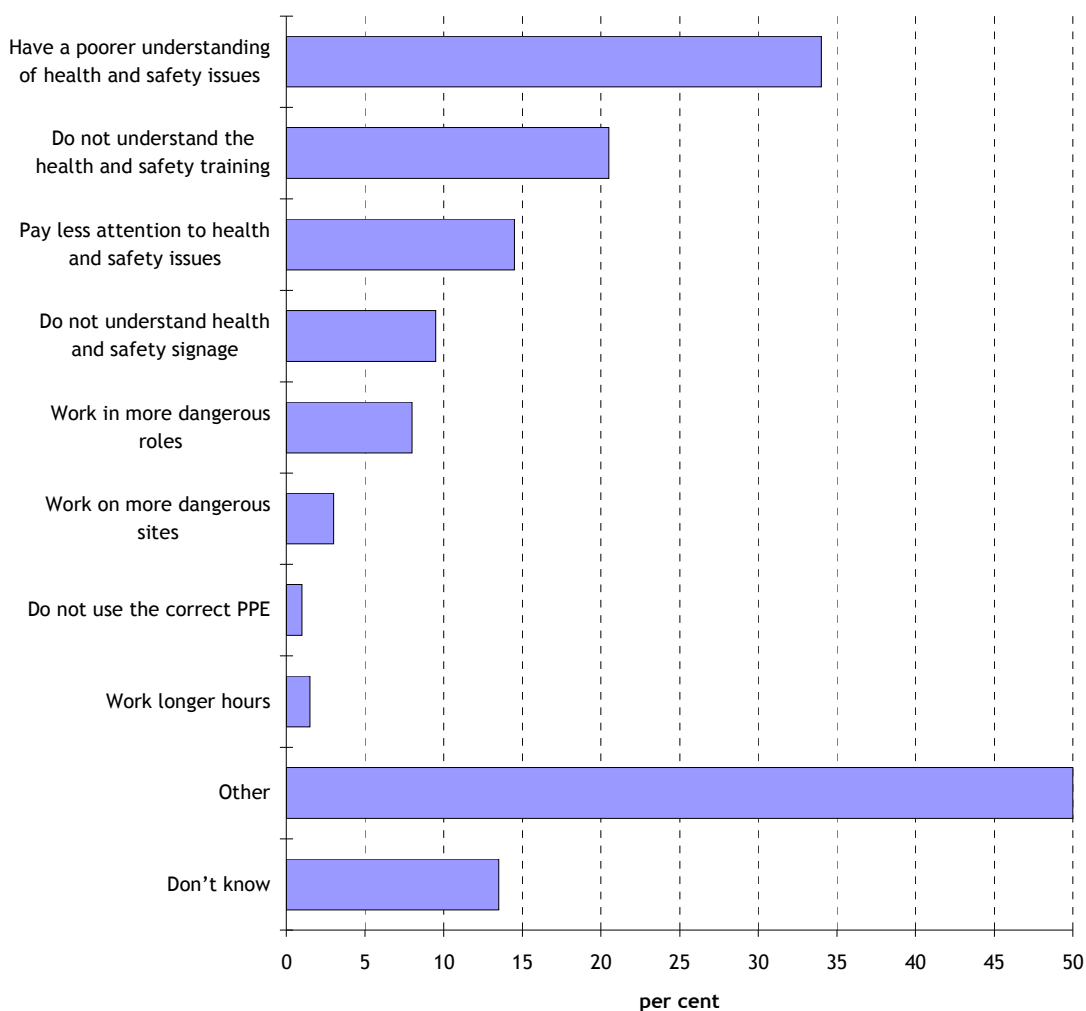
#### 4.2.3 Employers' explanations for the disproportionate number of accidents involving non-Irish national workers

All organisations were informed that the Central Statistics Office (CSO) figures for 2005 show a disproportionately high number of accidents amongst non-Irish national workers, and were asked to explain the possible reasons for this. The results, as shown in Figure 4.5, were that:

- 34 per cent believed that non-Irish national workers have a poorer understanding of health and safety issues
- 15 per cent felt that non-Irish national workers pay less attention to health and safety on sites
- 21 per cent were concerned that non-Irish national workers do not understand health and safety training
- 10 per cent did not feel that non-Irish national workers understand the health and safety signage on sites
- 8 per cent felt that non-Irish national workers work in more dangerous roles.

Due to small numbers it was not possible to compare these responses by size of organisation.

**Figure 4.5: Employers' views on the reasons for the higher proportion of reported accidents amongst non-Irish national workers (base=200)**



Note: This was a multiple response question, so the combined per cent is greater than 100.

Source: IES, 2008

The participants were also given the opportunity to provide an open-ended answer to this question. Some believed that the poorer safety culture in non-Irish national workers' home countries was partly to blame. For example:

*'They are coming from places where there are not the same health and safety standards so they are willing to take more chances.'*

*'They have grown up in a culture where they are less keen on safety and communication issues generally.'*

*'They come from countries that do not give health and safety a priority... They cannot understand why they need training.'*

Others felt that the problem stems from the fact that non-Irish national workers are more anxious than their Irish peers to keep their jobs. This means that they try to get jobs done quickly and are less likely to ask for help if they need it. For example:

*'They are wanting to impress bosses and not wanting to lose their jobs, therefore they push themselves and perhaps don't ask for help where others might.'*

*'They're very anxious to impress their bosses and due to this they take shortcuts which are risky.'*

*'They possibly take more risks than locals to keep their jobs.'*

*'They are too keen. When others will stop they won't.'*

A minority felt that employers were partly to blame:

*'They are employed by poor employers who exploit them.'*

*'They experience pressure from their employers.'*

*'They haven't had things explained properly.'*

*'Employers don't care.'*

It is worth mentioning that some of the organisations did not know how to answer the question because they had not experienced any problems with non-Irish national workers. Some disagreed that non-Irish national workers were more likely to take risks:

*'They're good workers, we have no problems with them.'*

*'I can't say. I haven't noticed anything on our sites.'*

#### 4.2.4 Providing support to non-Irish national workers

Just under half of employers (47 per cent) stated that they provide extra training or support on their sites to non-Irish national workers for whom English is not their first language. This varied significantly by size and was much higher amongst large firms (79 per cent, compared to just 18 per cent of very small firms, see Table 4.4).

**Table 4.4: Frequency of organisations that provide support, by size**

Size	Frequency	Per cent
Very small	12	18.2
Small	36	55.4
Medium	22	57.9
Large	22	78.6
All	94	47.0

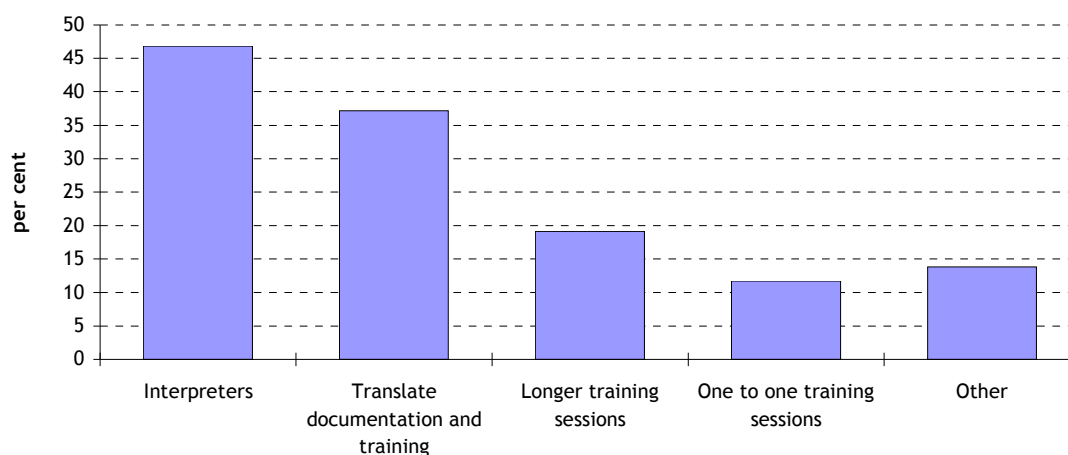
Note: A minority of organisations (3) did not know their size.

Source: IES, 2008

Of those offering support (94 organisations), nearly half (47 per cent) stated that they use interpreters, but it is unclear whether these are actually interpreters or just other workers who

happen to speak both languages (see Figure 4.6). Whilst the numbers were small (only 44 organisations were providing translation), a breakdown showed that this included a mix of company sizes, with 20 of these companies employing less than 50 employees. In the open-responses, 35 participants (37 per cent of those who provide support to non-Irish national workers) stated that they ensure that people can understand health and safety information by translating documentation/signage or health and safety training materials. A smaller proportion helped by providing longer training sessions (19 per cent) or one-to-one training sessions (12 per cent). Due to small numbers it was not possible to compare the types of support provided by organisations of different sizes.

**Figure 4.6: Type of support provided (base=94)**



Source: IES, 2008

### 4.3 Summary

The employer survey provided an opportunity to gauge the views of a range of organisations in construction which either employ or work with non-Irish national workers (for whom English is not their first language). The main findings from this survey were:

- Many employers felt that there were no particular issues facing non-Irish national workers in the Irish construction industry and thought they did pay attention to health and safety onsite, and did so as much as their Irish peers.
- Whilst spoken English amongst non-Irish workers was felt to be good, understanding of written English was felt to be more of a problem.
- The experience of working with non-Irish nationals was more positive amongst smaller firms, including views on the English ability of non-Irish national workers (or co-workers) and about their attention to health and safety. However, it may be that smaller employers are less attractive to non-Irish workers with poor language skills as they are less likely to employ others who speak their native language. Equally, non-Irish workers in smaller firms may assimilate the culture of that organisation because they have fewer non-Irish colleagues.



- Not all employers were equally positive about non-Irish workers, however, and when asked to try and explain the disproportionate experience of accidents for non-Irish workers (according to HSA accident data) this was often attributed to a poorer understanding of health and safety issues, potentially due to differences between the safety culture in their home countries and the culture in Ireland.
- Relatively few employers, particularly smaller firms, provided direct support to non-Irish workers to address any deficiencies in their understanding of health and safety. The support provided generally involved adaptations to help with poorer levels of English language ability.

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## 5 Worker Survey

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This chapter of the report presents the findings from the worker survey of Irish and non-Irish national construction workers. It begins with a description of the sample, before detailing the findings of the survey.

Unless specified, questions were asked of all workers (601 in total, 299 non-Irish national workers and 301 Irish workers). Bases in tables and figures indicate the number who responded to the question, providing an indication of the amount of missing data.

### 5.1 Sample profile

The Ipsos MORI team of fieldworkers succeeded in distributing surveys in a range of different construction sites across Ireland, with around half of the surveys being conducted on sites outside of the capital, in Galway, Limerick and Cork (see Table 5.1). The team was also successful at reaching workers on sites of different sizes, including some very small sites. Nearly half of the sample were taken from sites with less than 50 workers.

Very little is known about the demographics or work arrangements currently in place for non-Irish national workers in the construction industry in Ireland. In addition to setting the context to the findings that follow, the sample profile provides a useful picture of their employment situation. Whilst it has not been possible to check the representativeness of this survey (in part because there is little population data available) it is important to remember that all participants were taken from the same 29 sites across the country. As such, this comparison gives an indication of the differences between non-Irish national workers and their Irish peers working together on the same sites.

Table 5.1: Sample profile

	Frequency	%
<b>Site size</b>		
1-10 workers	72	12.0
11-49 workers	199	33.1
50+ workers	330	54.9
<i>Total</i>	<i>601</i>	<i>100.0</i>
<b>Region</b>		
Galway	101	16.8
Limerick	102	17.0
Cork	110	18.3
Dublin	288	47.9
<i>Total</i>	<i>601</i>	<i>100.0</i>

Source: IES, 2008

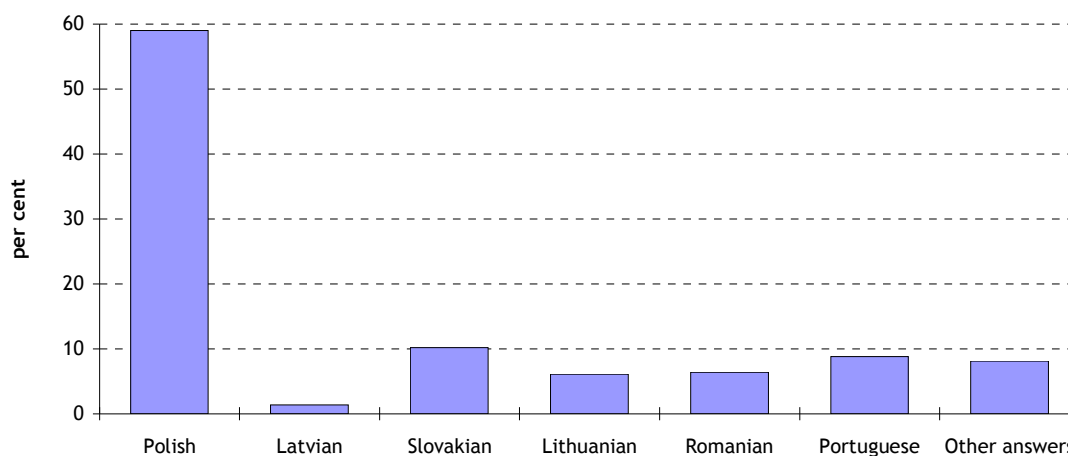
### 5.1.1 Demographics

The comparisons begin with a look at the demographics of the two groups.

#### Nationality

The total sample included 302 Irish workers and 299 non-Irish national workers. Over half of the non-Irish national sample (59 per cent) was made up of Polish workers, but the survey achieved a wide range of other nationalities (see Figure 5.1).

Figure 5.1: Breakdown of nationality in non-Irish national worker sample (base=295)



Source: IES, 2008

CSO figures for the final quarter of 2007 show that of the non-Irish national population in Ireland (excluding British workers) 84 per cent are from Accession states (countries involved in the

accession to the European Union as part of its recent expansion).<sup>1</sup> Our survey achieved a very similar breakdown, with 85 per cent of the non-Irish national workers in our survey originating from these countries.

The average length of time spent in Ireland by non-Irish national workers was just under three years (33 months). Just under one-fifth (19 per cent) of our sample had been in Ireland for less than a year (see Table 5.2).

**Table 5.2: Length of time spent in Ireland by non-Irish national workers**

Time in Ireland	Frequency	%
Under 1 year	56	19.1
1-2 years	41	14.0
2-3 years	82	28.0
3-4 years	69	23.5
4+ years	45	15.4
<i>Base</i>	<i>293</i>	<i>100.0</i>

*Source: IES, 2008*

## Age

On average, the non-Irish national workers in our sample were significantly younger than their Irish peers, with a mean age of 33.9 years compared to 36.2 years. Table 5.3 also shows that the majority of non-Irish nationals (58 per cent) were aged 26 to 40 years, whilst there was a greater range of ages amongst the Irish workers.

**Table 5.3: Age**

Age*	Irish %	Non-Irish national %	All %
25 and under	22.4	19.6	21.0
26 to 40	41.5	58.4	50.0
41 to 60	34.0	21.3	27.6
60 plus	2.0	0.7	1.4
<i>Base</i>	<i>294</i>	<i>296</i>	<i>590</i>

\* Significant difference between Irish and non-Irish nationals at  $p < 0.05$ .

*Source: IES, 2008*

## Education

The non-Irish national workers in our sample had completed their education, on average, at a later age than their Irish peers, at 19.7 years compared to 17.7 years. Table 5.4 shows that only 16 per cent of the non-Irish national workers in our sample had completed their education before the age of 18, compared to just over half (52 per cent) of the Irish workers. This would indicate

<sup>1</sup> Quarterly National Household Survey, Quarter 4, 2007. CSO Statistical Release 5 March 2008.

that our non-Irish national workers have achieved a higher educational level than their Irish peers. Due to the range of qualifications across the different countries involved, it was decided that the best approach was to ask for age at which education was completed, since this allows for one question to be asked of all. However, it is important to bear in mind that different nationalities may have interpreted this question in different ways, and it remains unclear whether Irish workers have included apprenticeships as a form of 'education'.

**Table 5.4: Age at which completed formal education**

Age completed education*	Irish %	Non-Irish %	All %
Under 16	16.0	6.7	11.5
16 to 17	35.5	8.8	22.4
18 to 21	32.4	61.1	46.5
22 plus	9.6	18.0	13.7
Still in education	6.5	5.3	5.9
<i>Base</i>	293	283	576

\* Significant difference between Irish and non-Irish nationals at  $p < 0.05$ .

Source: IES, 2008

### 5.1.2 Work details

The survey also asked all participants to provide a range of details concerning their work situation.

#### Length of time in the construction industry

Non-Irish national workers in our sample tended to be newer to the industry than their Irish peers. On average, the non-Irish national workers had been in the industry for just over nine years, compared to 14.5 years for the Irish workers. Table 5.5 shows that just 36 per cent of non-Irish national workers but 59 per cent of Irish workers had worked in construction for over ten years.

Despite the shorter length of time in the industry, most non-Irish national workers (86 per cent) had worked in construction before coming to Ireland.

**Table 5.5: Length of time in the construction industry**

Length of time in the industry*	Irish %	Non-Irish %	All %
Under one year	6.2	4.7	5.4
1 to 3 years	13.1	28.2	20.7
4 to 6 years	13.4	21.1	17.3
7 to 9 years	8.6	9.7	9.2
10 years plus	58.6	36.2	47.3
<i>Base</i>	290	298	588

\* Significant difference between Irish and non-Irish nationals at  $p < 0.05$ .

Source: IES, 2008

## Employment status

Non-Irish national workers were less likely to be self-employed than Irish workers (six per cent in the sample compared to 12 per cent), and were more likely to come from an agency (nine per cent compared to three per cent, see Table 5.6). As might be expected, given that all participants were recruited from the same sites, there was a similar profile of employing organisation, in terms of size, for both the non-Irish national and Irish workers. However, non-Irish national workers were more likely to be employed in the medium-sized firms than their Irish peers (30 per cent compared to 19 per cent), and less likely to be employed by the large firms (16 per cent compared to 24 per cent).

**Table 5.6: Employment status**

Employment status*	Irish %	Non-Irish %	All %
An employee - very small firm (less than 10 employees)	21.9	21.3	21.6
An employee - small firm (10 to 49 employees)	19.7	18.0	18.9
An employee - medium firm (50 to 249 employees)	19.4	29.6	24.4
An employee - large firm (250+ employees)	24.4	16.1	20.3
Self-employed	11.5	5.6	8.6
Agency worker	3.2	9.4	6.2
<i>Base</i>	<i>279</i>	<i>267</i>	<i>546</i>

\* Significant difference between Irish and non-Irish nationals at  $p < 0.05$ .

Source: IES, 2008

Non-Irish national employees had been, on average, with their employer for less time than their Irish peers (just under two years compared with just over five years), although this is likely to reflect the fact that many had only recently arrived in Ireland.

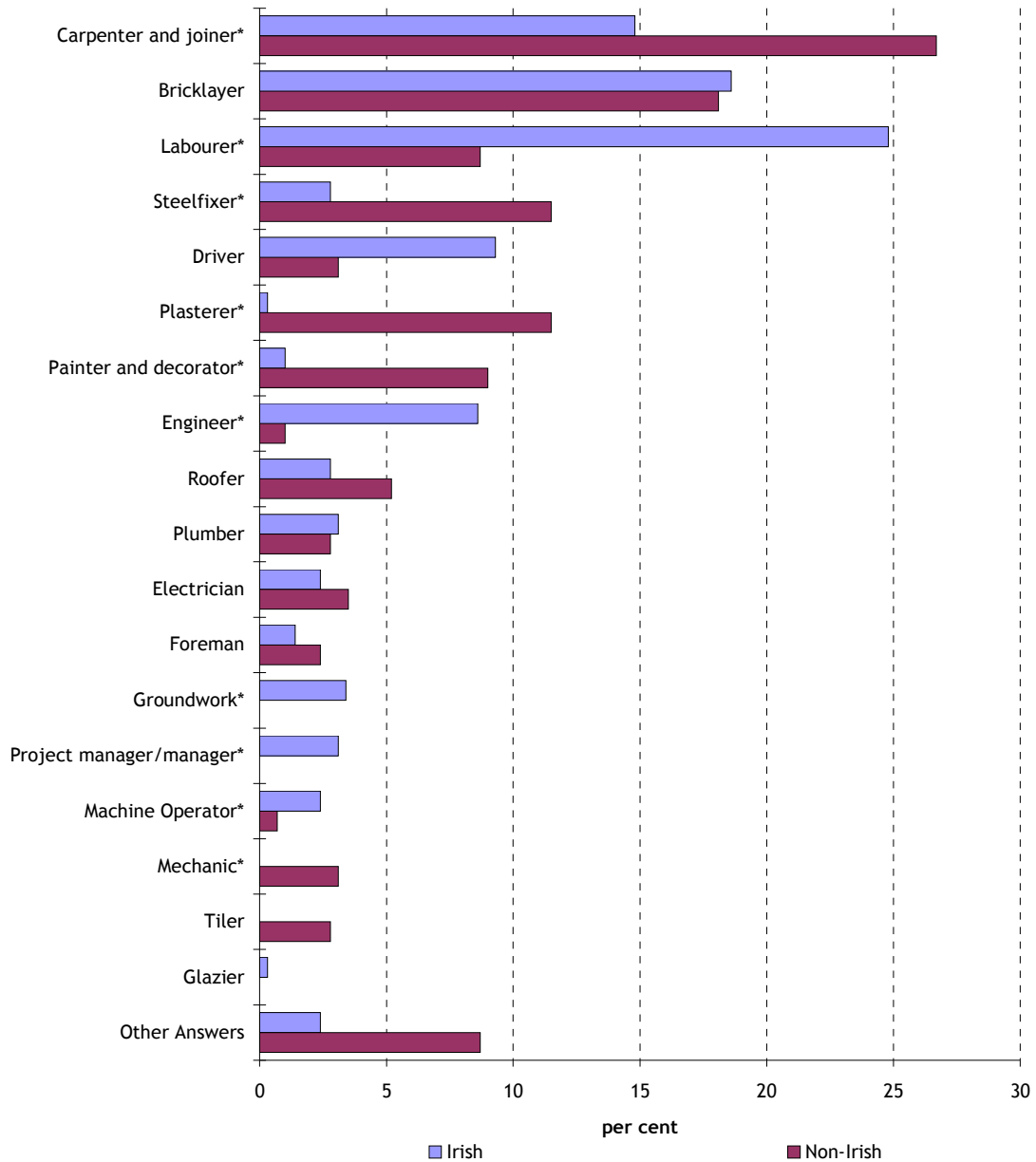
## Job type

Workers from a range of trades participated in the survey (see Figure 5.2). There were larger proportions of skilled tradesmen among the non-Irish national workers than amongst Irish workers; 27 per cent of non-Irish national workers were carpenters/joiners, 12 per cent were steel fixers and another 12 per cent were plasterers, whilst the corresponding proportions for the Irish workers were just 15 per cent, three per cent and less than one per cent respectively. Instead, Irish workers were much more likely to work in unskilled labourer positions, with a quarter (25 per cent) working in these roles. However, our sample of non-Irish national workers did not include any in a project management role. It is worth noting that according to the Authority's database of reported injuries<sup>1</sup>, 30 per cent of all injuries are reported for 'labourers in mining, construction, manufacturing and transport', and this is more than for any other occupation (across all industries) including 'extraction and building trades workers', who account for just eight per cent of accidents. However, these figures do not allow for the different numbers working in these occupations (ie they do not provide accident rates for the different occupations).

<sup>1</sup> Health and Safety Authority: Summary of Injury, illness and fatality statistics 2005/06.

For the purposes of analysis, these job roles have been broken down into six key categories as shown in Table 5.7, which correspond to the different stages of construction, from site clearance, through to building, fitting out and completion. Additional categories of driver/machine operator tasks and 'other' have also been included. Please refer to Appendix 2 for a breakdown of these categories. This categorisation shows that the non-Irish national workers were less likely to be involved in site clearance tasks or working as drivers/machine operators, and were more likely to be involved in build and completion tasks.

Figure 5.2: Trade (base=578)



Note: Whilst this was intended as a single response question, some workers indicated that they work in several trades.

\* Significant difference between Irish and non-Irish nationals at  $p < 0.05$ .

Source: IES, 2008

**Table 5.7: Trade categorisation**

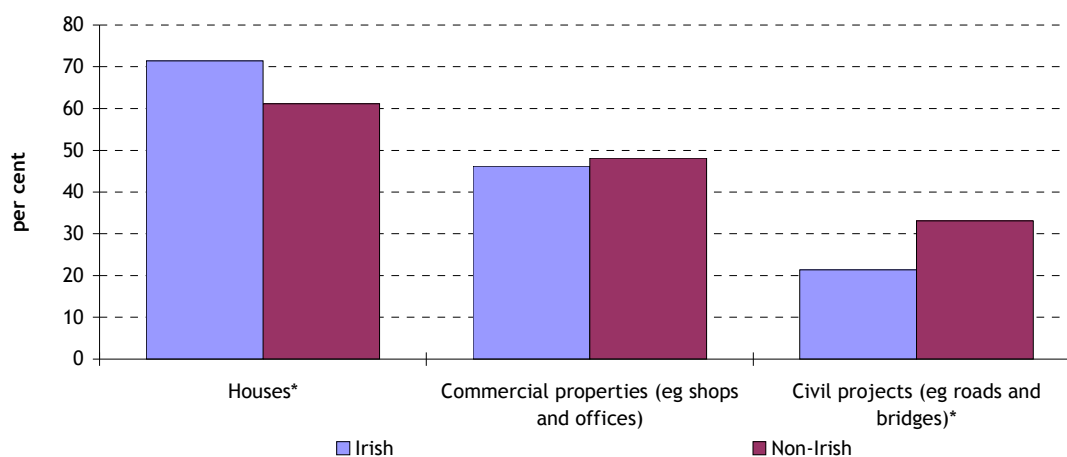
Trade	Irish %	Non-Irish %	All %
Site clearance*	28.3	8.7	18.5
Build*	24.1	32.6	28.4
Fit out	5.5	6.3	5.9
Completion*	16.6	46.5	31.5
Driver/machine operator*	11.7	3.8	7.8
Other	15.5	15.3	15.4
<i>Base</i>	<i>290</i>	<i>288</i>	<i>578</i>

Note: Whilst this was intended as a single response question, some workers indicated that they work in more than one trade.

\* Significant difference between Irish and non-Irish nationals at  $p < 0.05$ .

Source: IES, 2008

The types of projects worked on also varied between the groups, with 33 per cent of non-Irish national workers working on civil projects, compared to 21 per cent of Irish workers (see Figure 5.3). Non-Irish national workers were less likely to be involved in building houses, at 61 per cent compared to 71 per cent.

**Figure 5.3: Types of projects worked on (base=501)**

Note: This was a multiple response question, which is why percentages add up to more than 100. It should also be noted that there was a considerable amount of missing data, as 100 workers did not answer this question.

\* Significant difference between Irish and non-Irish nationals at  $p < 0.05$ .

Source: IES, 2008

### Other work and hours

Only five per cent of workers stated that they had more than one paid job, and the proportions did not differ significantly between the two groups (four per cent of non-Irish national workers had another job compared to six per cent of Irish workers). There were no differences between



Irish and non-Irish national workers in terms of the number of hours worked each week (including overtime), with each group working, on average, 44 hours per week. Around a quarter of each group worked over 50 hours per week, and three individuals stated that they worked, on average, 80 hours per week (see Table 5.8).

**Table 5.8: Hours worked in total including overtime**

Hours worked	Irish %	Non-Irish %	All %
Under 39	3.4	3.4	3.4
39 to 49	72.5	70.1	71.2
50 plus	24.2	26.5	25.4
<i>Base</i>	<i>265</i>	<i>291</i>	<i>556</i>

*Source: IES, 2008*

### Main differences in the sample profile

The findings in this section show some clear differences in the work profile of our Irish and non-Irish national workers. In general, the non-Irish national workers in the sample tended to be younger and to have been in education for longer than their Irish peers. They also tended to be newer to the profession (although most had worked in construction before coming to Ireland), were more likely to work for medium-sized firms, and were more likely to be employed as skilled trades people on civil projects.

Whilst the HSA statistical releases do not compare numbers of reported accidents and fatalities across these different groups within the construction industry, it is likely that some of these demographic and work factors are, in themselves, related to accidents and risk taking behaviour. For example, certain roles or certain projects may be more likely to result in accidents than others. We might also expect younger workers to be more likely to take risks at work (although the direction of this relationship is unclear as some would argue that younger workers are better educated about risks). Given that the profiles of Irish and non-Irish national workers are likely to differ in the construction population as a whole, and that our workers were taken from the same sites, a decision was made not to match the two samples. The findings presented in the following sections are, therefore, for both samples as they stand. However, in the final section of the chapter, we present an analysis in which these demographic and work factors are held constant, and look at the 'true' effect of being non-Irish on the main accident and risk taking behaviour variables. Regression analyses were used in order to determine the extent to which differences in these variables were due to nationality as opposed to being younger, working in different jobs etc.

Considering the findings overall, it is important to bear in mind when reading the following sections that this data is not representative of all construction workers in Ireland. The survey deliberately targeted a range of construction companies of different sizes across different regions in order to allow comparisons to be made between workers from different types of companies. Whilst we were successful in reaching workers employed by very small companies, it is likely that our data under-represents these types of workers (the vast majority of workers in construction are likely to be employed by very small companies). Most of the qualitative interviews were conducted with workers from very small firms to ensure that the research was better able to capture the views of these workers.

## 5.2 Health and safety training

This section of the chapter looks at the health and safety training received by all workers, and their views on this.

All of the non-Irish national workers (N=299) were asked whether they had received training in health and safety prior to coming to Ireland: the vast majority (85 per cent) stated that they had. Due to small numbers it was not possible to compare this variable across all nationalities, but table 5.9 shows that the vast majority (97 per cent) of Polish workers, who make up the biggest group in the sample, had received training prior to coming to Ireland. Other non-Irish nationals were less likely than Polish workers to have received prior health and safety training.

**Table 5.9: Received health and safety training before coming to Ireland**

Received health and safety training prior*	Polish %	Other non-Irish %	All non-Irish %
Yes	97.1	68.4	85.4
No	2.9	31.6	14.6
<i>Base</i>	<i>170</i>	<i>117</i>	<i>287</i>

\* Significant difference between Polish and other non-Irish nationals at  $p < 0.05$ .

Source: IES, 2008

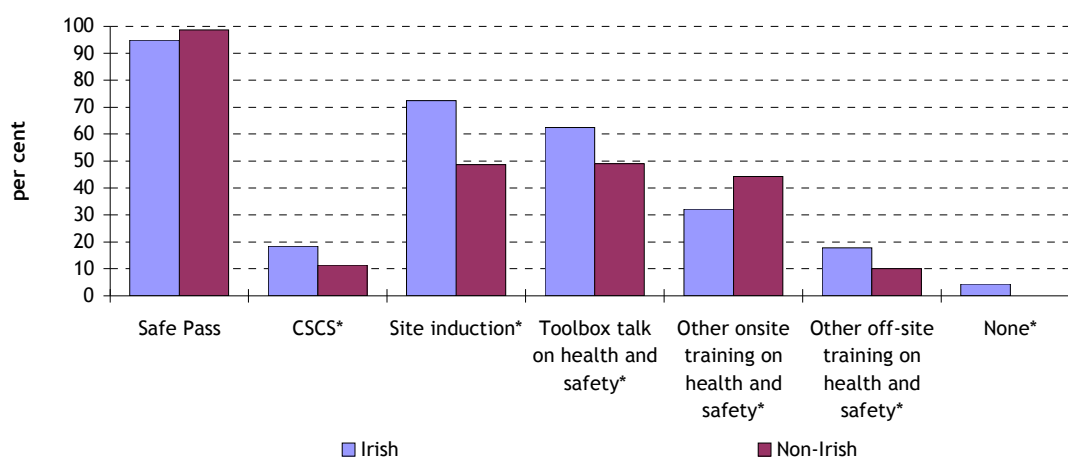
Younger non-Irish national workers were the least likely to have received health and safety training prior to coming to Ireland, with 25 per cent of those aged 25 and under stating that they had no prior training compared to just three per cent of those aged over 40.

All participants were asked whether they had received particular types of health and safety training whilst in Ireland. Only two per cent had not received any training at all, all of whom were Irish. As Figure 5.4 shows, nearly all of the participants in the survey, 97 per cent, claimed to have completed Safe Pass training, and both the non-Irish national workers and the Irish workers were highly likely to have received this. Whilst it is supposed to be mandatory for workers to have completed this training in order to work onsite, this is an encouraging finding. However, non-Irish national workers were less likely to have received most other types of training and around one-third (32 per cent) had received Safe Pass training only.

In particular, non-Irish national workers were less likely to receive site induction training, with only 49 per cent saying they had been given a site induction compared to 75 per cent of the Irish workers. Further analysis showed that self-employed workers and employees from larger companies were those most likely to have received a site induction, whilst those working in completion jobs were least likely, which may, in part, explain the lower proportion of non-Irish nationals receiving this type of training. In addition, workers who had spent less time working in Ireland (which tended to be the case for the non-Irish national workers) were less likely to have received this type of training, although over one-fifth (22 per cent) of non-Irish national workers had only received the Safe Pass course even though they had been working in Ireland for over a year. Given that both sets of workers were recruited from the same sites, they should, in theory, have at least received the same induction training on that site. Only half of the non-Irish national workers in our survey had ever had a toolbox talk.

Non-Irish national workers were more likely to have received 'other on site training on health and safety' than their Irish peers, which may compensate for the lack of induction training. It is also possible that non-Irish national workers have included their site inductions under this 'other' category.

**Figure 5.4: Types of training received in Ireland (base=591)**



Note: This was a multiple response question, which is why percentages add up to more than 100.

\* Significant differences between Irish and non-Irish nationals at  $p < 0.05$ .

Source: IES, 2008

The non-Irish national workers in our sample had, overall, received training in health and safety more recently than their Irish peers; 77 per cent had received health and safety training since 2007, compared to 62 per cent of Irish workers (see Table 5.10). This is likely to be due to the fact that many of the non-Irish nationals had recently arrived in the country and were required to complete the Safe Pass training in order to acquire work. Indeed, analysis found that within the non-Irish national worker sample, those who had arrived more recently were also those who had received training more recently. Of those who had been in Ireland for less than one year, 67 per cent had last received training in 2008 compared to just 39 per cent of those who had been in Ireland for more than four years.

**Table 5.10: When training was last received in Ireland**

When training last received*	Irish %	Non-Irish %	Total %
2008	11.1	45.7	29.2
2007	50.8	31.6	40.7
Prior to 2007	38.1	22.7	30.0
Base	244	269	513

Note: There was some missing data for this variable, which may reflect difficulty in recalling exact dates.

\* Significant differences between Irish and non-Irish nationals at  $p < 0.05$ .

Source: IES, 2008

Understanding of health and safety training received in Ireland was high for all workers, with 90 per cent stating that they had understood their training either well or very well. However, as Table 5.11 shows, non-Irish nationals were more likely to report lower levels of understanding, with just 48 per cent claiming that they understood it 'very well', compared to 83 per cent of their Irish peers. Twelve per cent of non-Irish nationals were unsure how well they had understood, although only one per cent claimed that they did not understand it at all or well. It is important to bear in mind that this question was asked in relation to all training received, rather than to specific courses, so the comparison between the two groups did not necessarily compare ratings for the same courses.

**Table 5.11: How well health and safety training in Ireland was understood**

How well training understood*	Irish %	Non-Irish %	Total %
Very well	82.9	48.2	65.1
Well	10.8	38.4	25.0
Neither well nor not well	5.9	12.0	9.0
Not well or not at all	0.4	1.4	0.9
<i>Base</i>	269	284	553

\* Significant difference between Irish and non-Irish nationals at  $p < 0.05$ .

Source: IES, 2008

Non-Irish national workers were also asked to compare the quality of the health and safety training they had received in Ireland (in general) with any received in their home country (where applicable). The majority of workers felt that the training they had received in their home country and in Ireland was of about the same quality (see Table 5.12). However, where there was a perceived difference, ratings tended to favour training received in Ireland. Just under a quarter (23 per cent) of non-Irish national workers believed that the quality of training in Ireland was 'a bit' or 'much' better than the training they had received in their home country, compared to four per cent who believed it to be worse. Amongst Polish workers, the ratings were slightly lower, with only 17 per cent rating the training in Ireland as better than in their home country.

**Table 5.12: How the quality of health and safety training in Ireland compares with that of the home country (non-Irish nationals only)**

Quality of training compared to home country	Frequency	%
Much better	31	12.8
A bit better	24	9.9
About the same	171	70.7
A bit worse	9	3.7
Much worse	7	2.9
<i>Base</i>	242	100.0

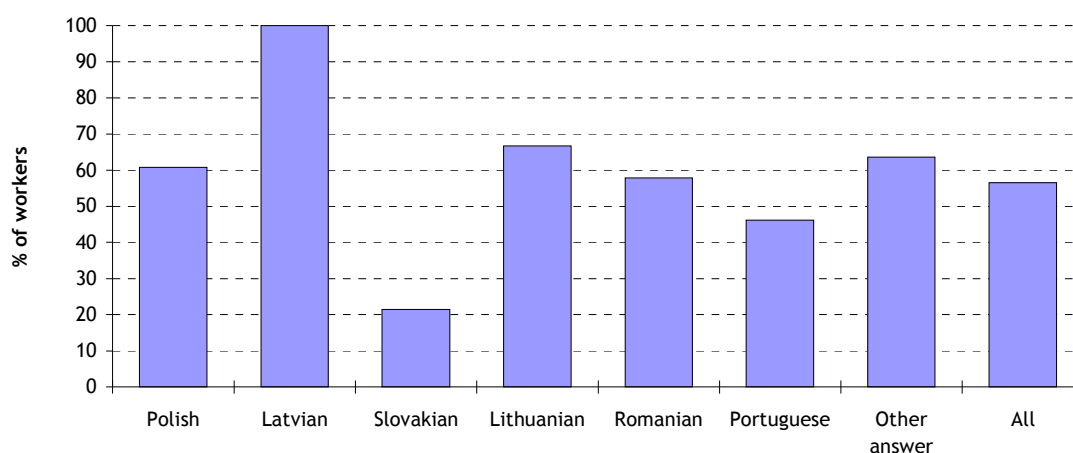
Source: IES, 2008

## 5.3 Understanding of health and safety information in English

A common assumption is that the major barrier to effective health and safety for migrant workers in any industry is low levels of English proficiency, and several questions were included in the survey to measure levels of English comprehension.

Over half (57 per cent) of the non-Irish national workers in our sample had studied the English language. It was not possible to make statistical comparisons across all the nationalities due to the small numbers in each group. Figure 5.5 suggests that English skills varied substantially for people from different countries. The Slovak workers in our sample were the group least likely to have studied English: of the 28 sampled, only six had completed an English course. Older workers in the non-Irish national sample were less likely to have studied English than younger non-Irish national workers: only one-third (33 per cent) of those aged 40 plus had studied English, compared to nearly two-thirds (63 per cent) of those under 40.

Figure 5.5: Non-Irish nationals who have studied English (base=288)



Source: IES, 2008

### 5.3.1 Self-reported English comprehension

Whilst 43 per cent of non-Irish national workers had not studied English, only 18 per cent claimed to find spoken English on sites a bit or very difficult to understand (see Table 5.13). As before, the numbers were too small to establish statistical differences by nationality, but Polish workers were no different to all other non-Irish nationals when taken together (despite their greater likelihood of having studied English, as outlined in the previous section).

Table 5.13: Understanding of spoken English on site (non-Irish nationals only)

Understanding of spoken English	Frequency	%
Very easy (understand everything)	30	10.1
Easy (understand most of it)	115	38.9
OK (can understand around half of it)	98	33.1
A bit difficult (can understand only a little)	49	16.6
Very difficult (cannot understand any of it)	4	1.4
Base	296	100.0

Source: IES, 2008

In general, non-Irish nationals struggled more with understanding written English on sites than spoken English. Nearly one-third (31 per cent) stated that they found written English a bit or very difficult to understand, and a further one-third (34 per cent) said they only understood around half of what they saw on sites (see Table 5.14). Irish workers were also asked this question, as it was felt that there may be some literacy issues in the sample. The vast majority (99 per cent) of the Irish workers stated that they found written English on sites easy or very easy to understand. As a certain level of literacy was required to complete the survey, this is not a surprising result and does not necessarily reflect literacy levels in the construction population as a whole.

**Table 5.14: Understanding of written English on site (non-Irish nationals only)**

Understanding of written English	Frequency	%
Very easy (understand everything)	37	12.6
Easy (understand most of it)	66	22.4
OK (can understand around half of it)	99	33.7
A bit difficult (can understand only a little)	79	26.9
Very difficult (cannot understand any of it)	13	4.4
<i>Base</i>	<i>294</i>	<i>100.0</i>

*Source: IES, 2008*

Older non-Irish national workers reported facing more difficulties with written and spoken English, which is likely to be a consequence of the fact that they were less likely to have studied English: nearly half (48 per cent) of those aged over 40 said that they found spoken English on sites difficult to understand, whilst 62 per cent reported finding written English difficult to understand.

To compensate for their language barriers, many of the non-Irish national workers in the sample regularly asked colleagues to translate information for them on sites. Only nine per cent of the non-Irish nationals stated that they never ask colleagues to translate for them, whereas 28 per cent reported doing this most or all of the time (see Table 5.15). As before, there was a significant difference when comparisons were made by age, with older workers being more likely to use colleagues to translate for them than younger workers.

**Table 5.15: How often do non-Irish nationals ask colleagues to translate information for them?**

Frequency of translation	Frequency	%
All the time	38	13.1
Most of the time	44	15.2
Sometimes	119	41.2
Rarely	62	21.5
Never	26	9.0
<i>Base</i>	<i>289</i>	<i>100.0</i>

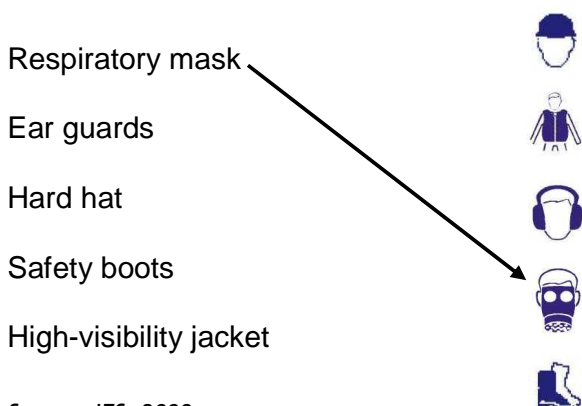
*Source: IES, 2008*

### 5.3.2 English comprehension tests

In addition to the self-report questions, levels of English comprehension were assessed objectively in the survey using a series of tests designed with input from NIACE. These varied from simple tests in which participants were required to match words to pictures, to a test assessing comprehension of a passage of English text. All of the tests were designed to be relevant to the construction industry.

For each test we found that a number of workers skipped the questions. These individuals have been included in the presentation of results, as their omissions could signal a lack of understanding of the English text.

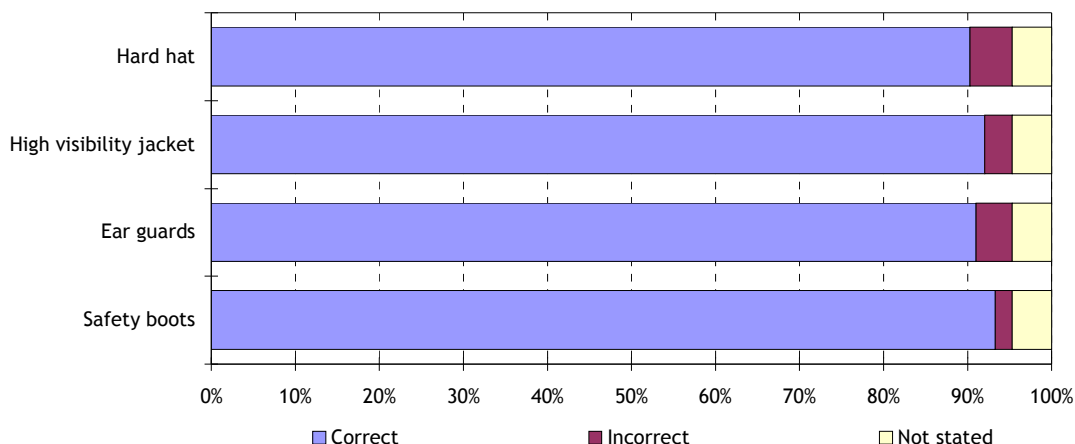
Figure 5.6: Match the words to the pictures as shown by the example



Source: IES, 2008

All non-Irish national workers (N=299) were asked to match a series of symbols concerning personal protective equipment with the relevant words in English. As Figure 5.7 shows, the overwhelming majority managed to match the pictures to the words correctly, with over 90 per cent selecting the correct answer for each question. Even for those who completed the survey in their own language, the responses were very high, and again, at least 90 per cent chose the correct answer to each question. As might be expected given their better English skills, none of the non-Irish national workers who completed the English version of the survey made any mistakes, although some of them did leave this section blank.

Figure 5.7: Matching words to pictures test (base=299)



Source: IES, 2008

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**Figure 5.8: Match the English and Polish sentences below by using arrows/lines**

Połącz zdania w języku angielskim ze zdania w języku polskim, tak jak pokazuje przykład

Użyj uprzęży bezpieczeństwa	→	Wear a hard hat
Ubierz kask		Use a safety harness
Sprawdź, czy bariery ochronne znajdują się na swoim miejscu		Check tools and materials for damage
Sprawdź, czy narzędzia i materiały nie są uszkodzone		Make sure area is clean and tidy
Upewnij się, czy teren jest czysty i wysprzątnięty		Check safety barriers are in place

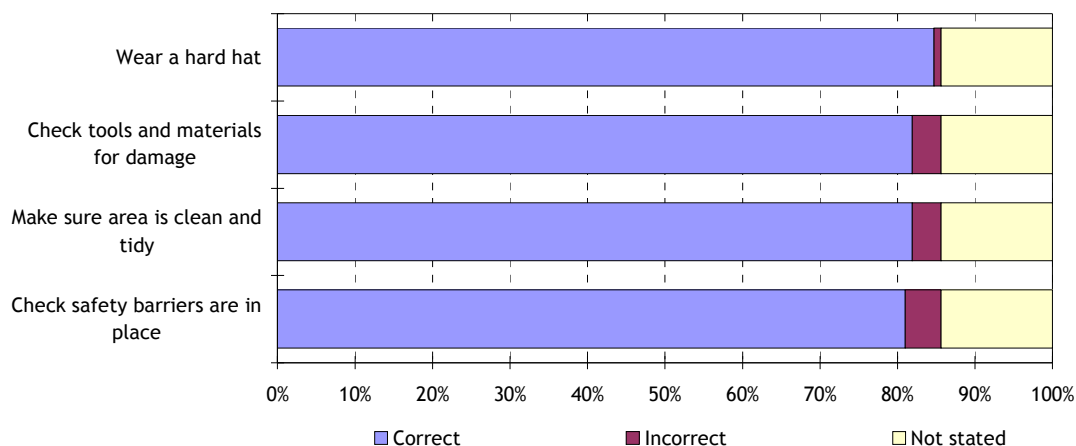
Source: IES, 2008

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Non-Irish national workers who completed a translated version of the survey (N=216) were asked an additional question in which they were required to match English commands on health and safety to translated pieces of text (see Figure 5.8). As before, some participants skipped this section, and we have included these responses in the presentation of results. Even bearing this in mind, the overwhelming majority of workers chose the correct answers to these questions, with over 80 per cent matching the phrases correctly (see Figure 5.9).

Very few of those who had studied English gave incorrect answers (only two individuals made mistakes with the statements 'wear a hard hat' and 'check safety barriers are in place'), although 11 participants who had studied English did not complete this section. For those who had not studied English, correct identification was unexpectedly high, with at least 73 per cent giving correct answers for each question.

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**Figure 5.9: Matching English phrases with the correct translated text - non-Irish nationals on translated versions of the survey (base=216)**



Source: IES, 2008

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Figure 5.10: English reading comprehension test

Please read this passage in English and answer the two questions that follow:

<p><b>Safe Working with Ladders</b></p> <p>Ladders should only be used for work that won't take long and if there is no safer alternative.</p> <p>They must be well maintained and should be checked once a day.</p> <p>They should be secured so they cannot slip.</p> <p>Put the ladder at an angle so that it won't slip outwards (one out for every four up).</p> <p>Access ladders should extend about 1m above the working platform. This will give a handhold for people getting on and off.</p>	
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Source: IES, 2008

All of the participants (N=601), both Irish and non-Irish, were asked to complete a simple English reading comprehension test on the safe use of ladders by answering multiple response questions (see Figure 5.10 above). As Table 5.16 shows, the vast majority, 86 per cent, correctly answered the first question on the test concerning how often ladders should be checked. Non-Irish national workers were just as likely to answer this correctly as their Irish peers. Despite few having ever studied English, 93 per cent of the Slovaks in the sample answered this question correctly.

Table 5.16: English comprehension test - question 1

Question 1*	Irish %	Non-Irish %	All %
Once a day - correct answer	84.8	87.3	86.0
Other answer - incorrect	4.0	7.4	5.7
Do not understand the English text	8.6	3.7	6.2
Not stated	2.6	1.7	2.2
Base	302	299	601

Note: Some participants gave more than one answer to these questions and were therefore excluded from the analysis (they fall under the 'not stated' category).

\* Significant difference between Irish and non-Irish nationals at p<0.05.

Source: IES, 2008

There were some differences between the Irish and non-Irish national groups on the second English comprehension question, with only 43 per cent of non-Irish national workers correctly identifying that you should use a ladder only where there is no safer alternative, compared to 67 per cent of Irish national workers (see Table 5.17). Please note that there was a high number of non-Irish national workers (33; 11 per cent of the group) who did not answer this question, possibly because they found it too difficult.

What is interesting about these results is that on both questions there was a relatively high proportion of Irish workers who either selected the wrong answer or claimed that they could not

understand the text. Nine per cent of Irish workers claimed that they could not understand the text for the first question, whilst 21 per cent answered the second question incorrectly. This is despite the fact that nearly all of the Irish participants stated that they find it easy to understand written health and safety information on sites. It is important to bear in mind that some workers may have used their own knowledge of working safely at height rather than the text in the questionnaire to answer the questions.

**Table 5.17: English comprehension test - question 2**

Question 2*	Irish %	Non-Irish %	All %
Only when there is no safer alternative - correct answer	66.6	42.8	54.7
Other answer - incorrect	20.9	41.8	31.3
Do not understand the English text	7.3	4.3	5.8
Not stated	5.3	11.0	8.2
<i>Base</i>	<i>302</i>	<i>299</i>	<i>601</i>

\* Significant difference between Irish and non-Irish nationals at  $p < 0.05$ .

Source: IES, 2008

Overall, the answers to these tests suggest that the vast majority of non-Irish national workers who took part in the survey were able to understand basic health and safety information written in English. This is despite the fact that many had not studied English and that many claimed to struggle with written and spoken English on sites. If these tests provide an accurate assessment of English ability, then it is possible that our survey findings have been skewed towards those with good levels of English. However, since these tests were not conducted in a standardised exam setting, we would recommend that the results be treated with caution. Although fieldworkers were present on sites during the distribution of surveys, it was not possible for them to watch participants at all times. It is therefore possible that some collusion took place, which could explain the good results. The self-report measures of English proficiency may provide a better indication of levels of ability on sites, and have therefore been used in the analysis.

## 5.4 Understanding of health and safety signs

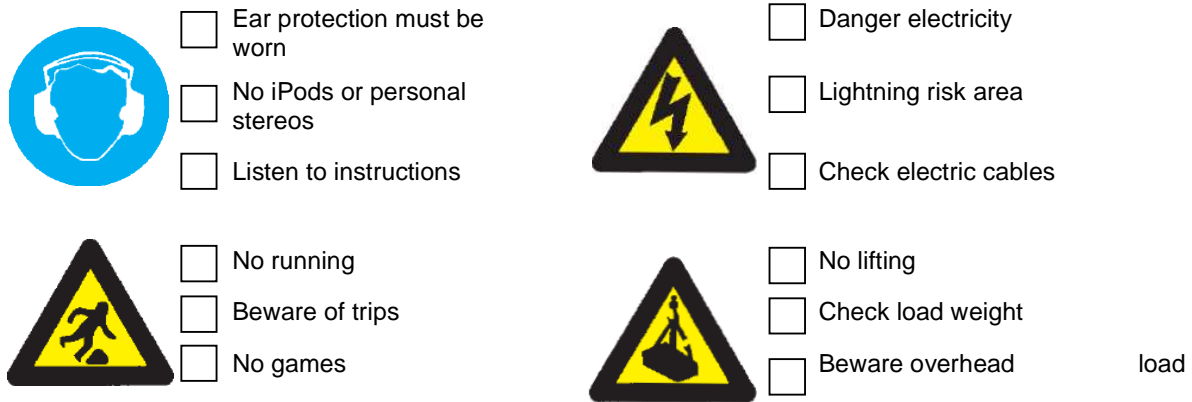
In another section of the survey, both non-Irish national and Irish workers were tested on the meaning of some simple health and safety signs commonly seen on sites (see Figure 5.11). As before, individuals who skipped this section have been included in the presentation of results, as their omission may indicate a lack of understanding.

For the most part, both non-Irish national workers and Irish workers correctly identified the meaning of signs used in construction (see Figure 5.12). However, understanding of the 'beware overhead load' sign was fairly low, with only 54 per cent of workers identifying this correctly. The International Organisation for Standardisation (ISO 3864-1984) requires a 67 per cent rate of comprehension for safety symbols to be considered acceptable, so this finding would suggest that this symbol is not working effectively.

For most of the symbols, levels of understanding were fairly similar between non-Irish nationals and their Irish peers. However, on the 'beware overhead load' sign, non-Irish national workers

were actually more likely to correctly identify the meaning of the symbol (63 per cent identified it correctly compared to 46 per cent of their Irish peers). Amongst Polish workers, understanding of this sign was particularly high, with 73 per cent identifying it correctly.

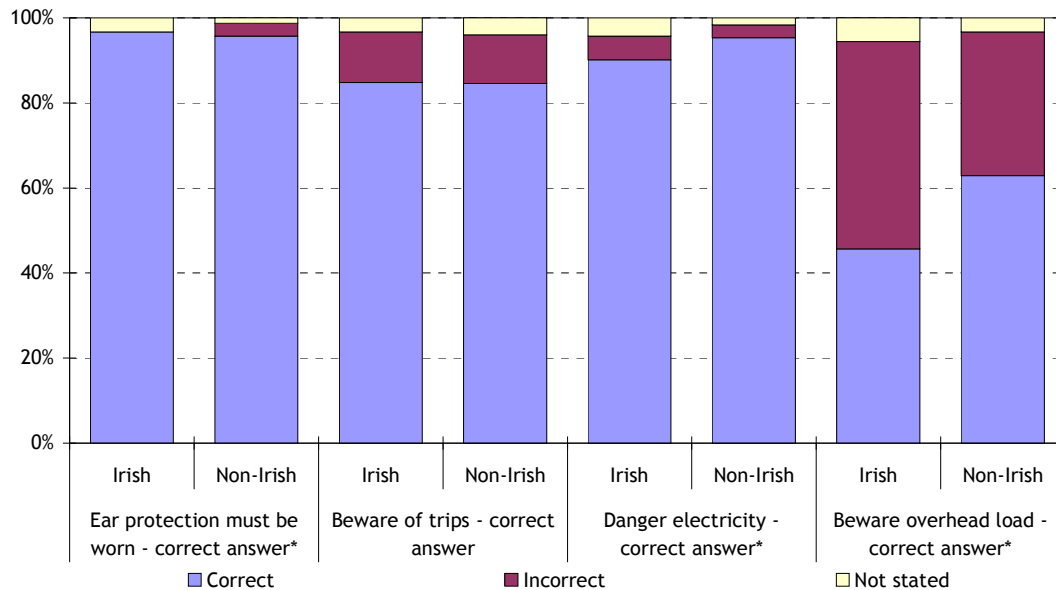
Figure 5.11: Health and safety signs



Source: IES, 2008

Time spent in education made a significant difference to how well this sign was understood: 67 per cent of those who left education after 19 years of age answered this correctly, compared to just 45 per cent who left school at 16 years old or before. This may help explain the differences between the two groups as non-Irish national workers tended to be better educated than their Irish peers.

Figure 5.12: Understanding of signs



\* Significant differences between Irish and non-Irish nationals at  $p < 0.05$ .

Source: IES, 2008

As with the English comprehension tests, the tests of health and safety symbols were not conducted in a standardised setting, so the possibility that participants colluded with each other cannot be ruled out. These results should therefore be treated with caution.

## 5.5 Health and safety culture and climate

In addition to asking participants 'hard' factual questions about their situation, all participants were asked to complete a series of attitude questions relating to their work environment. These statements looked at some of the 'softer' issues affecting workers, such as integration in the workplace and treatment by employers, which may play a role in their health and safety at work.

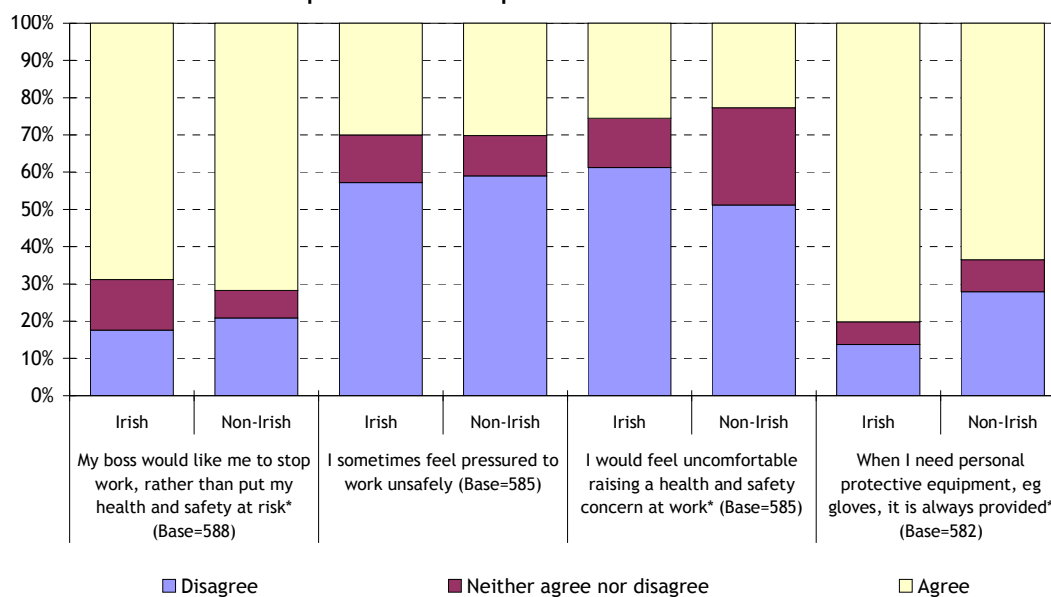
### 5.5.1 Relationships with bosses/supervisors

The majority of workers (70 per cent) agreed that their boss would prefer them to stop work rather than put their health and safety at risk (see Figure 5.13). However, almost one-fifth disagreed with this statement. The responses to this question were fairly similar for non-Irish national workers and their Irish peers, but Irish workers were more likely to give a neutral response (by neither agreeing nor disagreeing), suggesting that they may be unsure of their boss' approach.

Almost one-third (30 per cent) of workers agreed that they sometimes felt pressure to work unsafely on sites, and nearly a quarter (24 per cent) agreed that they would feel uncomfortable raising a health and safety concern at work. Non-Irish national workers were no more likely than their Irish peers to state either that they felt pressure or felt uncomfortable asking for help. However, as the figure shows, a reasonable proportion of non-Irish national workers were uncertain about how comfortable they would feel asking for help.

A major difference between the two groups lay in the perceived provision of PPE. Non-Irish national workers were much less likely than their Irish peers to agree that they are always provided with PPE, at 63 per cent compared to 80 per cent. Over a quarter of non-Irish national workers actually disagreed with this statement. When comparing different companies, levels of agreement did not differ significantly by size of company or type of work. Those involved in completion jobs (plasterers, painters and decorators) were less likely to agree with the statement than workers in other professions, so type of job may explain some of the discrepancy.

Figure 5.13: Attitudes to relationships with bosses/supervisors



\* Significant difference between Irish and non-Irish nationals at p<0.05.

Source: IES, 2008

### 5.5.2 Attitudes to health and safety in Ireland

There were no significant differences between non-Irish national workers and their Irish peers in terms of how much they felt they knew about health and safety law in Ireland (see Figure 5.14). The vast majority of non-Irish national workers (77 per cent) agreed or strongly agreed that they know a lot about the law. It was not possible to assess workers' knowledge of the law in a paper-based survey, so it is unclear whether these responses reflect high levels of awareness or simply over-confidence on the part of the workers.

However, there was a clear difference between the two groups in their attitude towards health and safety procedures. Non-Irish national workers were much less likely than their Irish peers to consider some health and safety procedures impractical, with 31 per cent agreeing with the statement compared to 52 per cent. This may have something to do with non-Irish national workers being slightly younger on average, as older workers were more likely to agree that health and safety procedures are impractical, than younger workers: 47 per cent of those aged over 40 agreed with this statement compared to 39 per cent of those younger. It may also be linked to education and length of time in the industry, as those who were less educated, and those who had been in the industry for longer were also more likely to agree that health and safety procedures are sometimes impractical.

Figure 5.14: Attitudes to health and safety in Ireland



\* Significant difference between Irish and non-Irish nationals at  $p < 0.05$ .

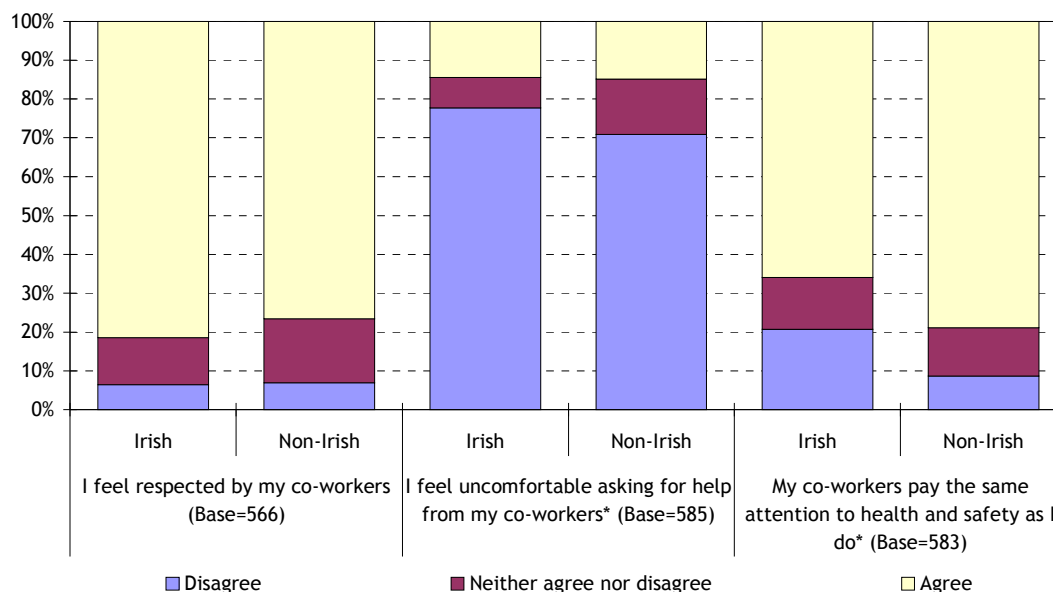
Source: IES, 2008

Thinking about the industry as a whole, non-Irish national workers were significantly more likely to agree that health and safety does not seem to be important in the construction industry in Ireland, at 26 per cent compared to 18 per cent amongst their Irish peers. This would suggest that the climate facing non-Irish national workers is slightly different, and that their interactions with others and experiences of working on sites lead them to believe that health and safety is not taken so seriously. However, it is unclear whether this means that non-Irish national workers were more critical of the Irish construction industry, or whether it reflects, in part, their own approach towards health and safety.

### 5.5.3 Relationships with co-workers

There were no significant differences between non-Irish national workers and their Irish peers in terms of whether they felt respected by their co-workers, with around 80 per cent of each group stating that they felt respected. Most workers disagreed that they would feel uncomfortable asking for help from their co-workers. However, as Figure 5.15 shows, non-Irish national workers were slightly more unsure about this than their Irish peers. Amongst Polish workers, one-third (33 per cent) were unsure about how comfortable they would feel.

Figure 5.15: Attitudes to relationships with co-workers



\* Significant difference between Irish and non-Irish nationals at  $p < 0.05$ .

Source: IES, 2008

Non-Irish national workers were more likely than their Irish peers to agree that their co-workers pay the same attention to health and safety as they do (79 per cent compared to 66 per cent). It is important to remember that it was not clear who participants included as their co-workers, or their nationalities. This discrepancy between the two groups may relate to the fact that non-Irish national workers tended to work for smaller firms, as workers from large employers were less likely to agree that their co-workers pay the same attention to their health and safety than those from very small firms, at 65 per cent compared to 80 per cent.

### 5.5.4 Main differences

Overall, the responses to these attitude statements suggest some differences in the health and safety climate facing non-Irish national workers and their Irish peers. Whilst non-Irish national workers appeared to have a more positive attitude towards health and safety procedures, and were less concerned about the practicalities of them, on the whole, they perceived health and safety as less important in the industry than their Irish peers. Also, a number of the non-Irish national workers felt that they did not always receive PPE when it was required. This is compounded by the fact that many were uncertain about raising a health and safety concern or asking for help from colleagues. However, it is worth mentioning that some of the findings in the section suggest that there are issues which exist for both Irish and non-Irish national workers on sites.

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## 5.6 Attributing the causes of accidents

All participants were asked a series of questions about their views on the causes of accidents. Half of the questions had an internal focus: agreement with these meant the participant believed they controlled their own lives and their health and safety. The other half had an external focus: agreement meant the participant believed that their environment, some higher power or other people controlled what happens to them, and their health and safety. These items were borrowed from Locus of Control literature, which claims that people vary in the extent to which they attribute events to external or internal causes. One of the aims of this research project was to identify whether non-Irish national workers have a different attitude to the causes of accidents than Irish workers, and whether this can in any way explain the differences in the proportion of reported accidents and fatalities for the group.

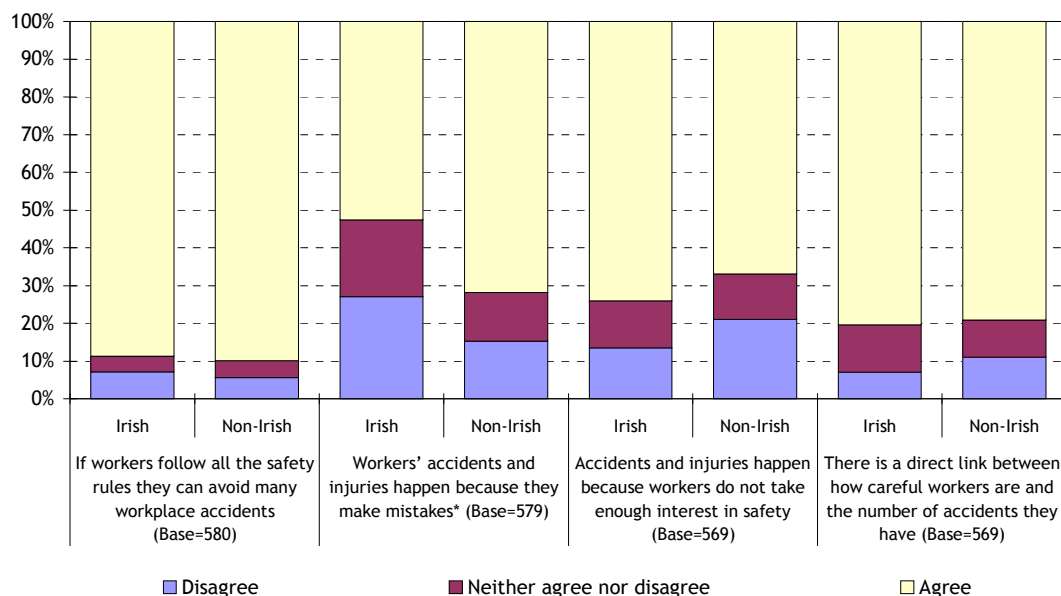
### 5.6.1 Internally-focussed questions

As Figure 5.16 shows, there were high levels of agreement with all of the internally-focussed statements, across all workers, suggesting that the majority of workers believe that they have some control over their own health and safety at work. Of all participants, 89 per cent agreed that if workers follow all the safety rules they can avoid many workplace accidents, 80 per cent agreed that there is a direct link between how careful workers are and the number of accidents they have, and 71 per cent agreed that accidents and injuries happen because workers do not take enough interest in safety. The responses to these statements were very similar between non-Irish national workers and their Irish peers, although non-Irish national workers were less likely to *strongly* agree that accidents are due to workers not taking enough interest in health and safety, at 12 per cent compared to 21 per cent.

However, there were differences between the two groups in their views on whether workers' accidents and injuries happen because they make mistakes. Most non-Irish national workers agreed with this statement, at 72 per cent, compared to just over half (53 per cent) of Irish workers. For Polish workers, the levels of agreement were even higher, at 79 per cent. It would seem that these differences were not simply due to the different demographic profile of non-Irish national workers, as older workers and those who had worked longer in construction were the most likely to agree with this statement (non-Irish national workers tended to be both younger and newer to the profession). These findings suggest that there is a tendency for non-Irish national workers, and more so than their Irish peers, to attribute accidents to events within their control.



Figure 5.16: Internally-focussed questions regarding the causes of accidents



\* significant difference between Irish and non-Irish nationals at  $p < 0.05$ .

Source: IES, 2008

### 5.6.2 Externally-focussed questions

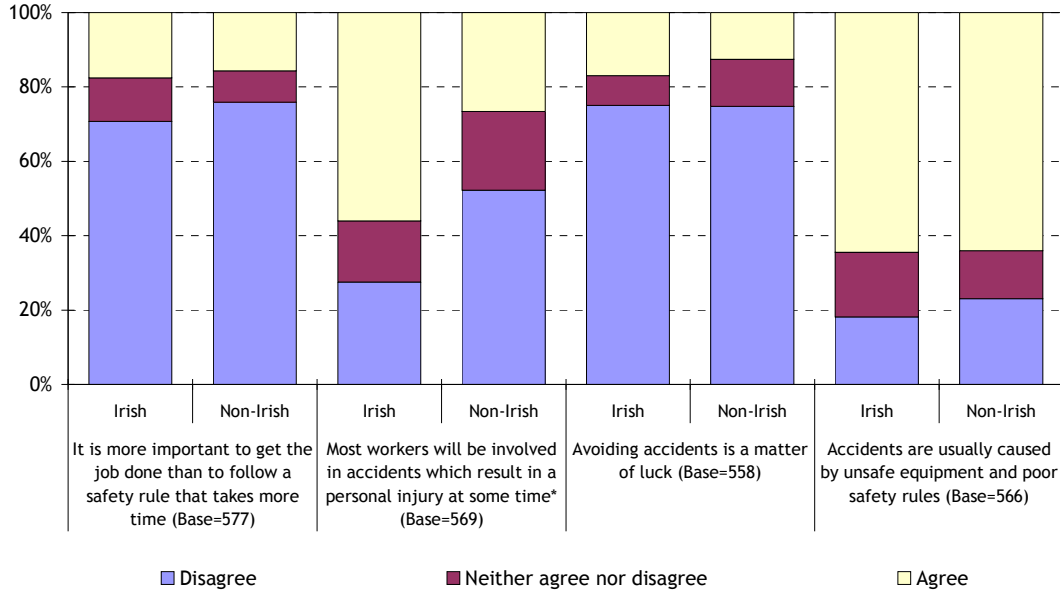
As expected, given the results already described, the majority of workers disagreed with externally-focussed statements (see Figure 5.17). Of all participants, 73 per cent disagreed that it is more important to get the job done than to follow a safety rule that takes more time, and 75 per cent disagreed that avoiding accidents is a matter of luck. On both of these questions, the responses from non-Irish nationals and their Irish peers were fairly similar, although non-Irish national workers were less likely to *strongly* disagree that avoiding accidents is a matter of luck, with 20 per cent of non-Irish national workers strongly disagreeing compared to 34 per cent of Irish workers.

In contrast to the other questions, the majority of workers (64 per cent) agreed that accidents are usually caused by unsafe equipment and poor safety rules. Levels of agreement with this statement were very similar for both Irish and non-Irish national workers, at 65 per cent and 64 per cent respectively.

There was, however, a clear difference between the two groups in their views concerning the inevitability of accidents. Non-Irish national workers were much more likely than their Irish peers to disagree that most workers will be involved in accidents which result in a personal injury at some time, with 52 per cent disagreeing compared to 28 per cent of Irish workers. Disagreement was particularly high for Polish workers, at 67 per cent. This result would suggest non-Irish national workers have a tendency to be less externally focussed in their attribution of accidents, which is in line with the findings above showing that they have a more internal focus. However, when comparing different groups on their responses, it was clear that those who were better educated and newer to the profession were more likely to disagree with the statement,

whilst those involved in site clearance jobs (ie labourer tasks) were more likely to agree, which may, in part, explain the high levels of disagreement from non-Irish national workers.

**Figure 5.17: Externally-focussed questions regarding the causes of accidents**



\* significant difference between Irish and non-Irish nationals at p<0.05.

Source: IES, 2008

### 5.6.3 Internally- and externally-focussed scales

The internal and external items were aggregated to form two scales on attitudes about the causes of accidents, one with an internal focus and the other with an external focus (please refer to Appendix 1 for more details on the construction and reliability of these scales).

Table 5.18 shows that composite scores were higher on the internally-focussed scale than the externally-focussed scale, showing greater overall agreement with these items (which would be expected given the results already described). Comparing non-Irish national workers with their Irish peers on these scales shows few absolute differences between the two groups. Non-Irish national workers and Irish workers did not differ on their internal scale scores, with mean scores of 15.2 and 15.1 respectively. Whilst scores were also not wildly different on the external scale, they did differ significantly. Non-Irish national workers had slightly lower external scale scores with an average score of 10.7 compared to 11.3.

**Table 5.18: Mean internal and external scale scores**

Scale scores	Irish	N	Non-Irish	N	All	N
Internal Locus of Control	15.1	280	15.2	278	15.2	558
External Locus of Control*	11.3	282	10.7	264	11.0	546

\* significant difference between Irish and non-Irish nationals at p<0.05.

Source: IES, 2008

The findings from this section of the survey show that, overall, the non-Irish national workers were more likely than their Irish peers to attribute accidents to events *within* their control, and less likely to attribute them to fate or other external events. In theory, one might expect this acceptance of the importance of their own actions to lead to better health and safety behaviour amongst non-Irish national workers. However, it is also possible that having a greater internal focus means that individuals are less willing to use the guidance and advice of others, in favour of taking their own approach to health and safety.

## 5.7 Risk perceptions and behaviours

All participants were asked how risky they found a number of situations relating to the four key risk areas in construction – working at height, manual handling, use of PPE, and working around vehicles. They were then asked how often they take part in these kinds of activities on construction sites.

### 5.7.1 Working at height

As Figure 5.18 shows, there were clear differences between the two groups in both their perception of the risks involved in working at height and their engagement in this type of risk-taking behaviour. Non-Irish national workers were significantly less likely than their Irish peers to rate working on the top rungs of a ladder as a high risk. Amongst non-Irish national workers as a whole, 72 per cent considered this activity a high risk compared to 81 per cent of the Irish workers. Polish workers, however, gave a similar response to their Irish peers on this measure, with 81 per cent rating it as a high risk.

Non-Irish national workers were also less likely to rate climbing down scaffolding instead of using a ladder as a high risk compared to Irish workers. Nearly one-fifth (18 per cent) of non-Irish national workers considered this to be a low risk. Again, Polish workers were more similar to their Irish peers in this regard than other non-Irish nationals, with 83 per cent recognising this as high risk.

The two groups also differed in the extent to which they took these risks on sites (see

Figure 5.19). Non-Irish national workers were significantly more likely to report working on the top rungs of a ladder more than once a week compared to their Irish peers, at 22 per cent compared to six per cent (for Polish workers the equivalent figure was 15 per cent). As many as 12 per cent of non-Irish national workers reported doing this every day.

Non-Irish national workers were also more likely to report climbing down scaffolding instead of using a ladder more than once a week, at 16 per cent compared to seven per cent of their Irish peers (for Polish workers on their own the equivalent figure was 11 per cent). As before, as many as 12 per cent of non-Irish national workers reported doing this every weekday.

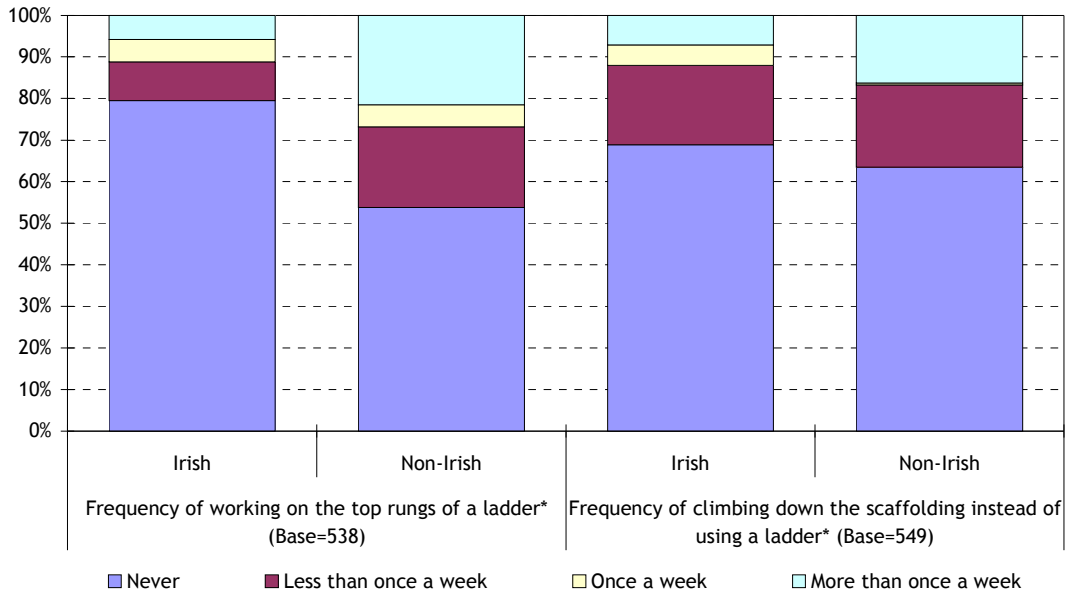
Figure 5.18: Perceptions of working at height risks



\* significant difference between Irish and non-Irish nationals at  $p < 0.05$ .

Source: IES, 2008

Figure 5.19: Frequency of taking part in working at height risks



Note: Those who claimed that working at height was not a part of their role were excluded from the analysis.

\* Significant difference between Irish and non-Irish nationals at  $p < 0.05$ .

Source: IES, 2008

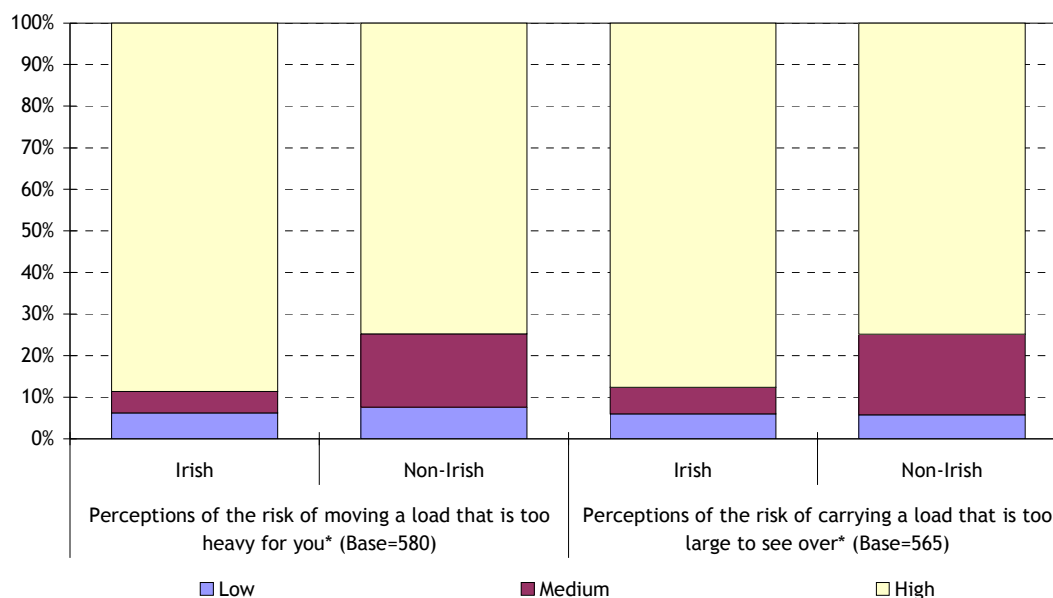
### 5.7.2 Manual handling

There were also clear differences between the two types of workers in their perceptions of risks and risk-taking behaviour relating to manual handling. As shown in Figure 5.20, non-Irish national workers were significantly less likely to consider moving a load that is too heavy for them as a high risk than their Irish peers (75 per cent doing so compared to 89 per cent). Of the Polish workers, 82 per cent recognised this as a high risk. Nearly one-fifth of non-Irish national workers (18 per cent) considered this a medium risk.

Non-Irish national workers were also less likely to consider carrying a load that is too large to see over as a high risk than their Irish peers, at 75 per cent compared to 88 per cent (the equivalent figure for Polish workers was 80 per cent). Again, nearly one-fifth of non-Irish national workers as a whole rated this risk as medium on the scale, at 19 per cent.

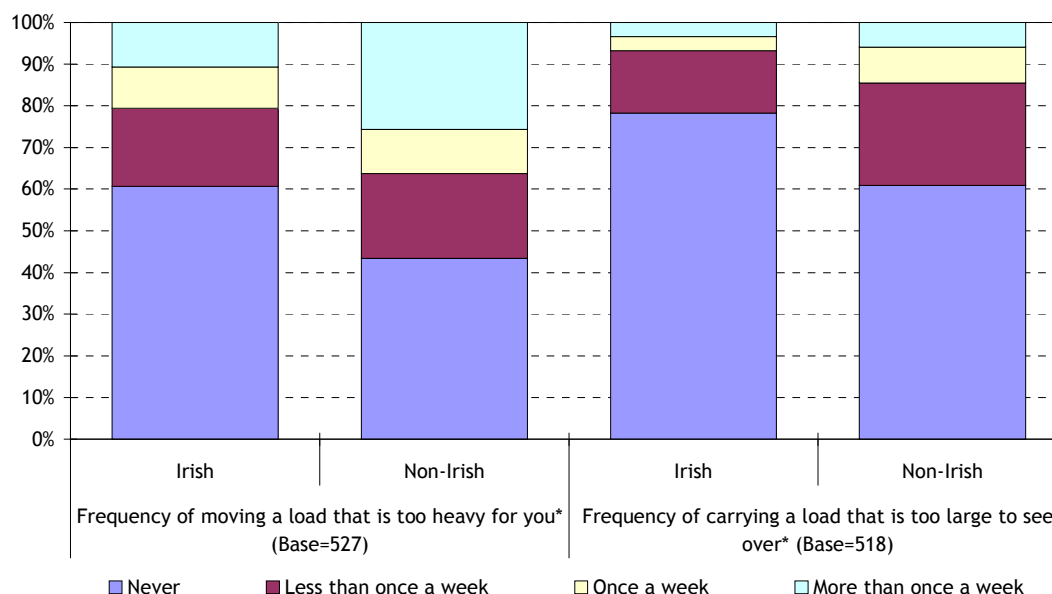
Non-Irish national workers reported moving loads that are too heavy for them more frequently than the Irish workers, with over a quarter (26 per cent) stating that they do so more than once a week, compared to 11 per cent of Irish workers (see Figure 5.21). The majority of Irish workers, 61 per cent, claimed that they never participate in this kind of behaviour.

**Figure 5.20: Perceptions of manual handling risks**



\* Significant difference between Irish and non-Irish nationals at  $p < 0.05$ .

Figure 5.21: Frequency of taking part in manual handling risks



\* significant difference between Irish and non-Irish nationals at  $p < 0.05$ .

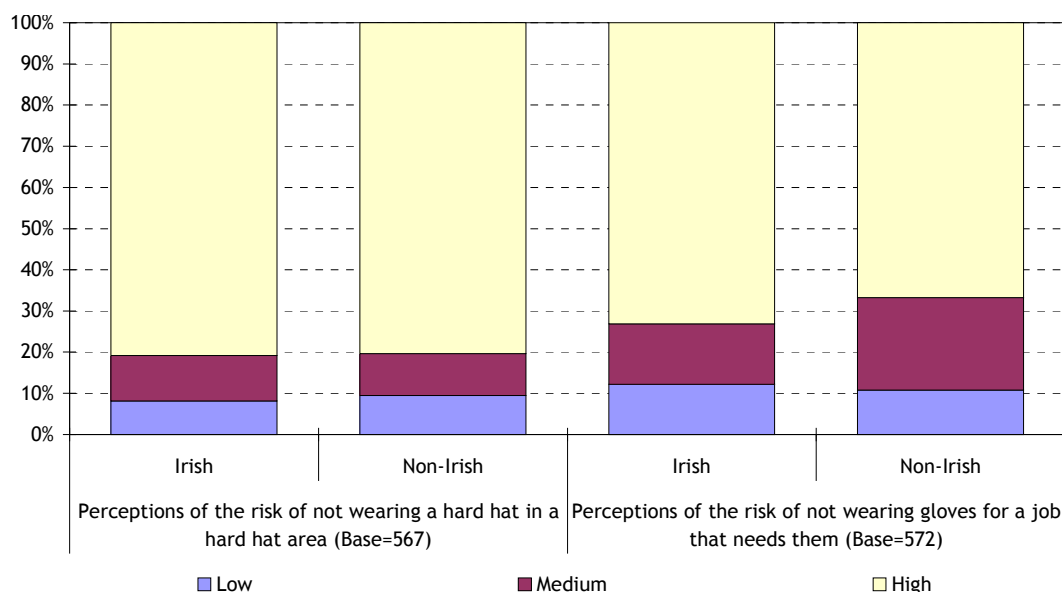
Source: IES, 2008

Although the majority of workers claimed that they never carry a load that is too large to see over, there was still a discrepancy between non-Irish national workers and Irish workers for this variable. Of the non-Irish nationals, 39 per cent admitted taking this risk (although for most this was less than once a week), compared to 22 per cent of Irish workers.

### 5.7.3 Use of personal protective equipment

There was basic agreement amongst all workers that not wearing a hard hat in a hard hat area is a high risk, with 81 per cent rating this risk as high. Non-Irish national workers did not differ significantly from their Irish peers for this variable. Although Figure 5.22 shows that non-Irish national workers were more likely to perceive not wearing gloves for a job that needs them as a medium risk than their Irish peers, statistical tests showed that the two groups did not differ significantly for this variable either.

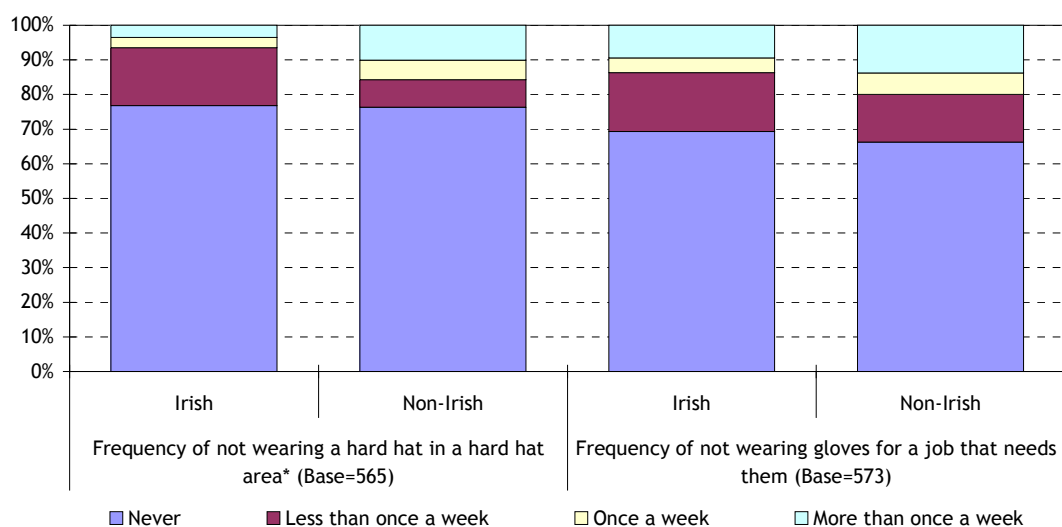
Figure 5.22: Perceptions of PPE risks



Source: IES, 2008

However, in terms of engaging in these risks, the non-Irish national workers again reported doing so more often. Whilst around two-thirds of each group stated that they never fail to wear a hard hat in a hard hat area, of those who did, non-Irish national workers tended to be the ones who did it more often (see Figure 5.23). Of the non-Irish national workers, ten per cent reported not wearing a hard hat more than once a week compared to four per cent of their Irish peers. There were no significant differences between the two groups in how often they failed to wear gloves. For both groups, around two-thirds (66 per cent for non-Irish national workers and 69 per cent for Irish workers,) claimed that they never take this risk.

Figure 5.23: Frequency of taking part in PPE risks



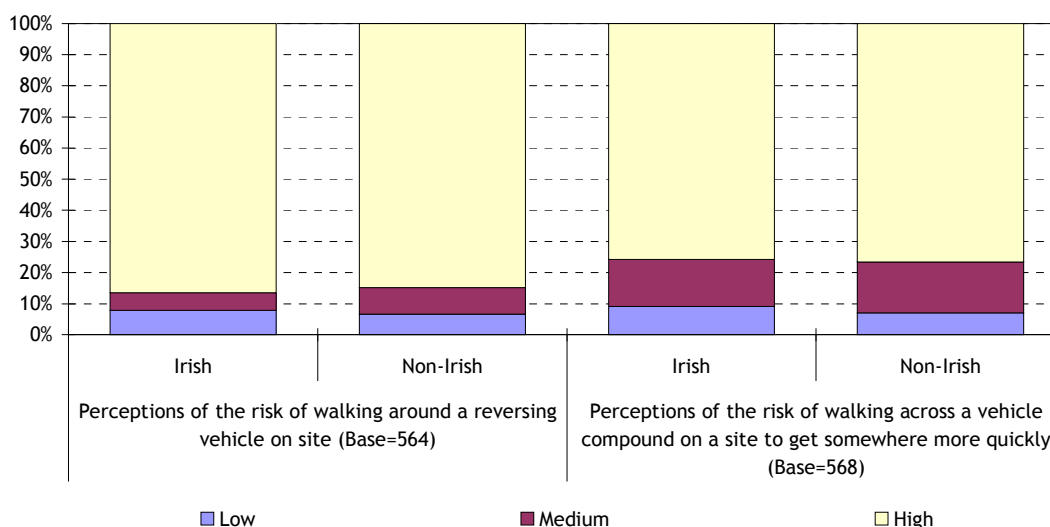
\* significant difference between Irish and non-Irish nationals at  $p < 0.05$ .

Source: IES, 2008

### 5.7.4 Working around vehicles

When it came to walking around a reversing vehicle on site, Irish and non-Irish national workers were both of the opinion that this was a high risk. There were no significant differences between the groups, with 85 per cent of non-Irish national workers and 87 per cent of Irish workers rating this activity as a high risk (see Figure 5.24).

**Figure 5.24: Perceptions of the risks of working around vehicles**



Source: IES, 2008

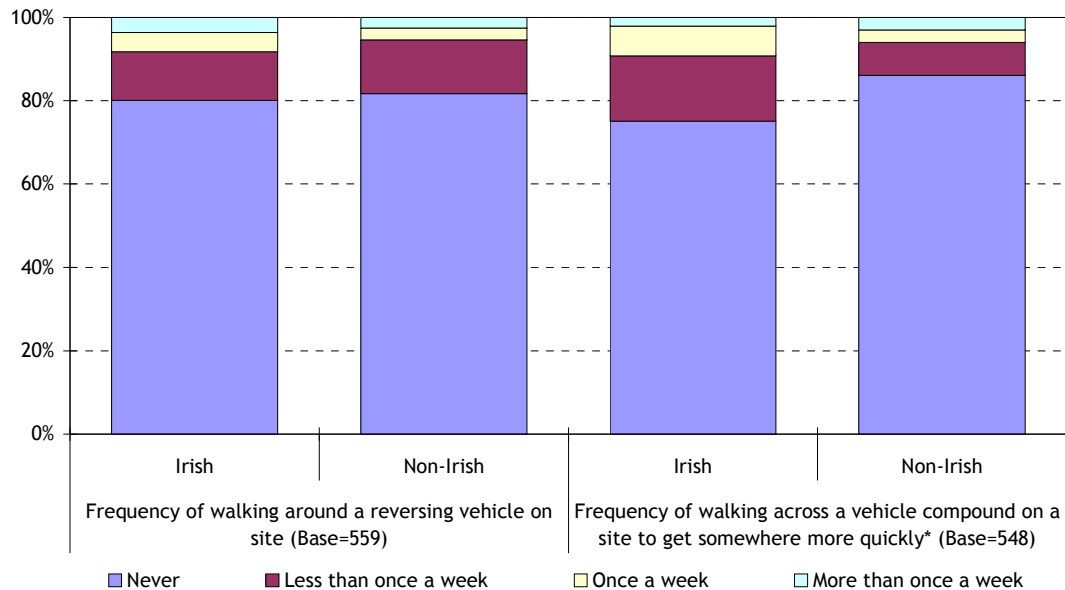
There were also no differences between the two groups in their assessment of whether taking a short cut across a vehicle compound is either a high, medium or low risk. However, in contrast to the above findings, non-Irish national workers were more likely to perceive this activity as a *very* high risk than their Irish peers, at 57 per cent compared to 47 per cent. Seven per cent of the Irish workers believed that this was a very low risk.

There were no significant differences between the groups in how often they reported walking behind a reversing vehicle on site, with the majority of each group (82 per cent of non-Irish nationals and 80 per cent of Irish workers) stating that they never do this (see Figure 5.25). A small minority, just three per cent, reported doing this more than once a week.

Non-Irish national workers were less likely than their Irish peers to report taking a short cut across a vehicle compound. Whilst 86 per cent of non-Irish nationals reported that they never do this, the equivalent proportion amongst Irish workers was 75 per cent, and nine per cent of Irish workers reported doing so once a week or more.



Figure 5.25: Frequency of taking part in working around vehicle risks



\* Significant difference between Irish and non-Irish nationals at  $p < 0.05$ .

Source: IES, 2008

### 5.7.5 Main differences

In general, these findings show that a sizeable proportion of workers are taking risks on sites and indicate some clear differences between non-Irish national workers and Irish workers in both their perceptions of risk, and their risk-taking behaviour. For most of the example risks given, non-Irish national workers were both less likely to recognise the significance of the risk and more likely to report engaging in the behaviour on a regular basis (although often Polish workers were more similar to their Irish peers in this regard than other non-Irish nationals). Risks engaged in most often included moving a load that was too heavy for them and working on the top rungs of a ladder. The only major exception was the risk of walking across a vehicle compound on a site to get somewhere more quickly, which non-Irish national workers were more likely to recognise as high risk and less likely to take part in.

At face value these findings are of concern, as they would suggest that non-Irish national workers are at greater risk of suffering an accident or injury through work. However, it is important to bear in mind that these were self-report measures and an objective assessment of behaviour on sites has not been taken. It is also important to recognise that some of these differences may be due to the different profile of our non-Irish national workers and the fact that they work for different types of companies. Other analyses found that on many of the examples, younger workers and those who were newer to the industry were less likely to perceive the risk as being high and more likely to engage in the risk taking behaviour, so the different perceptions of our non-Irish national workers may relate to their lack of experience. Similarly, those who worked for larger firms were less likely to take the risks, whilst those involved in completion tasks (plasterers and painters and decorators) were sometimes more likely to engage in risk

taking behaviour, so the findings may relate to the different employment situation of the non-Irish national workers. Later in the chapter, more complex analyses are presented on risk taking behaviour which control for these other factors.

## 5.8 Accidents and perceptions of working conditions

In this section of the report we look at differences between the two groups for some of the key variables of the survey, their experiences of accidents, near misses and ill-health. We also examine perceived levels of safety for the two groups and overall satisfaction with working conditions.

### 5.8.1 Experience of accidents

As Table 5.19 shows, the non-Irish national workers in the sample were less likely to have had an accident whilst working in construction in Ireland than the Irish workers, (ten per cent compared to 25 per cent). They were also less likely to have seen a colleague have an accident or sustain an injury, although the proportions witnessing accidents were high for both groups (26 per cent for non-Irish national workers and 49 per cent for Irish workers).

Non-Irish national workers were much less likely to have experienced a near miss whilst at work than their Irish peers, at just 12 per cent compared to 46 per cent. However, they were no different to Irish workers in terms of the likelihood of their having suffered a health problem caused or made worse by work; 18 per cent of non-Irish national workers had experienced this compared to 16 per cent of Irish workers.

**Table 5.19: Experience of incidents at work**

Experience of incidents	Irish	N	Non-Irish	N	Total	N
Had an accident*	24.7	291	9.9	293	17.3	584
Seen a colleague have an accident or injury at work*	48.7	277	25.6	289	36.9	566
Had a near miss*	46.3	272	12.3	284	29.0	556
Had a health problem caused or made worse by work	15.5	271	17.9	285	16.7	556

\* Significant difference between Irish and non-Irish nationals at  $p < 0.05$ .

Source: IES, 2008

Whilst these figures are in contrast to the CSO figures presented as the premise for the research, which state a higher proportion of reported accidents for non-Irish nationals, it must be remembered that the two statistics relate to different time periods. Due to the recent arrival of many non-Irish national workers, the survey questions asked about experiences 'whilst in construction in Ireland' rather than over any defined time period. Since the CSO figures look at accidents and fatalities over a financial year, they are not directly comparable with our survey results.

Clearly, most Irish workers have been working in construction in Ireland for longer than their non-Irish peers, and hence, have had more elapsed time in which to experience the above. Analyses found that workers who had been working in construction in Ireland for longer were

more likely to have experienced an accident, seen a colleague have an accident and had a near miss. Other analyses found that these experiences were more common for those working for certain types of companies, in certain types of trades or on certain types of projects. Assessing the true difference between non-Irish national workers and Irish workers according to measures therefore requires the use of regression techniques to hold the length of time in construction in Ireland and other factors constant. A fuller discussion later in the chapter shows that, when other factors are taken into account (using logistic regression analysis), the non-Irish nationals in our sample are still less likely to have experienced an accident or near miss, or to have witnessed an accident.

### 5.8.2 Reporting of accidents

We also examined whether non-Irish national workers and Irish workers differ in their reporting behaviour. As Table 5.20 shows, the two groups were very similar in this regard, with over 80 per cent of both groups stating that they would report an accident whenever they were injured in any way. A minority of workers (three per cent) stated that they would never report an accident.

**Table 5.20: Reporting behaviour at work**

Reporting behaviour	Irish %	Non-Irish %	All %
Whenever I am injured in any way	82.3	83.0	82.6
Only if I have to be off work	12.3	12.5	12.4
Only if I have broken a bone	0.0	0.7	0.3
Only if I have to go to hospital	3.1	1.0	2.1
Never	2.4	2.8	2.6
<i>Base</i>	293	288	581

*Source: IES, 2008*

### 5.8.3 Perceived levels of safety on site

Perceptions of safety on sites in Ireland were generally high amongst the Irish workers in our sample, with 79 per cent stating that they feel very safe or quite safe on sites (see Table 5.21).

**Table 5.21: Irish workers' perceptions of safety on site**

Perceptions of safety	Frequency	%
Very safe	61	20.6
Quite safe	174	58.8
Neither safe nor unsafe	48	16.2
Quite unsafe	13	4.4
<i>Base</i>	296	100.0

*Source: IES, 2008*

Non-Irish national workers were asked to rate how safe they feel on construction sites in Ireland compared with their home country (therefore only those who worked in construction before coming to Ireland are included, N=246). In total, 42 per cent of the non-Irish national workers claimed to feel a bit or much safer on construction sites in Ireland compared with their home country, whilst only five per cent stated that they feel less safe (see Table 5.22).

Non-Irish national workers who were agency workers were much less likely than other workers to rate themselves as feeling much safer in Ireland, with most (95 per cent) either stating that they feel just a bit safer or about the same. Those working on commercial properties were also less likely to rate the work in Ireland as much safer than their home country (16 per cent), whilst those working on civil projects were highly likely to rate it as much safer in Ireland (38 per cent). Workers employed in completion tasks (eg plasterers, painters and decorators) generally thought levels of safety were around the same, with 65 per cent rating it in this way. There was also a difference by size of site and size of company. Twenty-seven per cent of those working on small sites, and 15 per cent of those employed by micro companies felt less safe in Ireland compared to their home country.

**Table 5.22: Non-Irish national workers - how safe they feel on construction sites in Ireland compared with their home country**

Safety compared to home country	Frequency	%
Much safer	64	26.9
A bit safer	36	15.1
About the same	127	53.4
Less safe	11	4.6
Much less safe	0	0.0
<i>Base</i>	238	100.0

Source: IES, 2008

All workers were asked how happy they felt about the working conditions they face on site. Table 5.23 below shows that although overall satisfaction with safety conditions was high for both groups, non-Irish national workers were less likely than their Irish peers to be 'very happy' with their working conditions, at 26 per cent compared to 39 per cent, with many indicating instead that they were only 'happy'.

In general, levels of happiness were higher for those newer to the industry (81 per cent of those who had been in the industry for less than three years rated themselves as happy). In line with the above, ratings of happiness were lower for those working on commercial projects (68 per cent) and higher for those on civil projects (76 per cent). They also tended to be lower for those working in building jobs (eg bricklayers, steel-fixers) at just 65 per cent. However, in contrast to the above, agency workers were highly likely to rate themselves as happy with their working conditions at 85 per cent.

Table 5.23: Happiness with working conditions

Happiness with working conditions*	Irish %	Non-Irish %	All %
Very happy	38.8	25.8	32.1
Happy	34.6	47.2	41.0
Neither happy nor unhappy	22.5	23.4	23.0
Unhappy	4.2	2.0	3.1
Very unhappy	0.0	1.7	0.9
<i>Base</i>	289	299	588

\* Significant difference between Irish and non-Irish nationals at  $p < 0.05$ .

Source: IES, 2008

Overall, these findings suggest non-Irish national workers participating in this research were actually less likely to experience accidents, witness a colleague have an accident, or experience a near miss than their Irish peers. They were also, on the whole, highly satisfied with their working conditions and, if anything, rated health and safety as better in Ireland than in their home country. However, as stated earlier, the accident statistics used were dependent on the length of time spent working in construction in Ireland, which was generally longer for Irish workers. In the next section of the report, regressions are used to look at the true effect of being non-Irish on the key variables in the report by holding this and other variables constant.

## 5.9 The true effect of being a non-Irish national on experience of accidents and risk behaviour

In this section of the report we discuss the effect of being a non-Irish national on a worker's propensity to have an accident, near miss or health problem due to work, or to be involved in risk taking behaviour. As previously discussed, there are some differences between non-Irish national workers and Irish co-workers. The non-Irish national group were less likely to suffer an accident or near miss but more likely to engage in risk taking behaviours (with the exception of walking across a vehicle compound to get to a destination more quickly). However, as outlined, non-Irish national workers had a different demographic and work profile than their Irish peers and there were also differences in terms of their take up of training, their perceptions of workplace culture and their attitudes towards accidents. As such, it remains unclear whether the differences in accident experiences and risk behaviours are due to being non-Irish or some other underlying variable.

For example, it is not clear from this data whether non-Irish national workers are more likely to take risks because they tend to be slightly younger than their Irish peers, or because they have less experience in the industry. To identify 'true' differences between Irish and non-Irish national workers, it was important to control for other characteristics in our analysis. This was conducted using regression techniques. This type of analysis also provided an opportunity to see which of the range of factors described throughout the report, from training through to language abilities, attitudes towards accidents and health and safety climate are most important in predicting health and safety behaviour onsite.

## Approach to running the regressions

The analysis was conducted using probit regressions in STATA. Two models were used:

- a **'basic' model** which included nationality alongside other 'hard' data on demographics, characteristics, training received and understanding of English language, and
- an **'augmented', more sophisticated model** which included, in addition to the above 'hard variables', 'softer' variables on attitudes to the causes of accidents (an internally-focussed scale and an externally-focussed scale) and perceptions of workplace culture.

Hard variables (used in both models) included the following:

- age
- educational attainment (finishing age 16 and under, 17 to 18, 19 plus, still in education)
- length of time working in construction in Ireland/length of time in industry<sup>1</sup>
- site size (small, medium or large)
- region (Galway, Limerick, Cork, Dublin)
- employment status (whether working for a micro, small, medium, or large firm, self-employed or an agency worker)
- job type (whether site clearance, build, fit out, completion, driver/machine operator, other)
- hours worked
- type of project worked on (houses, commercial properties, civil projects)
- training<sup>2</sup> (whether workers had received Construction Skills Certification Scheme (CSCS), site induction, toolbox talk, other on site health and safety training, other off-site health and safety training)
- English proficiency – whether workers had studied English and how easy they find it to understand spoken English on site.<sup>3</sup>

Soft variables (used in the augmented model only) included:

- attitudes towards the causes of accidents – internally-focussed
- attitudes towards the causes of accidents – externally focussed
- health and safety culture variables.

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<sup>1</sup> The variable included depended on the question. For all questions about accidents, near misses and ill-health it was necessary to include time spent working in construction in Ireland, as the questions in the survey asked for any experience of these in Ireland. It was therefore necessary to control for the differences in elapsed time for Irish and non-Irish national workers. All questions relating to risk behaviour were period specific and asked for activities over the past 12 months, so time in the industry was used.

<sup>2</sup> Please note that Safe Pass was not included as a variable because the vast majority of workers had received it.

<sup>3</sup> Please note that all Irish workers were included as having studied English to indicate a good understanding of English for this group, and as understanding spoken English on site very well.

In the tables that follow, a positive sign (+ve) indicates that non-Irish nationals are more likely to experience the incident in question or engage in that behaviour, a negative sign (-ve) means that they are less likely to, whilst a 0 indicates that there is no difference between the groups once the other factors are taken into consideration.

## Experience of accidents

The first set of analyses looked at the 'true' effect of being Irish or non-Irish on experiences of an accident, near miss or ill-health due to work whilst working in construction in Ireland (see Appendix 3 for output of the analyses using the augmented model). Each of the models had strong predictive power, with R-squares ranging from 18 to 58 per cent (ie the models explain between 18 and 58 per cent of the variance in our sample). In all cases, the augmented models had stronger predictive power than the basic models.

**Table 5.24: Significance of being non-Irish with regard to accident experience since working in construction in Ireland once other differences between the groups are controlled for**

	Descriptive comparison	Basic model	Augmented model
Accident	-ve	0	0
Near miss	-ve	-ve	-ve
Ill-health caused or made worse by work	0	0	0

Source: IES, 2008

Table 5.24 shows that in terms of experience of accidents whilst in Ireland, when hard variables such as demographics, work variables, experience of training and English proficiency were controlled for nationality had no effect. What this essentially means is that what looked to be a difference between the two groups in their accident experience was due to differences in their demographic and work situations rather than simply being Irish or non-Irish. The main significant variables (from the augmented model) affecting whether an individual was likely to experience an accident appeared to be (in other words, the main factors influencing accident outcomes):

- Size of site – with accidents being more likely on medium and large sites.
- Types of projects – with accidents being less likely in civil projects.
- Training – with accidents being more likely for those who received other off-site training (although it is not clear what this training included, or the direction of causality).
- External focus on accidents – with accidents being more likely for those who felt that accidents were inevitable.
- Workplace culture – with accidents being less likely for those who felt respected by their colleagues, and who thought that health and safety was not prioritised in Ireland, and more likely for those who thought that some health and safety procedures are not really practical.
- English language – with accidents being less likely for those who have studied English language.

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In terms of near misses, our analyses found that even once all of the hard and soft variables were included, there was still an effect of being Irish/non-Irish, with Irish workers still being more likely to report a near miss. What this essentially means is the range of demographic and background factors were not, in themselves, able to explain the difference between Irish and non-Irish nationals. However, the model did find that English proficiency was a key variable, and that those who had studied English were less likely to report experiencing near misses in the survey. The full list of significant variables in the model was included:

- Age – with older workers being more likely to report near misses (up to a point after which the effect died away).
- Length of time working in construction in Ireland – with those who had worked in Ireland for longer being more likely to report a near miss.
- Region – with near miss reporting being greater in Limerick, Cork and Dublin.
- Hours worked – at very long hours the propensity for having a near miss increased.
- Types of projects – with near misses being reported more by those who worked on houses or commercial projects.
- Training – with accidents being more likely for those who received other off-site training (although it was not clear what this included or the direction of causality).
- External focus on accidents – with near misses being more likely to be reported for those who perceived that accidents were inevitable.
- Workplace culture variables – with near misses being reported less by those who thought that their boss would rather they stop work than put their health and safety at risk, and more by those who felt that some health and safety procedures are not really practical.
- English language – with near misses being less likely for those who have studied English language.

As was reported in the previous section, there were no differences between Irish and non-Irish national workers in their reporting of suffering ill-health caused or made worse by work. In the full model, the significant variables were:

- Educational attainment – those still in education were more likely to report ill-health.
- Hours worked – those who worked longer hours were more likely to report health problems, up to a point (after which the effect of hours worked became negligible).
- Training received – those who received toolbox talks were less likely to report ill-health, those who had received other on site training were more likely to report ill-health (although it was not clear what this training included, or the direction of causality).
- External focus on accidents – with ill-health being more likely to be reported for those who perceived that accidents are inevitable.



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- Workplace culture variables – with ill-health being reported more by those who felt pressure to work safely, and who felt that some health and safety procedures are not practical, and less by those who stated that they were always provided with PPE and those who felt uncomfortable raising a health and safety concern.
  - English language – with ill-health being less likely for those who have studied English language.

### Risk taking activity

The second set of analyses looked at the ‘true’ effect of being Irish or non-Irish on risk taking behaviour in relation to working at height, manual handling, use of PPE and working around vehicles. The analyses looked at what predicted those who took a risk against those who never took a risk.<sup>1</sup> Please see Appendix 3 for output of the analyses using the augmented models, which included all of the factors. Please note that in each case the models had strong predictive power, with R-squares ranging from 13 to 43 per cent. In all cases, the augmented models had stronger predictive power than the basic models. We also ran regression models adding in the perception of risk variables (only including those related to the risk in question) which all provided greater predictive power and showed similar results concerning the effect of being non-Irish.

Table 5.25 below shows that for most of the risk taking activities, although the non-Irish national workers in our sample appeared to be more likely to take part, once other differences between the two groups were accounted for, these differences disappeared. As such, in most cases, the differences in risk taking activity were due to some variables other than being non-Irish. However, there were some exceptions. It would appear that non-Irish national workers were more likely to work on the top rungs of a ladder or carry a load that is too large to see over, once all variables, including differences in ‘softer’ variables such as attitudes and work culture were considered. The descriptive statistics presented earlier in the report showed that non-Irish national workers were less likely than their Irish peers to walk across a vehicle compound on a site to get somewhere more quickly. However, once other factors were controlled for, these differences disappeared.

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<sup>1</sup> Other regressions (ordered probits) were run comparing Irish workers who never take risks with those who take them less than once a week and once a week or more, which produced similar results.

**Table 5.25: Significance of being non-Irish with regard to taking a risk in the past 12 months once other differences between the groups are controlled for**

	Descriptive comparison	Basic model	Augmented model
Working on the top rungs of a ladder	+ve	0	+ve
Climbing down scaffolding instead of using a ladder	+ve	0	0
Moving a load that is too heavy for you	+ve	0	0
Carrying a load that is too large to see over	+ve	0	+ve
Not wearing a hard hat in a hard hat area	+ve	0	0
Not wearing gloves for a job that needs them	0	0	0
Walking behind a reversing vehicle onsite	0	0	0
Walking across a vehicle compound on a site to get somewhere more quickly	-ve	0	0

Source: IES, 2008

It is interesting to note that the ability to speak good English was a significant factor in predicting some risk behaviours – climbing down scaffolding instead of using a ladder, carrying a load that is too large to see over, and not wearing gloves for a job that needs them – with those who had studied English being less likely to take the risk. How well spoken English was understood on sites was not, in itself, a significant factor.

There was a range of other factors which predicted propensity to take risks, other than being non-Irish. Those that were common across a number of risks (four or more) included:

- Training received – those who had taken part in CSCS were less likely to report taking risks.
- Education attained – those who left school between 17 and 18 were more likely to take risks.
- Work culture variables – those who felt that co-workers paid the same attention to health and safety as they did were less likely to take risks, as were those who felt they knew a lot about health and safety law.
- Attitudes to accidents – those with an internal focus were less likely to take risks.
- Type of projects – those who worked on civil projects were less likely to take risks.
- Hours worked – those who worked longer hours were less likely to report risk behaviour (although for some variables this was only up to a point after which the effect fell away).
- Job type – those involved in building jobs were less likely to report risk behaviour.
- Employment status – employees working for medium sized firms were less likely to report taking risks.

Please refer to Appendix 3 for the full analysis output for each type of risk behaviour.

## 5.10 Summary

The employer survey involved 300 each of Irish and non-Irish workers. The main findings were that, in our sample:

- Despite working on the same sites as their Irish colleagues at the time of the survey, non-Irish workers had a different profile to their Irish peers, being: younger; later to leave education; newer to the industry; and working as skilled trades people and/or on civil rather than domestic projects.
- Amongst non-Irish workers, younger workers were least likely to have received health and safety training prior to coming to Ireland, and non-Irish workers were, overall, less likely to receive training other than their Safe Pass. Training that had been received was generally felt to be of a higher quality in Ireland than elsewhere.
- Half of all non-Irish workers had studied English at some point, although older workers were less likely to have done so. Non-Irish workers were more concerned about their ability to understand written English than they were about spoken English, although colleagues on site were frequently asked to act as translators.
- Non-Irish workers appear to have a more positive attitude towards health and safety procedures, but perceived health and safety as less important in the industry in Ireland than their Irish peers. However, they were less likely to feel that they always receive the PPE they need and some were unsure how comfortable they would feel asking for help from a co-worker or raising a concern about health and safety at work.
- The majority of workers, both Irish and non-Irish tend towards an internal view of control (ie they tend to believe that they do have some level of control over their life). Non-Irish workers, however, have a greater tendency to attribute accidents to events within their own control (ie people making mistakes rather than being somehow 'inevitable'), although both Irish and non-Irish workers agree in similar proportions (around 65 per cent) that accidents are usually caused by unsafe equipment and poor safety rules.
- Non-Irish nationals were less likely than Irish workers to have experienced an accident, seen a colleague have an accident, or suffered a near miss whilst working in Ireland. However, once other factors (ie personal and work characteristics) had been controlled for, non-Irish workers were, statistically, just as likely as their Irish peers to have experienced an accident. This relates to the fact that Irish workers are more likely to work for larger firms (which have higher accident rates in this data) and less likely to be employed on civil projects (which tend to be safer according to this data).

Perhaps the most important message to take from this chapter is that, in general, differences in approach and behaviour that were evident between Irish and non-Irish national workers fell away when the differences in the profiles of the two groups were taken into account. Therefore, it would seem that whilst demographic and work factors are, in themselves, related to accidents and risk taking behaviour, in most cases, differences are not directly attributable to nationality per se.

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## 6 Face-to-Face Interviews with non-Irish National Workers

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This chapter draws together data gathered from 30 face-to-face interviews with non-Irish nationals living in Ireland and working in the construction industry. It explores their employment and training backgrounds as well as the motivations and circumstances surrounding their moves to Ireland. Other topics explored include: English fluency and confidence levels in using English; experiences of health and safety training; knowledge and awareness of health and safety procedures and legislation; views on the Irish work culture and communities; and attitudes to risk in general and in relation to specific incidents witnessed and experienced. The final section highlights the key themes which may explain, in part, why non-Irish national workers have a higher proportion of accidents and fatalities than their Irish counterparts, according to figures from the HSA and CSO.<sup>1</sup> Where appropriate in this chapter, interviewees' perceptions of differences between Irish and home country health and safety cultures are also explored.<sup>2</sup>

### 6.1 Qualitative data analysis

The outcomes of these in-depth face-to-face interviews are used to highlight and understand specific individual experiences, views, circumstances and behaviours. The interviews were semi-structured, enabling flexibility for both the interviewer and the respondent to explore issues in as great a depth as was relevant for each respondent, and also allowed the discussion of issues not previously considered. Whilst the analysis, in places, makes note of patterns or groupings of similar responses, this should not be taken as being statistically significant in any way. References to size of respondent groups are similarly descriptive, and not statistically representative of the wider population of non-Irish national construction workers. In several

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<sup>1</sup> The proportion is derived from HSA statistics of reported accidents and population data from the CSO.

<sup>2</sup> Many of the interviews were conducted with the aid of an interpreter. In these cases, the quotations taken from recorded transcripts are in the voice of the interpreter who, in some cases, refers to the speaker in the third person. All quotations are presented verbatim; however, where corrections are required to clarify meaning these are inserted in boxed parentheses.

cases, interesting issues were mentioned by only one respondent: these are still relevant in terms of research findings as although there is no way to tell to what extent the issue applies to other workers, it is nonetheless true for that respondent. The value of qualitative evidence of this type, compared to quantitative evidence, is its ability to illustrate specific circumstances and experiences whilst also taking into account an individual's wider background and context. The results from the worker survey are drawn together with the interview data and compared in the final chapter of the report.

Please note that the individuals interviewed for this research had not taken part in the worker survey so it is not possible to link survey responses with interview notes. The primary aim of this in-depth element of the research was to clarify some of the issues which could not be fully covered in a quantitative survey. Furthermore, as the in-depth interviews did not include a comparison group of Irish construction workers, there are issues covered here which are not necessarily exclusive to non-Irish nationals but are still relevant to their experiences of working in Ireland. The final section of this chapter highlights the key themes, whilst distinguishing between issues which are relevant to all construction workers and those particular to non-Irish nationals.

## 6.2 Sample profile

Participants were recruited to take part in the research from four regions; however, the largest group of interviewees were from Dublin (11) and Cork (9). A further ten interviewees came from Galway and Limerick (five from each). All of the workers were male.

Nationalities included:

- Polish (22)
- Slovakian (five)
- Russian (one)
- Lithuanian (one)
- Armenian (one).

Whilst the sample included more Polish workers, it is worth noting that workers from Poland make up the majority of non-Irish national workers in the industry.

The sample included a range of ages. Just under half of the interviewees were between 26 and 35 years of age (14), and nine were under 25 years old. Seven were aged between 36 and 45 years.

Over half of those interviewed worked in very small firms (1–10 employees), seven worked for small firms (11–49 employees) and four worked for medium sized firms (50–250 employees). None of the workers interviewed claimed to be sole traders. This element of the research deliberately targeted 'hard to reach' workers in smaller firms, as we were concerned that it would not be possible to reach these workers in the survey. However, several of the interviewees had worked for more than one employer since being in Ireland and those working in very small firms often had experience of working on large construction sites.

The non-Irish national workers we spoke to had come to Ireland mainly in the past four years. Only three participants had been in Ireland for more than four years, while 11 had been in Ireland from two to four years. Six of those interviewed had been in Ireland for less than a year.

### 6.3 Workers' backgrounds

The circumstances surrounding individuals' moves to Ireland varied. Many of those interviewed, particularly Polish workers, already knew people from their home country who were living and working in Ireland at the time of their relocation. In one case a worker claimed to know almost 50 people from his Polish village that were in Ireland.

*'There was a lot of Polish people over here, almost the entire street where he lived in Poland is here, so all the neighbours he knew are here.'*

(Polish painter working for a small firm)

Some workers had extended family living in Ireland, for example, uncles, cousins, or siblings. Several of those interviewed were in Ireland with partners, who were also working, but only a few were accompanied by young children. Those with family in Ireland often noted that these contacts helped them to make the transition and to find and secure work.

*'He left Poland, as everyone leaves Poland for better payment, better work, better conditions. He has family here – three uncles are living here so he was safe to get here. They helped him.'*

(Polish general operative working for very small firm)

*'(I came) on my own and later I brought my wife and kids after I found a job. They are with me now. My sister is also living here. And my friend who helped me find a job. Two people I knew before I came. I had no money in Poland. This job was waiting for me. I didn't have to look for a job. I came here and started work straight away. Everything was set.'*

(Polish carpenter working for a medium sized firm)

#### 6.3.1 Motivations for coming to Ireland

The most common motivations for moving to Ireland were economic: better pay, better jobs, and the ease of finding work.

*'They have good money here – better than I have in Poland so – it's employment.'*

(Polish tiler working for a very small firm)

*'I was getting very low wage so I decided to locate to another place to find some other job. So that's why I came to Ireland, because I knew the wages here in Ireland are completely different than in Poland.'*

(Polish electrician working for a very small firm)

Some workers had plans to save their earnings whilst in Ireland in order to start businesses or buy/build a house when they return to their home country. Others had moved to Ireland because they were interested in travelling and wanted new experiences and opportunities for cultural exchange.

*'That's a difficult question for me because I don't know. Not for money, that's not a problem for me. Language. Experience. But not for money.'*

(Polish general operative working for a large firm)

*'First thing was just to do something different, like new friends and people, new language and everything. That's it, was no friends but now is completely different.'*

(Polish window and blind fitter working for a very small firm)

### 6.3.2 Work experience before coming to Ireland

Many of the non-Irish nationals had some experience of work in construction, either as a general labourer or in a specific trade, before moving to Ireland to look for work. Others had work experience in parallel industries with skills which were easily transferred to construction trades, such as forestry and engineering.

Several participants had formal qualifications and work experience in professional fields outside construction, including IT, engineering, and biology. Some of these individuals had tried but failed to find work in their chosen field in Ireland, and subsequently looked for work in a construction trade.

*'I was IT specialist. I have two masters degrees. I wasn't able to get this job here in Ireland.'*

(Polish electrician working for a very small firm)

*'No, I'm a biologist not a tiler. When I came to Ireland and I was thinking what am I going to do and I find out I could go study more and I found that it's difficult for me and I need to work for rent for living.'*

(Polish carpenter working for a medium sized firm)

## 6.4 Working in Ireland

Interviewees were working in a wide range of roles in the construction industry, including:

- carpentry and general building/renovation work (seven)
- labourer or general operative (eight)
- skilled trades such as plumbers, electricians, masons and decorators (eight)
- other specialist roles such as window fitting, tiling, and steel polishing (seven).

Workers described a wide variety of working arrangements, in terms of working hours and contract types. A few workers noted that non-Irish nationals tended to work in the lower status jobs on sites while Irish workers held the more skilled roles. One worker also suggested non-Irish national workers in the same roles as their Irish colleagues were paid less to do the same work.

*'He says with contractors there were around 30 people, quite a large company. Only labourers were 12 Polish and two Ukrainians. He worked there for four months. He said that his earnings were very low*

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*there. He says it's sure that they earned less than Irish. I don't think that any Irish would work for what they were paid.'*

(Polish general operative working for a small firm)

Several of the workers interviewed had at least one experience of working for what they described as a 'bad' employer, characterized by low pay, poor working conditions, or disregard for workers' health and safety (we return more fully to this issue later in the chapter). Most participants had found it relatively easy to change jobs since their arrival in Ireland, and had done so in many cases to move away from unfavourable working conditions. However, we heard reports that the construction industry had been slowing down in recent years, which was starting to affect the availability of work for some non-Irish nationals.

#### 6.4.1 Working hours

Most participants in the research worked standard full-time hours, around eight hours a day.<sup>1</sup> The main variation in working hours was in relation to site size and employer, in that smaller companies appeared to be more prone to peaks in work demands requiring workers to work longer days and sometimes weekends in order to finish jobs on time.

*'In the small companies I know the people they're working like seven days a week for 12 hours. Of course on the paper they're going to have 39 hours if they're employed and there is still loads of people that are not employed at all and they're working on the sites. So it depends you know, what boss going to say or sometimes when it's very short time to finish the contract and there is not too much done already, you know everybody is busy, busy so they're working longer, or like seven days a week you know because boss he want to finish the job and you know keep the customer happy, but I would say most of the people on the site they're not working longer than 40, 45 hours a week.'*

(Polish carpenter working for a large firm)

A few workers had personal experience or knew of other non-Irish nationals who, in addition to their full-time jobs, were working in second jobs or involved in weekend work. Again, some thought that supplementary working was more common amongst those employed in smaller companies.

*'The people from the big companies, I think they don't have like a second job, but I know loads of guys from the small companies they have. For example, they're working for their own like on Saturdays they're doing an extra job. They're advertising in the newspaper, for example, small jobs, I don't know, carpentry jobs, or plumbers service or something like that, you know, and loads of people they're working after hours like, for example, they're going to finish at five o'clock and at six they go to do something like that.'*

(Polish carpenter working for a large firm)

Some thought that non-Irish nationals were working longer hours than their Irish peers, although this view was not held by everyone. In particular, it coincided with the opinion that non-Irish

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<sup>1</sup> One of the difficulties recruiters had in finding workers to take part in the interviews was that many did not want to take time off work in the evenings to attend the interview. This suggests that those working the longest hours and those with second jobs have largely been excluded from this sample.



nationals were mainly working in Ireland to make money, and that there was a strong motivation to work as many hours as possible to maximise their income.

*'I think Irish people they're working less. That's what not only Polish people say, the Irish people they're working a bit less.'*

(Polish carpenter working for a large firm)

## 6.4.2 Illegal working

Whilst it was not in the remit of this research to look at illegal working amongst non-Irish national workers, there was some admissions of working in 'unregistered' jobs in construction amongst the participants. The reasons why workers would take these jobs were not always clear. However, workers were often led to these jobs by friends or family, in the same way that other new arrivals found legitimate work through their network of contacts already based in Ireland. Examples of both illegal working and poor working conditions tended to have occurred in the first weeks and months after arriving in Ireland, suggesting that this is a crucial phase of vulnerability for newcomers. In some cases it was not always clear to the workers whether the job was legitimate until they left.

*'I was working in construction, it was in (named region) and that was kind of labourer. But like I said that wasn't official job. I had this job from my friend. Nobody know. Even the revenue don't know about it. My friend was working there one year before and employer told him he would take him again and use him and I joined with him. If I have to be honest I was doing everything. I was putting the scaffolding without qualifications, that was part of this job.'*

(Polish electrician working for a very small firm)

## 6.5 Communicating in English

Using a rudimentary assessment of interviewees' fluency in English, based on their ability to communicate at interview without the aid of an interpreter, participants were categorised into two groups of English fluency: basic to none, and adequate to good. Thirteen of the non-Irish nationals had only basic or no English, while the remaining 17 were able to communicate adequately or to a good standard. Those with the most basic English language skills tended to be those who had come to Ireland in the past year or two; however, there were five participants who had been in Ireland between two and four years who still had basic or no English. Only one participant who had come to Ireland in the past year had an 'adequate or good' level of English.

### 6.5.1 Levels of comprehension and ability on arrival

Many Polish workers had some experience of studying English at school, although some had studied German instead of English. Fewer of the Slovaks had studied English at school as, historically, Russian was part of their standard school curriculum. As such, many of the non-Irish national workers interviewed had little or no English on first arrival in Ireland.

*'My first job so what I do I fix the small shop, destroy everything put the new plasterboard, this was my first job, I was in Ireland about three weeks, so my English was very bad, this time was the problem but now I don't think so.'*

(Polish general operative working for a small firm)

*'The first month was hard going but things improved quickly after that.'*

(Slovakian roofer working for a very small firm)

Most found that their ability to speak and understand spoken English improved quickly within the first few weeks and months of working in Ireland. However, many admitted that their understanding of written English was still limited.

*'When I talk it's not that bad but if I want to sign something in English then is problem because I don't have this in the school.'*

(Polish general operative working for a small firm)

*'I can talk but if I want to read something it is difficult.'*

(Polish builder working for a very small firm)

The discussions with workers suggested that some employers were not always aware of the language limitations of their non-Irish national employees. Two participants told of friends or relatives who had attended a job interview on behalf of a non-Irish national worker due to their lack of English. This was seen as more likely to happen in larger companies, where a worker arriving on site with little or no English could easily go unnoticed.

*'Sometimes the big companies when, for example, you're going to find advertising, Internet or newspaper, (named) site, whatever, (employment agency) were looking for people and interview is with somebody else and I know sometimes Polish people they're doing like that, different person went for interview speaking better English. You have to, you know, if you don't have a job. People doing loads of different things to get the job.'*

(Polish carpenter working for a large firm)

### 6.5.2 Learning English

Some non-Irish national workers had taken active steps to improve their levels of English since arriving in Ireland. They had enrolled in English schools, and were engaged in learning in addition to their full-time work on construction sites. This required both significant financial and time commitments, which one worker had to save up to do.

*'After eight months my first money which I saved I spent for a school of English. When I arrived to Ireland I knew just three words in English.'*

(Polish carpenter working for a large firm)

For some, the courses were simply too expensive or too time-consuming for them to get involved. Others learnt English by immersing themselves in Irish culture and in their local community. They would seek out opportunities to practice their English, and as a result tended to develop their fluency quite quickly.

*'The first two weeks was hard but after then it was easier. I was watching Irish TV every day so it was helping. I had not many Polish friends here so most of the time I spoke English, so it helps.'*

(Polish mason working for a very small firm)

Some workers saw a clear incentive to improve their English levels, which was to progress more quickly at work, gain specific training and responsibilities, and earn better pay. There was a

perception amongst some workers that the better employers required a higher standard of English. Similarly, a lack of English language skills was seen as a key factor in preventing skilled foreign workers from working in their trade or profession.

*'He might go back to English school as he thinks it would help him to get a job.'*

(Slovakian builder working for a very small firm)

*'I want to find a better job. This is not good money. This is good money for me, but many companies, big companies, pay for the people like me, more money, in my profession, eg for the people, profession like me, when go the person like me, to a big company, he have €700 minimum for the week, this is minimum. I work for the landlord so he doesn't have to pay me too much money, because he wants to save money. This is normal because I'm not Irish but Polish so I must learn English. I might wait a year and it will be much better.'*

(Polish builder working for a very small firm)

However, other participants did not seem to be particularly interested in improving their levels of English, and many workers noted that it was easy to get by without a good understanding of the language. The large community of Polish and other Eastern European nationals in cities meant that it was often unnecessary; it was common for non-Irish nationals to work on sites with many fellow expatriates, and many had extensive networks of family and friends in Ireland they could rely on if need be.

*'He has a brother here who's fluent in written and spoken English and he can read to him or ask if there is any problem.'*

(Polish painter working for a small firm)

*'It would be difficult if there wouldn't be no Polish guys round me, but another side is if you're working with Polish people you're going lazy, you don't want to learn English because there is no point. You know you're working with Polish people, there is Polish newspapers, Polish shops, you don't have to speak in Tesco because you go to machine and there's loads of people like that, they just don't care you know.'*

(Polish carpenter working for a large firm)

### 6.5.3 Perceived need for English language skills at work

There were differing views regarding the need for English language skills at work. Some of those with very little English acknowledged that it can be frustrating trying to communicate at work with a limited vocabulary. In particular, non-Irish nationals struggled to learn the names of tools and other technical language used on construction sites.

*'For every single task you have some words which are specified for this. You have to know them. In the beginning it was quite hard to get all the names of the tools.'*

(Polish carpenter working for a very small firm)

*'If he has a conversation face-to-face with the boss there is no problem with communication but sometimes the small tiny things like by the 'phone or if he is using the words that they don't know like the names of the places and things like that, but generally it is no problem.'*

(Polish general operative working for a very small firm)

Most, however, felt that they were able to get by at work, despite low levels of English comprehension. Where non-Irish nationals were working in companies without any other fellow expatriates', communication without English language skills was considered to be very difficult. On the other hand, where non-Irish nationals from the same country were able to work together, the person with the best English would often act as an interpreter for the others. A number of workers told how their bosses would help ease communication with non-Irish national workers by using gestures to show them how to carry out a task, or speaking slowly with them. Employers in smaller companies were often seen as being particularly patient and sympathetic in this regard.

*'They're trying to help and explain so like I said before most of the time they're speaking very slowly and clearly, they want to be sure that you understand.'*

(Polish carpenter working for a large firm)

*'No, no, they always tried to tell me this way I will understand you know. Just you know – easy, slow, and use easier word.'*

(Polish tiler working for a very small firm)

However, not all workers felt in a position to ask for extra time and support and some work environments did not offer the opportunity to allow this. Large work sites and companies where there were frequent time pressures were especially noted for their lack of adequate support in addressing language barriers.

*'I can do my job like well but there was this problem I didn't know what to do and he didn't have time to take me and show me here you've got your work.'*

(Slovakian general operative working for a very small firm)

*'The problem is English but the boss in the small companies, or the owner, most of the time he is on the site. In big company you know sometimes I see the Polish people walking around the site for ten hours and doing nothing, yeah really, it is like that. You can't keep all those people all the time.'*

(Polish carpenter working for a large firm)

One worker admitted that he would avoid drawing attention to his lack of fluency by asking questions only as a last resort.

*'He finds himself limited by the fact that he doesn't speak English and he finds it kind of embarrassing and ashamed so very often instead of asking a question, OK I don't know how to do that, because of his English he prefers to think you know and figure himself and really if he has no idea how to do the thing, the last thing if he really has to would be to go to the foreman and say OK I really don't know but it's the last resort.'*

(Polish general operative working for a small firm)

#### 6.5.4 Risks associated with language barriers at work

Some of the interviewees felt that construction sites were particularly dangerous for those who had limited English, as these workers were unable to fully understand health and safety instructions at work.

*'If you don't understand somebody talking to you, especially on the construction site, it's extremely dangerous because sometimes you can do really stupid things.'*

(Polish carpenter working for a large firm)

*'If somebody tell you, hey, watch out for that, that and this and if you don't know you can hurt somebody or yourself.'*

(Polish general operative working for a large firm)

In some cases, individuals' awareness of specific health and safety regulations and restrictions was limited by their lack of English. One worker thought that this allowed employers to exploit non-Irish nationals; he knew of workers who had been asked to undertake tasks for which they had not been appropriately trained or qualified, for example, working at heights.

*'There are many people who can't speak English language they don't know about high job and high licence and sometimes I did see people using this situation so I think not so good.'*

(Russian welder working for a very small firm)

The first few weeks and months for non-Irish nationals without previous English training were thought to be the most difficult, and potentially the most risky. This was especially true for workers who had started working before getting their Safe Pass, or were working alone.

*'Yes when you don't know, I mean because of the language and for example I've never been working in a construction site and for me I was worried, but after four or five months I saw everything and then when we went to the Safe Pass course they are giving some information generally when you have to be on the site for your safety and things like that.'*

(Armenian tiler working for a very small firm)

However, there were many workers who felt that their lack of English language was more of a barrier to understanding what work needed to be done and accomplishing this to a high standard, than a risk in relation to health and safety.

*'They know all safety rules, but the language is only a problem to do some job. To set the right quality. To reach a right quality of the job. But not for safety.'*

(Polish carpenter working for a medium sized firm)

As stated earlier, many felt able to get by with limited English, either by asking colleagues to translate or asking bosses to talk through instructions slowly or to use gestures. A number of participants did not mention the potential danger of not being able to speak English in an emergency situation, as well as the increased dangers of missing important information in relation to health and safety guidance as a result of their lack of English fluency.

## 6.6 Health and safety training

Several of the workers interviewed had some experience of health and safety training before coming to Ireland, and almost all of the workers had received some health and safety training since arriving in Ireland. The most common experience of training was the Safe Pass course, which was usually done very soon after arrival. Health and safety training received from employers usually took place during site inductions on larger sites and, on smaller sites, more informally through regular supervision and day-to-day communication.

### 6.6.1 Safe Pass

The Safe Pass training course offers an introduction to health and safety issues affecting the construction industry and most workers are required to have this in order to be eligible to work on construction sites. In recent years, the course has been offered in languages other than English to accommodate demand from non-Irish nationals wanting to work in construction. Comments from one worker who attempted to complete the course in English after first completing it in Polish demonstrate the importance of such provision.

*'When I get my Safe Pass in Polish, after a year I went once again just for myself. I was wondering if I can understand English Safe Pass. Nightmare.'*

(Polish carpenter working for a large firm)

Most of the participants in this research had taken the course in Polish, and one Slovakian worker had accessed a course in Latvian. Some of those who had completed a translated Safe Pass course noted that the standard of interpretation had not met their expectations.

*'The interpreter was so bad that sometimes I had to translate what the man who provided the training said, so some things were good but the translator some words I don't know, but loads of things I understand. This was an interpreter who probably came to Ireland probably half a year or a year before me and have the same problem with English.'*

(Polish general operative working for a large firm)

In one case, a translator was criticised for not having sufficient knowledge of the technical language and the types of examples and work scenarios being referred to. This suggests that a literal translation of the instruction is insufficient and that some subject knowledge is required in order for the course to be effective.

*'Because it was like I understood it better in English, manual handling. So he showed, he talked, he explained. In Polish it was like translation. I felt that the girl which was doing the course she did not actually do it before, she has no idea what she's talking about it just translation.'*

(Polish mason working for a very small firm)

It would appear that some workers struggled to find a translated course before starting work as some workers knew of non-Irish nationals who had completed the course in English despite having very limited English language skills. Two of the workers interviewed for this research had never undertaken the Safe Pass course, despite working in construction jobs for some time, whilst one worker had obtained a card from a colleague without ever attending a course. One of the workers recognised that he might need to undertake the course at some point, but another suspected he would be able to get by without doing so.

*'My brother tell me about everything, but if I come here I working, I don't have the Safe Pass. This is important if I want to go to the bigger company or working in big company, so I have to have Safe Pass.'*

(Polish builder working for a very small firm)

*'He doesn't have the Safe Pass training. He doesn't think this is a problem and thinks it's easy for people to get a job without Safe Pass as bosses tend to turn a blind eye. He can't work on roofs, but can still get other jobs.'*

(Slovakian builder working for a very small firm)

These findings suggest that some workers are not receiving even basic training, and that some employers are not checking that staff have Safe Pass cards.

### 6.6.2 Other health and safety training received

Most workers had experience of other types of health and safety training at work, including training on manual handling, working at height, and fire safety. Some individuals had also undergone training for specific roles, such as banks man training, which involved more detailed coverage of particular health and safety procedures associated with the specific role. Workers on bigger sites often referred to the health and safety training received during site inductions.

*'It was internal training for that particular building. It was just training but things that the company thinks are the most important on that particular construction site: about the vehicles, about the cranes, about working at heights; just for people working for that company.'*

(Polish painter working for a small firm)

There were also several examples of more informal training, such as meetings on site, as well as advice and reminders from supervisors whilst working. This was more common in smaller companies, and was often in place of formal health and safety training on site.

*'We had meetings on the site – it was a month ago – something like this – it was maybe half an hour – it was talking about some safety – how to keep helmet and all this kind of thing – just remember.'*

(Polish tiler working for a very small firm)

Very few workers had not received additional health and safety training beyond Safe Pass. Where workers had not received additional training their employers appeared to consider the Safe Pass course to be sufficient in addressing health and safety training needs.

The provision of interpreters for other types of health and safety training varied, but in most cases those struggling with English would be assisted by fellow non-Irish nationals with better language skills. In the absence of an interpreter or colleague to translate, non-Irish nationals with limited English were forced to take what they could from the training. Some acknowledged that they had not therefore understood the training very well.

*'He says it was mostly by myself I was able to understand partly, maybe a little more than 40 per cent, maybe 50 per cent and why we started to laugh he says it depends on an Irish person how he speaks. Sometimes I'm able to understand 60 per cent, sometimes I'm not able to understand even ten per cent.'*

(Polish general operative working for a small firm)

### 6.6.3 Views on health and safety training received in Ireland

There was a mix of views on the health and safety training undertaken by non-Irish nationals in Ireland, including the Safe Pass course and training received from employers. Several workers appreciated the training they had received and felt that it had been useful to them in their work. Those who held this view of the training also tended to have a generally positive and responsible attitude towards health and safety.

*'He said that generally he is using the information that he gets on the training. He knows that it is for his good and he is trying to remind everyone around him and remind himself that it is important because he knows that if not it will affect his body, injuries and things like that.'*

(Polish general operative working for a very small firm)

For some, the training had clearly emphasised the attention and priority given to health and safety in the Irish construction industry.

*'From the beginning I was surprised of the what is the pressure on the safety on the sites here, but right now I think it's good, that's helping people to start work and finish work in one piece.'*

(Polish general operative working for a large firm)

There was a range of views specifically with regard to the Safe Pass training. Whilst the overriding feedback was quite positive, there were some who thought that Safe Pass training was too easy, both in terms of the subjects covered, and in terms of the ease with which some appeared to be able to pass the test at the end of the course. In particular, several interviewees noted frustration at seeing others who did not speak English attending un-translated courses, and still managing to pass.

*'A joke. I could understand them easy. Some people they didn't speak English at all. Even with that they passed the test which is surprising. We had to fill out the forms. This Safe Pass training is common rules and you have to be stupid not to follow them.'*

(Polish carpenter working for a medium sized firm)

On the other hand, one interviewee thought that the Safe Pass course covered too much information, and suggested that certain people with less ability would have found the course too difficult while those who were more experienced or more intelligent would find it too easy.

*'Too much, too much, too quick, too fast. It's eight hours. Sit. Blah, blah. If you are smart, you know almost everything. You can, on the roof, you have various safety tests on the roof, you have the belt etc., but some people are, maybe not stupid, but not too smart, for that fast lesson, too fast lesson.'*

(Polish general operative working for a large firm)

The range of views on Safe Pass reflects, in part, the differing experience levels of those commenting on the course, both in terms of their construction work experience and previous health and safety training. In terms of health and safety training in general, many rated the training in Ireland as better than training they had received at home. Several interviewees noted that health and safety training and practice in their home countries was not taken very seriously, and was in some cases treated more in terms of a paperwork exercise to pass liability for health and safety from the employer to the worker.

*'They just had to sign a form to say they had the training and in case of any problems any accidents, the boss/company was covered and could say that there was training and the accident wasn't the company's fault.'*

(Polish painter working for a small firm)

It is worth noting that a few workers felt that the training in their country of origin was better because it gave them a fuller understanding of all the potential risk factors, relating to various



specific tasks and roles at work. One worker asserted that health and safety training in Poland was better because he had received it more regularly than in Ireland.

There were some workers who felt that they had not gained much from the on site training they had received in Ireland. Comments included that it was too simple and repetitious, and that it tended to cover old ground. One worker told how he found the on site training boring, and as such had found it difficult to stay focussed.

*'He says sometimes I'm pretending I'm listening, but I'm just waiting until the two hours finish. Boring? He said yeah because it's very repetitive and he took part in quite a lot of those health and safety training up to now, so he knows definitely what is going to come, he knows that now there is going to be the procedure of how the ladder should stand for example and he's just looking at it and says oh my God, okay I know how to do that. He says there is nothing new really coming up on those trainings. I really know the procedures and how things work.'*

(Polish general operative working for a small firm)

Some workers were a little sceptical of the value of training in general, and felt that real learning only came from gaining experience at work. As such some were resistant to the idea of receiving more training on health and safety.

*'It's good to have the training, you will catch something. But it's very hard for the training to prepare you for exactly the situation the next day. So you will still just in practice try to kind of find your safe way of working and exactly the way how you should do it, so that's where you really learn. It's not really that you follow all the training at work.'*

(Slovakian general operative working for a very small firm)

This suggests that not all workers are equally receptive to training at work, and that training programmes need to be flexible to meet workers' different needs and skill sets. There were only a few occasions where workers wanted more health and safety training, and this was usually in relation to meeting a specific training need or addressing an area of main risk, for example working at heights. Workers' views on their preferred ways to receive health and safety training are discussed later in the chapter.

## 6.7 Knowledge of health and safety practice

Workers were asked to assess their own knowledge and awareness of a variety of issues relating to health and safety on construction sites, and to rate how important they thought it was to know about each issue. This approach enabled the research to explore worker attitudes towards the different areas of health and safety regulations and procedures.

### 6.7.1 Describing what they know

Non-Irish national workers were generally quite confident about their knowledge of health and safety procedures at work, such as manual handling, working around vehicles, personal protection equipment, and conducting risk assessments. However, their ability to describe what they knew varied considerably. While some workers' grasp of English restricted their ability to describe what they understood, others had difficulty verbalising the detail of their approach to,

for example, manual handling. In the two examples below, the first quotation illustrates a rather simplistic approach to conducting manual handling safely, whilst in the second quotation the participant is able to fully describe the correct postures and methods to safely lift heavy objects. It is difficult, however, to disentangle poor language skills from a lack of knowledge.

*'When I see it is something, too heavy, I don't bring to a different place. I say to my employer you have to help me because this is too heavy.'*

(Polish builder working for a very small firm)

*'For example, if some heavy bags he has to lift then has to come and bend over the bag, has to go down, kneel down and then go up so the back is straight.'*

(Slovakian general operative working for a small firm)

### 6.7.2 What they know less about

In terms of perceived gaps in awareness and knowledge, it was apparent that there were two distinct types of worker. The first of these had an attitude towards health and safety practice which acknowledged that there would always be more to learn, and that they would continue to learn throughout their work.

*'He thinks he knows what he should know but you can always learn more and get more information.'*

(Polish roofer working for a very small firm)

The second group were more likely to give the opinion that health and safety guidance was superfluous and surplus to requirements for those who had an intuitive understanding of construction sites.

There were some topics which workers admitted they knew little about, in particular, workers' rights at work and the responsibilities of employers. However, many workers did not view these two subjects as important for them in their roles. One worker thought that he would seek out information about employers' responsibilities when it was required, suggesting that he did not feel the need to know about it at the present time.

*'I'm sure I don't understand all those rules and I don't know everything about this. I know enough for now if it will be situation if I have to know I do something else. I will find out what to do when I need to know.'*

(Polish carpenter working for a medium sized firm)

A second quotation illustrates a similar view, that knowledge of employers' responsibilities is not relevant much of the time. The worker perceived that it was mainly the employer's responsibility to think about health and safety on sites and did not appear to recognise the need to assess risks himself.

*'He thinks that employer has his own tasks, his own responsibilities he has to concentrate on and he has his own work to do. The employer should definitely assess the risk, for example, if he was a boss he wouldn't send somebody who is new to handle more dangerous work without knowing if he, for example, is afraid of heights or not, so he has to think if the workers will be safe or not.'*

(Slovakian general operative working for a very small firm)

Only one worker appeared to be concerned about his lack of knowledge of employers' responsibilities, although he was keen to learn more about entitlements for pay and time off work rather than employer responsibilities to do with health or safety.

There was one topic which a number of workers claimed they wanted to know more about, working at height. Several workers expressed concern about their lack of knowledge on the subject, which they perceived to be a particularly high risk activity and in the interviews a number of examples of people working at height without adequate training emerged.

*'Yes, because I am a little bit afraid of the height. If scaffolding I'm not afraid, but if sometimes I see not scaffolding or I look behind I am afraid about this a little bit. I don't know if there's any training for this.'*

(Polish scaffolder working for a small firm)

When workers lacked confidence in their own knowledge of a health and safety issue, it was usually asserted that they would ask for more information from a supervisor, friend or colleague.

*'No, I ask somebody every time if I don't know something.'*

(Polish general operative working for a large firm)

*'What I know now my brother know very well and if I don't know something I ask him. I don't look this information in the book. Not reading about this. I don't care. If I want to know something I ask him and he know very well.'*

(Polish carpenter working for a very small firm)

Whilst seeking out assistance to deal with gaps in health and safety knowledge is a positive step, it does require workers to adequately assess what they do not know and the scale of risk this poses. Even where workers do perceive a risk or have concerns or questions about the work they are doing, there is evidence that they do not always feel able to raise the issue (as explored later in this chapter). Regular training, which ensures that individuals are aware of the potential dangers before they arise, would appear to be the only practical means of improving knowledge, but was rarely suggested by our participants as a means to address their knowledge gaps, possibly because of their views on the utility of the training that they had already received. There were very few requests for more or additional training, as workers were generally very confident about their knowledge of health and safety procedures. Any future initiatives will therefore need to overcome these reservations, and will need to be relevant to workers with differing levels of knowledge and awareness.

## 6.8 Risks and incidents in the workplace

All workers were asked what they felt were the main health and safety risks in their work. A range of risks were raised and responses varied according to the jobs that people were doing, the types of sites they were working on, and the stage of completion for which their particular trade was involved. Some interviewees discussed common hazards such as slipping or tripping whilst others talked about the most dangerous areas of their work, such as electrocution and falling from height. Only a few workers took the view that all things could potentially pose a risk to one's safety or health.

*'As a general operative the main risk, actually everything. If you're not focussed on your job, actually everything can put you at risk, if you're not using protective equipment, if you're not looking, or not*

*provide yourself for example working at heights to use the proper ladder or something like that, that's all pushing on risk in that kind of job.'*

(Polish general operative working for a large firm)

*'Everything is about his and the other people's safety and its like part of their DNA to remember everything. If there is a path on the construction site he will never put a brick or shovel over there. You always have to remember someone may pass and can fall. It's obvious for everyone you have to keep your eyes open all the time.'*

(Polish roofer working for a very small firm)

For several workers, there appeared to be some complacency around risks and an ignorance regarding the variety of hazards on a work site.

*'We don't do big buildings so there are not so many risks, but anyway I think the main risk is when we're doing the roof because something can fall on your head. That's the main, we need to have hat, that's it. [...] With the bricks you don't have any risks. If you have gloves then everything good.'*

(Slovakian builder working for a very small firm)

*'He doesn't see there being many risks because he is working very safely.'*

(Slovakian roofer working for a very small firm)

### 6.8.1 External pressures

Some workers discussed external factors as the main source of risk, in particular, pressure to get a job done quickly. There were several examples given by participants of accidents and injuries they had experienced or witnessed that seemed to result from not following correct work procedures in the interest of completing the task more quickly. In fact the majority of incidents described had involved workers taking short cuts. In the example below, a worker and his colleague made a lucky escape from a situation which was potentially fatal.

*'He said I had a very slight accident. I was hit by a piece of wood, I was bleeding a little bit and not really very important.'*

**'WHAT HAPPENED?'**

*'He says there was a beam supporting the ceiling and a piece of wood, kind of beam, fell down and he didn't have time to escape and it hit him, but it wasn't very safe what they were doing.'*

**'WHY WASN'T IT SAFE?'**

*'He says because we knew how to do it, we should have been doing it from the ladders, got on the ladder and take it up, and then put it down, but what they did was they just let down a close beam and let it collapse.'*

**'A SHORT CUT?'**

*'Yeah.'*

(Polish general operative working for a small firm)

In some cases, pressure to work quickly came from bosses and the threat of losing a job (covered more fully in the following section), whereas in other cases, working quickly was welcomed by workers as it meant getting paid faster and/or earning more. Not all workers seemed aware of

the potential danger of trying to get jobs completed more quickly, as the following quotation illustrates.

*'This job is not risky. He's not really scared at all and yes sometimes the boss asks him OK can you do it faster and they know if they do it faster they will be paid faster, like the boss will be paid and they will be paid so they will do it faster, but it doesn't mean they are putting themselves in danger.'*

(Slovakian general operative working for a very small firm)

The incidents in which interviewees had been personally involved sometimes occurred despite workers acknowledging that they had some prior awareness that what they were doing could be hazardous. In the example given above, the worker admitted that he had known how to carry out the task safely, but had still decided to take a short cut.

**'WHEN YOU STARTED THE JOB WERE YOU GIVEN INSTRUCTIONS BY THE FOREMAN?'**

*'He said the foreman just told them okay you have to go there and bring those beams and the wood supporting the whole thing. They went with this Irish guy to do this and he said everybody worked before on that construction site so we knew that we should have been [doing] it from the ladder, go up on the ladder and take off this beam and take the thing, put it down, etc. but we just do the short cut and loosened a little bit the wood and then pushed on it and it fell down.'*

(Polish general operative working for a small firm)

The attitudes of workers and their colleagues to taking risks therefore play a role in predicting safety outcomes, alongside, or even in place of an individual's knowledge about health and safety procedures.

## 6.9 Work environment and health and safety cultures

Interviewees described a wide range of attitudes and practices in relation to health and safety in their workplaces. The collective approach and behaviour towards health and safety practice in a company or on a site can be described in terms of a 'health and safety culture'. Understanding the variety of health and safety cultures in workplaces can help to differentiate risks associated with individual workers from those which are more effectively addressed at the organisational level.

Workers' abilities to raise concerns about health and safety with supervisors and ways in which non-Irish nationals are treated at work also contribute to understanding the nature of different working cultures, and are discussed in this section.

### 6.9.1 Health and safety cultures at work

In general, non-Irish nationals felt that attitudes towards health and safety in Ireland were more positive than those in their home countries. It was often observed that work sites in Ireland have more strict regulation and enforcement than sites in workers' home countries.

*'He fell 12 metres. That's why he stopped working on the roofs in Poland. He had equipment but ... in Poland we work different. If there is a rush sometimes you have to forget about safety. [In Ireland its the] opposite. The chief tells them you can do this in two days, not one. Slower, safer.'*

(Polish roofer working for a very small firm)

*'Here employers are much more strict about complying with the training legislation. In Slovakia bosses don't worry so much if you don't have the right training certificates.'*

(Slovakian roofer working for a very small firm)

It was evident from workers' discussions that some workplaces in Ireland upheld a strict adherence to health and safety regulations. Many workers were impressed by the strong enforcement presence achieved through safety officers on sites in Ireland, and the regular reminders about safety equipment and PPE.

*'The safety rules are really strict. You have to wear the PPE, hard hats, safety boots and vest. You have to wear safety glasses. The safety officer is nearly all the time on site. That company is really good for safety.'*

(Polish carpenter working for a medium sized firm)

*'The boss is paying attention to their safety and he is reminding them every time when they work to be careful with the wind when they are working on that kind of a house with a small roof – they have to use the ladder to get there so they are reminded daily to be careful of the wind, not to slip.'*

(Polish general operative working for a very small firm)

While it was not possible to objectively assess the extent to which workplaces complied with regulations and promoted a positive health and safety culture, it was clear that certain workplaces exhibited more variation in practice and behaviour than others. One worker explained that the availability of PPE on his sites depended on which foreman was working, or on the level of financial constraint in which the company was operating.

*'In one of the companies he worked for, they cut back on PPE that was available when they started to have financial problems, but generally he feels that the companies he has worked for have provided sufficient PPE. He also recalls one foreman who was not so keen to hand out PPE and would just tell them to do the job.'*

(Polish general operative working for a very small firm)

Interviewees also told of sites where Safety Officers had a difficult time influencing workers' behaviour on site, and even more difficulty changing employers' attitudes. In the quotation below, a worker described the types of conversations held between Safety Officers and individual workers at his workplace.

*'Some people don't understand them [the safety officers]. Why he tell me I have to stop that job? Because you are not safety. I don't understand. Some people they don't understand why [they] have to stop. Why? Because it's not safety and the safety officer have instruction [...] but sometimes they don't have influence over employers.'*

(Polish general operative working for a large firm)

### 6.9.2 Levels of integration at work

One of the issues explored in interviews with non-Irish nationals was the level of integration at work between themselves and Irish workers. This depended partly on the number of workers in the company and the size of the work site. Workers' lack of fluency in English was one of the main reasons given for not integrating more fully, for example socialising with colleagues and employers outside working hours.

*'He says mostly I spend time with Polish people. I also spend a lot of time on networking. I would like to spend more time with Irish people if I wasn't so lazy to learn English better to have the opportunity.'*

(Polish general operative working for a small firm)

On the whole, the relationships between Irish and non-Irish nationals were perceived positively. Several Polish workers, in particular, noted the similarities between Irish and Polish cultures as a factor in easing their integration.

*'Irish people are very similar to Polish people, maybe not that much the Ukrainians, more from the East, but a friend of mine he's Irish one day he say something like that to me, we are very similar because we are white, we are catholic, we like drinking and we like fighting and we are the hard worker. Because Irish people they're working hard as well. They didn't have all this work they have if they'd been all lazy.'*

(Polish carpenter working for a large firm)

Those working in the smaller companies had the best impressions of working relationships, although there were examples cited of previous work in small companies that were not viewed well. This made it difficult to identify any clear trend in terms of integration levels and company size.

### 6.9.3 Relationships with bosses

On the whole, workers told of good relationships with their bosses and a number described their employers as being 'like family'. This was particularly the case in smaller companies.

*'It's a small company with only three or four employees ... All his colleagues are Irish which he prefers. He gets on with them well, "My employer now like my family. I go round his house, he comes round my house".'*

(Slovakian roofer working for a very small firm)

However, there were a few cases of employers who put pressure on workers to work more quickly, or who had a disregard for health and safety on sites. Usually it was felt that this pressure was not exclusively put on non-Irish nationals, but on all workers on site. Sometimes workers had left these employers to move to sites with better working conditions. When asked whether his employer had ever talked about safer ways of doing things at work, one worker replied:

*'No, it is more like about making money. He was rushing us. You can feel like he wants to be done more every day, like. It is not about me because I am Polish. All of us.'*

(Polish mason working for a very small firm)

One worker saw the main risk in his work as supervisors putting pressure on workers to work quickly, and the threat of losing a job for not working fast enough.

*'The main risk? When I listen the bad people over me. That is very big risk. Because sometimes they are very very stupid. They [the superiors] think they can do everything. Sometimes they are very stupid, because you know because if you are slowly you are bad, if you are fast you are good. But sometimes fast and safety. Here is very big barrier.'*

(Polish general operative working for a large firm)

#### 6.9.4 Experiences of discrimination

Interviewees were asked whether they had ever felt discriminated against by employers or colleagues, either through being given an uneven distribution of tasks or by other more direct means. Most workers claimed that discrimination was not an issue.

*'There is no discrimination, everything is alright, if there is something to do their boss doesn't say that you have to do this because it is hard and you are Polish. They do the same job, the same days, the same times. But he knows some people around, Polish people, Polish construction site workers that are actually, they are getting the harder work.'*

(Polish general operative working for a very small firm)

Commenting on the types of jobs that non-Irish nationals tend to be doing, one worker implied that there was an unfair allocation of work. As mentioned earlier in the chapter, one participant also reported that non-Irish national workers were paid less to carry out the same tasks as their Irish peers.

*'Generally the opinion is non-Irish workers are doing the harder more dangerous things and that's the reason why there are more accidents. They are treated like cheap workers.'*

(Polish roofer working for a very small firm)

Whilst, on the whole, discrimination was not widely reported, the few examples that were provided were potentially quite serious. In the example below, a worker referred to a comment made by a foreman about a Polish worker who was working at height without scaffolding or other protective measures.

*'Sometimes he says, you know, things like ... not to me but to my friend, he don't have you know the scaffoldings around – but it wasn't high but he should have them and he don't have them, and someone said to this guy this foreman that he don't. [The foreman responded] "aye that's alright, he's Polish".'*

(Polish tiler working for a very small firm)

#### 6.9.5 Ability to raise concerns

Almost all of the non-Irish nationals interviewed reported that they felt confident and able to raise concerns about health and safety with their employers or colleagues.

*'Yes I would straight away [say] "you had better not do this or something like this you know so give me protection", or whatever you know.'*

(Polish tiler working for a very small firm)



*'The place where I work I want to feel safe, so if I see something which in my opinion is not okay I try to do something about it.'*

(Polish general operative working for a large firm)

There were examples, however, of workers with clear problems and concerns which had not been raised. One worker, an electrician, had developed a skin rash and asthma as a result of handling a certain type of insulation when working in attics but was worried about mentioning it to his boss.

*'[I have] an allergy. We are working on the attics and there is a very soft insulation, I don't know what it's called. Insulation foam. That is I am not allergic but I feel that if I breathe the fumes in, I feel there is something wrong with my lungs. And sometimes I get a rash.'*

**'HOW OFTEN DO YOU HAVE TO WORK WITH THAT?'**

*'Almost every day, every second day.'*

**'HAVE YOU HAD TRAINING SPECIFICALLY ABOUT THE HEALTH AND SAFETY AROUND WORKING WITH THAT KIND OF MATERIAL?'**

*'No.'*

**'HAVE YOU EXPRESSED ANY CONCERNS TO YOUR EMPLOYER ABOUT IT?'**

*'Not yet. No.'*

**'WHY NOT?'**

*'I am afraid a bit.'*

**'WHAT DO YOU THINK MIGHT HAPPEN IF YOU EXPRESS THAT CONCERN?'**

*'I don't know what will be the reaction of my boss. That's very important part of my job, doing that in the attic. You have to do that and if I don't do that I will be fired.'*

**'ARE YOU SUPPLIED WITH ANY PROTECTION?'**

*'No. A mask. Because my partner who have the same, but he has asthma that is why the boss give for both of us the mask.'*

(Polish electrician working for a very small firm)

The worker later offered several explanations for not raising the issue with his employer, including not intending to work as an electrician in the longer-term, and feeling that working with the material could not be avoided.

Sometimes workers were concerned about appearing weak or scared in front of others if they asked for help. In the conversation below (through an interpreter), a worker described an incident where a colleague was injured, but how nonetheless he failed to raise his concern with others.

*'Once they had to move the heavy material, they had to move with six people together and there was a truck came and they had to take it on the truck very quickly and so they were trying to rush with it and he was the last one from the six people, so if they dropped it somebody it will fall on him.'*

**'SO THEY WERE GOING UP SOMEWHERE?'**

*'They were putting it on the roof.'*

*'PEOPLE WERE CLIMBING UP AHEAD OF HIM?'*

*'No I think they were just putting it in an angle.'*

*'HOW DID HE FEEL ABOUT THAT SITUATION?'*

*'Demanding situation.'*

*'WOULD HE BE ABLE TO EXPRESS HIS CONCERN ABOUT THAT?'*

*'He could say but he didn't because then they will say he cannot lift well enough or something.'*

(Slovakian general operative working for a small firm)

### 6.9.6 Job security

Interviewees were generally pleased with the level of job security they felt they had in Ireland. It was noted by several workers that this compared favourably with situations in home countries, where workers could be easily replaced if they did not do what was asked of them, despite safety concerns.

*'He doesn't want to say that Slovakia is bad but what he likes the most here in Ireland is that if the boss is satisfied with the worker and then the worker makes some mistake or will ask for something, then the boss will never say like oh if you don't like it you can always go and there's ten more waiting for this position.'*

(Slovakian general operative working for a very small firm)

*'Generally, Poland is rough about [health and safety] and they are not reminding everyone about everything and sometimes even if the conditions are not good enough to work on heights they tell you that you have to go work otherwise you will lose your job. So he is saying that he probably wouldn't even be working on a construction site in Poland because of the safety.'*

(Polish general operative working for a very small firm)

There was, however, some variation in experiences in Ireland. Some of the interviewees who had worked on large construction sites in particular, felt less secure in their jobs.

*'In a small company like he's working at the moment the boss knows his first and last name, address, phone numbers. They are working together as a team, as friends. In a big company you are just a name and payslip. If you don't want to work no one will ask you a question, there are other people waiting for your place.'*

(Polish roofer working for a very small firm)

Several workers also noted that the demand for construction work had started to wane in recent months making it more difficult to find work: two of the interviewees were, at the time of interview, unemployed.

Considering some of the working conditions described in home countries, it is not surprising that many interviewees expressed a level of gratitude towards their Irish employers that was perhaps not matched by their Irish colleagues. Where some workers were impressed by employers providing gloves and other PPE, others noted appreciation for not being yelled at for making mistakes at work.

*'Very good relationships with my boss. He's a good man never scream for me if I do something wrong. He explain me everything. He's the best boss what I have.'*

(Polish general operative working for a large firm)

As such, non-Irish nationals' experiences of working in more difficult working conditions in their home countries may have influenced their expectations with regard to Irish employers, and may mean that they are more prepared to accept less favourable working conditions than Irish workers.

## 6.10 Non-Irish nationals' explanations for differences in proportions of reported accidents and injuries

Some interviewees were not surprised to learn that non-Irish nationals had a higher proportion of accidents and injuries than their Irish counterparts, although almost all (even those who were surprised) were quick to come up with explanations as to why this may be the case. Explanations for the higher proportion of reported accidents and fatalities for non-Irish national workers in construction touched on several of the issues covered in the interview. For example, language barriers, the types of jobs being undertaken, the attitudes of workers, and the attitudes of employers.

*'I think language – because I know guys – they have no language – they was on the Safe Pass and they passed – so I think it is the language here.'*

(Polish tiler working for a very small firm)

Several workers attributed differences in accident and injury figures to non-Irish nationals working too quickly, which in turn was explained both in terms of time pressures at work and workers' desire to get the job done quickly in order to earn more money. There were some workers, however, who attributed the increased risk to a difference in attitudes and behaviour in following good health and safety practice and procedures.

*'Irish people take care about safety and the risk and non-Irish people just deal with the work a little bit around the safety. Like Polish people not used to it for the safety is the boots and helmets and not just like me forget about gloves and have accident. Irish people always stop, put in gloves, put in mask and something about this. They know probably from the school maybe in school it's long time and Polish people not so used to it. Not take it so seriously from Poland but here most respect these risks.'*

(Polish scaffolder working for a small firm)

*'We are more likely to make risky decisions or make risky moves, for example, it's very simple people from Eastern Europe they're driving much much faster, they're drinking much much stronger alcohol, I mean joke you know. [But] if there is not safe scaffolding or something like that, Irish guy he's going to start thinking maybe we shouldn't pass that over there. Polish guy, guy from Ukraine, Lithuania, they're going to do it first always.'*

(Polish carpenter working for a large firm)

Many of the explanations appeared to be based on stereotypical observations and generalisations, as very few were willing to accept their explanations in relation to themselves. However, the most common explanation provided was that non-Irish nationals worked too hard and too quickly because they were only here to make money. Again, this did not chime with

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what the majority of interviewees who took part in this research said about themselves and their own experiences, as even those workers who appeared less engaged with health and safety issues claimed to recognise the importance of health and safety, asserting that their lives were at stake if health and safety procedures were not followed.

## 6.11 Future support

Interviewees were asked what more support they would like to receive from the Health and Safety Authority in the future, and their suggestions and requests are described here. There were also implicit support needs identified through the general discussions of the problems and barriers they faced, such as ways of changing poor safety cultures at work.

### 6.11.1 Addressing language barriers effectively

It was acknowledged by many of the interviewees that the barriers posed by a lack of fluency in English were contributing to elevated health and safety risks at work. Considering some of the difficulties that workers had experienced in trying to improve their English, some suggested that it would be useful to have more formal support to learn English from their employers.

*'Maybe they shouldn't be spending so much money, but just do I don't know maybe classes of English language, I think the employers they should do something for example sending people for courses of English.'*

(Polish carpenter working for a large firm)

It was also suggested that language barriers could be reduced if non-Irish national workers were supervised and managed by non-Irish nationals who spoke the same language.

*'Maybe start employing Polish people with good English for positions like manager of the site, or maybe there should be let's say Irish manager and Polish manager. Because for me it sounds quite stupid if manager is Irish and the majority of workers are Polish and 50 per cent of them are 50 years old and they're never going to learn English because it's more difficult for them.'*

(Polish carpenter working for a large firm)

The analysis of non-Irish nationals' experiences of language barriers at work also demonstrated that those working either in smaller organisations or with close and supportive supervision were able to develop their English language skills more quickly. This would suggest that work environments where employers and managers are able to devote time and patience to communicating tasks and procedures, may help non-Irish national workers overcome the increased risks associated with language barriers.

### 6.11.2 Preferred ways to receive health and safety training

There was a range of views from non-Irish national workers regarding the training they had received, and many comments were made which could help to shape future health and safety training to more effectively meet the needs of this group of learners. The main preference was to be able to access training in workers' own languages.

*'Well it's better if it's in my own language, because I can speak English but it's better if it's in my own language. For other people it's better in their own language – in Polish, in Slovakian.'*

(Slovakian builder working for a very small firm)

Videos were also considered an effective teaching tool, as one worker remarked on the increased accessibility associated with watching and seeing, as opposed to just hearing and listening.

*'He said it's better because most of the people doing it are non-English speaking so it's easier to remember from the video. It's better than reading the books. If you don't know English it can be hard. It's easier to remember when you see something.'*

(Polish roofer working for a very small firm)

Some workers felt that training which included real life examples of injuries caused by unsafe working would help them to appreciate the reasons for learning about correct health and safety procedures. The more real, and the more personal the examples used, the greater the impact on learners.

*'No when you go to Safe Pass you have test and this guy show you the movies, be careful here. I think the best is say to these people to run big company and show them one guy he lose the two fingers because he put into the machine. I know the people here won't want to lose their finger like that, so if they see his hand and it's cut like that.'*

(Polish general operative working for a small firm)

Many workers acknowledged that it was easy to forget about what was taught in the health and safety training, and so recommended regular updates and refreshers. One worker asserted that formal training, conducted off-site, should be provided on a more regular basis.

*'I don't know, I think it's all right, it should be once in two years should be some training – full training – not like what we have on the site – which is like half an hour – it should be more because you can forget some things if you don't use them – if you work on something different you – for example if you don't use the ladder for a year you can forget what's the norm.'*

(Polish tiler working for a very small firm)

There were mixed views regarding the preferred length of training. While some liked a day long format, others found it too long. Those who already had an implicit appreciation of health and safety procedures were more prepared to devote their attention to learning new material and reviewing good practice. Workers who felt bored and tired in training also tended to take a less concerned approach to health and safety practice.

### 6.11.3 Supervision and enforcement

Many non-Irish nationals commented that they had observed changes in the behaviour of their colleagues at work when Safety Officers were on site<sup>1</sup>. In some cases, workers were advised by supervisors in advance of Safety Officer visits to change their working practices (ie to be safer). When asked what more could be done to improve health and safety practice in Ireland, a number

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<sup>1</sup> Although respondents used the term Safety Officer, in these cases it is likely that they were referring to Safety Inspectors.

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felt that increased supervision and enforcement would help to deter workers from taking risks. One worker explained:

*'Maybe more safety guys be in the site sometimes, because it's three or four times a week and if it will be every day you know everybody will be afraid about safety and they will respect this.'*

(Polish scaffolder working for a small firm)

This was felt to be particularly important on large sites where there tends to be a lower ratio of supervisors to workers. While it was not made clear whether supervision should be by the HSA or employing organisations, in practical terms the latter would seem more practical.

## 6.12 Summary

This chapter presents the findings from 30 face-to-face interviews with non-Irish nationals working in construction in Ireland. Interviewees came from a variety of backgrounds and had a range of experiences of working in Ireland. As such it is important to recognise that non-Irish nationals are not a homogeneous group but have as many differences in experiences, attitudes, and behaviours, as there are amongst construction workers in general. Also, whilst the views of individual workers provide interesting and useful contexts for other results in this report, they should not be extrapolated to the wider population.

These interviews revealed:

- Levels of English language tended to be low, with an interpreter required to complete some interviews. Living and working amongst fellow non-Irish migrants meant that some could 'get by' without making a particular effort to learn English. Whilst some workers felt that poor language skills were a barrier to effective health and safety practice, not everyone agreed, and there were examples of very helpful employees who made special efforts to communicate instructions with individuals with only basic or no English.
- Most workers had received Safe Pass training and most viewed this positively. There were some concerns that the standard of translation could be improved and gaining access to a translated course (in time to allow them to start work quickly) could be difficult. A more flexible training system was felt, by some workers, to be needed. Some workers were sceptical regarding the utility of training.
- Some individuals felt that they would like to know more about working at heights safely, but overall, most workers did not believe they needed additional training to that already received. Employers were felt to be a source of advice when needed, but for some workers the ability to ask questions is dependent on the cooperation and availability of others who speak their native language.
- A few workers identified external pressures from foremen and supervisors as a main risk, because they want workers to work unsafely, or more often, work too quickly. Many of the incidents experienced by workers in terms of accidents or near misses had resulted from workers taking short cuts, and completing tasks in ways which were known to be more dangerous.

- Non-Irish nationals generally held positive views about the treatment they received from both employers and colleagues, attitudes towards health and safety and levels of compliance with health and safety guidelines. However, not all experiences were positive and a small number discussed being discriminated against or not wanting to speak up when they felt under pressure to work unsafely, in case they lost their jobs.
- The experiences of workers from very small and very large firms were particularly positive. However, some individuals had come from difficult working conditions in their home countries and were therefore particularly well disposed to employers in Ireland.
- When asked specifically to discuss why they thought rates of accident/injury amongst non-Irish workers might be higher, workers most commonly identified language barriers, and differences in non-Irish nationals' approach to health and safety. However, there was also a feeling that non-Irish workers were prepared to take short cuts in order to earn more money, although very few admitted this about themselves.
- Ideas for future support for non-Irish workers included: providing English language on site; offering more supervisory roles to non-Irish workers; specific suggestions for training (eg use of translated videos, real life examples of accidents), and; a greater presence of Safety Officers and/or HSA inspectors.

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## 7 Discussion of all Results

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This final chapter of the report draws together the findings from the three different elements of the research project: the employer survey, the worker survey and the face-to-face interviews with non-Irish national workers. It is important to recognise that the three strands are complementary, in that they provide slightly different perspectives on the same key topic areas.

### 7.1 Acknowledging difference

Before discussing the main findings it is imperative to note that non-Irish national workers are not a homogeneous group. There is no theoretical reason to believe that the experiences of a non-Irish national worker from Poland will be similar to those of a worker from Brazil, or even Lithuania. Just like Ireland, each country of origin has its own approach to health and safety which sets the context and background for any worker who decides to take their skills and look for work overseas. Whilst each research element in this project has included workers of different nationalities, and is roughly representative of the non-Irish national population in Ireland at large, it has not been possible to look closely at the differences between different national groups.

Nor is it appropriate to regard Irish workers as a homogeneous group. Although the accident and fatality figures are lower (or were lower) for domestic workers (in proportion to the number of Irish construction workers), these workers are not free from risks on sites. It was not within the remit of this research to look at the health and safety issues affecting all workers in construction in Ireland, but nonetheless, the research identified issues affecting the full range of workers on sites. Construction is a high-risk industry, and continued work is needed from the Health and Safety Authority and other bodies to ensure that risks are reduced for all workers as far as possible.

The aim of this research was to explore the range of potential factors affecting the health and safety of non-Irish national workers in the construction industry and to see how these compare with those for Irish workers. The exploratory approach meant that we set out without any preconceived ideas about what the issues were or even whether non-Irish national workers were a high-risk group. Accident and, in particular, fatality figures are a very crude measure of whether or not a group is high risk. Whilst the number of fatalities was higher amongst non-Irish national construction workers in Ireland in 2005 when compared to Irish nationals, the most recent figures show that there were no fatalities amongst non-Irish national workers in 2007.



Whatever the official statistics, there are large numbers of non-Irish national workers who now work in the Irish construction industry and it is important to ensure that this group, and their needs, are well understood.

## 7.2 Are non-Irish national workers a high-risk group?

In determining whether non-Irish national workers are a high risk group, there is a range of evidence from this research to consider. This includes:

- The views of employers participating in our survey, many of whom did not feel that non-Irish national workers were a more 'at risk' group or more prone to risk taking behaviour than their Irish peers.
- The accident rates of workers in our survey, which were slightly lower for non-Irish national workers than for their Irish counterparts. Non-Irish nationals were also less likely to have seen a colleague have an accident or have suffered a near miss whilst working in Ireland.
- The views of non-Irish national workers who are generally happy with their working conditions in Ireland, and the importance placed on health and safety in this country when compared to their home nations.
- The role of workplace factors in predicting risk, with those working on larger sites and domestic and commercial jobs more likely to have accidents.

The evidence from this research, therefore, does not identify that non-Irish national workers are actually more at risk than their Irish peers per se. It does show that the non-Irish national workers in our sample had a very different profile to their Irish peers. They tended to be younger, more educated and newer to the industry, for example, as well as more likely to be working on civil projects and/or for employers rather than self employed. This was despite the workers involved in the study, both Irish and non-Irish nationals, all working on the same 29 work sites at the time of survey.

What we cannot be clear about from this research is whether, as a whole, non-Irish national workers in construction are more likely to be found engaged in riskier jobs or working for employers with poorer health and safety records than the same population of Irish workers. It is therefore not possible to say whether, as a whole, they are actually more at risk. Factors such as age and industry experience do play a part in determining safety behaviour, but a better appreciation of the type of work that non-Irish nationals are involved in, in Ireland (which was beyond the scope of this project) would help to further our understanding. In particular, better population data would be useful in determining whether non-Irish national workers are actually in more dangerous jobs, and whether this, in itself, explains differences between them and their Irish counterparts.

There were, however, other issues facing non-Irish national workers which may also impact on their ability or propensity to work safely, and which may in turn lead to a greater vulnerability amongst this group. It may therefore be useful to address these in order to ensure that non-Irish workers, whatever the work they are involved in, are better protected.

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## 7.3 English language skills

A number of the employers recognised the poor ability amongst non-Irish national workers in both spoken and written English, and some were concerned about non-Irish national workers' understanding of training and signage on sites.

Whilst the non-Irish national workers who took part in the survey tended to score highly on most of the English tests included, many reported struggling to understand spoken and written English on sites. Around half of the workers claimed that they understood, at most, only half of what they heard, and around two-thirds could understand no more than half of what they read. In the face-to-face interviews with workers it became clear just how limited the levels of English were amongst this group. Whilst some were nearly fluent in English, a large proportion struggled during the interviews and several required the help of an interpreter.

It was difficult in the survey to assess exactly what impact a poor level of English has on the health and safety of workers. However, analyses revealed that those who had studied English were less likely to engage in risky behaviours on sites. This may be because they have a greater understanding of health and safety procedures in Ireland or are able to access higher quality jobs with safer employers due to their higher levels of English. One worker suggested that low levels of English ability meant that some workers were unknowingly working on tasks for which they did not have appropriate skills and qualifications. Certainly some, but not all, of the workers interviewed felt that poor mastery of English did pose a danger on site. Others felt that if they were able to understand what they needed to do in their day to day tasks (which was often helped by employers gesturing and communicating slowly with them or through colleagues interpreting on their behalf), this was enough. Whether this would be sufficient in the case of an emergency situation, where things happen quickly, however, was not mentioned.

Some individuals had no interest in improving their English language skills, and where this was the case it tended to be because there was no incentive to do so (eg because there were extensive communities of fellow non-Irish nationals both on sites and in the community) or because the costs involved were prohibitive (in terms of both time and money). To effectively target these individuals, it may be necessary for English courses to be given taken on sites, or to be employer-led. Many employers stated that they were already helping workers on their sites by providing translated information, and there were examples given in the interviews of employers making extra efforts to help non-Irish national workers to understand on site communication. It is unlikely that employers would always have the time to adequately deal with queries from non-Irish national workers lacking English language skills.

Some workers tried to hide the fact that they have low levels of English ability from employers and were embarrassed to ask questions in case it highlighted their lack of fluency. It may therefore be the case, particularly amongst larger employers where individual workers are less visible, that the impact of low English ability on worker understanding of health and safety information and instructions is underestimated. It is, then, just as important that employers check whether their workers understand and retain safety information as it is to provide it. Increased use of non-Irish nationals in supervisory roles was felt to offer a means of reducing the risks associated with language barriers at work.

## 7.4 Health and safety knowledge and training

With regard to training, the situation of non-Irish national survey respondents was that they had:

- generally worked in construction before coming to Ireland and received some form of health and safety training in their home country
- like their Irish counterparts, almost all received Safe Pass training
- far less exposure to toolbox talks or induction training than Irish co-workers, even though, at the time of this survey, they were working on the same sites together.

Further evidence from the interviews suggested that anything additional to Safe Pass training, particularly in smaller companies, was often ad hoc and informal, involving guidance from employers and supervisors as tasks were undertaken. This would suggest that some employers are not fulfilling their statutory duties to provide regular training to employees, possibly because they feel that Safe Pass is sufficient on its own or because they find it difficult to offer training to those with language barriers. There was also one case where an individual reported being handed a Safe Pass Card to use by a colleague, but this was not widespread. Overall, therefore, some employers do appear to need further encouragement to fulfil their legal obligations towards training non-Irish national workers.

Where training had been received, non-Irish national workers were relatively positive about how effective these courses had been, and many felt that training in Ireland was better than in their home country. The Safe Pass course is designed to be a simple introductory course, covering essential basics for a range of workers. The role of providing additional and supplementary material for workers falls to their employers. Safe Pass was criticised by some workers for being simple and repetitious, whilst others found it too complicated. Most had been able to access the Safe Pass in their own language and often other types of training had been translated by colleagues. However, there were criticisms of translations of Safe Pass courses, with some workers struggling to understand what they were being taught. In addition, there were concerns that workers were not always able to access translated Safe Pass courses as quickly as they would like, and that some had been forced to take up an English version despite having only low levels of English language ability. Another criticism was that some of the trainers responsible for running non-English language versions of Safe Pass had so little industry experience that their ability to translate more technical aspects of the course was very limited, and that this affected the quality of translated material.

It is likely that Safe Pass is the only training that many non-Irish national workers will receive, as there are some employers who are not providing any additional information. Therefore, the fact that there are problems with the way Safe Pass is being communicated and received by workers does raise some potentially serious issues. However, offering a more flexible system in a range of languages would be practically very difficult. Certainly this would require that trainers in other languages have greater industry knowledge in order that they can adapt the course to different ability levels.

Workers did not, generally, feel the need for more health and safety training (although some would have liked to know more about working at heights), and most were happy to approach

their employers when they did require additional information. Due to language barriers it was difficult for this research to assess levels of knowledge amongst non-Irish national workers, and employers may also face this problem when they determine what training and support to offer their workforce. Some workers did mention how difficult it can be for them to ask their supervisors questions, either because of English language difficulties or because they fear that there might be consequences.

Clearly, it would be preferable for workers to be provided with the skills and information necessary to deal with risks before they encounter dangerous situations at work. Not least because training in risk identification could help individuals to avoid contact with risks in the first place. Workers suggested that using (translated) videos and references to real-life examples of accidents might provide a more relevant approach to training. There does appear to be more that could be done, therefore, in both the design of training and in encouraging employers to offer it.

## 7.5 Health and safety cultures at work

Non-Irish nationals generally felt that approaches to health and safety on sites in Ireland compared favourably to those in their home countries. However, there were examples provided by some workers in interviews which suggest that not all employers adopt good practice in relation to health and safety. Pressure to finish jobs quickly could override concerns about safety, both amongst the workforce and their employers. Individuals provided a number of examples of how they or colleagues had been involved in accidents or near misses caused by workers taking short cuts. These pressures were felt to affect non-Irish national workers more than their Irish counterparts, generally because workers who had concerns about their job security tended to be less willing to ask for help (in case it was seen to raise issues about their skill levels) or raise concerns about employer practices (in case they were laid off). Concerns about job insecurity were considered highest on larger sites or where individuals worked for larger employers.

Largely, however, non-Irish national workers appeared to have good working relationships with both co-workers and their bosses. While there was no evidence of widespread discrimination, some individuals described how non-Irish national workers had been paid less than, were forced to work longer hours than, or were given an unfair allocation of tasks when compared to their Irish co-workers. The survey also revealed that non-Irish national workers were more likely to state that they were not always provided with the required PPE for their job.

The overall position of non-Irish national workers in construction in Ireland is therefore relatively positive. However, there are indicators that at least a proportion of the non-Irish national workforce are in a more vulnerable position than their Irish peers. This group appear to be more open to exploitation by employers because they are less willing to question unsafe practices. As the survey results demonstrate that a poor health and safety culture is correlated with the experience of accidents, near misses or risky behaviour, this is an important finding. When asked to identify reasons for a higher proportion of reported accidents amongst non-Irish national workers in general, the non-Irish national workers involved in this research identified the perceived threat of losing their jobs as a major factor. Given the current economic downturn which is having an impact on the availability of employment in the Irish construction industry, those non-Irish national workers who decide to stay may become even less willing to speak out against unsafe practices in the future.

## 7.6 Attitudes to risk and risk-taking behaviour

There is a perception that non-Irish nationals may have a different understanding of and attitude towards risk than their Irish counterparts. Employers participating in the survey felt that understanding of health and safety was poorer for non-Irish nationals, with some suggesting that this was due to a difference in the safety culture in Ireland, compared to their home countries. A number of non-Irish national workers also identified this as an issue during interviews. Some workers felt that the higher proportion of accidents amongst non-Irish national workers could be explained by the fact that they were more prepared to take risks than Irish workers. Non-Irish national workers were felt to be more prepared to take short cuts or work quickly in order to increase their earnings. In interpreting these views, however, it is important to consider whether stereotyping is occurring. When workers discussed real examples of accidents (either experienced or witnessed), for example, differences in attitudes were rarely mentioned. The worker survey was designed to allow some investigation of actual differences in attitudes toward health and safety between Irish and non-Irish nationals.

Some differences in attitudes were apparent from the survey data. These were that non-Irish national workers were more likely than their Irish peers to blame accidents on workers making mistakes, less likely to see suffering a personal injury as an inevitable part of working in the industry, and less likely than their Irish peers to think that some health and safety procedures are impractical.

These differences, if taken alone, might suggest that non-Irish national workers take a more proactive and constructive approach towards health and safety, in which they have a greater appreciation of the need to protect themselves from accidents. However, further evidence from the survey showed that non-Irish national workers were less likely to see a number of situations as high risk and were more likely to engage in more frequent risky behaviour than their Irish peers. This was particularly true in relation to working at height, which was also highlighted as a knowledge gap by some of those interviewed.

There are some factors which should be taken into account when interpreting these differences, however. The Irish workers in our survey had encountered more accidents than non-Irish national workers, for example, and non-Irish national workers were younger and newer to the industry (and therefore less experienced) than their Irish peers. Whatever the cause, their greater propensity to take risks does suggest that non-Irish national workers may be more likely to experience accidents in the longer term.

## 7.7 Internal versus external attributions

In trying to explain the causes of accidents in general, the non-Irish national workers were more likely than their Irish peers to blame them on workers making mistakes, and were less likely to see suffering a personal injury as an inevitable part of working in the industry. The expectation might be that if you believe more strongly that your own actions affect your health and safety outcomes, then you will be more likely to take steps to protect yourself. In the tests of validity for the measure, a higher internal focus and a lower external focus was indeed found to be linked to reduced levels of accidents. This finding would suggest that non-Irish national workers are less

likely to be at risk of experiencing an accident on construction sites. However, the direction of causality is not clear (ie involvement in an accident could alter a worker's opinion about the degree of control that they have over their health and safety at work). More research is required which considers the links between attitudes towards the causes of accidents and actual experience of accidents at work.

## 7.8 The experience across different companies and sites

Employer size has emerged as an important factor from all three research elements, although there will obviously be huge differences between individual employers. However, it would appear that some issues are particularly prevalent for larger employers and companies working on bigger sites, and accidents are more likely to have occurred on medium and large sites in the sample data. This may be due to a lower ratio of supervisors to workers rather than because such companies are less compliant with health and safety regulations. It is often easier for workers to hide poor language skills on larger sites, and supervisors may not have time to deal with queries properly. In smaller companies, particularly family-run operations, employers may watch over their workers more closely, have a better idea of their skill levels and take more time to ensure that their workers understand their instructions.

Workers were clear that higher levels of inspection or supervision on site would lead to improved behaviours, and a number of interviewees commented specifically that they had witnessed a change in behaviour on sites when safety officers and/or health and safety inspectors were present.

## 7.9 Conclusion

The particular issues facing non-Irish national workers in the construction industry in Ireland are listed below (in no particular order):

- Many non-Irish national workers struggle with spoken and written English and employers are not always aware of the poor language skills of their workers. Whilst in many cases this is dealt with through sympathetic employer support and translation services, this makes it more difficult for some workers to ask questions and/or raise concerns with employers. In emergency situations these workers could well be at greater risk.
- Many non-Irish national workers are not receiving much formal training in health and safety beyond the Safe Pass course. A minority of the interview sample have managed to acquire work without undertaking Safe Pass, whilst others have not been able to access a translated course in time and therefore have taken it in English despite low levels of English ability.
- Some non-Irish national workers have little knowledge regarding workers' rights and employers' responsibilities. Rather than being concerned about their rights, workers appear grateful for the employment they have, particularly when they have had negative employment experiences in their home country.

- Many workers come to Ireland to find work due to poor economic conditions and lack of job security in their home countries. This experience of job insecurity continues to influence non-Irish nationals' behaviour on sites in a way that did not influence Irish workers (at least at the time when this research took place): they are less likely to question unsafe practices, or raise concerns with employers or colleagues and may be more likely to undertake risky jobs when asked to do so.
- Non-Irish national workers are less likely to perceive some risky behaviours as high risk and are likely to engage in them more often. This stems in part from a different approach to health and safety in non-Irish nationals' home countries. In addition, some non-Irish nationals are prepared to take short cuts or work quickly despite an awareness of the increased risks associated with doing so.
- We do not have population data on non-Irish national workers which allows us to compare all such workers with their Irish peers and therefore draw definitive conclusions. However, the evidence from this research certainly indicates that higher accident rates amongst non-Irish national workers in construction, when compared to their Irish peers, are likely to be due to differences in their personal and work profiles rather than any nationality specific variable.

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## Appendix 1: The ‘Causes of Accidents’ Measure

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Using the Hunter (2002) Locus of Control scale, items were grouped together to form two scales – an internally-focussed scale, consisting of four items in which attitude statements attribute accidents to events under an individual’s control, such as not taking enough interest in health and safety and making mistakes, and an externally-focussed scale consisting of four items attributing accidents to fate and events outside an individual’s control. Participants were asked to rate agreement with each statement on a 5-point Likert scale ranging from strongly disagree to strongly agree.

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**Table A1.0.1: Details of internal and external items used in analysis**

Internally-focussed items	Externally-focussed items
If workers follow all the safety rules they can avoid many workplace accidents	It is more important to get the job done than to follow a safety rule that takes more time
Workers’ accidents and injuries happen because they make mistakes	Most workers will be involved in accidents which result in a personal injury at some time
Accidents and injuries happen because workers do not take enough interest in safety	Avoiding accidents is a matter of luck
There is a direct link between how careful workers are and the number of accidents they have	Accidents are usually caused by unsafe equipment and poor safety rules

*Source: IES, 2008*

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Composite scale scores were calculated by totalling up the item scores in each scale. Total scores varied between four and 20 for each scale. In each case a high score indicated agreement with the items, and thus either a more externally or internally oriented attitude towards the causes of accidents. Individuals with missing values on any of the items in a scale were excluded from the analysis.

Prior to using these scales in the full analysis, reliability and factor analysis techniques were run on the ‘causes of accidents’ attitudinal items (both as a single and as two separate scales) to assess their reliability and validity.



## Factor analysis and reliability analysis

Factor analyses precluded putting all of the items into a single scale, as internal items and external items did not negatively correlate with each other, suggesting that they are not necessarily polar opposites on a continuum. In Locus of Control research, from which our scale was derived, some researchers have argued against the single theoretical position, and Hunter (2002) demonstrated that his scale had better construct validity as two scales (an internal Locus of Control scale and an external Locus of Control scale) than as a single scale.

The reliability analyses found Cronbach alpha scores of 0.59 and 0.44 for the internally-focused scale and the externally-focused scale respectively. Whilst these are lower than the Hunter (2002) analysis on the 20-item scale from which this was derived (where coefficient scores were 0.69 and 0.63 respectively) these were considered respectable given the very short length of each scale. Factor analyses found that on each scale only one factor emerges, and items correlated positively with each other and were significant (in all cases but one on the external scale), although correlation coefficients were low with a number below 0.3.

## Construct validity

Comparing external attribution attitudes of those with experience of accidents and those without showed very little difference. Those who had experienced an accident or injury at work did not have higher external scores than those who had not. This suggests that the scale lacks validity. However, those who had experienced a near miss did have significantly higher scores, at 12.0 compared to 10.6, and those who had experienced a health problem caused or made worse by work also had marginally, but significantly, higher scores at 11.6 compared to 10.8. External scores were also higher for those who had seen a colleague have an accident or injury at work, at 11.3 compared to 10.8.

**Table A1.0.2: External attitude towards the cause of accidents and experience of accidents**

	Yes	N	No	N
Had an accident or injury at work	11.2	96	11.0	437
Seen a colleague have an accident or injury at work*	11.3	207	10.8	314
Had a near miss at work*	12.0	154	10.6	357
Had a health problem caused or made worse by work*	11.6	92	10.8	419

\* signifies a statistically significant difference on this measure, Chi-square  $p < .05$

Source: IES, 2008

Comparing internal scale scores with experience of accidents also showed only marginal differences. However, these were in the direction anticipated. Those who had experienced accidents at work had lower scores on the internally-focused scale, at 14.5 compared to 15.3. This would suggest that the internal scale has validity. However, it is again important to stress that this analysis does not determine the direction of causality. It may be that those who have had accidents do not feel able to control their surroundings and protect themselves so easily. Internal Locus of Control scores were no higher for those who had seen a colleague have an

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accident or injury at work, had a near miss or had a health problem caused or made worse by work.

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**Table A1.0.3: Internal attitude towards the cause of accidents and experience of accidents**

	Yes	N	No	N
Had an accident or injury at work*	14.5	93	15.3	452
Seen a colleague have an accident or injury at work	15.2	201	15.2	332
Had a near miss at work	15.2	152	15.1	371
Had a health problem caused or made worse by work	15.0	92	15.2	431

\* significant difference in scores between those who had and had not experienced an accident  $p < 0.05$ .

Source: IES, 2008

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## Appendix 2: Breakdown of Construction Trades

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The categories for trade were broken down into the following six groups:

- site clearance – labourer/groundworks
- build – bricklayer/roofer/steel-fixer
- fit out – plumber/electrician
- completion – carpenter and joiner/plasterer/glazier/painter and decorator
- driver/machine operator
- other.

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## Appendix 3: Regression Outputs

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- Attitude statement 1: My boss would like me to stop work rather than put my health and safety at risk.
- Attitude statement 2: I know a lot about health and safety law in Ireland.
- Attitude statement 3: I feel respected by my co-workers.
- Attitude statement 4: Health and safety does not seem to be important in the construction industry in Ireland.
- Attitude statement 5: I sometimes feel pressured to work safely.
- Attitude statement 6: I feel uncomfortable asking for help from my co-workers.
- Attitude statement 7: Some health and safety procedures are not really practical.
- Attitude statement 8: When I need PPE it is always provided.
- Attitude statement 9: I would feel uncomfortable raising a health and safety concern at work.
- Attitude statement 10: My co-workers pay the same attention to health and safety as I do.

Table A3.0.1: Experience of having an accident since working in construction in Ireland

Probit regression, reporting marginal effects

Number of obs = 358

LR chi2(49) = 104.66

Prob &gt; chi2 = 0.0000

Log likelihood = -117.27553

Pseudo R2 = 0.3085

Accidents	dF/dx	Std. Err.	z	P> z	x-bar	[ 95% C.I. ]	
Non-Irish	-.0091295	.0676102	-0.14	0.892	.513966	-.141643	.123384
Age (linear)	.1336927	.1806568	0.73	0.463	3.48174	-.220388	.487774
Age (square)	-1.119238	.6958456	-1.58	0.115	.124499	-2.48307	.244595
Left education 17-18	.0046243	.0424611	0.11	0.913	.324022	-.078598	.087847
Left education 19 plus	-.0047334	.0499254	-0.09	0.925	.424581	-.102585	.093119
Still in education	-.0053298	.0854439	-0.06	0.952	.055866	-.172797	.162137
Time working in Ireland (months)	.0003166	.0002538	1.24	0.213	94.9972	-.000181	.000814
Medium site (11-49 workers)	.2751878	.1076542	3.06	0.002	.374302	.064189	.486186
Large site (50 plus)	.2146336	.1149362	2.11	0.035	.48324	-.010637	.439904
Limerick	-.0498893	.0373276	-1.13	0.260	.206704	-.12305	.023272
Cork	.0042612	.0523339	0.08	0.934	.184358	-.098311	.106834
Dublin	-.0254273	.0419818	-0.60	0.550	.455307	-.10771	.056855
Small company (10-49 employees)	-.0431237	.0394405	-0.93	0.352	.209497	-.120426	.034178
Medium company (50-249)	-.0903023	.034791	-1.78	0.075	.201117	-.158491	-.022113
Large company (250+)	-.0273617	.0730756	-0.34	0.732	.226257	-.170587	.115864
Self-employed	.0054045	.0935924	0.06	0.953	.083799	-.178033	.188842
Agency worker	.0850203	.1764983	0.61	0.543	.036313	-.26091	.430951
Site clearance job	.0613157	.0950071	0.76	0.450	.162011	-.124895	.247526
Build job	.0156023	.0695411	0.23	0.816	.276536	-.120696	.1519
Fit out job	-.0666424	.0349243	-1.08	0.279	.058659	-.135093	.001808
Completion job	-.0493272	.0517938	-0.86	0.390	.332402	-.150841	.052187
Driver/machine operator job	.0764294	.1134261	0.83	0.408	.089385	-.145882	.29874
Other job	-.0425317	.053163	-0.68	0.498	.178771	-.146729	.061666
Hours (linear)	.3639559	.4026774	0.90	0.368	3.77249	-.425277	1.15319
Hours (square)	-.8961146	.8542898	-1.05	0.294	.198139	-2.57049	.778263
Houses project	-.0162159	.043478	-0.38	0.707	.558659	-.101431	.068999
Commercial project	.0301693	.0409039	0.75	0.456	.421788	-.050001	.11034
Civil project	-.0689571	.030271	-1.96	0.050	.231844	-.128287	-.009627
Project (do not know/missing)	-.0790113	.0328789	-1.67	0.096	.153631	-.143453	-.01457
CSCS training	-.00416	.0404395	-0.10	0.919	.162011	-.08342	.0751

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Accidents	dF/dx	Std. Err.	z	P> z	x-bar	[ 95% C.I. ]	
Site induction training	-.0162514	.0446165	-0.37	0.708	.617318	-.103698	.071195
Toolbox training	.0094475	.0394501	0.24	0.811	.569832	-.067873	.086768
Other on-site training	-.0724991	.0384847	-1.77	0.077	.405028	-.147928	.00293
Other off-site training	.2147719	.0952365	2.89	0.004	.153631	.028112	.401432
Cause of accidents (internal)	-.0121224	.0066694	-1.81	0.070	15.3128	-.025194	.000949
Cause of accidents (external)	.0181528	.0066048	3.04	0.002	10.9581	.005208	.031098
Attitude statement 1	-.0039639	.0411491	-0.10	0.923	.703911	-.084615	.076687
Attitude statement 2	.0025655	.0366257	0.07	0.944	.765363	-.06922	.074351
Attitude statement 3	-.145861	.070074	-2.61	0.009	.812849	-.283204	-.008519
Attitude statement 4	-.0835246	.0304772	-2.12	0.034	.173184	-.143259	-.02379
Attitude statement 5	-.0243504	.0380186	-0.60	0.547	.304469	-.098866	.050165
Attitude statement 6	.0031521	.0561582	0.06	0.955	.139665	-.106916	.11322
Attitude statement 7	.0893318	.0474294	2.22	0.026	.379888	-.003628	.182292
Attitude statement 8	-.0260176	.0438474	-0.63	0.527	.726257	-.111957	.059922
Attitude statement 9	-.0285015	.0337558	-0.80	0.422	.22905	-.094662	.037659
Attitude statement 10	.0162267	.0332603	0.47	0.636	.709497	-.048962	.081416
Studied English	-.1714728	.0998725	-2.05	0.041	.796089	-.367219	.024274
Understand spoken English OK	-.0473323	.0479705	-0.82	0.411	.203911	-.141353	.046688
Don't understand spoken English	-.0780101	.048724	-1.21	0.227	.24581	-.173507	.017487

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obs. P | .1815642

pred. P | .0742612 (at x-bar)

(\*) dF/dx is for discrete change of dummy variable from 0 to 1

z and P>|z| correspond to the test of the underlying coefficient being 0

Source: IES, 2008

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**Table A3.0.2: Experience of having a near miss since working in construction in Ireland**

Probit regression, reporting marginal effects

Number of obs = 362

LR chi2(49) = 214.97

Prob &gt; chi2 = 0.0000

Log likelihood = -117.25127

Pseudo R2 = 0.4783

Near miss	dF/dx	Std. Err.	z	P> z	x-bar	[ 95% C.I. ]	
Non-Irish	-.4069711	.1345267	-2.95	0.003	.527624	-.670639	-.143304
Age (linear)	.758152	.2918849	2.65	0.008	3.47721	.186068	1.33024
Age (square)	-3.377605	1.086479	-3.21	0.001	.124224	-5.50706	-1.24815
Left education 17-18	.0422361	.0785303	0.55	0.582	.337017	-.111681	.196153
Left education 19 plus	.0119555	.0892216	0.13	0.893	.41989	-.162916	.186827
Still in education	.1148872	.1750259	0.74	0.458	.063536	-.228157	.457932
Time working in Ireland (months)	.0008421	.0004183	2.07	0.038	90.3287	.000022	.001662
Medium site (11-49 workers)	-.1745349	.1050764	-1.45	0.146	.364641	-.380481	.031411
Large site (50 plus)	-.0452216	.1704181	-0.26	0.792	.494475	-.379235	.288792
Limerick	.2705351	.1355072	2.24	0.025	.209945	.004946	.536124
Cork	.3758262	.1523843	2.74	0.006	.157459	.077158	.674494
Dublin	.2268621	.0908374	2.50	0.012	.466851	.048824	.4049
Small company (10-49 employees)	.2025866	.1859459	1.22	0.223	.20442	-.161861	.567034
Medium company (50-249)	.3056958	.2309028	1.50	0.134	.198895	-.146865	.758257
Large company (250+)	.2638534	.2463178	1.21	0.226	.212707	-.218921	.746627
Self-employed	.2949549	.2790755	1.22	0.221	.077348	-.252023	.841933
Employment status missing	.534414	.2527898	2.09	0.037	.069061	.038955	1.02987
Site clearance job	.0757612	.1346218	0.61	0.543	.151934	-.188093	.339615
Build job	.1380872	.1185518	1.27	0.205	.276243	-.09427	.370445
Fit out job	-.0320296	.1149291	-0.26	0.794	.058011	-.257286	.193227
Completion job	.0725852	.1111043	0.68	0.498	.342541	-.145175	.290346
Driver/machine operator job	.0094136	.1344365	0.07	0.943	.099448	-.254077	.272904
Other job	.0559959	.1406737	0.42	0.673	.171271	-.219719	.331711
Hours (linear)	-.7629193	.5488388	-1.42	0.156	3.77159	-1.83862	.312785
Hours (square)	2.844355	1.406705	2.08	0.038	.197658	.087264	5.60145
Houses project	.204673	.0696583	2.77	0.006	.544199	.068145	.341201
Commercial project	.1497791	.075306	2.06	0.039	.41989	.002182	.297376
Civil project	-.05477	.0765452	-0.67	0.502	.212707	-.204796	.095256
Project (do not know/missing)	.0168464	.1276868	0.13	0.893	.171271	-.233415	.267108
CSCS training	-.095248	.0617187	-1.28	0.202	.151934	-.216215	.025718

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Near miss	dF/dx	Std. Err.	z	P> z	x-bar	[ 95% C.I. ]	
Site induction training	.0051759	.07457	0.07	0.945	.632597	-.140978	.15133
Toolbox training	.083471	.0704598	1.17	0.241	.574586	-.054628	.22157
Other on-site training	-.1393209	.0693155	-1.89	0.059	.40884	-.275177	-.003465
Other off-site training	.2355188	.1129574	2.31	0.021	.151934	.014126	.456911
Cause of accidents (internal)	-.0067505	.0128347	-0.53	0.598	15.2624	-.031906	.018405
Cause of accidents (external)	.0486069	.0113423	4.26	0.000	11.0055	.026376	.070837
Attitude statement 1	-.2452578	.090011	-3.00	0.003	.69337	-.421676	-.068839
Attitude statement 2	.0824696	.0569854	1.31	0.191	.748619	-.02922	.194159
Attitude statement 3	-.0462656	.081429	-0.59	0.554	.790055	-.205863	.113332
Attitude statement 4	.0320451	.101986	0.33	0.744	.187845	-.167844	.231934
Attitude statement 5	-.0524179	.0690396	-0.72	0.472	.30663	-.187733	.082897
Attitude statement 6	-.0526673	.0803344	-0.60	0.547	.132597	-.21012	.104785
Attitude statement 7	.1471598	.0664129	2.32	0.020	.406077	.016993	.277327
Attitude statement 8	-.007835	.0724607	-0.11	0.913	.698895	-.149855	.134185
Attitude statement 9	-.0140239	.0697703	-0.20	0.842	.240331	-.150771	.122723
Attitude statement 10	.0175668	.0634871	0.27	0.785	.70442	-.106866	.141999
Studied English	-.2622032	.1266491	-2.21	0.027	.776243	-.510431	-.013976
Understand spoken English OK	-.0067903	.1350345	-0.05	0.960	.207182	-.271453	.257872
Don't understand spoken English	-.0072707	.1464981	-0.05	0.961	.251381	-.294402	.27986

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obs. P | .3121547

pred. P | .1664821 (at x-bar)

(\*) dF/dx is for discrete change of dummy variable from 0 to 1

z and P>|z| correspond to the test of the underlying coefficient being 0

Source: IES, 2008

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**Table A3.0.3: Experience of ill-health caused or made worse by work since working in construction in Ireland**

Probit regression, reporting marginal effects

Number of obs = 376

LR chi2(50) = 136.79

Prob &gt; chi2 = 0.0000

Log likelihood = -128.80676

Pseudo R2 = 0.3468

Ill-health	dF/dx	Std. Err.	z	P> z	x-bar	[ 95% C.I. )	
Non-Irish	.0640691	.0758387	0.83	0.405	.529255	-.084572	.21271
Age (linear)	.1816731	.2007116	0.89	0.372	3.47818	-.211714	.575061
Age (square)	-.4488807	.7812425	-0.57	0.567	.123577	-1.98009	1.08233
Left education 17-18	.0286305	.0484385	0.61	0.542	.329787	-.066307	.123568
Left education 19 plus	-.0197876	.0477762	-0.41	0.684	.422872	-.113427	.073852
Still in education	.3193712	.194167	2.23	0.026	.06117	-.061189	.699932
Time working in Ireland (months)	.0003871	.0002913	1.37	0.170	92.5372	-.000184	.000958
Medium site (11-49 workers)	.0812695	.0890652	1.00	0.319	.356383	-.093295	.255834
Large site (50 plus)	.1207152	.1000888	1.24	0.217	.507979	-.075455	.316886
Limerick	.1189261	.0867649	1.67	0.095	.204787	-.05113	.288982
Cork	.1225237	.0983641	1.54	0.124	.178191	-.070266	.315314
Dublin	.0369227	.0537779	0.70	0.482	.457447	-.06848	.142326
Small company (10-49 employees)	.0058062	.068962	0.09	0.932	.199468	-.129357	.140969
Medium company (50-249)	-.0007951	.0806065	-0.01	0.992	.191489	-.158781	.157191
Large company (250+)	.1084142	.1397654	0.93	0.354	.210106	-.165521	.382349
Self-employed	.1611525	.1898188	1.11	0.268	.074468	-.210885	.533191
Agency worker	-.0559229	.0643017	-0.59	0.557	.034574	-.181952	.070106
Employment status missing	-.0538645	.0542428	-0.73	0.463	.06117	-.160178	.05245
Site clearance job	-.0548342	.0517099	-0.84	0.401	.156915	-.156184	.046515
Build job	.0213229	.0657564	0.34	0.736	.276596	-.107557	.150203
Fit out job	-.0811616	.0303256	-1.69	0.092	.055851	-.140599	-.021725
Completion job	-.0255607	.0571085	-0.43	0.667	.340426	-.137491	.08637
Driver/machine operator job	-.0732345	.0382613	-1.21	0.227	.095745	-.148225	.001756
Other job	-.0504055	.0506276	-0.84	0.399	.172872	-.149634	.048823
Hours (linear)	2.94298	1.048887	2.21	0.027	3.77297	.887199	4.99876
Hours (square)	-6.202729	2.497427	-2.01	0.044	.198047	-11.0976	-1.30786
Houses project	.0546004	.0458348	1.17	0.243	.555851	-.035234	.144435
Commercial project	.0744665	.0520556	1.54	0.123	.417553	-.027561	.176494
Civil project	-.0241487	.0452399	-0.49	0.621	.220745	-.112817	.06452
Project (do not know/missing)	.1222489	.1076361	1.40	0.162	.164894	-.088714	.333212

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Ill-health	dF/dx	Std. Err.	z	P> z	x-bar	[ 95% C.I. )	
CSCS training	.0854621	.0662279	1.55	0.121	.162234	-.044342	.215267
Site induction training	.0461951	.0393504	1.13	0.257	.630319	-.03093	.12332
Toolbox training	-.1019333	.0506144	-2.16	0.030	.574468	-.201136	-.002731
Other on-site training	.1370774	.0551713	2.79	0.005	.412234	.028944	.245211
Other off-site training	.0100393	.0507889	0.20	0.838	.151596	-.089505	.109584
Cause of accidents (internal)	-.001852	.0074781	-0.25	0.803	15.2979	-.016509	.012805
Cause of accidents (external)	.0276752	.0071661	3.78	0.000	10.9681	.01363	.04172
Attitude statement 1	.0148563	.0368365	0.39	0.695	.707447	-.057342	.087054
Attitude statement 2	-.0336129	.0464921	-0.77	0.441	.760638	-.124736	.05751
Attitude statement 3	-.0000499	.0425612	-0.00	0.999	.803191	-.083468	.083368
Attitude statement 4	-.0156782	.0435054	-0.34	0.731	.18617	-.100947	.069591
Attitude statement 5	.0867882	.0494559	2.01	0.045	.297872	-.010144	.18372
Attitude statement 6	.014032	.0565518	0.26	0.796	.12766	-.096808	.124872
Attitude statement 7	.1827763	.0541659	3.69	0.000	.393617	.076613	.288939
Attitude statement 8	-.1584677	.0643165	-3.02	0.002	.712766	-.284526	-.03241
Attitude statement 9	-.0749446	.0292653	-2.05	0.040	.236702	-.132303	-.017586
Attitude statement 10	-.0345688	.0424076	-0.86	0.388	.704787	-.117686	.048549
Studied English	-.196067	.0842066	-3.00	0.003	.781915	-.361109	-.031025
Understand spoken English OK	.0206434	.0817147	0.27	0.790	.215426	-.139514	.180801
Don't understand spoken English	-.037162	.066221	-0.51	0.612	.24734	-.166953	.092629

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obs. P | .2180851

pred. P | .0853017 (at x-bar)

(\*) dF/dx is for discrete change of dummy variable from 0 to 1

z and P>|z| correspond to the test of the underlying coefficient being 0

Source: IES, 2008

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**Table A3.0.4: Working on the top rungs of a ladder**

Probit regression, reporting marginal effects

Number of obs = 355

LR chi2(50) = 197.25

Prob &gt; chi2 = 0.0000

Log likelihood = -124.95443

Pseudo R2 = 0.4411

<b>Working on top rungs of a ladder</b>	<b>dF/dx</b>	<b>Std. Err.</b>	<b>z</b>	<b>P&gt; z </b>	<b>x-bar</b>	<b>[ 95% C.I. ]</b>	
Non-Irish	.3659311	.1085914	3.10	0.002	.529577	.153096	.578766
Age (linear)	-.9181603	.345158	-2.71	0.007	3.47416	-1.59466	-.241663
Age (square)	2.414005	1.348605	1.82	0.068	.122878	-.229213	5.05722
Left education 17-18	.0338166	.0868583	0.40	0.691	.307042	-.136423	.204056
Left education 19 plus	.0856864	.0908328	0.96	0.338	.433803	-.092343	.263716
Still in education	.2153498	.2264432	1.08	0.279	.061972	-.228471	.65917
Time working in construction	.0000984	.0004398	0.22	0.823	124.389	-.000764	.00096
Medium site (11-49 workers)	-.0792774	.1056403	-0.72	0.473	.352113	-.286329	.127774
Large site (50 plus)	-.025598	.1722271	-0.15	0.882	.51831	-.363157	.311961
Limerick	.0494726	.0978303	0.53	0.599	.208451	-.142271	.241216
Cork	.0638148	.1121229	0.60	0.549	.177465	-.155942	.283572
Dublin	.1059893	.0839882	1.28	0.200	.439437	-.058624	.270603
Small company (10-49 employees)	.3150764	.1437109	2.38	0.017	.191549	.033408	.596745
Medium company (50-249)	-.2973355	.0579258	-3.18	0.001	.202817	-.410868	-.183803
Large company (250+)	.0349295	.1812149	0.20	0.843	.211268	-.320245	.390104
Self-employed	-.0118147	.1977203	-0.06	0.953	.073239	-.399339	.37571
Agency worker	.6815663	.1884858	2.44	0.015	.03662	.312141	1.05099
Employment status missing	-.0582814	.1458641	-0.36	0.718	.061972	-.34417	.227607
Site clearance job	.0607027	.1280239	0.50	0.618	.166197	-.19022	.311625
Build job	-.2539182	.0671853	-3.01	0.003	.28169	-.385599	-.122238
Fit out job	-.1875734	.0446621	-2.20	0.028	.061972	-.27511	-.100037
Completion job	-.2808012	.0742594	-3.09	0.002	.332394	-.426347	-.135255
Driver/machine operator job	-.1822445	.0601449	-1.71	0.087	.092958	-.300126	-.064363
Other job	-.1570833	.0686036	-1.76	0.078	.174648	-.291544	-.022623
Hours (linear)	-.4451424	.602535	-0.74	0.460	3.77046	-1.62609	.735805
Hours (square)	-.0142539	1.660233	-0.01	0.993	.197339	-3.26825	3.23974
Houses project	.2186238	.0773108	2.59	0.010	.571831	.067097	.37015
Commercial project	.0122532	.0780343	0.16	0.875	.433803	-.140691	.165198
Civil project	-.1152506	.0788811	-1.26	0.206	.211268	-.269855	.039353
Project (do not know/missing)	.325116	.1793692	2.00	0.046	.152113	-.026441	.676673

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Working on top rungs of a ladder	dF/dx	Std. Err.	z	P> z	x-bar	[ 95% C.I. ]
CSCS training	-.035402	.0888683	-0.38	0.704	.146479	-.209581 .138777
Site induction training	-.0618028	.0760595	-0.82	0.410	.625352	-.210877 .087271
Toolbox training	.0028613	.0745797	0.04	0.969	.574648	-.143312 .149035
Other on-site training	.0208183	.0777561	0.27	0.788	.414085	-.131581 .173217
Other off-site training	.0626469	.1068528	0.62	0.534	.143662	-.146781 .272074
Cause of accidents (internal)	-.0138611	.0136844	-1.03	0.304	15.338	-.040682 .01296
Cause of accidents (external)	-.0116413	.012729	-0.91	0.363	10.938	-.03659 .013307
Attitude statement 1	-.0583194	.0751756	-0.80	0.422	.692958	-.205661 .089022
Attitude statement 2	-.2484326	.0957875	-2.77	0.006	.75493	-.436173 -.060693
Attitude statement 3	.0804541	.0675881	1.08	0.280	.802817	-.052016 .212924
Attitude statement 4	-.1225741	.0580294	-1.78	0.074	.185915	-.23631 -.008839
Attitude statement 5	.2242092	.088193	2.70	0.007	.31831	.051354 .397064
Attitude statement 6	.1059155	.1191998	0.97	0.333	.129577	-.127712 .339543
Attitude statement 7	.1535339	.073672	2.12	0.034	.414085	.009139 .297928
Attitude statement 8	-.2027345	.08151	-2.63	0.009	.721127	-.362491 -.042978
Attitude statement 9	.1071247	.0883381	1.30	0.194	.23662	-.066015 .280264
Attitude statement 10	-.1806259	.0900069	-2.18	0.029	.726761	-.357036 -.004216
Studied English	-.0463488	.0904646	-0.53	0.595	.780282	-.223656 .130959
Understand spoken English OK	-.0150701	.113311	-0.13	0.896	.214085	-.237156 .207015
Don't understand spoken English	.1191883	.1425277	0.90	0.368	.250704	-.160161 .398537

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obs. P | .3239437

pred. P | .1918963 (at x-bar)

(\*) dF/dx is for discrete change of dummy variable from 0 to 1

z and P>|z| correspond to the test of the underlying coefficient being 0

Source: IES, 2008

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**Table A3.0.5: Climbing down scaffolding instead of using a ladder**

Probit regression, reporting marginal effects

Number of obs = 364

LR chi2(50) = 138.30

Prob &gt; chi2 = 0.0000

Log likelihood = -165.00071

Pseudo R2 = 0.2953

Climbing down scaffolding	dF/dx	Std. Err.	z	P> z	x-bar	[ 95% C.I. ]	
Non-Irish	.0864226	.1246498	0.69	0.492	.527473	-.157887	.330732
Age (linear)	.0096935	.3615782	0.03	0.979	3.47099	-.698987	.718374
Age (square)	.7003247	1.36965	0.51	0.609	.121357	-1.98414	3.38479
Left education 17-18	.2508988	.0974957	2.63	0.009	.324176	.059811	.441987
Left education 19 plus	.0500482	.1015563	0.50	0.620	.434066	-.148998	.249095
Still in education	.2614457	.1998654	1.37	0.171	.054945	-.130283	.653175
Time working in construction	-.0005876	.0004059	-1.45	0.148	124.25	-.001383	.000208
Medium site (11-49 workers)	-.2590009	.1039166	-2.23	0.026	.362637	-.462674	-.055328
Large site (50 plus)	-.2916812	.1660593	-1.69	0.091	.516484	-.617151	.033789
Limerick	-.0199853	.0962445	-0.21	0.837	.211538	-.208621	.16865
Cork	.1381462	.1185888	1.22	0.223	.173077	-.094284	.370576
Dublin	.0658198	.0878549	0.75	0.452	.447802	-.106373	.238012
Small company (10-49 employees)	.1324169	.1315944	1.05	0.293	.197802	-.125503	.390337
Medium company (50-249)	.0790232	.1491316	0.55	0.585	.208791	-.213269	.371316
Large company (250+)	.5009246	.1765347	2.60	0.009	.211538	.154923	.846926
Self-employed	.2514448	.2228713	1.18	0.238	.076923	-.185375	.688264
Agency worker	.5057904	.2059521	2.03	0.043	.032967	.102132	.909449
Employment status missing	.2482508	.2221616	1.17	0.242	.057692	-.187178	.683679
Site clearance job	-.1567454	.0974457	-1.37	0.171	.153846	-.347736	.034245
Build job	-.255811	.0794648	-2.69	0.007	.28022	-.411559	-.100063
Fit out job	.0360169	.1509709	0.24	0.807	.057692	-.259881	.331914
Completion job	-.3327559	.0852792	-3.25	0.001	.348901	-.4999	-.165612
Driver/machine operator job	-.3218703	.039508	-3.27	0.001	.085165	-.399305	-.244436
Other job	-.1889368	.0867631	-1.81	0.071	.181319	-.358989	-.018884
Hours (linear)	-2.144408	.9188538	-2.34	0.019	3.77129	-3.94533	-.343488
Hours (square)	5.082122	1.880521	2.70	0.007	.197639	1.39637	8.76788
Houses project	.0283399	.0858984	0.33	0.742	.565934	-.140018	.196698
Commercial project	.0925805	.0787982	1.18	0.238	.434066	-.061861	.247022
Civil project	-.2295764	.0713179	-2.54	0.011	.217033	-.369357	-.089796
Project (do not know/missing)	-.0354623	.1257402	-0.28	0.783	.148352	-.281909	.210984

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Climbing down scaffolding	dF/dx	Std. Err.	z	P> z	x-bar	[ 95% C.I. ]	
CSCS training	-.1977224	.0683848	-2.30	0.022	.153846	-.331754	-.063691
Site induction training	.0056253	.0792465	0.07	0.944	.637363	-.149695	.160946
Toolbox training	-.1156755	.0816315	-1.42	0.154	.582418	-.27567	.044319
Other on-site training	.0420082	.0788308	0.54	0.592	.398352	-.112497	.196514
Other off-site training	.0188145	.0968212	0.20	0.844	.145604	-.170952	.208581
Cause of accidents (internal)	.0003617	.0126776	0.03	0.977	15.2995	-.024486	.025209
Cause of accidents (external)	.0314388	.012753	2.44	0.015	10.9533	.006443	.056434
Attitude statement 1	-.1285789	.0744897	-1.76	0.078	.678571	-.274576	.017418
Attitude statement 2	-.0925668	.0820845	-1.16	0.245	.758242	-.25345	.068316
Attitude statement 3	-.1287517	.0925455	-1.46	0.145	.796703	-.310138	.052634
Attitude statement 4	-.1361212	.0762209	-1.59	0.112	.186813	-.285511	.013269
Attitude statement 5	-.0308387	.0729331	-0.42	0.676	.315934	-.173785	.112108
Attitude statement 6	.0465906	.110362	0.43	0.665	.126374	-.169715	.262896
Attitude statement 7	.1563191	.0734948	2.15	0.032	.406593	.012272	.300366
Attitude statement 8	-.0999909	.0764371	-1.34	0.181	.711538	-.249805	.049823
Attitude statement 9	-.0647731	.074654	-0.84	0.404	.214286	-.211092	.081546
Attitude statement 10	-.2139903	.0815196	-2.71	0.007	.711538	-.373766	-.054215
Studied English	-.294363	.1042528	-2.89	0.004	.777473	-.498695	-.090031
Understand spoken English OK	.0349453	.1337437	0.27	0.791	.214286	-.227188	.297078
Don't understand spoken English	-.0673295	.125844	-0.52	0.606	.244505	-.313979	.17932

---

obs. P | .3434066

pred. P | .278845 (at x-bar)

(\*) dF/dx is for discrete change of dummy variable from 0 to 1

z and P>|z| correspond to the test of the underlying coefficient being 0

Source: IES, 2008

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**Table A3.0.6: Moving a load that is too heavy**

Probit regression, reporting marginal effects

Number of obs = 362

LR chi2(50) = 169.55

Prob &gt; chi2 = 0.0000

Log likelihood = -165.34606

Pseudo R2 = 0.3389

Moving a load that is too heavy	dF/dx	Std. Err.	z	P> z	x-bar	[ 95% C.I. ]	
Non-Irish	.2044241	.1407848	1.42	0.155	.533149	-.071509	.480357
Age (linear)	-.2692147	.4318	-0.62	0.533	3.47451	-1.11553	.577098
Age (square)	-.7245033	1.733828	-0.42	0.676	.12282	-4.12274	2.67374
Left education 17-18	.2433347	.0952641	2.41	0.016	.312155	.056621	.430049
Left education 19 plus	.1291027	.1130114	1.13	0.259	.428177	-.092396	.350601
Still in education	.1740418	.1592406	1.01	0.315	.066298	-.138064	.486148
Time working in construction	-.0000493	.0005175	-0.10	0.924	123.265	-.001064	.000965
Medium site (11-49 workers)	-.3208627	.1335542	-2.27	0.023	.345304	-.582624	-.059101
Large site (50 plus)	-.3388954	.1825449	-1.73	0.083	.524862	-.696677	.018886
Limerick	.0089428	.1175317	0.08	0.939	.209945	-.221415	.239301
Cork	.2714756	.1071867	2.23	0.026	.179558	.061393	.481558
Dublin	.0806679	.1048985	0.77	0.444	.444751	-.124929	.286265
Small company (10-49 employees)	.2138316	.117269	1.68	0.092	.190608	-.016011	.443675
Medium company (50-249)	.0980442	.1541286	0.62	0.533	.198895	-.204042	.400131
Large company (250+)	.2375402	.1717067	1.27	0.204	.218232	-.098999	.574079
Self-employed	.4090204	.0981889	2.40	0.016	.074586	.216574	.601467
Agency worker	.4744652	.0403679	3.11	0.002	.035912	.395346	.553585
Employment status missing	.0159641	.20859	0.08	0.939	.063536	-.392865	.424793
Site clearance job	.1327166	.1307854	0.98	0.329	.162983	-.123618	.389051
Build job	.0918255	.1346965	0.67	0.502	.276243	-.172175	.355826
Fit out job	.3123439	.1142629	2.01	0.045	.052486	.088393	.536295
Completion job	.2412597	.1216195	1.88	0.060	.350829	.00289	.479629
Driver/machine operator job	.0485914	.1755764	0.27	0.784	.09116	-.295532	.392715
Other job	-.1259527	.1497759	-0.84	0.403	.174033	-.419508	.167603
Hours (linear)	-.5450429	.5882372	-0.93	0.354	3.77204	-1.69797	.607881
Hours (square)	.9043456	1.362096	0.66	0.507	.197772	-1.76531	3.57401
Houses project	-.2240204	.0938392	-2.31	0.021	.560773	-.407942	-.040099
Commercial project	.1047167	.0887694	1.17	0.242	.430939	-.069268	.278702
Civil project	-.1189426	.1135571	-1.04	0.297	.212707	-.34151	.103625
Project (do not know/missing)	.1078806	.1492755	0.70	0.482	.154696	-.184694	.400455

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Moving a load that is too heavy	dF/dx	Std. Err.	z	P> z	x-bar	[ 95% C.I. ]	
CSCS training	-.3326878	.0935965	-3.17	0.002	.162983	-.516134	-.149242
Site induction training	.141976	.098797	1.43	0.154	.627072	-.051663	.335615
Toolbox training	.1462572	.0983961	1.47	0.140	.582873	-.046596	.33911
Other on-site training	.1634943	.091353	1.75	0.080	.403315	-.015554	.342543
Other off-site training	-.1707268	.1149997	-1.46	0.145	.146409	-.396122	.054669
Cause of accidents (internal)	-.0512718	.0158579	-3.24	0.001	15.3453	-.082353	-.020191
Cause of accidents (external)	.0063545	.0152841	0.42	0.678	10.8674	-.023602	.036311
Attitude statement 1	.0072827	.0861577	0.08	0.933	.707182	-.161583	.176149
Attitude statement 2	-.0162162	.0942946	-0.17	0.864	.767956	-.20103	.168598
Attitude statement 3	-.1744566	.0975717	-1.68	0.093	.81768	-.365694	.01678
Attitude statement 4	-.1809459	.1112681	-1.59	0.111	.18232	-.399027	.037136
Attitude statement 5	.3733383	.0773131	4.18	0.000	.309392	.221807	.524869
Attitude statement 6	-.1047971	.1263038	-0.83	0.408	.127072	-.352348	.142754
Attitude statement 7	.1573094	.0795991	1.94	0.052	.406077	.001298	.313321
Attitude statement 8	.1243009	.0846185	1.46	0.143	.718232	-.041548	.29015
Attitude statement 9	-.0494733	.0942275	-0.53	0.599	.243094	-.234156	.135209
Attitude statement 10	-.158521	.0834766	-1.84	0.066	.723757	-.322132	.00509
Studied English	-.1683417	.1043605	-1.54	0.123	.78453	-.372885	.036201
Understand spoken English OK	-.1354722	.1507417	-0.89	0.372	.218232	-.430921	.159976
Don't understand spoken English	.1558975	.1601196	0.94	0.348	.251381	-.157931	.469726

---

obs. P | .5331492

pred. P | .5509696 (at x-bar)

(\*) dF/dx is for discrete change of dummy variable from 0 to 1

z and P>|z| correspond to the test of the underlying coefficient being 0

Source: IES, 2008

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Table A3.0.7: Carrying a load that is too large to see over

Probit regression, reporting marginal effects

Number of obs = 354

LR chi2(50) = 175.14

Prob &gt; chi2 = 0.0000

Log likelihood = -139.11765

Pseudo R2 = 0.3863

Carrying a load that is too large	dF/dx	Std. Err.	z	P> z	x-bar	[ 95% C.I. ]	
Non-Irish	.3133808	.1169043	2.49	0.013	.528249	.084253	.542509
Age (linear)	.2960546	.4118994	0.71	0.478	3.47246	-.511253	1.10336
Age (square)	-3.533856	1.861554	-1.83	0.068	.12248	-7.18243	.114723
Left education 17-18	.3794091	.1064437	3.51	0.000	.30791	.170783	.588035
Left education 19 plus	.154274	.1049299	1.46	0.143	.432203	-.051385	.359933
Still in education	.5876376	.1547438	3.07	0.002	.067797	.284345	.89093
Time working in construction	.0001172	.0004545	0.26	0.797	124.621	-.000774	.001008
Medium site (11-49 workers)	-.0110697	.1176549	-0.09	0.925	.353107	-.241669	.21953
Large site (50 plus)	.0946524	.1709695	0.55	0.583	.516949	-.240442	.429747
Limerick	-.0450591	.0967497	-0.45	0.653	.20904	-.234685	.144567
Cork	.1607435	.1310823	1.32	0.188	.172316	-.096173	.41766
Dublin	.0733723	.0919736	0.80	0.422	.451977	-.106893	.253637
Small company (10-49 employees)	-.0999343	.0956881	-0.95	0.344	.194915	-.287479	.087611
Medium company (50-249)	-.3800789	.0502971	-4.33	0.000	.19209	-.478659	-.281498
Large company (250+)	-.3049226	.0807548	-2.44	0.015	.211864	-.463199	-.146646
Self-employed	-.0680184	.1651194	-0.38	0.707	.076271	-.391646	.25561
Agency worker	.0657482	.2490537	0.28	0.780	.036723	-.422388	.553885
Employment status missing	-.1868504	.0842618	-1.40	0.161	.062147	-.352001	-.0217
Site clearance job	.0180276	.127023	0.14	0.886	.166667	-.230933	.266988
Build job	-.1184729	.0923695	-1.18	0.236	.282486	-.299514	.062568
Fit out job	.0279876	.1462726	0.20	0.844	.056497	-.258702	.314677
Completion job	-.0390458	.102403	-0.38	0.708	.336158	-.239752	.16166
Driver/machine operator job	.2474893	.181419	1.49	0.137	.09322	-.108085	.603064
Other job	-.0675143	.1095086	-0.58	0.565	.172316	-.282147	.147119
Hours (linear)	-1.60373	.7392235	-2.19	0.028	3.77163	-3.05258	-.154878
Hours (square)	2.735563	1.500399	1.83	0.067	.19767	-.205164	5.67629
Houses project	-.2786224	.0876421	-3.15	0.002	.576271	-.450398	-.106847
Commercial project	.0170639	.0758721	0.23	0.822	.429379	-.131643	.165771
Civil project	-.0928034	.0798549	-1.08	0.279	.217514	-.249316	.063709
Project (do not know/missing)	-.0102909	.1312548	-0.08	0.938	.149718	-.267546	.246964

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Carrying a load that is too large	dF/dx	Std. Err.	z	P> z	x-bar	[ 95% C.I. ]	
CSCS training	-.2104814	.0549041	-2.67	0.008	.152542	-.318091	-.102871
Site induction training	.0087299	.0831382	0.10	0.917	.629944	-.154218	.171678
Toolbox training	-.0231957	.0859179	-0.27	0.786	.581921	-.191592	.1452
Other on-site training	.1201748	.0867899	1.41	0.159	.412429	-.04993	.29028
Other off-site training	.0621509	.1043312	0.62	0.533	.155367	-.142334	.266636
Cause of accidents (internal)	-.0290773	.0131414	-2.18	0.029	15.3192	-.054834	-.003321
Cause of accidents (external)	-.0071465	.0141117	-0.51	0.614	10.8927	-.034815	.020522
Attitude statement 1	-.0098939	.0781152	-0.13	0.899	.69774	-.162997	.143209
Attitude statement 2	-.2302287	.0972692	-2.50	0.012	.757062	-.420873	-.039584
Attitude statement 3	-.0158047	.0848712	-0.19	0.851	.810734	-.182149	.15054
Attitude statement 4	-.0871834	.0750035	-1.06	0.291	.175141	-.234187	.059821
Attitude statement 5	.4764887	.0901858	4.96	0.000	.305085	.299728	.65325
Attitude statement 6	.0300767	.1078169	0.29	0.775	.129944	-.181241	.241394
Attitude statement 7	.0068381	.07231	0.09	0.925	.415254	-.134887	.148563
Attitude statement 8	.1454381	.0635995	2.04	0.041	.720339	.020785	.270091
Attitude statement 9	-.0963421	.0709542	-1.26	0.207	.240113	-.23541	.042726
Attitude statement 10	-.2708955	.0929557	-3.05	0.002	.734463	-.453085	-.088706
Studied English	-.334772	.1139452	-3.09	0.002	.79096	-.5581	-.111444
Understand spoken English OK	-.1760835	.0912333	-1.57	0.116	.220339	-.354897	.00273
Don't understand spoken English	-.0641638	.1301312	-0.47	0.638	.251412	-.319216	.190889

---

obs. P | .3389831

pred. P | .2318707 (at x-bar)

(\*) dF/dx is for discrete change of dummy variable from 0 to 1

z and P>|z| correspond to the test of the underlying coefficient being 0

Source: IES, 2008

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**Table A3.0.8: Not wearing a hard hat in a hard hat area**

Probit regression, reporting marginal effects

Number of obs = 377

LR chi2(50) = 118.33

Prob &gt; chi2 = 0.0000

Log likelihood = -151.44854

Pseudo R2 = 0.2809

Not wearing a hard hat	dF/dx	Std. Err.	z	P> z	x-bar	[ 95% C.I. ]	
Non-Irish	-.0397931	.1030984	-0.39	0.699	.525199	-.241862	.162276
Age (linear)	.499297	.2840535	1.76	0.078	3.48248	-.057438	1.05603
Age (square)	-1.972708	1.101309	-1.79	0.073	.124301	-4.13123	.185818
Left education 17-18	.1696221	.07956	2.30	0.022	.331565	.013687	.325557
Left education 19 plus	.0263692	.0770997	0.34	0.730	.427056	-.124743	.177482
Still in education	.1770073	.1685778	1.22	0.222	.058355	-.153399	.507414
Time working in construction	-.0002516	.0003167	-0.79	0.427	125.199	-.000872	.000369
Medium site (11-49 workers)	.1284964	.1069599	1.27	0.203	.350133	-.081141	.338134
Large site (50 plus)	.0824291	.13013	0.63	0.529	.519894	-.172621	.337479
Limerick	-.0101239	.0718165	-0.14	0.889	.206897	-.150882	.130634
Cork	.0601968	.0904631	0.71	0.477	.172414	-.117108	.237501
Dublin	.0568646	.066894	0.86	0.389	.453581	-.074245	.187974
Small company (10-49 employees)	-.1100226	.0616359	-1.50	0.134	.198939	-.230827	.010782
Medium company (50-249)	-.1458177	.0637095	-1.73	0.083	.190981	-.270686	-.020949
Large company (250+)	-.1256137	.0908762	-1.13	0.257	.214854	-.303728	.0525
Self-employed	-.0737533	.1073455	-0.58	0.564	.079576	-.284147	.13664
Agency worker	.2526129	.2575229	1.16	0.247	.034483	-.252123	.757348
Employment status missing	-.0577082	.1076439	-0.47	0.639	.061008	-.268686	.15327
Site clearance job	-.025276	.0802421	-0.30	0.761	.161804	-.182548	.131996
Build job	.0322242	.0847911	0.39	0.697	.286472	-.133963	.198412
Fit out job	-.0487947	.087937	-0.50	0.619	.05305	-.221148	.123559
Completion job	.1852316	.0936103	2.13	0.033	.339523	.001759	.368704
Driver/machine operator job	.137949	.1424356	1.10	0.271	.087533	-.14122	.417118
Other job	-.1174578	.0645431	-1.44	0.150	.175066	-.24396	.009044
Hours (linear)	-.7609641	.365648	-2.08	0.037	3.77093	-1.47762	-.044307
Hours (square)	2.012929	.8500661	2.37	0.018	.197299	.34683	3.67903
Houses project	-.0812189	.0678313	-1.21	0.225	.559682	-.214166	.051728
Commercial project	-.1289866	.0564587	-2.19	0.028	.437666	-.239644	-.01833
Civil project	-.1794999	.0447158	-2.87	0.004	.209549	-.267141	-.091858
Project (do not know/missing)	-.1782037	.0431218	-2.61	0.009	.151194	-.262721	-.093686

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Not wearing a hard hat	dF/dx	Std. Err.	z	P> z	x-bar	[ 95% C.I. ]	
CSCS training	-.1759973	.0376738	-2.93	0.003	.159151	-.249837	-.102158
Site induction training	-.0299525	.0640642	-0.48	0.635	.639257	-.155516	.095611
Toolbox training	-.0806927	.0629755	-1.31	0.189	.570292	-.204122	.042737
Other on-site training	.1052775	.0638539	1.71	0.087	.395225	-.019874	.230429
Other off-site training	.1215878	.0988993	1.37	0.172	.140584	-.072251	.315427
Cause of accidents (internal)	-.0238323	.0099011	-2.38	0.017	15.3156	-.043238	-.004426
Cause of accidents (external)	.015458	.0099138	1.56	0.119	10.9019	-.003973	.034889
Attitude statement 1	-.0581556	.0616222	-0.98	0.329	.689655	-.178933	.062622
Attitude statement 2	.1055869	.0469983	1.94	0.052	.763926	.013472	.197702
Attitude statement 3	.0198272	.0604408	0.32	0.749	.798408	-.098635	.138289
Attitude statement 4	-.0288404	.05668	-0.49	0.625	.177719	-.139931	.08225
Attitude statement 5	.0336746	.0596961	0.58	0.564	.310345	-.083328	.150677
Attitude statement 6	.0137054	.0717212	0.19	0.846	.132626	-.126866	.154276
Attitude statement 7	.1081257	.0589188	1.90	0.057	.405836	-.007353	.223605
Attitude statement 8	-.0312697	.0576353	-0.56	0.579	.713528	-.144233	.081693
Attitude statement 9	-.0385267	.0531975	-0.69	0.490	.225464	-.142792	.065739
Attitude statement 10	.049805	.0503608	0.94	0.349	.713528	-.0489	.14851
Studied English	.0222515	.0650589	0.33	0.739	.777188	-.105262	.149765
Understand spoken English OK	-.1237322	.0764233	-1.33	0.182	.214854	-.273519	.026055
Don't understand spoken English	.053331	.1216177	0.46	0.646	.246684	-.185035	.291697

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obs. P | .2466844

pred. P | .162664 (at x-bar)

(\*) dF/dx is for discrete change of dummy variable from 0 to 1

z and P>|z| correspond to the test of the underlying coefficient being 0

Source: IES, 2008

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**Table A3.0.9: Not wearing gloves for a job that requires them**

Probit regression, reporting marginal effects

Number of obs = 378

LR chi2(50) = 116.96

Prob &gt; chi2 = 0.0000

Log likelihood = -184.80036

Pseudo R2 = 0.2404

Not wearing gloves	dF/dx	Std. Err.	z	P> z	x-bar	[ 95% C.I ]	
Non-Irish	.2131599	.1187809	1.74	0.083	.526455	-.019646	.445966
Age (linear)	-.0242301	.3425019	-0.07	0.944	3.48532	-.695521	.647061
Age (square)	-.4406301	1.294984	-0.34	0.734	.125762	-2.97875	2.09749
Left education 17-18	.1390722	.0879723	1.62	0.106	.325397	-.03335	.311495
Left education 19 plus	-.0154417	.0937849	-0.16	0.870	.420635	-.199257	.168373
Still in education	.1155624	.1626778	0.74	0.456	.063492	-.20328	.434405
Time working in construction	.0001254	.0003821	0.33	0.743	125.656	-.000623	.000874
Medium site (11-49 workers)	.0075883	.1185968	0.06	0.949	.346561	-.224857	.240034
Large site (50 plus)	-.1042669	.1622569	-0.64	0.522	.52381	-.422285	.213751
Limerick	.1282673	.1049501	1.26	0.206	.195767	-.077431	.333966
Cork	.1714551	.1134275	1.57	0.116	.177249	-.050859	.393769
Dublin	.1746232	.0873816	1.98	0.047	.457672	.003358	.345888
Small company (10-49 employees)	.0181052	.111572	0.16	0.870	.198413	-.200572	.236782
Medium company (50-249)	-.1139215	.1148588	-0.92	0.359	.195767	-.339041	.111198
Large company (250+)	-.01012	.1625454	-0.06	0.951	.219577	-.328703	.308463
Self-employed	.1202682	.2022634	0.62	0.533	.079365	-.276161	.516697
Agency worker	.3475812	.2292723	1.49	0.137	.034392	-.101784	.796947
Employment status missing	.1162365	.1966656	0.62	0.536	.058201	-.269221	.501694
Site clearance job	-.0242938	.1175257	-0.20	0.839	.161376	-.25464	.206052
Build job	-.2017323	.0897646	-2.01	0.045	.291005	-.377668	-.025797
Fit out job	-.1076481	.1169263	-0.82	0.414	.05291	-.336819	.121523
Completion job	-.1685993	.0964102	-1.63	0.104	.333333	-.35756	.020361
Driver/machine operator job	-.2510194	.0744911	-2.15	0.032	.092593	-.397019	-.105019
Other job	-.188416	.0861741	-1.83	0.067	.171958	-.357314	-.019518
Hours (linear)	-.9373722	.5953995	-1.57	0.115	3.77153	-2.10433	.229589
Hours (square)	2.650234	1.299106	2.03	0.042	.197536	.104032	5.19644
Houses project	-.0409727	.0809882	-0.51	0.612	.558201	-.199707	.117761
Commercial project	.165335	.0747122	2.21	0.027	.431217	.018902	.311768
Civil project	-.2239583	.067596	-2.74	0.006	.214286	-.356444	-.091473
Project (do not know/missing)	-.110896	.1071743	-0.95	0.344	.148148	-.320954	.099162

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Not wearing gloves	dF/dx	Std. Err.	z	P> z	x-bar	[ 95% C.I ]	
CSCS training	-.2229398	.0625064	-2.76	0.006	.161376	-.34545	-.10043
Site induction training	-.0178762	.075808	-0.24	0.813	.632275	-.166457	.130705
Toolbox training	.0914585	.0757727	1.19	0.235	.568783	-.057053	.23997
Other on-site training	.0695852	.0747039	0.94	0.348	.396825	-.076832	.216002
Other off-site training	.0546136	.1010919	0.55	0.580	.140212	-.143523	.25275
Cause of accidents (internal)	-.0265361	.0126104	-2.10	0.036	15.2778	-.051252	-.00182
Cause of accidents (external)	.0206496	.0124913	1.65	0.099	10.9048	-.003833	.045132
Attitude statement 1	.1243965	.066204	1.78	0.076	.695767	-.005361	.254154
Attitude statement 2	.042359	.0715698	0.58	0.562	.769841	-.097915	.182633
Attitude statement 3	-.1816673	.0883672	-2.14	0.032	.801587	-.354864	-.008471
Attitude statement 4	-.0969842	.0728702	-1.25	0.212	.185185	-.239807	.045839
Attitude statement 5	.125453	.0767426	1.67	0.095	.314815	-.02496	.275866
Attitude statement 6	.0797924	.1004905	0.82	0.411	.132275	-.117165	.27675
Attitude statement 7	.1528304	.0700486	2.20	0.028	.399471	.015538	.290123
Attitude statement 8	-.1231912	.0757858	-1.67	0.095	.706349	-.271729	.025346
Attitude statement 9	-.090229	.0675465	-1.27	0.204	.232804	-.222618	.04216
Attitude statement 10	-.0661457	.0720769	-0.93	0.351	.71164	-.207414	.075122
Studied English	-.2101401	.098919	-2.20	0.028	.783069	-.404018	-.016262
Understand spoken English OK	-.1737052	.1020957	-1.49	0.137	.208995	-.373809	.026399
Don't understand spoken English	-.1173472	.1182653	-0.93	0.352	.251323	-.349143	.114448

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obs. P | .3439153

pred. P | .2940588 (at x-bar)

(\*) dF/dx is for discrete change of dummy variable from 0 to 1

z and P>|z| correspond to the test of the underlying coefficient being 0

Source: IES, 2008

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**Table A3.0.10: Walking behind a reversing vehicle**

Probit regression, reporting marginal effects

Number of obs = 372

LR chi2(50) = 153.36

Prob &gt; chi2 = 0.0000

Log likelihood = -103.20389

Pseudo R2 = 0.4263

Walking behind reversing vehicle	dF/dx	Std. Err.	z	P> z	x-bar	[ 95% C.I. ]
Non-Irish	.0287834	.0292144	1.17	0.243	.518817	-.028476 .086043
Age (linear)	.3378068	.1434886	2.75	0.006	3.47921	.056574 .619039
Age (square)	-2.009964	.7986594	-3.16	0.002	.124059	-3.57531 -.44462
Left education 17-18	.0823433	.0480264	2.68	0.007	.327957	-.011787 .176473
Left education 19 plus	.0181429	.024566	0.84	0.399	.422043	-.030006 .066291
Still in education	.1502316	.14234	1.97	0.049	.064516	-.12875 .429213
Time working in construction	.0000303	.0001034	0.30	0.766	125.97	-.000172 .000233
Medium site (11-49 workers)	.0024423	.0224449	0.11	0.912	.357527	-.041549 .046434
Large site (50 plus)	.0458368	.0473967	1.19	0.235	.518817	-.047059 .138733
Limerick	-.0344726	.0183157	-2.55	0.011	.198925	-.070371 .001426
Cork	.0074912	.0240206	0.35	0.723	.172043	-.039588 .054571
Dublin	-.0134193	.0166139	-0.80	0.422	.462366	-.045982 .019143
Small company (10-49 employees)	-.0197423	.0154	-1.22	0.222	.198925	-.049926 .010441
Medium company (50-249)	-.0737728	.0343313	-3.70	0.000	.201613	-.141061 -.006485
Large company (250+)	-.0269668	.0222774	-1.04	0.299	.223118	-.07063 .016696
Self-employed	-.0142175	.0188949	-0.51	0.610	.067204	-.051251 .022816
Agency worker	.0151288	.0677516	0.28	0.781	.034946	-.117662 .14792
Employment status missing	-.0278179	.0165544	-2.41	0.016	.05914	-.060264 .004628
Site clearance job	-.0147181	.016487	-0.72	0.473	.155914	-.047032 .017596
Build job	-.0661298	.0324693	-3.54	0.000	.27957	-.129768 -.002491
Fit out job	-.0278393	.0164719	-3.07	0.002	.056452	-.060124 .004445
Completion job	-.0517154	.0287724	-2.55	0.011	.33871	-.108108 .004677
Driver/machine operator job	-.0114296	.0187281	-0.48	0.630	.094086	-.048136 .025277
Other job	-.0362531	.0203202	-2.49	0.013	.177419	-.07608 .003574
Hours (linear)	-.2150405	.1474132	-2.17	0.030	3.77271	-.503965 .073884
Hours (square)	.4418532	.3139369	1.93	0.054	.198061	-.173452 1.05716
Houses project	-.0035231	.018361	-0.19	0.846	.55914	-.03951 .032464
Commercial project	.0854314	.0410276	3.58	0.000	.422043	.005019 .165844
Civil project	.0044776	.0194719	0.24	0.811	.223118	-.033687 .042642
Project (do not know/missing)	.1612902	.1204512	2.33	0.020	.158602	-.07479 .39737

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Walking behind reversing vehicle	dF/dx	Std. Err.	z	P> z	x-bar	[ 95% C.I. ]	
CSCS training	-.0465158	.0225773	-3.75	0.000	.163978	-.090767	-.002265
Site induction training	.0127398	.0142202	0.92	0.360	.639785	-.015131	.040611
Toolbox training	-.0113588	.0181527	-0.70	0.483	.569892	-.046937	.02422
Other on-site training	-.0047399	.0145278	-0.32	0.752	.387097	-.033214	.023734
Other off-site training	-.0123915	.0145556	-0.77	0.439	.153226	-.04092	.016137
Cause of accidents (internal)	-.0008223	.0026855	-0.31	0.756	15.3118	-.006086	.004441
Cause of accidents (external)	.0008791	.0027384	0.32	0.745	10.9624	-.004488	.006246
Attitude statement 1	-.0392312	.0274487	-2.05	0.041	.69086	-.09303	.014567
Attitude statement 2	-.0697022	.040297	-3.15	0.002	.755376	-.148683	.009278
Attitude statement 3	-.0072163	.0180803	-0.45	0.656	.793011	-.042653	.02822
Attitude statement 4	-.0149586	.0142937	-1.01	0.311	.180108	-.042974	.013056
Attitude statement 5	.0042876	.0170622	0.26	0.794	.30914	-.029154	.037729
Attitude statement 6	.016983	.0357483	0.58	0.564	.123656	-.053082	.087048
Attitude statement 7	-.0154373	.014177	-1.10	0.273	.405914	-.043224	.012349
Attitude statement 8	.0002335	.0142462	0.02	0.987	.72043	-.027689	.028156
Attitude statement 9	.01043	.0210588	0.56	0.572	.228495	-.030844	.051704
Attitude statement 10	-.0464783	.0305082	-2.42	0.015	.717742	-.106273	.013317
Studied English	-.0515652	.0434557	-1.82	0.069	.787634	-.136737	.033606
Understand spoken English OK	-.0272645	.0171222	-1.61	0.108	.206989	-.060823	.006294
Don't understand spoken English	-.0194475	.0197048	-0.90	0.370	.247312	-.058068	.019173

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obs. P | .188172

pred. P | .0200135 (at x-bar)

(\*) dF/dx is for discrete change of dummy variable from 0 to 1

z and P>|z| correspond to the test of the underlying coefficient being 0

Source: IES, 2008

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**Table A3.0.11: Walking across a vehicle compound to get to a destination more quickly**

Probit regression, reporting marginal effects

Number of obs = 371

LR chi2(50) = 138.61

Prob &gt; chi2 = 0.0000

Log likelihood = -113.25231

Pseudo R2 = 0.3796

Walking across vehicle compound	dF/dx	Std. Err.	z	P> z	x-bar	[ 95% C.I. ]	
Non-Irish	.0166923	.0499974	0.33	0.739	.512129	-.081301	.114685
Age (linear)	.2185309	.1359858	1.59	0.112	3.48157	-.047996	.485058
Age (square)	-1.029414	.5558917	-1.96	0.050	.125161	-2.11894	.060114
Left education 17-18	-.0008391	.0332512	-0.03	0.980	.32345	-.06601	.064332
Left education 19 plus	.009337	.0381138	0.25	0.803	.425876	-.065365	.084039
Still in education	.0477025	.088455	0.67	0.500	.059299	-.125666	.221071
Time working in construction	-.0001086	.0001441	-0.75	0.454	126.493	-.000391	.000174
Medium site (11-49 workers)	-.0099917	.040268	-0.24	0.809	.350404	-.088916	.068932
Large site (50 plus)	.0037912	.0795655	0.05	0.962	.530997	-.152154	.159737
Limerick	-.0276332	.0308773	-0.79	0.429	.204852	-.088152	.032885
Cork	.0694705	.0643047	1.41	0.158	.175202	-.056565	.195505
Dublin	.0084671	.033978	0.25	0.801	.455526	-.058128	.075063
Small company (10-49 employees)	-.0432965	.0257561	-1.36	0.173	.199461	-.093777	.007184
Medium company (50-249)	-.1431209	.0367596	-3.39	0.001	.202156	-.215168	-.071073
Large company (250+)	-.0442949	.0496233	-0.70	0.484	.22372	-.141555	.052965
Self-employed	-.0304027	.0464732	-0.47	0.636	.072776	-.121488	.060683
Agency worker	-.0147226	.0693573	-0.18	0.853	.03504	-.150661	.121215
Employment status missing	-.0392892	.0372633	-0.64	0.520	.06469	-.112324	.033745
Site clearance job	.0478401	.0808642	0.72	0.470	.161725	-.110651	.206331
Build job	-.0616845	.0353036	-1.56	0.118	.277628	-.130878	.007509
Fit out job	-.0512028	.021345	-1.47	0.142	.051213	-.093038	-.009367
Completion job	-.0418766	.0402953	-0.98	0.329	.345013	-.120854	.037101
Driver/machine operator job	-.0609021	.0231427	-1.96	0.050	.09434	-.106261	-.015543
Other job	.0069344	.0605906	0.12	0.906	.172507	-.111821	.12569
Hours (linear)	-.4305477	.2266727	-2.18	0.029	3.77267	-.874818	.013723
Hours (square)	1.084346	.5254013	2.49	0.013	.198075	.054578	2.11411
Houses project	-.0465642	.0409035	-1.23	0.218	.557951	-.126733	.033605
Commercial project	.04697	.0339938	1.55	0.121	.428571	-.019657	.113597
Civil project	-.0791074	.027953	-3.19	0.001	.218329	-.133894	-.02432
Project (do not know/missing)	-.0024229	.0469061	-0.05	0.959	.15903	-.094357	.089511

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Walking across vehicle compound	dF/dx	Std. Err.	z	P> z	x-bar	[ 95% C.I. ]	
CSCS training	.0006493	.0374625	0.02	0.986	.16442	-.072776	.074074
Site induction training	-.0313078	.0379189	-0.91	0.360	.641509	-.105627	.043012
Toolbox training	.0356086	.0298972	1.18	0.240	.571429	-.022989	.094206
Other on-site training	-.0597907	.029341	-2.12	0.034	.38814	-.117298	-.002283
Other off-site training	.0532309	.0603781	1.08	0.282	.148248	-.065108	.17157
Cause of accidents (internal)	-.0057344	.0051449	-1.13	0.257	15.2992	-.015818	.004349
Cause of accidents (external)	.0052974	.0055408	0.96	0.335	10.9218	-.005562	.016157
Attitude statement 1	-.071028	.0416983	-2.03	0.043	.698113	-.152755	.010699
Attitude statement 2	-.1083403	.0528386	-2.90	0.004	.768194	-.211902	-.004779
Attitude statement 3	-.0110822	.0313991	-0.37	0.713	.800539	-.072623	.050459
Attitude statement 4	-.0402554	.0234382	-1.53	0.126	.180593	-.086193	.005683
Attitude statement 5	.0677987	.0448566	1.89	0.059	.309973	-.020119	.155716
Attitude statement 6	.0493417	.0651615	0.94	0.346	.123989	-.078373	.177056
Attitude statement 7	-.012047	.0252964	-0.46	0.643	.407008	-.061627	.037533
Attitude statement 8	.0154945	.0249127	0.58	0.560	.725067	-.033333	.064322
Attitude statement 9	-.052479	.0242304	-2.00	0.046	.22372	-.09997	-.004988
Attitude statement 10	-.0830971	.0457548	-2.44	0.015	.719677	-.172775	.006581
Studied English	.0420607	.0291009	1.15	0.249	.789757	-.014976	.099097
Understand spoken English OK	-.061286	.0293053	-1.64	0.102	.204852	-.118723	-.003849
Don't understand spoken English	-.0379822	.0408982	-0.78	0.436	.242588	-.118141	.042177

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obs. P | .1940701

pred. P | .0482268 (at x-bar)

(\*) dF/dx is for discrete change of dummy variable from 0 to 1

z and P>|z| correspond to the test of the underlying coefficient being 0

Source: IES, 2008

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## Appendix 4: Employer Screening Survey

Employer ID No: \_\_\_\_\_

**INTRODUCTION:**

Hello, my name is ..... and I'm calling from Ipsos MORI, an independent research company.

The Health and Safety Authority has commissioned Ipsos MORI to undertake some research on health and safety for non-Irish workers in construction. You should have received a letter about this recently. I just have a few questions for you about this. Your answers will be treated in the strictest confidence and no contact details will be passed on to the HSA. Is that ok? It should take no longer than 5-10 minutes.

**Q1 ASK ALL:**

Can you confirm that this company works in construction?  
SINGLE CODE.

Yes.....1  
No .....2  
..... THANK/CLOSE

**Q2 ASK ALL**

Can you please just tell me the size of your company?  
DO NOT READ OUT, SINGLE CODE.

1-10 employees .....1  
10-49.....2  
50-249 .....3  
250+ .....4  
Don't know .....5

**Q3 ASK ALL**

Does your company currently employ any non-Irish workers for whom English is not their first language?  
DO NOT READ OUT, SINGLE CODE.

Yes..... 1 GO TO Q4  
No ..... 2 GO TO Q5

**Q4 ASK IF ANSWER 1 TO Q3**

How many?  
RECORD EXACT NUMBER OR ASK FOR AN ESTIMATE.

.....

**Q5 ASK ALL**  
 Does your company ever work on sites with other workers for whom English is not their first language?  
 DO NOT READ OUT, SINGLE CODE.

Yes..... 1  
 No ..... 2

**IF ANSWER NO (RESPONSE 2) TO Q3 AND Q5 THANK AND CLOSE. IF ANSWER YES (RESPONSE 1) TO EITHER Q3 OR Q5 CONTINUE**

**Q6 ASK ALL**  
 On average how would you rate non-Irish workers' ability to understand spoken English on site?  
 PROMPT TO PRECODE, SINGLE CODE.

Very good..... 1  
 Fairly good ..... 2  
 Neither good nor bad ..... 3  
 Fairly bad ..... 4  
 Very bad..... 5  
 Don't know ..... 6  
 No comment..... 7

**Q7 ASK ALL**  
 On average how would you rate non-Irish workers' ability to understand written English on site?  
 PROMPT TO PRECODE, SINGLE CODE.

Very good..... 1  
 Fairly good ..... 2  
 Neither good nor bad ..... 3  
 Fairly bad ..... 4  
 Very bad..... 5  
 Don't know ..... 6  
 No comment..... 7

**Q8 ASK ALL**  
 On average how would you rate non-Irish workers' attention to health and safety on sites?  
 PROMPT TO PRECODE, SINGLE CODE.

Very good..... 1  
 Fairly good ..... 2  
 Neither good nor bad ..... 3  
 Fairly bad ..... 4  
 Very bad..... 5  
 Don't know ..... 6  
 No comment..... 7

**Q9 ASK ALL**  
 How do they compare against their Irish co-workers in this regard?  
 PROMPT TO PRECODE, SINGLE CODE.

Much better..... 1  
 A bit better..... 2  
 About the same..... 3  
 A bit worse ..... 4  
 Much worse..... 5  
 Don't know ..... 6  
 No comment..... 7

**Q10 ASK ALL**  
 Would you say that there are any particular nationalities of non-Irish workers who are more of a high-risk group?  
 DO NOT READ OUT, SINGLE CODE.

- Yes..... 1 GO TO Q11
- No ..... 2 GO TO Q12
- Don't know ..... 3 GO TO Q12

**Q11 ASK IF ANSWER 1 AT Q10**  
 If so who?  
 DO NOT READ OUT, TICK UP TO THREE.

- Polish .....1
- Latvian .....2
- Lithuanian .....3
- Slovakian .....4
- Russian .....5
- Spanish .....6
- Portuguese .....7
- Other (please specify) .....8
- No comment .....9

**Q12 ASK ALL**  
 Statistics show that non-Irish workers in construction have a disproportionately high accident rate. Why do you think this might be?  
 DO NOT READ OUT, CODE ALL THAT APPLY.

- Do not understand the health and safety training.....1
- Do not understand health and safety signage .....2
- Pay less attention to health and safety issues .....3
- Have a poorer understanding of health and safety issues .....4
- Do not use the correct PPE .....5
- Work in more dangerous roles .....6
- Work on more dangerous sites.....7
- Work longer hours .....9
- Other (please specify) .....8
- Don't know .....10
- Don't agree .....11

**Q13 ASK ALL**  
 Would you recommend that any extra training or support be given to non-Irish workers on sites for whom English is not their first language?  
 DO NOT READ OUT, CODE ONE ONLY.

- Yes ..... 1 GO TO Q14
- No ..... 2 GO TO Q15

**Q14 ASK IF RESPONSE WAS 1 ABOVE**  
 If yes, what do you think would be helpful?  
 DO NOT READ OUT, CODE ALL THAT APPLY.

- Longer health and safety training sessions .....1
- Providing interpreters .....2
- One to one health and safety training sessions .....3
- English lessons.....4
- Providing accommodation .....5
- Other (please specify) .....6

**SAY TO ALL (UNLESS CLOSED)**

The HSA has commissioned Ipsos MORI to do research looking at health and safety issues for non-Irish workers in the Irish construction industry.

We are conducting a survey of construction workers. We want to understand any differences in the behaviour of Irish and non-Irish workers and any difficulties they may face. The findings will be used to ensure that the HSA's safety awareness campaigns and training and development initiatives may be tailored to the needs of those who would benefit from more support in this area.

A researcher from Ipsos MORI would like to come onto one of your sites and ask workers to complete a short and simple questionnaire which should take no longer than 10 minutes to complete. The researcher will be based in a communal area and workers can be invited to take part during their breaks rather than during work time. All workers who take part will receive two lottery tickets as a thank you for their time.

All the information provided will be treated in the strictest confidence, and neither your site, company nor workers will be identified in any reports or findings delivered to the HSA. All employers who take part will receive a short user-friendly report with the findings of the research.

Would you be willing to help the research team by allowing us to come onto your site?

*(If ask for more info, say that we are hoping to speak to 600 workers in total across a range of sites across Ireland. We hope to commence the research in January and will also be conducting fieldwork in February and early March).*

Yes.....1 GO TO CLOSE BELOW

No ..... 2 THANK/CLOSE

**IF YES – Thank you very much for agreeing to help us. My colleague will call shortly to discuss the arrangements and find out when and where would be most convenient for you and your workers. Can I just check that you are the right person to make the arrangements with and that this is the best number to call? *If not get other details.***

*Following questions may be completed in a separate telephone conversation. Introduce self, remind interviewee of purpose of the call, and their agreement to help. Then answer the following questions*

**Q15 ASK ALL**

Can you confirm that your site at XXXXX (READ OUT FROM AF2) is still in operation?  
DO NOT READ OUT, SINGLE CODE.

Yes..... 1 GO TO Q16

No ..... 2 GO TO Q17

**Q16 Are any of the workers on the site non-Irish?**

DO NOT READ OUT, SINGLE CODE.

Yes..... 1 GO TO Q19

No ..... 2 GO TO Q17

**Q17 ASK IF ANSWER 2 AT Q17 OR 2 AT Q18**

If not, do you have another site currently in operation or one that will be in operation in that we could visit that has non-Irish workers on it?  
READ OUT, SINGLE CODE.

Yes..... 1 GO TO Q18

No .....2 THANK AND CLOSE

**Q18 ASK IF ANSWER 1 AT Q19**

If so, can I please have the address of the site and the contact details for the site manager?

ADDRESS AND SITE MANAGER DETAILS .....  
 .....

**Q19 We hope to visit a range of sites, including some big ones and some smaller ones. Do you know roughly how many companies are/will be working on this site?  
 GET BEST ESTIMATE**

.....

**Q20 Do you know roughly how many people are/will be working on the site?  
 GET BEST ESTIMATE OR USE BANDS BELOW**

- 1-10 workers .....1
- 10-49.....2
- 50-249 .....3
- 250+ .....4
- Don't know .....5

**Q21 We also want to make sure we get enough non-Irish workers to take part in the research. Do you have any idea what proportion on the site are non-Irish for whom English is not their first language?**

- Less 5 per cent .....1
- 5-10 per cent.....2
- 10-20 per cent.....3
- 20 – 50 per cent.....4
- 50 per cent or more .....5
- Don't know .....6

**Q22 Have you any idea what nationalities they are?  
 READ OUT, TICK ALL THAT APPLY.**

- Polish .....1
- Latvian .....2
- Lithuanian .....3
- Slovakian .....4
- Russian.....5
- Spanish.....6
- Portuguese .....7
- Other please specify .....8

**READ OUT TO ALL WHO AGREED TO TAKE PART IN FURTHER RESEARCH:**

Ideally we would like to visit you in January or February 2008 and would like to come at a time when we are able to speak to a number of workers. We can provide posters and fliers to advertise the event to workers if you think that would be useful.

**Thank you.**

**Q23 ASK ALL:** When would be a good time to come on site and speak to workers?

WRITE IN BELOW:

**Q24 ASK ALL WHO AGREED TO TAKE PART IN RESEARCH (1 AT Q14)**

Can you confirm that your company works specifically in XXXXXXXX (Read out the ISIC code)?  
 DO NOT READ OUT, SINGLE CODE.

- Yes.....1 GO TO Q26
- No .....2 GO TO Q25

**Q25 ASK IF ANSWER 2 AT Q15.**

Which area of construction does your company mainly work in?  
READ OUT, SINGLE CODE.

- Site preparation ..... 1
- Building of complete constructions or parts thereof; civil engineering ..... 2
- Building installation ..... 3
- Building completion..... 4
- Renting of construction or demolition equipment with operator ..... 5
- Don't know ..... 6

**Q26 ASK ALL:**

Please can I confirm that your company name is \*\*READ OUT FROM SAMPLE\*\*?  
WRITE IN BELOW:

**Q27 ASK ALL:**

Please can I confirm that your name is \*\*READ OUT FROM SAMPLE\*\*?  
WRITE IN BELOW:

**Q28 ASK ALL:**

Please can I confirm that your telephone number is \*\*READ OUT FROM SAMPLE\*\*?  
WRITE IN BELOW:

**Q29 ASK ALL:**

Please can I confirm your full address including your postcode?  
WRITE IN BELOW:

**Q30 ASK ALL:**

Please can I take down your email address (if have one) in case I need to contact you further about visit arrangements?  
WRITE IN CAREFULLY AND READ BACK TO RESPONDENT:

---

**READ OUT TO THOSE WHO AGREED TO HELP WITH FURTHER RESEARCH:**

Thank you for agreeing to help us with our research.  
Ipsos MORI will contact you directly in due course to discuss full arrangements for the site visit.

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**CLOSE FOR ALL:**

I would like to thank you very much for answering these questions. You and your organisation will not be able to be identified in any report from this research.

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## Appendix 5: Discussion Guide

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### Introduction

*Introduce self and colleague and thank them for taking part.*

*Project:* I work for the Institute for Employment Studies which is an independent not-for profit research company, and we've been commissioned by the Health and Safety Authority to explore some of the particular health and safety issues for non-Irish workers in the construction industry. The findings from this research will be used to ensure that safety awareness campaigns and training and development initiatives may be tailored to the needs of those who would benefit from more support in this area.

*Confidentiality:* Any personal information from your interview that is used in project reports will be quoted anonymously and any references that could identify you will be removed.

*Tape:* I would like to record the interview just so that I can make sure I get everything that you say properly. The recording will be deleted when we are finished with it. Is this okay?

*Time and exit:* The interview will take about an hour – is that okay? You can stop the interview at any time and withdraw consent for the use of any information you have provided.

### Background

#### Country of origin, length of time in Ireland

1. Could you start by telling me when you moved to Ireland?
2. Where did you move from? Did you come over alone, or with friends or family?
3. What was your motivation for moving to Ireland? (*Probe: to find work, better pay, improving English, experience living abroad...*)

## Current work and work history

4. And can you also tell me a little about your current job?
  - Who do you work for?
  - Size of company? Sole trader?
  - Their (main) occupation and type of work undertaken
  - Casual/ temporary/ permanent work arrangement?
  - Do you work alone?
  - Do you work with other Migrant Workers? *If yes:* What countries are they from?
5. How long have you been doing this type of work?
6. Since working in Ireland, have you always worked for this employer/ as a sole trader/ as a casual employee? *If not:*
7. Was your previous job different from your current job? *If yes:* In what way was it different?
8. Do you have any other jobs? How many hours do you work a week (on average)?

## Training history (general for occupation)

9. How did you get into construction work? Did it involve an apprenticeship or a college course? Where did you do that?
10. Have you had any work training since then? What sort of training was it (on or off the job) and what did it cover? Where was this? *Interested in broad vocational training – specific H&S training covered in next sections.*
11. Were you doing the same type of work before coming to Ireland? *If not:* What kind of work were you doing in your home country?
12. Do you have any other qualifications? *If yes:* What are these?

## Confidence in English

13. Have you ever studied English? *If yes:* What course/when/where?
14. When you first arrived in Ireland and started working, how confident were you in your English? (*Probe: technical and everyday language, spoken and written*)

15. When you first started to work in construction, did it affect your ability to work and communicate on site? *If yes: How did you get around this? (Probe: use colleagues to translate, hand gestures, English lessons, any specific additional support from employer)*
16. Were you ever worried that you might be missing important information? Does your employer do anything to help with this?
17. To what extent does your current level in English affect your ability to work now? *(Probe: still have communication difficulties? Does this pose any problems? Concerns about health and safety?)*

## Health and safety training received in Ireland and before

18. When was the last time you had any H&S training? Where was this? Have you received any H&S training since you arrived in Ireland?
19. Have you done the Safe Pass training? Have you done CSCS training?
20. What other training have you done in health and safety, if any? *(Probe: formal/informal/toolbox talks, etc.)*. What sorts of topics were covered? (eg manual handling, use of PPE)
21. Thinking about all/any of the H&S training you've received since working in Ireland...
  - How well do you feel you've understood the content and messages from it? Why was this (eg English, or quality of training)?
  - How relevant did the training feel, for the jobs and tasks you tend to do?
  - How was the training delivered (format, style)? *If poor English: How did you get around the language difficulties? Did someone translate for you?*
22. Did you receive any training in health and safety before you came to Ireland?
23. *If yes: How does the H&S training you've received in Ireland compare with any previous experiences of H&S training you've had in your home country? (Probe: differences in quality, regularity, content, usefulness, relevance, etc.)*
24. What would be your preferred means of receiving health and safety-related information? *(eg written guidance, face-to-face instruction, television or DVD, translated)*

## Awareness of current guidance and initiatives for migrant workers

25. Are you aware of any guidance on health and safety for construction work, specifically for those for whom English is not their first language?

26. Are you aware of any new initiatives to improve H&S for migrant workers doing construction work?
27. Have you heard of, or used, the Safe System of Work Plan (SSWP)? *If yes*: Where used? What did you think of it?
28. Do you know where to look to find more information on relevant health and safety procedures, tools, or regulations? What sources would you use?

## Main risks in current job

29. What do you think the main risks are in your current work? (*Probe using list below*)

<p>Hazardous machinery or vibrating machinery</p> <p>Handling or touching chemical and biological materials and substances</p> <p>Breathing in dusts, aerosols, gases or other substances</p> <p>Noise</p> <p>Movement of fork lift trucks or vehicles on site</p> <p>Driving of vehicles off-site</p> <p>Manual handling (ie lifting/moving of heavy or awkward objects)</p> <p>Risk of slips, trips or falls</p> <p>Repetitive actions</p> <p>Potentially dangerous objects accessible to the public</p> <p>Potentially dangerous levels of electricity (eg when working with electrical systems, electrical appliances)</p> <p>UV radiation/working in the sun</p> <p>High or low temperatures</p> <p>Working/operating at heights</p> <p>Awkward working posture/position, including kneeling</p> <p>Excessive standing</p> <p>Other features of workplace such as steep stairs, blind corners</p> <p>Stressful work situations</p> <p>Harassment or bullying</p> <p>Other workers who do not adhere to health and safety practices</p> <p>Other (please specify)</p>
---

30. Have you experienced any accidents or injuries since working in Ireland? *If yes:*  
What happened?
31. Have you witnessed any accidents or injuries since working in Ireland? *If yes:*  
What happened?
32. Have you experienced any 'near misses'? *If yes:* What happened?
33. Have you experienced any ill-health that was caused or made worse by your work? *If yes:* What was this?

## Critical incidents

*The aim of this section is to determine the **critical requirements** that need to be in place for an individual to follow **good practice** when negotiating a risky activity, or in avoiding accidents and injuries, which is done by examining specific **incidents**. If possible, keep the discussion focussed on an actual example. However, if they can only talk in general terms – that can be useful too.*

### **Interviewer reminder**

**Incident** - A situation where someone (interviewee or a colleague) experienced an accident or an injury, or had a near miss. This might have involved working at heights, manual handling, work around vehicles, or wearing PPE. Can use/refer to examples cited in Q30-33.

**Critical requirements** - What we are looking for, ie surrounding circumstances, influences, thoughts, attitudes, pressure, actions and responses.

The HSA is keen to know what can be done to improve health and safety for non-Irish workers in construction. One of the ways of doing this is by looking at specific incidents that non-Irish workers have experienced. What we do is we gather a couple of examples from the people that we are talking to and then we look across all the incidents to see if there are any patterns or trends that may point to areas requiring more support or advice from the HSA. In doing this, the times when you or a fellow worker did something incorrectly are just as useful as when all appropriate precautions and procedures were followed. Please remember that everything you say is confidential. You will not be individually linked to any of the practices you describe.

*Explaining how data is used is more reassuring than simply promising confidentiality.*

## Overview of incident

34. Can you think of a time since working in Ireland when you, or a fellow worker you were working with, were in a risky or dangerous work situation? The situation may have resulted in an accident or injury, or perhaps there was only a 'near miss'.
35. Thinking about that time, what was the job/task you were doing/were asked to do?
36. When was that?
37. Please describe what happened, and what you did?

*Repeat the above to identify a couple of examples, ideally ones which are easily recalled, where different behaviours were displayed. Examples may be based around key guidance areas, such as working at height, manual handling, work around vehicles, wearing PPE. Try to identify the range/set of examples first. If they worked in construction in their home country, please get at least one example of a situation in Ireland and one from the home country for each respondent. If not, please get two examples from Ireland.*

*The more examples there are of the same type of situation, the better, especially when there were different outcomes. Ideally incidents will deal with similar situations, however if the interviewee can't think of a corresponding example for their home country, it would be okay to use a hypothetical situation. This will be useful to understand the perceived differences between H&S behaviour in each location. If probing on a hypothetical incident, use the questions under the heading 'Hypothetical probes' beginning at question #48.*

## Basic circumstances

38. Were there any signs warning of the risk/hazard?
39. Were you using/did you have access to appropriate equipment? Was the equipment in good working order?
40. Was there clear communication about what the task was, and how to do it?
41. Had you/the worker been trained to do this particular job?
42. Had a risk assessment been done?

## Detailed probes

43. Were you aware of the dangers of doing X in advance? From what source?
44. Why did you think there was a risk of danger? What triggered that knowledge?
45. What did you do when you realised that there was an unaddressed risk?
46. Were you working alone? Who were you working with?

47. Can you tell me generally about the background to that job?
- What was the client/customer like?
  - How did you get on with the boss?
  - Was the budget for the job particularly tight or generous?
  - How about the timescale for the job?
48. What did the people you were working with do and say at the time?
49. What about the bosses/foremen/people in charge of the job? What did they say or do at the time?
50. Did you speak to anyone else about it? What was their reaction?
51. What did you think at the time?
52. How much choice did you feel you had about continuing with the task (without taking further precautions)? Did you feel under pressure? Why was this?
53. What happened as a result of what you did? What was the outcome?
54. Do you think the risk/or accident was dealt with well? How could it have been dealt with better?
55. Can you now think of a time when you dealt with a similar situation differently? This could be another time in Ireland, or perhaps a similar situation experienced in your home country (if previous work experience was also in construction/same line of work).

### Hypothetical probes

56. Using the example of the risky situation in Ireland, can you think of how that same situation would have been dealt with in your previous experiences of construction work in your own country?
57. What might have been different leading up to the accident/near miss?
- Would you have been made aware of the danger/hazard in advance? From what source?
  - Would you have been more likely to notice the risk yourself? Why is this?
  - Would the circumstances around the job, client, pressures, have been different? In what way? Why is this?
58. How might the situation have been handled differently elsewhere (in the home country)?

- Would the boss/foreman have behaved differently? How so?
  - Would your fellow workers have acted or behaved differently? In what way?
59. If the same situation had happened elsewhere (in the home country), do you think it would have had a different outcome? Would this have been better or worse? Why do you think this?

## Assessment of awareness and knowledge of H&S procedures and legislation relevant to current work

I now want to ask you a few questions about how much you know about H&S procedures. How much different people know varies – some people will know more than others and one of the main aims of this study is to find out what people do and don't know.

60. In general, how well informed do you feel about H&S procedures?
61. And in general, how well informed do you feel about H&S regulations? This includes your rights, and the responsibilities of your employer.

**Use summary sheet.** Now I'm going to read out a few questions about different work situations which correspond to specific health and safety procedures and guidance. For each question, I want you to tell me how much you know about the H&S guidance on this subject, (*show card*) either:

- a) You know about it and understand it pretty well
- b) You know a little bit about it but are not confident you know enough
- c) You don't know but you feel you should
- d) You don't know and you don't need to know

- 62. Working at heights
- 63. Manual handling
- 64. Work around vehicles
- 65. Wearing PPE
- 66. Risk assessments (how to conduct, where, why)
- 67. Health hazards related to construction (eg noise hazards, vibration hazards, dermatitis)
- 68. Employers' responsibilities around H&S
- 69. Workers' rights in regards to H&S



### Things they know about

*This section is about finding the messages that they received about health and safety procedures, including any misconceptions and the sources of those messages.*

*Select one topic (rotating topics across interviewees)*

You said you felt you knew about X...

70. Can you tell me briefly what you understand by that?

I'm just trying to get an idea of the sorts of things that come to mind. Please don't worry about getting something wrong – it's not meant to be a test.

71. Anything else?

72. Can you remember how and where you learned about that? And from whom?

### Things they know a little about

*Select one topic (rotate topics across interviewees)*

You indicated that you might like to know more about X...

73. Have you received any information about this in the past?

74. Can you tell me why you think it is important to know more about this?

75. Where do you think you might get that information? What sources would you use?

76. Are there other ways you would prefer to find out about it?

### Things they feel they need to know about

*Select one topic (rotate topics across interviewees)*

You indicated that you might like to know more about X...

77. Can you tell me why you think it is important to know about this?

78. Where do you think you might get that information?

79. Are there other ways you would prefer to find out about it?

### Things they don't think they need to know about

*Select one topic (rotate topics across interviewees)*

80. You said that you don't need to know about X. Can you tell me why you think this isn't important in your job?

## Levels of integration within the workforce and community

*Interview likely to last another ten minutes (max.), let interviewee know that the interview is almost over by checking that they are okay for time.*

81. Generally speaking, how have you found your experience of working in Ireland?
82. Who do you spend time with outside of work? Do you know many people in Ireland? Are they Irish or from a similar background to you?
83. Do you feel that you've been able to get to know your Irish workmates? How well integrated do you feel at work?
84. *If working with other migrants:* Do migrant workers and Irish mix well? How do they get on? Do they help each other out?
85. How would you describe your relationship(s) with your boss/bosses? Is it easy or difficult? Familiar or business only?
86. Do you feel able to voice concerns about health and safety? Who would you speak to, and why?
87. Do you ever feel pressure to work unsafely? Who does this come from?
88. Have you ever felt discriminated against or excluded at work, either by a colleague or boss? *If yes:* Can you tell me about this? How do you think the discrimination was expressed?
89. Do you feel that you are given a fair or equal distribution of tasks on site? Do certain people get more than their share of undesirable tasks? Which tasks are unevenly assigned, and to whom?
90. Statistics show that non-Irish construction workers are more likely to have accidents, or be injured at work. Why do you think this may be? Does this surprise you? Can you think of any examples from your own experiences which could help explain this?
91. What future support would you like to receive from the HSA?

## Wrap up

*Thanks and close interview.*

*Give incentive, and get signature for receipt.*

*Provide them with your card, and reassure them of confidentiality.*

*Summary will be available if they wish to receive one.*

## List of key words for interpreters

working at heights

manual handling

guidance and information

rights

responsibilities

risk assessments

PPE (Personal Protective Equipment)

asbestos

demolition

H&S (health & safety)

regulations

anonymous

confidential

near miss (when an accident or injury almost happened, but didn't)

integrated

'Safe Pass' to stay the same

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## **Appendix 6: Irish Questionnaire**

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# HEALTH AND SAFETY IN CONSTRUCTION

CONFIDENTIAL TO IPSOS MORI

IRISH

We want to understand how you feel about health and safety in construction.

This is not an exam. There are no right or wrong answers. Please answer these questions as well as you can.

When you have finished please give the questionnaire to the Ipsos MORI fieldworker on site.

We will not share your answers with anyone else. If you have any questions, please phone Trevor Bacon at Ipsos MORI on (01) 632 6000.

THANK YOU FOR HELPING US. YOU CAN PICK UP TWO LOTTERY SCRATCH CARDS WHEN YOU HAND IN YOUR QUESTIONNAIRE. THIS IS OUR WAY OF SAYING THANKS.



## About you

### 1. How old are you?

Years

### 2. How old were you when you finished your education?

Years

Still in education  1

### 3. What is your nationality? (please tick)

- a) Polish  1
- b) Latvian  2
- c) Slovakian  3
- d) Lithuanian  4
- e) Russian  5
- f) British  6
- g) Other (please specify)  7 .....

## About your work

### 4. How long have you been working in construction?

Years  Months

### 5. What is your main trade? (please tick one only)

- a) Bricklayer  1
- b) Carpenter and joiner  2
- c) Roofer  3
- d) Plasterer  4
- e) Glazier  5
- f) Plumber  6
- g) Electrician  7
- h) Painter and decorator  8
- i) Labourer  9
- j) Steelfixer  10
- k) Other (Please specify)  11

### 6. Are you...? (please tick one only)

- An employee  1 *Go to Q7*
- An agency worker  2 *Go to Q9*
- Self-employed  3 *Go to Q9*

### 7. If you are an employee, how big is your company? (please tick one only)

- Very small  1 *1 – 10 employees*
- Small  2 *11 – 49 employees*
- Medium  3 *50 – 250 employees*
- Large  4 *250+ employees*
- Do not know  5

### 8. How long have you been with this company?

Years  Months

**Go to Q9**

### 9. Do you work on...? (please tick all that apply)

- Houses  1
- Commercial properties (eg shops and offices)  2
- Civil projects (eg roads and bridges)  3
- Do not know  4

### 10. Besides this job, do you have any other paid jobs? (please tick)

Yes  1 No  2

### 11. How many hours a week do you work in total (including other jobs and overtime)?

Hours

## Health and safety training

**12. Have you had any of this health and safety training since you've been working in Ireland? (please tick all that apply)**

- a) Safe Pass  1
- b) CSCS  2
- c) Site induction  3
- d) Toolbox talk on health and safety  4
- e) Other on site training on health and safety  5
- f) Other off-site training on health and safety  6
- g) None  7

**13. When was the last time you had health and safety training in Ireland?**

Month  Year

No training in Ireland

**14. How well did you understand the training you had on health and safety in Ireland?**

- a) Very well  1
- b) Well  2
- c) OK  3
- d) Not very well  4
- e) Not at all  5
- f) Have not had any training  6

## Risks at work

Please tick the box that says what you really think – remember that this is confidential.

15. How risky is:	Very low risk	Low risk	Medium risk	High risk	Very high risk
Working on the top rungs of a ladder?					
Climbing down the scaffolding instead of using a ladder?					
Moving a load that is too heavy for you?					
Carrying a load that is too large to see over?					
Not wearing a hard hat in a hard hat area?					
Not wearing gloves for a job that needs them?					
Walking behind a reversing vehicle on site?					
Walking across a vehicle compound on a site to get somewhere more quickly?					

**16. How often have you done these things in Ireland over the last 12 months?**

	Never	Less than once a week	Once a week	More than once a week	Every weekday	Not part of my job
Working on the top rungs of a ladder						
Climbing down the scaffolding instead of using a ladder						
Moving a load that is too heavy for you						
Carrying a load that is too large to see over						
Not wearing a hard hat in a hard hat area						
Not wearing gloves for a job that needs them						
Walking behind a reversing vehicle on site						
Walking across a vehicle compound on a site to get somewhere more quickly						

**17. Whilst working in construction in Ireland have you:**

	Yes	No
Had an accident or injury at work?	<input type="checkbox"/>	<input type="checkbox"/>
Seen a colleague have an accident or injury at work?	<input type="checkbox"/>	<input type="checkbox"/>
Had a near miss at work?	<input type="checkbox"/>	<input type="checkbox"/>
Had a health problem caused or made worse by work?	<input type="checkbox"/>	<input type="checkbox"/>

**19. How happy are you with the working conditions in your job?**

Very happy	<input type="checkbox"/>	1
Happy	<input type="checkbox"/>	2
Neither happy nor unhappy	<input type="checkbox"/>	3
Unhappy	<input type="checkbox"/>	4
Very unhappy	<input type="checkbox"/>	5

**18. When would you report an accident to a supervisor (please tick one only)?**

Whenever I am injured in any way	<input type="checkbox"/>	1
Only if I have to be off work	<input type="checkbox"/>	2
Only if I have broken a bone	<input type="checkbox"/>	3
Only if I have to go to hospital	<input type="checkbox"/>	4
Never	<input type="checkbox"/>	5

**20. How safe do you feel on construction sites in Ireland?**

Very safe	<input type="checkbox"/>	1
Quite safe	<input type="checkbox"/>	2
Neither safe nor unsafe	<input type="checkbox"/>	3
Quite unsafe	<input type="checkbox"/>	4
Very unsafe	<input type="checkbox"/>	5



Health and safety in construction

Please tick the box that says what you really think – remember that this is confidential.

21. In your workplace:	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
My boss would like me to stop work, rather than put my health and safety at risk					
I know a lot about health and safety law in Ireland					
I feel respected by my co-workers					
Health and safety does not seem to be important in the construction industry in Ireland					
I sometimes feel pressured to work unsafely					
I feel uncomfortable asking for help from my co-workers					
Some health and safety procedures are not really practical					
When I need personal protective equipment e.g. gloves, it is always provided					
I would feel uncomfortable raising a health and safety concern at work					
My co-workers pay the same attention to health and safety as I do					

22. In general:	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
If workers follow all the safety rules they can avoid many workplace accidents					
It is more important to get the job done than to follow a safety rule that takes more time					
Most workers will be involved in accidents which result in a personal injury at some time					
Avoiding accidents is a matter of luck					
Workers' accidents and injuries happen because they make mistakes					
Accidents and injuries happen because workers do not take enough interest in safety					
Accidents are usually caused by unsafe equipment and poor safety rules					
There is a direct link between how careful workers are and the number of accidents they have					

**Understanding English health and safety information**

**23. How easy do you find it to understand written English on site?**

Very difficult – cannot understand any of it  5


Very easy – understand everything  1

Easy – understand most of it  2

OK – can understand around half of it  3

A bit difficult – can understand only a little  4

*Please read this passage in English and answer the two questions that follow:*

<p><b>Safe Working with Ladders</b></p> <p>Ladders should only be used for work that won't take long and if there is no safer alternative.</p> <p>They must be well maintained and should be checked once a day.</p> <p>They should be secured so they cannot slip.</p> <p>Put the ladder at an angle so that it won't slip outwards (one out for every four up).</p> <p>Access ladders should extend about 1m above the working platform. This will give a handhold for people getting on and off.</p>	
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**24. According to the text, how often should you check ladders?**

Once a day  1

Once a week  2

Once a month  3

Do not understand the English text  4

**25. According to the text, you should use a ladder:**

Every time you need to work at height  1

Only when there is no safer alternative  2

When you are working below a certain height  3

Do not understand the English text  4

## Signs

26. Please look at these signs and tick the box with the right meaning:



- Ear protection must be worn
- No iPods or personal stereos
- Listen to instructions



- No running
- Beware of trips
- No games



- Danger electricity
- Lightning risk area
- Check electric cables



- No lifting
- Check load weight
- Beware overhead load

Thank you for doing this questionnaire

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## Appendix 7: Details of Participation Rate for the Employer Screening Survey

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Table A7.0.1: Employer survey: Breakdown of participation

Dialled sample	983
Complete interviews	200
Hard appointments	14
Soft appointments	193
Engaged	4
No reply	130
Bad numbers	261
Ineligible for this study*	76
Out of quota	22
Other dead leads	1
Refused	82
<i>Total</i>	983
<b>Refusal rate (refusal/eligible outcomes)</b>	<b>20%</b>

\* Employers were ineligible because they were either not construction companies or were involved in the construction sector but did not do any work on sites.

Source: IES, 2008

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## Appendix 8: The Use of Qualitative Software

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### Qualitative software

The term Computer Assisted Qualitative Data Analysis Software (CAQDAS) refers to all qualitative analysis software packages. In this research, Atlas.ti was used on full transcripts of interviews.

The use of CAQDAS ensured rigorous and systematic analysis of varied qualitative information. It allowed a systematic exploration of themes, ensured that all the interview data was used, and ensured consistency in analysis of in-depth interviews conducted by different researchers. A code list was developed by the research team and applied to the data, with each code carefully defined to ensure consistency of coding between the researchers (see Figure A8.1).

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**Figure A8.1: List of codes used in qualitative analysis**

Background  
Work and training  
Confidence in English  
H&S training  
Current guidance for MWs  
Main risks in current job  
Critical incidents  
Awareness & knowledge of H&S  
Integration with workforce, community  
Reasons why NI at greater risk  
Future, additional support

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Transcripts in Atlas.ti can be grouped into any number of 'Families', which allows easy grouping of information into different categories, thus facilitating the easy and systematic handling of the data. In this case, each transcript can be placed in a family according to:

- age of interviewee
- English fluency (good or not)
- length of time in Ireland
- nationality
- whether the individual had personal experience of accident or injury at work
- region in which interview was conducted
- size of employer
- time in construction industry
- whether they had received formal training in a trade
- whether they work with other migrants.

This makes it easy to retrieve information relating to each criterion.