

# Highways and transportation sector UK Employment trends and workforce make-up

## Benchmarking study overview





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## Introduction

The highways and transportation (H&T) sector is growing and changing, with increasing expectations to provide sustainable transport, reduce carbon emissions, improve health, develop people and communities, and provide employment, yet very little is known about the changing size and structure of the collective workforce and the changing skills needed within the sector.

The Chartered Institution of Highways and Transportation (CIHT) is embarking on an initiative to track employment trends and gather evidence on key skills issues, which involves a biennial survey across a wide selection of employers from the H&T sector in the UK.

During 2023, CIHT commissioned the first survey, establishing the benchmark upon which future surveys will build to generate an understanding of employment trends and establish evidence-based insights to aid future planning and development of the sector.

As more data are gathered over the coming years, we trust the value of this programme will grow for the employers and individuals working in our sector.

### Background

CIHT represents and qualifies professionals responsible for the planning, designing, building, management, maintenance, and operation of H&T infrastructure and services. It operates as a key source of information and advice for national and local governments and other relevant stakeholders.

With the UK aiming to be net zero by 2050, there are significant implications for the H&T sector, creating both challenges and opportunities. However, the sector requires a skilled and effective labour force to meet its targets, and recent research suggests recruitment and training issues persist.<sup>1,2</sup> Training

and supporting staff to gain new skills in response to technological advances and the net zero agenda may be particularly difficult.

Meanwhile, the UK economy has experienced significant challenges in recent years: the UK's exit from the EU, the Covid-19 pandemic, supply-chain issues arising from the pandemic, international conflicts, and rising costs due to inflation.

These issues have the potential to seriously inhibit growth and development in the H&T sector. CIHT aims to address these challenges and provide the first comprehensive employment and skills map to support the strategic development of the sector.

### Aims and objectives

The overarching aim of the research was to gather detailed labour market intelligence (LMI) for the H&T sector, which will be used as a first marker in an ongoing longitudinal study.

To achieve this, several objectives were specified:

- ✔ Define the area of interest, including a working definition of the H&T infrastructure sector
- ✔ Gather demographic and company-level information on the H&T sector
- ✔ Identify skills shortages and gaps
- ✔ Examine skills gaps and training needs
- ✔ Explore how CIHT can play a role in shaping future action for the sector
- ✔ Provide an evidence base against which changes over time, including comparisons and trends, can be monitored.

<sup>1</sup> Future Highways Research Group (FHRG) (2022), Human Capital Management: Survey update, Waypoint Meeting: Q3, ADEPT / Proving Research Partnership, 14–15. See [https://adeptnet.org.uk/sites/default/files/media/2022-09/FHRG%20Programme%20Waypoint%20Q3%202022\\_0.pdf](https://adeptnet.org.uk/sites/default/files/media/2022-09/FHRG%20Programme%20Waypoint%20Q3%202022_0.pdf) (accessed 30 May 2023).

<sup>2</sup> Transport Scotland (2020), National Transport Strategy 2: Protecting our climate and improving lives, 27. See <https://www.transport.gov.scot/media/47052/national-transport-strategy.pdf>.

## Key findings and recommendations

### UK H&T workforce size and scale

To establish a strong picture of the sector, respondents were asked about the size and make-up of their businesses and the business areas which their work covered. Over time these data will demonstrate the outcomes of our collective efforts in improving diversity within the sector, how well we represent the communities in which we work, and where gaps may start to appear or widen in the workforce profiles and skill sets.

#### Key findings

- ✔ The sector has approximately 1.5m to 1.9m workers (about 5% of the total UK workforce)
- ✔ They are 82% male and 18% female (compared with 48% female in the total UK workforce)
- ✔ The sector's age profile roughly mirrors that of the UK workforce, although in public sector organisations the age profile is skewed slightly towards an older demographic
- ✔ 79% identify as White British (compared with 84% White in the UK-wide workforce)
- ✔ 39% work as frontline operatives and 32% in professional services, design, or project management.

### Recruitment

To monitor over time the pace of change and the scale of the sector's challenges, the survey included questions on the current make-up of the workforce, including diversity, breadth of roles on offer, and salary levels. This information will help to inform how we attract people and encourage them to view our sector as a place of choice to build their careers, and it will help to demonstrate, strengthen, and support the direction our sector is taking in becoming more inclusive and diverse.

#### Key findings

- ✔ 44% of employers report frontline operative roles are hard to fill, and 37% of employers report professional services/design project management roles are hard to fill
- ✔ Larger companies typically find it harder to fill roles than smaller organisations

- ✔ All business areas in the sector are experiencing similar recruitment challenges
- ✔ 52% of respondents currently employ apprentices, and 44% employ graduates
- ✔ Annual staff turnover is highest for frontline operatives in the private sector and professional services in the public sector
- ✔ Two in five employers/respondents (42%) say that salary levels impact recruitment and retention for professional services, design, and project management roles, and one third (35%) say likewise for senior management positions
- ✔ Academic and public sectors struggle to match the more competitive salaries offered by private organisations, impacting recruitment and retention, although the private sector still experiences recruitment and retention challenges linked to salary levels, albeit to a lesser extent.

### Skills, training, and qualifications

Training and qualifications of employees are central to the development of the sector. Questions were asked to understand the current and future skills needs, as well as what new skill sets will be required as the sector adapts and embraces new ways of working.

#### Key findings

- ✔ Employers currently highly rate soft skills and those related to sustainability and say they will continue to be important in the future. They currently rate their knowledge and understanding of digital technologies as average and see this as an emerging priority in the future
- ✔ Confidence in the current skill levels of the workforce is higher among larger organisations and academic organisations
- ✔ There is concern that private sector competition and budget cuts are eroding public sector expertise
- ✔ The training that is currently available meets the needs of most (but not all) organisations. Additional training – not perceived to be currently available – would be welcome in surfacing/tarmacking and digitalisation

- ✔ Cost is given as the main barrier to training and upskilling. Larger companies are more likely to cover the cost of training and qualifications
- ✔ 78% pay for staff membership of professional bodies. CEng is the most commonly held professional qualification, followed by MRICS
- ✔ CIHT is viewed by interview participants as the key body for the sector, and substantial value is attached to organisational membership by most.
- ✔ Two main challenges are foreseen over coming years: increased costs due to inflation, and government spending cuts restricting funding. These issues are cited by organisations across all sectors and all sizes except micro companies, which are most concerned about their lack of skills and knowledge of emerging issues
- ✔ Two main opportunities are anticipated for the H&T sector: decarbonisation – provided there is sufficient supporting action – and improving the pipeline of talent by strengthening links between industry and education

### Future landscape of the sector

The H&T sector is constantly changing and adapting to challenges, new and old. Some are more significant than others.

To gain some insight into organisations' views of the sector's future, respondents were asked about anticipated and potential challenges the sector will be facing in the coming years.

This information will help to show where and how the sector can best prepare for the challenges ahead.

### Key findings

- ✔ No skills or job roles are anticipated to be lost, but new roles are expected to emerge in digital, data analysis, and sustainability
- ✔ Survey respondents are optimistic they will grow in size over the next five years, although there are variable confidence levels in the stability of the sector, with some interviewees raising concerns about perceived under-investment, an aging workforce, and rising costs
- ✔ Between 53,000 and 223,000 additional workers may be required over the next five years. This is purely to meet anticipated sector expansion and does not include workforce churn.

## Call to action for the H&T sector

### UK H&T workforce size and scale

The survey results show that the H&T sector employs around 5% of the total UK workforce and is a strong contributor to the UK economy. Using the evidence gathered, this contribution needs to be promoted to attract investment and ensure a sustainable future for the sector and for those working in it.

It is recognised that the traditional image of the sector needs to be reframed and awareness of the current opportunities for building a career within the sector needs to be improved. A stronger understanding is needed of how the sector can become more inclusive, to attract a more diverse workforce, including younger generations.

The training offer needs to be strengthened both for individuals already in the sector and to attract new talent, to ensure there are the skills needed, for now and the future.

We are calling for the sector to join with CIHT in:

- ✔ Promoting the importance of the H&T sector and its contribution to the economy and to the quality of life for communities across the UK
- ✔ Transforming the perception of the sector (more than just hard hats and high vis) to better represent what it offers in terms of careers and to become more attractive and accessible to all, ensuring that our industry is a more equal, diverse, and inclusive place to work
- ✔ Investing in training and qualifications for a resilient and sustainable workforce, identifying and developing the skills and jobs that are vital for the transition to net zero and the changing digital landscape.

## Acknowledgements

For this survey and report, CIHT worked with Pye Tait Consulting, an independent research agency. Over 100 employers of different sizes within the H&T sector took part, including private firms, public sector bodies (e.g. local authorities), and academia.

## Methodology

The research was undertaken via four main strands:

- ✔ A workshop between Pye Tait Consulting, CIHT staff, and key stakeholders to co-design and finalise the approach to the research and inform the development of the research tools
- ✔ Secondary desk research to explore existing data and reports
- ✔ An online survey of H&T organisations
- ✔ Follow-up in-depth interviews.

The online survey was live between February and March 2023, open to anyone involved in the H&T sector, including private firms, public sector bodies (e.g. local authorities), and academia. Targeting of survey participants was deliberately weighted towards achieving a greater proportion of responses from medium and larger companies. In total, 117 valid responses were received.

Follow-up in-depth telephone interviews were undertaken with a cross-section of survey respondents who were recruited from a specific question in the survey. A total of 13 interviews were conducted in March 2023.

## Definitions and guidance used in the survey

For this survey, we defined the H&T sector as businesses involved with the planning, design, construction, maintenance, and operation of land-based transport systems and infrastructure in the UK.

We asked employers to provide their most recent people data, which included all staff who spend the majority (75% or more) of their time in H&T.

We asked for estimates, averages, and approximations in recognition that many collect and store data in different formats and for ease of answering.

To categorise job roles, the following groupings were used:

### **Frontline operative**

(e.g. traffic management maintenance gang, banksman, road marking, plant operator, sign installation)

### **Contract and account management**

(e.g. client relationship manager, contract manager, commercial manager, estimator, strategic stakeholder engagement, compliance)

### **Account support / enabling functions**

(e.g. commercial, finance, HR, legal, admin)

### **Professional services / design / project management**

(e.g. asset management, operations manager, technical support manager, engineer, transport planner, quantity surveyor, site manager, carbon/climate/environmentalist, digital manager, safety, quality assurance, performance, innovation, professor, lecturer, researcher)

### **Senior management**

(e.g. director of business unit, managing director, CEO, board member)

### **Customer services / community engagement / communications / work winning**

(e.g. marketing and communications, press relations, social value, community liaison, bid manager, business development, data analyst/manager, market analyst)

Business areas were given as:

- ✔ Transport planning
- ✔ Materials and geotechnics
- ✔ Traffic management, safety, and systems engineering
- ✔ Infrastructure planning, design, construction, and/or maintenance
- ✔ Transport-related structural engineering
- ✔ Academic research, teaching, or training
- ✔ Research and development in H&T
- ✔ Intelligent transport systems.



CIHT provides strategic leadership and support to help our members develop, deliver, and maintain sustainable solutions for highways, transport infrastructure, and services that:

- ✔ **Address the challenges of climate change**
- ✔ **Support the economy**
- ✔ **Help address societal inequalities**
- ✔ **Reduce environmental degradation**
- ✔ **Respond to a changing world**

We bring members together to share, learn, and feel confident about addressing these challenges through the application of good practice, by embracing innovation and by acting with integrity. It is through this and the values that CIHT can demonstrate and deliver on thought leadership and shaping the highways and transportation sector for the public benefit.

Whether you are a student, apprentice, work in the private or public sectors or are a company director, CIHT has a place for you and a commitment to fulfilling your professional development needs throughout your career.

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119 Britannia Walk  
London N1 7JE

t: +44 (0)20 7336 1555  
e: [info@ciht.org.uk](mailto:info@ciht.org.uk)  
[www.ciht.org.uk](http://www.ciht.org.uk)

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