

**NELSIP**  
North East

Local Skills  
Improvement  
Plan



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UK Government

# Construction

Annex A: Detailed Information on Skills Needs Assessment



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# Construction

## The National picture

Construction is a foundational sector in the Industrial Strategy, critical for delivering the infrastructure for all other growth sectors. National priorities include the decarbonisation of the built environment via Retrofit and the adoption of Modern Methods of Construction (MMC) to improve productivity and efficiency. The government's target of building 1.5 million new homes over the next 5 years places immense pressure on the sector to ramp up capacity. While the government has reported progress, DLUHC reports 208,600 net additional dwellings in 2024/25. Using EPC proxies, the department estimates 275,600 net additions between 9 Jul 2024 and 9 Nov 2025, this figure shows a delay in the implementation, suggesting that the pace of building must accelerate substantially to meet the deadline. This environment of high ambition is supported by the Planning and Infrastructure Act, which represents the most ambitious planning reform in a generation, specifically designed to accelerate delivery by scrapping pre-application consultations and streamlining judicial reviews. The Planning and Infrastructure Act 2025 introduces reforms to speed up NSIP decisions, including reducing statutory pre-application consultation for NSIPs and adjusting JR processes, alongside implementation plans now published by government.

Data from Homes England indicates that 90% of homes completed on its land now achieve Energy Performance Certificate (EPC) ratings of A or B, and it also reports 87% of completions it enabled in 2023/24 were EPC B or above, evidencing a shift to higher energy performance. However, the sector continues to grapple with "higher for longer" interest rate environments and volatile energy markets, which have introduced significant uncertainty for developers and lenders alike.

The national strategy also emphasises the role of the Building Safety Regulator (BSR) in accelerating housebuilding through improved oversight, though some industry analysts suggest that regulatory bottlenecks, such as the mandatory "Gateway 2" approval points, have delayed starts on higher-risk residential buildings. Industry sources recorded significant Gateway 2 delays in 2025 (often >30–40 weeks), with performance improving into 2026 through staged applications and operational changes. Despite these tensions, the sector remains a primary source of social value.

## The specific sector in the North East

Construction in the North East is moving beyond traditional building to focus on sustainable retrofit, Modern Methods of Construction (MMC) and infrastructure for new industries. It is the enabler for all physical economic growth in the region. It is identified as one of the four sectors with the greatest additional employment demand to 2030.

The sector is tasked with delivering a massive capital investment pipeline, including the "Angel Network" transport system and a £1 billion+ heat network. It is also repurposing industrial heritage sites for modern uses, such as building data centres on old power station sites.

Construction is the enabler for all physical growth in the region, currently employing 76,331 people. It is one of the region's most employer-dense sectors with 5,715 businesses, 66.5% of which are micro-sized (less than 9 employees) 21% are SMEs with less than 50 employees, 7.6% are medium size enterprise with less than 250 staff, and only the 4.5% are large organisation. The workforce is notably skilled, with 43% of employees at a "Skilled" level and 23% in "Senior Technical" roles.

The sector is projected to grow by 2.6% per year, reaching 93,393 roles by 2030 (currently 76,331) to meet the national target of 1.5 million new homes. Construction benefits from strong youth engagement, with 23% of the workforce aged 16-24 and an additional 26% aged 25-34. However, it struggles with the region's lowest female participation rate at 14-15% of the UK construction workforce overall, but 2% in site based roles. Regional output remains resilient, with the North East recording a 1% increase in completions in 2025, one of the few English regions to avoid a contraction. This performance is bolstered by major regional projects, including the £475 million Crown Works film and TV studio development in Sunderland, which has become a primary driver of construction demand.

Sector Definition - Priority SIC Codes: Construction of buildings (41), Civil engineering (42), Specialised construction activities (43).

RTIC: 06100 Extraction of crude petroleum, 06200 Extraction of natural gas, 07100 Mining of iron ores, 07290 Mining of other non-ferrous metal ores, 08110 Quarrying of ornamental and building stone, 08120 Operation of gravel and sandpits, 08910 Mining of chemical and fertilizer minerals, 08930 Extraction of salt, 08990 Other mining and quarrying, 09100 Support activities for petroleum and natural gas mining, 09900 Support activities for other mining and quarrying, F Construction- 41100 Development of building projects, 41201 Construction of commercial buildings, 41202 Construction of domestic buildings, 42110 Construction of roads and motorways, 42120 Construction of railways and underground railways, 42130 Construction of bridges and tunnels, 42210 Construction of utility projects for fluids, 42220 Construction of utilities projects for electricity and telecommunications, 42910 Construction of water projects, 42990 Construction of other civil engineering projects, 43110 Demolition, 43120 Site preparation, 43130 Test drilling and boring, 43210 Electrical installation, 43220 Plumbing, eat and air-conditioning installation, 43290 Other construction installation, 43310 Plastering, 43320 Joinery installation, 43330 Floor and wall covering, 43341 Painting, 43342 Glazing, 43390 Other building completion and finishing, 43910 Roofing activities, 43991 Scaffold erection, 43999 Other specialised construction activities, 71111 Architectural activities, 74902 Quantity surveying activities, 77320 Renting and leasing of construction and civil

engineering machinery and equipment, 81300 Landscape service activities.

Priority Occupations (SOC 2020):

SOC20 unit code	SOC20 unit label	2021-2025 monthly average actual job posting	average monthly job posting forecast by 2029	Forecasted change by 2029 in monthly job postings	Forecasted % change by 2029 in average monthly job postings
1122	Production managers and directors in construction	8.6	9	0.4	4.65%
2121	Civil engineers	96.8	110	13.2	13.64%
2151	Conservation professionals	1.8	1.7	-0.1	-5.56%
2152	Environment professionals	4.3	4.2	-0.1	-2.33%
2451	Architects	5.7	6	0.3	5.26%
2452	Chartered architectural technologists, planning officers and consultants	33.1	36	2.9	8.76%
2453	Quantity surveyors	71.4	78	6.6	9.24%
2454	Chartered surveyors	26.4	28	1.6	6.06%
2455	Construction project managers and related professionals	14.1	14.8	0.7	4.96%
3114	Building and civil engineering technicians	6.7	7	0.3	4.48%
3120	CAD, drawing and architectural technicians	21.6	23	1.4	6.48%
3555	Estate agents and auctioneers	1.3	1.3	0	0.00%
3581	Inspectors of standards and regulations	5.6	5.9	0.3	5.36%
5214	Pipe fitters	59.4	65	5.6	9.43%
5241	Electricians and electrical fitters	27.1	29	1.9	7.01%
5250	Skilled metal, electrical and electronic trades supervisors	7.6	7.8	0.2	2.63%
5311	Steel erectors	2.9	2.8	-0.1	-3.45%
5312	Stonemasons and related trades	2.2	2.1	-0.1	-4.55%
5313	Bricklayers	1.2	1.2	0	0.00%
5314	Roofers, roof tilers and slaters	6.8	7.1	0.3	4.41%
5315	Plumbers and heating and ventilating installers and repairers	14.3	15	0.7	4.90%
5316	Carpenters and joiners	23.1	25	1.9	8.23%
5317	Glaziers, window fabricators and fitters	1.6	1.5	-0.1	-6.25%
5319	Construction and building trades n.e.c.	21.9	23	1.1	5.02%
5321	Plasterers	2	1.9	-0.1	-5.00%
5322	Floorers and wall tilers	9.7	10.5	0.8	8.25%
5323	Painters and decorators	8.3	9	0.7	8.43%
5330	Construction and building trades supervisors	64.1	72	7.9	12.32%
8151	Scaffolders, staggers and riggers	4.4	4.3	-0.1	-2.27%
8221	Crane drivers	6.9	6.7	-0.2	-2.90%
9121	Groundworkers	1.4	1.3	-0.1	-7.14%

The forecasted 12.32% increase in construction supervisors and 13.64% increase in civil engineers reflects a strategic shift toward more complex infrastructure projects and the oversight requirements of the new safety regime. Conversely, the slight declines in traditional groundworking and conservation roles suggest a gradual realignment toward off-site construction methods and modernized site management.

### Real-World Challenges for the Specific Sector

- **Aging Workforce:** The traditional construction workforce is aging, with one-thirds of the current workforce is expected to retire or leave by 2035, generating more pressure on their replacement strategy.
- **Recruitment Challenges:** Recruitment difficulties are widespread across all subsectors. Employers report shortages of experienced project managers, building surveyors, quantity surveyors, and tradespeople with 10+ years' experience. Traditional apprenticeships are not supplying sufficient numbers, with retention declining and block release models poorly aligned to modern site practices. Micro firms operating on piecework models face barriers to hosting apprentices due to supervision demands and inflexible working patterns.
- **Education Low Conversion:** Job conversion rates from FE colleges into site-based employment remain low, indicating a gap in practical

readiness, with graduates often lacking the hands-on experience required by contractors. In addition, the sector struggles to compete with the perceived attractiveness of other industries.

- **Workforce Inclusivity:** The region records one of the lowest female participation rates in the sector, at around 14–15%, with only a very small proportion of women working directly on site.
- **Productivity:** The sector lags in productivity due to slow adoption of digital tools and MMC, that is progressing slower than other regions in the UK. Business confidence among UK contractors has remained in contraction territory for much of 2025 and early 2026, the longest such stretch since the global financial crisis. This lack of confidence is tied to high financing costs, material price inflation, and the regulatory complexities of the Building Safety Act, which have prompted over 60% of firms nationally to postpone or scale back projects. New oversight requirements, such as "Gateway 2" approval points, are noted as potential causes for delays in higher-risk developments.
- **Housing Demand:** Meeting the regional target of 9,000 new homes (part of the national 1.5 million target) requires a step-change in delivery capacity.

## **Skill needs, current provision and demand**

Education Pathway in the North East is being restructured to align with the higher technical demands of the "green and digital" economy transition. While Level 2 and level 3 trade certifications remain the foundation for traditional trades like bricklaying and plumbing, there is a clear push toward Level 4 and 5 qualifications for supervisory roles and Level 6+ for professional roles such as architecture and planning.

A pivotal development in this space is the Social Housing Innovation North East (SHINE) partnership, a working group involving housing providers like Karbon Homes, Gentoo, Bernicia, and Believe Housing. SHINE has collaborated with Sunderland College to co-create a curriculum that professionalises the social housing sector, specifically targeting the management of regulatory standards and damp/mould remediation. Starting in February 2026, the partnership is delivering Level 4 Certificates and Level 5 Diplomas in Housing at HICSA, utilising a blended learning model that combines face-to-face teaching with immersive technology and virtual resources.

The pathway is also being bolstered by the emergence of Construction Technical Excellence Colleges (C - TEC), led by Sunderland College, which function as regional hubs for construction training. These centres are tasked with raising industry standards and addressing the low conversion rates from education to employment. The "Building Your Future" recruitment campaign, returning in March 2026, facilitates direct networking between final-year students and leading regional employers like Kier Group, Esh Group, and Robertson Construction, providing a clearer progression route into the workplace.

For professional and managerial roles, there is a growing demand for degree apprenticeships and technical-to-HE routes. The partnership between Sunderland College and Northumbria University, unveiled in late 2024, focuses on upskilling local people in housebuilding and green construction techniques at higher levels. These initiatives are designed to create a "ladder of opportunity" that allows workers to enter at Level 2 and progress through to strategic management.

Skills Priorities - Next 3 Years - Future demand profile is expected on:

- **Civil Engineering and Groundworks:** To support the Angel Network and other infrastructure project future demand will centre on civil engineering, groundworks, electrotechnical roles, retrofit capable trades, and digitally enabled site operations.
- **Retrofit and Low-Carbon Installation:** The regional push to achieve EPC C ratings for all social housing by 2030 and the deployment of the Newcastle-Sunderland heat networks have created massive demand for tradespeople skilled in ventilation, high-efficiency insulation, and heat pump installation.
- **PAS 2035 compliant retrofit and Trade Gaps:** It is essential for the region's decarbonisation goals. Employers consistently highlight the need for tradespeople with expertise in ventilation and damp/mould prevention, moisture control (damp and mould), and high-efficiency insulation, and compliance with the Building Safety Act. This is very well aligned to NEIoT retrofit programme roll out and HICSA (C-TEC). Regional provision in trades like roofing and tiling remains limited.
- **Quality Safety and Compliance Roles:** The Building Safety Act 2022 and the Planning and Infrastructure Act 2025 have generated an urgent requirement for technical inspectors, Clerks of Works, and fire safety professionals.
- **Digital capability is no longer an optional skill set; it is a core requirement for modern construction sites.** The growing use of Building Information Modelling (BIM), digital job ticketing, and handheld devices for live scheduling requires a workforce that is comfortable with data-intensive environments. The North East Institute of Technology (NEIoT) has recognised this, launching its Digital Ambassador Programme to embed high-level digital expertise into regional colleges.
- **Soft skills gaps are equally significant.** Literacy challenges among some experienced tradespeople hinder qualification achievement and digital adoption. Soft skills gaps are significant: communication, teamwork, customer service and supervisory capability are essential, particularly for early career staff working in occupied homes or on busy sites. Employers also identify a need to upskill mid-career workers in leadership and people management, alongside stronger digital competence across all trades to create the next generation of site supervisors.

Current provision – apprenticeship starts by Level and standard/framework in the academic year 24/25 is detailed below and shows 1,530 construction-related apprenticeship starts in the North East, dominated by Level 2 standards. However, there is a critical lack of provision in niche trades such as roofing, plastering, and wall/floor tiling. Employers report misalignment between FE curricula and real-world site requirements, particularly in digital skills and practical readiness.

Standard/framework	ST Code	Level	NE Starts
Construction Plant Operative	ST0736	2	200
Carpentry and Joinery	ST0264	2	180
Bricklayer	ST0095	2	120
Roofer	ST0270	2	70
Scaffolder	ST0265	2	60
Groundworker	ST0513	2	50
Floorlayer - Textile and Resilient	ST0262	2	30
Painter and Decorator	ST0295	2	30
Plasterer	ST0096	2	30
Property Maintenance Operative	ST0171	2	30
Interior Systems Installer	ST0388	2	20
Commercial Thermal Insulation Operative	ST0591	2	10
Highways Maintenance Skilled Operative	ST0053	2	10
Plumbing and Domestic Heating Technician	ST0062	3	140
Maintenance and Operations Engineering Technician	ST0154	3	110
Craft Carpentry and Joinery	ST0263	3	70
Civil Engineering Technician	ST0091	3	20
Construction Support Technician	ST0960	3	20
Safety, Health and Environment Technician	ST0550	3	20
Building Services Engineering Craftsperson	ST0058	3	10
Surveying Technician	ST0332	3	10
Civil Engineering Senior Technician	ST0046	4	20
Construction Design and Build Technician	ST0043	4	20
Construction Quantity Surveying Technician	ST0049	4	20
Building Services Engineering Senior Technician	ST0041	4	10
Construction Site Supervisor	ST0048	4	10
Chartered Surveyor (Degree)	ST0331	6	90
Civil Engineer (Degree)	ST0417	6	30
Construction Quantity Surveyor (Degree)	ST0045	6	20
Building Control Surveyor (Integrated Degree)	ST0652	6	10
Building Services Engineer (Degree)	ST0041	6	10
Construction Site Management (Degree)	ST0047	6	10
Architect (Integrated Degree)	ST0343	7	10
Adjustment	Small Volume Suppressed Standards		30
<b>TOTAL</b>			<b>1,530</b>

Innovative employer-led models are emerging, including construction bootcamps offering 12–16-week intensive training, followed by apprenticeship progression routes. Some employers advocate long-duration work experience (e.g., two days per week over several weeks) and Tier 1 host–place apprenticeship models, where large contractors employ apprentices and place them with subcontractors to build SME capacity. Workforce models—such as maintaining 10–15% apprentices/trainees—are used by some larger employers to ensure long term sustainability.

Engagement with Education and Talent Pipelines is improving but remains inconsistent. Many employers' report disengagement from FE recruitment pathways due to low job conversion and perceived lack of practical competence among full-time learners. There is strong demand for industry-endorsed curricula, improved CPD for tutors, and clearer progression routes from Level 2 to Level 3 and into professional qualifications.

Employers are developing new pathways, including technical to HE routes in architecture and degree apprenticeships in surveying and site management.

Community-based training, customer service programmes and job-guaranteed boot camps are increasingly used to widen participation and support local recruitment.

### **What's currently happening in the region**

- The Green Energy Academy and Energy Campus: Based in Wallsend and led by Newcastle College, this project is undergoing a landmark £8.48 million expansion supported by the Mayoral Strategic Authority (MSA) to triple student capacity to over 1,000 learners annually. This initiative represents regional best practice in aligning vocational training with the green energy revolution working in collaboration with the North East Institute of Technology (NEIoT). The energy campus mirror real-world site environments and is recognised as the top-performing regional college for construction achievement, serving as a national benchmark for technical excellence.
- Social Housing Innovation North East (SHINE) partnership: It is driving the "OneMap" project, a web-based GIS platform that integrates property, health, and demographic data across seventeen regional housing associations. This allows housing providers to spot trends in damp and mould and coordinate large-scale retrofit contracts across the region's 35,000+ social homes. It has been developed in partnership with housing organisations including believe housing, Bernicia, Darlington Borough Council, Gentoo Group, Karbon Homes, North Star, Places for People, and Thirteen Group.
- The Housing Innovation & Construction Skills Academy (HICSA) C-TEC Collaborative Model: officially opened in Sunderland in November 2025 as the region's primary Construction Technical Excellence College (CTEC), functioning as a hub for sustainable technologies. HICSA operates under a "Hub and Spoke" model, led by EPNE is connecting regional FE providers with major employers, and recently launched a £1 million Adult Skills Programme in January 2026 to support 227 residents with site-ready training.
- The NEIoT Digital Ambassador Programme: the program is now entering its third year, bringing expertise from firms like Esh Group, Turner & Townsend, and Arup into nine regional colleges to deliver masterclasses on digital construction including BIM and retrofit to ensure the future workforce is fluent in data-intensive environments.
- Regional infrastructure: Delivery is accelerating via the "Angel Network" transport plan, which includes Metro expansions to Washington and the ongoing restoration of the Tyne Bridge. The Angel Network (integrated public transport including franchised buses) and the Metro to Washington (13km extension via the Leamside alignment) are now in delivery preparation, supported by a £1.85bn deal. The establishment of Mayoral Development Zones in Newcastle-Gateshead and Sunderland to drive regeneration, including the Riverside Sunderland project and the next phase of Crown Works Studios. The Crown Works Studios project (Sunderland) originally scoped at c. £450–£475m; following changes to private finance in 2025, Phase 1 is now proceeding with new public funding while further investment is secured. Regional work pipelines are further bolstered by major capital projects such as the Aykley Heads development in Durham and the upcoming "Building Your Future" recruitment campaign in March 2026. Regional best practice is also the conversion of the old power station sites for data centres.

### **What needs to be retained**

- Regional "Hub and Spoke" Collaborative Frameworks: The governance structure that integrates regional FE Colleges and HE Institutions providers with employers. This partnership-led delivery model ensures that training remains responsive to industry-wide demands rather than institutional silos, and acts as the essential mechanism for scaling niche technical provision across the North East footprint.
- The Construction Sector Skills Partnership: This entity must remain the primary voice of industry in regional skills planning.
- Adult Skills Investment: Launch of a £1 million Adult Skills Programme in January 2026 to support 227 residents with site-ready training.
- Immersive Learning: The use of VR/AR for construction training has proven effective to improve learners engagement.
- Traditional trade qualifications: Despite the shift toward MMC, the "retirement cliff" in trades like bricklaying and plumbing necessitates the continued support of high-quality Level 2 and 3 trade certifications to maintain the region's essential maintenance and building capacity.
- Improving the FE-to-Site Transition: Curricula must be co-designed with employers to include longer-duration work experience (e.g., two days per week) and intensive, site-ready "boot camps" to improve the currently low job conversion rates.

## **What changes are needed**

- **Scaling PAS 2035 Retrofit Training:** There must be a significant expansion of PAS 2035 and low-carbon technology training to meet the demand of the social housing upgrade and heat network pipelines.
- **Digital Standardisation:** Digital skills and Building Information Modelling (BIM) should be integrated as core components of all construction apprenticeships, rather than treated as optional extras.
- **Recruitment and Sector attractiveness:** Specific, high-profile campaigns are needed to recruit a more inclusive workforce, linking construction careers with environmental sustainability and social value to attract diverse talent.
- **Supervisory and Management Upskilling:** The sector needs a dedicated pathway for upskilling mid-career tradespeople into management and supervisory roles to meet the regulatory demands of the Building Safety Act.
- **Improve Job conversion rates and work readiness:** Approximately only 20% of FE colleges students' progress into role in the sector. Employers report a gap in practical work readiness.

## **Potential benefit**

The construction sector will deliver the housing and infrastructure needed for economic growth while directly improving residents' quality of life through warmer, cheaper-to-heat homes. It creates local jobs that cannot be offshored and contributes to the "A North East we are proud to call home" mission.