

## Employment trends survey and report

### Questionnaire

### Purpose of the survey

The highways and transportation 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 we know very little about the size and structure of employment and about the level of skills needed to work in the sector.

The Chartered Institution of Highways and Transportation (CIHT) aims to address this gap and provide the first comprehensive employment and skills map to help the strategic development of the sector. This initiative will include conducting a survey biennially and producing a dynamic report on the averages and trends unique to our sector.

To achieve this, CIHT is working with Pye Tait Consulting, an independent research agency. We are keen to attract employers from across the sector, different-sized organisations and varying specialist expertise to complete the survey, to ensure a diverse representation of the sector.

**For this survey, we are defining the highways and transportation sector as businesses involved with the planning, design, construction, maintenance and operation of land-based transport systems and infrastructure in the UK.**

**We are interested in the most recent data you have on your employees.**

### How will we use the results?

This survey will help to:

- Inform our work in this area and build the evidence base
- Provide a true benchmark for highways and transportation businesses to measure against
- Demonstrate comparisons and trends which increase in knowledge value over time
- Establish an evidence base, from which to influence government on key issues for our sector
- Give clarity on the level of skills development needed within the sector
- Illustrate areas of diversity where time and investment will reap value
- Highlight the opportunities for attracting new talent to the sector

### Data Protection

Your responses will be treated confidentially by Pye Tait Consulting. Responses will be reported anonymously to CIHT in line with General Data Protection Legislation (GDPR) and the Market Research Society (MRS) Code of Conduct. Any Personal Data you choose to provide (where asked) will be on a voluntary basis, treated in the strictest confidence by Pye Tait Consulting, and only used for the purpose(s) stated in the questionnaire.

To view our privacy notice, please visit [Participant Privacy Notice | Pye Tait Consulting](#).

If you have any queries about the research, please contact Tom Wilson at [t.wilson@pyetait.com](mailto:t.wilson@pyetait.com) or call 01423 509433, or Joan Roemmele at [Joan.Roemmele@ciht.org.uk](mailto:Joan.Roemmele@ciht.org.uk)

## PART 1: About your business

To establish a strong understanding of the organisations operating within our sector, we are interested to hear about the size and location of your business. Questions are also included to help identify a base line for diversity in gender, age, and ethnicity of the sector's employees who are working for the majority of their time (75% or more) in highways and transportation. 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.

1. Please indicate which sector your organisation operates in. (select one option)

Public	
Private	
Academia	
Other (specify)	

If 'other', please specify:

2. Which areas does your business cover? (select all that apply)

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 highways and transportation	
Intelligent transport systems	

3. Approximately how many staff does your business directly employ in total?

4. Using the definition for highways and transportation as 'businesses involved with the planning, design, construction, maintenance and operation of land-based transport systems and infrastructure in the UK', **approximately how many of your total staff are involved in highways and transportation?**

Please include all staff who spend the majority, for example 75% or more, of their time in highways and transportation including:

**Frontline Operative** (e.g. TM, 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', MD, CEO, Board member)

**Customer Services / Community Engagement / Communications / Work winning** (e.g. Marketing & Communications, Press Relations, Social Value, Community Liaison, Bid Manager, Business Development, Data Analyst/Manager, Market Analyst)

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## Part 2: Workforce characteristics

For the following questions in this section, please provide answers in relation to those staff in your organisation who spend the majority (for example 75% or more) of their time in highways and transportation.

This section is important to us as we'd like to learn a bit more about who works in the sector so we can use this information to monitor its diversity and understand better the scale of the challenge. For example, women make up 47% of the UK workforce yet remain under-represented in the transport sector accounting for only 20% of workers.

5. Approximately what percentage of your directly employed staff involved in highways and transportation are:

(enter a whole number in each box – total should sum to 100%)

Full-time	
Part-time	
<b>TOTAL</b>	<b>100</b>

By part-time, we mean someone who works fewer hours than a full-time worker in an equivalent position.

6. Approximately what percentage of your directly employed staff involved in highways and transportation identify as:

(enter a whole number in each box – total should sum to 100%)

Male	
Female	
Non-binary	
Prefer to self-describe	
Prefer not to say	
<b>TOTAL</b>	<b>100</b>

7. Approximately what percentage of your directly employed staff involved in highways and transportation are aged:

(enter a whole number in each box – total should sum to 100%)

Under 21	
21 to 24	
25 to 34	
35 to 44	
45 to 54	
55 to 64	
65+	
<b>TOTAL</b>	<b>100</b>

8. What percentage of your directly employed staff involved in highways and transportation would you estimate are:

(enter a whole number in each box – total should sum to 100%)

Asian or Asian British	
Black or Black British	
Mixed/multiple ethnic background	
White British	
Prefer not to say	
Prefer to self-describe	
Any other ethnic background (specify)	
<b>TOTAL</b>	<b>100</b>

If Other – We invite you to provide further details:

## Part 3: About your workforce

We are interested in the breadth of roles our sector can offer and how that may change over time, salary levels, and the level of diversity represented specifically within senior management levels. These are all key factors in how we attract people and encourage them to view our sector as a place of choice to build their careers. This information will help to demonstrate, strengthen, and support the direction our sector is taking in becoming more inclusive and diverse, and it will help to identify the need and demand for specific skill sets.

Again, please provide answers in relation to those staff in your organisation who spend the majority, for example 75% or more, of their time in highways and transportation.

9. Approximately what percentage of your directly employed staff involved in highways and transportation are:

(enter a whole number in each box – total should sum to 100%)

<b>Frontline Operative</b> (e.g. TM, maintenance gang, banksman, road marking, plant operator, sign installation)	
<b>Contract and Account Management</b> (e.g. Client Relationship Manager, Contract Manager, Commercial Manager, Estimator, Strategic Stakeholder Engagement, Compliance)	
<b>Account Support / Enabling Functions</b> (e.g. Commercial, Finance, HR, legal, admin)	
<b>Professional Services / Design / Project Management</b> (e.g. Asset Management, Operations Manager, Technical Support Manager, Engineer, Transport Planner, Quantity Surveyor, Site Manager, Carbon/Climate/Environmentalism, Digital Manager, Safety, Quality Assurance, Performance, Innovation, Professor, Lecturer, Researcher)	
<b>Senior Management</b> (e.g. Director of 'business unit', MD, CEO, Board member)	
<b>Customer Services / Community Engagement / Communications / Work winning</b> (e.g. Marketing & Communications, Press Relations, Social Value, Community Liaison, Bid Manager, Business Development, Data Analyst/Manager, Market Analyst)	
<b>TOTAL</b>	<b>100</b>

10. Thinking back over the past three years, what would you estimate is the average annual turnover of directly employed staff who spend the majority (for example 75% or more) of their time in highways and transportation? **Please provide your answer as an estimated percentage of total staff, to the nearest whole number. If unsure, please leave blank.**

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11. To more fully understand people movement by different business-areas, please estimate the average turnover figures (over the past three years) for the following categories of staff.

**Please provide your answer as an estimated percentage of staff in that area of business, to the nearest whole number. If unsure, please leave blank.**

<b>Frontline Operative</b> (e.g. TM, maintenance gang, banksman, road marking, plant operator, sign installation)	
<b>Contract and Account Management</b> (e.g. Client Relationship Manager, Contract Manager, Commercial Manager, Estimator, Strategic Stakeholder Engagement, Compliance)	
<b>Account Support / Enabling Functions</b> (e.g. Commercial, Finance, HR, legal, admin)	
<b>Professional Services / Design / Project Management</b> (e.g. Asset Management, Operations Manager, Technical Support Manager, Engineer, Transport Planner, Quantity Surveyor, Site Manager, Carbon/Climate/Environmental, Digital Manager, Safety, Quality Assurance, Performance, Innovation, Professor, Lecturer, Researcher)	
<b>Senior Management</b> (e.g. Director of 'business unit', MD, CEO, Board member)	
<b>Customer Services / Community Engagement / Communications / Work winning</b> (e.g. Marketing & Communications, Press Relations, Social Value, Community Liaison, Bid Manager, Business Development, Data Analyst/Manager, Market Analyst)	

12. Approximately how many apprentices and graduates do you currently employ in highways and transportation? Please put '0' if you don't currently employ any.

Apprentices	
Graduate trainees	

13. In a typical year, approximately how many of each of the following do you recruit to your highways and transportation workforce?

<b>Graduate/Degree apprentices</b> (e.g. Level 6/7 or (SCQF Levels 8 to 11) e.g. Civil Engineer, Transport Planner, Project Manager	
<b>Higher apprentices</b> (e.g. Level 4/5 or SCQF Levels 7) e.g. civil engineering senior technician	
<b>Advanced/Foundation Apprentices</b> (Level 3 or SCQF Level 6) e.g. transport planning technician, civil engineering technician, construction: civil engineering	
<b>Intermediate apprentices</b> (L2 or SCQF Level 5) e.g. highways maintenance skilled operative, road surfacing operative, construction	
<b>Other trainees</b>	

14. Looking ahead, in five years' time, how do you anticipate the number of directly employed staff involved in highways and transportation changing in each role compared to numbers now: (tick one option per row, leave blank if unsure)

Numbers of staff in this role will....

	Increase	Stay the same	Decrease
Frontline Operative			
Contract and Account Management			
Account Support / Enabling Functions			
Professional Services / Design / Project Management			
Senior Management			
Customer Services / Community Engagement / Communications / Work winning			
Apprentices			
Graduate trainees			

15. Thinking of directly employed staff currently in senior management roles (e.g. Director of 'business unit', MD, CEO, Board member) with involvement in highways and transportation, what percentage would you estimate are:

Women	
From a minority ethnic background (i.e. non-White background)	
People with disabilities	

16. Compared to other sectors, do you feel salary levels are an issue for recruitment and retention within the sector, for the following roles? (tick one option per row, leave blank if unsure)

	Yes	No
Apprentices		
Graduate trainees		
Frontline Operative		
Contract and Account Management		
Account Support / Enabling Functions		
Professional Services / Design / Project Management		
Senior Management		
Customer Services / Community Engagement / Communications / Work winning		

Please provide any additional comment as to why you believe salary levels may or may not be an issue for some roles.

## PART 4: Skills, training, and qualifications

Training and qualifications of our people are central to lifting the sector, evolving and making progress and improving the outputs and outcomes that we collectively deliver. We are keen to understand the current and future needs, the changes in what new skill sets will be required as the sector adapts and embraces new ways of working.

Again, please provide answers in relation to those staff in your organisation who spend the majority (for example 75% or more) of their time in highways and transportation.

17. As an employer, do you pay for your staff to obtain any of the following training, professional qualifications or memberships?

(tick one option per row, leave blank if unsure)

	Yes	No
Doctorate degree (Level 8 or SCQF L12)		
Master's degree/postgraduate degree (Level 7 or SCQF L11) or equivalent		
Bachelor's degree (Level 6 or SCQF L10) or equivalent		
HNC, HND, or Foundation degree (Level 4-5 or SCQF L7-9) or equivalent		
A level (Level 3 or SCQF L4-6) or equivalent		
GCSE (Level 2 or SCQF L3 or below) or equivalent		
Front line Operative Training (line marking, CAT & Genny, surfacing, TM)		
Other qualifications ( <b>specify</b> )		
Membership to professional institutions or bodies		

If other, please specify

18. Excluding your Account Support / Enabling Functions (e.g. Commercial, Finance, HR, legal, admin), approximately what percentage of your directly employed staff involved in highways and transportation hold the following professional qualifications which are specifically related to highways and transportation?

CEng	
CEnv	
CGeog	
CMLI	
CTPP	
EngTech	
IEng	
MRICS	
MRTPI	
REnvP	

19. On a scale from 1 to 10 (where 1 is low and 10 is high), how would you rate the current skill level of your highways and transportation workforce relating to each of the following?
20. and the future importance of that skill over the next five years for your highways and transportation workforce? (see table)

	Current skill level of your workforce?	Future importance of that skill over the next five years?
	1 = skills completely lacking 10 = perfectly skilled	1 = not at all important 10 = extremely important
Carbon literacy		
Carbon reduction / zero carbon		
Digital twins		
Data analysis / data management		
Behavioural change		
Automation / AI / drones / robotics		
Negotiation		
Environmental / Sustainability		
Communication		
Connective services (e.g. real-time journey info, Wi-Fi, contactless payments, smart motorways)		
Stakeholder engagement		
Social value		
New materials / recycled materials		
Other – (specify)		

If other, please specify type of skill, current skills level, and future importance of this skill.

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21. Are there any additional future training needs for your highways and transportation workforce for which training is not currently available? Please detail below.

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22. What do you feel are the main barriers to getting existing highways and transportation staff trained and upskilled? (select all that apply)

Inability to release people from work	
People being unwilling to undertake formal training	
Lack of locally available and suitable courses	
Lack of mentoring support	
Length of courses	
Lack of options for face-to-face training	
Courses are not sufficiently appropriate to skill requirements	
Cost of training	
Other (specify)	

If other please specify.



23. What is your estimated average training investment in your directly employed staff as a percentage of your company's wage bill (excluding the apprenticeship levy)? **Please provide an approximate % to the nearest whole number. If unsure, please leave blank.**

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24. In the past 3 years have you found it difficult to recruit into any of the following job roles? **(tick one option per row, leave blank if unsure)**

	Yes	No	Not applicable
Frontline Operative			
Contract and Account Management			
Account Support / Enabling Functions			
Professional Services /Design/Project Management			
Senior Management			
Customer Services / Community Engagement / Communications / Work winning			

Please provide any additional comment as to why you believe recruitment for some roles was (not) challenging.

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25. **(masked: only show options selected in Q2)** On a scale from 1 (very easy) to 10 (very difficult), how easy or difficult is it to recruit in the following areas?

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 highways and transportation	
Intelligent transport systems	

## PART 5: Future landscape for the sector

Our sector is constantly changing and adapting to challenges, new and old. Some are more significant than others and we are keen to hear what you feel about anticipated and potential challenges we will all be facing in the coming years so we can support the sector and prepare as best we can.

26. What do you anticipate will be the top three challenges the highways and transportation sector will face in the next five years? **(tick up to three options)**

Net Zero agenda	
Fast pace of technological change	
Supply chain issues	
Sourcing skilled staff at L6+ (SCQF L10+)	
Sourcing skilled staff at L4&5 (SCQF L7-9)	
Sourcing skilled staff at L3 (SCQF L4-6)	
Sourcing staff at L2 (SCQF L3) or below	
Changes in consumer demand	

Increased costs due to inflation	
Government taxation inhibiting growth and investment	
Government spending cuts restricting funding	
Managing effects of EU Exit	
Forthcoming change to transport legislation	
Forthcoming change to immigration legislation	
Forthcoming change to social legislation	
Differences in legislation across the home nations	
Lack of skills and knowledge around emerging issues (e.g. carbon, SV, Digital, EDI)	
Other (specify)	

27. Please could you explain briefly why you selected these options as the top challenges?

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28. Discounting basic digital literacy (e.g. using Microsoft Word and Excel and laptop/smartphone use), how would you rate your company's knowledge and understanding of the following advanced digital concepts on a scale from 1 (non-existent) to 10 (perfect)? If not applicable, please leave blank.

Big data	
Digital twins	
Artificial Intelligence (AI)	
Robotics	
Transport modelling	
Data analysis	
3D-printing (additive manufacturing)	
Augmented or Virtual Reality (AR/VR)	
Logistics software / smart distribution	
Geo-location / GPS tools	
Other industry specific technology (specify)	

If other please specify.

29. And how would you rate your company's expertise, experience and competency of the following 'soft' concepts on a scale from 1 (non-existent) to 10 (perfect)? If not applicable, please leave blank.

Stakeholder engagement	
Community engagement	
Behavioural change intervention	
Negotiation	
Social value	
Mental health and wellbeing	
Equality, Diversity, and Inclusion (EDI)	

30. What new job roles (if any) are emerging in the highways and transportation sector? Please detail these below.

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31. What new skills will these emerging job roles require? Please detail these below.

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## PART 6: Additional comments

32. Do you have any final comments you would like to add in relation to the Highways and Transportation workforce, its employment status, training, qualifications and/or development?

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33. (mandatory) What is the name of your organisation?

Please note that this information will only be used to ensure you are opted out of any future reminder emails and will not be linked to your response.

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34. Finally, we are looking to have a more detailed follow-up conversation with some stakeholders who have participated in this survey. Would you be willing to be re-contacted to participate in a phone call – to be arranged at your convenience, and lasting no more than 45 minutes – in the next few weeks?

Yes	
No	

35. (If Yes to previous Q) Thank you. Please provide your contact details below.

Name:	
Telephone number:	
Email address:	

Many thanks for your time and feedback. Please now press 'submit'.