

Waste Management Industry: workforce and skills profile

Purpose – Collate the power sector intelligence on workforce and skills issues (sources include primary and secondary data and/ qualitative evidence).

Characteristics of the industry

- National Infrastructure Delivery Plan outlines £1.1 billion investment in the pipeline for waste management.ⁱ
- The waste management industry employs approximately 141,000 employees. The industry is primarily dominated by SMEs (99%).ⁱⁱ

Industry demographics

- 84% of the workforce is male, the proportion is significantly higher than the all sector average of 53%.ⁱⁱⁱ
- Across the UK, 12% of the workforce is from a BAME background. In contrast, in the waste management industry, just 3% of the workforce is from a BAME background.^{iv}
- In the energy and utilities sector, the waste management industry appears to rely most heavily on non UK nationals in terms of numbers employed. 14% of the total workforce is made up of non-UK nationals, which is greater than the UK average of 11%.^v
- The waste management industry has a distinctly different profile to the rest of the energy and utilities sector, with workforce weighted towards lower skills levels.^{vi}
- A high proportion of the waste sector workforce are employed in process, plant and machine operative roles (33%) and in elementary occupations (31%).^{vii}

Skills challenges

- There are two trends in the market which are influencing the skills requirements of the industry: a drive to prevent or minimise wastage and the extraction of value from waste.^{viii}
- Therefore, the blend of the work in the pipeline is changing and new, more innovative and productive techniques will require a different mix of skills in the future. There is also demand for cross sector and new technologies training.^{ix}
- EUSG foresight research in 2012 identified the following skills challenges for the waste management sector:
 - Reliance on low grade manual skills is likely to give way to investment in sophisticated measuring, monitoring, diversion and integrated telemetry systems;
 - Anticipated future increase in demand for testing, sampling and analytical skills, combined with qualifications in STEM subjects;
 - Commercial expertise will be essential as waste acquires a value and becomes a source of energy;
 - Professionalisation of the sector is set to become increasingly important to attract new recruits.^x

Employment and workforce renewal

- Workforce size is expected to increase, as recycling requires a much larger workforce than landfill. This is driven - to an extent - by EU recycling targets and Brexit could also have an impact on the future workforce requirements.^{xi}
- 62,000 vacancies are predicted in total for the waste management industries up to 2026.^{xii}

Apprenticeships expenditure and starts

- In the water supply, sewerage and waste management & remediation activities industry, the highest level of apprenticeship expenditure is amongst the larger businesses, equating to approximately 67%.^{xiii}
- In 2014/15, of all the apprenticeships started in the sector, 50% (2,020) were in 'water supply, sewerage and waste management & remediation activities'.^{xiv}

ⁱ HM Treasury (2016) *National Infrastructure Delivery Plan*, HMT

ⁱⁱ ONS (2017) *Business Register and Employment Survey*

ⁱⁱⁱ ONS (2017) *Labour Force Survey (4 quarter average Jan-Dec 2016)*

^{iv} ONS (2017) *Labour Force Survey (4 quarter average Jan-Dec 2016)*

^v ONS (2016) *Labour Force Survey (4 quarter average Jan-Dec 2016)*

^{vi} ONS (2016) *Labour Force Survey (4 quarter average Jan-Dec 2016)*

^{vii} BIS (2016) *Labour Force Survey (4 quarter average Jan-Dec 2015)*

^{viii} EUSG (2013) *Foresight: Overview of key findings*

^{ix} HM Treasury, (2015) *National Infrastructure Plan for Skills*, HMT

^x EUSG (2013) *Foresight: Overview of key findings*

^{xi} EUSG (2013) *Foresight: Overview of key findings*

^{xii} EUSG (2016) *Workforce Renewal and Skills Strategy*

^{xiii} DfE (2016), *Information on apprenticeship levy: data drawn down by size and sector and the total apprenticeship budget*

^{xiv} London Economics (2017) *The incidence of apprenticeships in England*