

CLC Skills Plan Priority 2: Routes into Industry – HE

Provide guidance for HE providers to attract and support a diverse and inclusive student body

Executive Summary

The construction industry needs skilled individuals to deliver a built environment now and into the future. The skills challenge is pressing and topical - attracting and retaining diverse talent is one key requirement of the industry skills plan. This task group was set up in response to Priority 2: HE providers to attract and support a diverse and inclusive student body i.e., to support Fairness, Inclusion and Respect (FIR) within their recruitment criteria.

We found that there is a long-standing, high-level commitment to the principles of FIR/ equality, diversity and inclusion (EDI), commonly termed 'Access and Participation' (A&P), within Higher Education (HE). There is an A&P framework for the sector which sets out the expectations from all universities and colleges registered with the Office for Students (OfS), the independent regulator of Higher Education in England, in terms of who they consider underrepresented groups to include and the key priorities for access and participation.

For several decades now Universities have been tracking data on the protected characteristics included in the Equality Act 2010: age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex, sexual orientation, as well as a range of characteristics that form 'underrepresented groups' as defined by the OfS: students from areas of low higher education participation, low household income or low socioeconomic status, care leavers, carers, people estranged from their families, refugees, and children from military families.

The report draws attention to:

- Current HE A&P planning, reporting, and monitoring;
- The role of centralised University Admissions; and
- The differences between subject areas, and the feasibility of course level considerations.

In terms of recommendations, we propose HE action on three levels:

1. Academic Schools' Level

1.1 To embed FIR/ EDI in the curriculum to educate the future generation of construction professionals.

1.2 To develop localised A&P Plans at School / Department level to monitor and evaluate the status of construction courses.

See page 16 for detailed recommendations.

2. Universities' Level

- 2.1 To make School/ Department/ Course level data available internally so that they can undertake localised monitoring and evaluation.
 - 2.2 To assess staff profiles and evaluate staff development requirements on FIR/ EDI to ensure they can satisfactorily support a diverse student body.
 - 2.3 To investigate student support and monitor retention. This will facilitate better student outcomes and provide relevant support during their education journey.
- See page 16 for detailed recommendations.

3. External Stakeholders' Level

- 3.1 The construction industry to reflect on the terminology used; FIR, EDI and A&P are the terms used to cover slight variations of the same topic.
 - 3.2 The construction industry to consider aligning with the wider global agenda to gain wider recognition, specifically amongst young people. The UN's Sustainable Development Goals impact on FIR in education on a number of fronts.
 - 3.3 The construction industry to use its resources to create a pipeline to HE. This should target schools and focus on ethnic minorities, female students and those from areas of low HE participation.
 - 3.4 Professional bodies to use their influence to drive change through their accreditation process.
- See page 17 for detailed recommendations.

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1. Background

The CLC Industry Skills Plan Update (CLC, 2022) is a sector-wide plan for construction and the built environment. It has set out four priorities as follows:

Priority 1: Culture change: An equitable, diverse and inclusive industry

Priority 2: Routes into Industry (Apprenticeships, Further Education / T Levels and Higher Education)

Priority 3: Competence

Priority 4: Skills for a Modernised Industry

This report focuses on Priority 2: Routes into Industry – HE, and specifically the task ‘Provide guidance for HE providers to attract and support a diverse and inclusive student body’. The report was undertaken to investigate if and/ or how HE providers are using the principles of Fairness, Integrity, and Respect (FIR) (or Equality, Diversity, and Inclusion, EDI) in recruiting students onto Higher Education courses.

The scope of the report entailed:

- Examining HE statistics and policies on FIR/ EDI;
- Reviewing University Access Statements in selected institutions;
- Interviewing selected Admissions Tutors;
- Critically reflecting upon the Priority 2: Routes into Industry – HE; and
- Providing guidance for FIR in HE.

In addition, a small number of Universities in the UK were selected for in-depth research so as to form an indicator of how student recruitment and selection in HE institutions works.

2. HE statistics and policies on FIR/ EDI

There are a number of key findings to report on from our research. These are:

1. How HEs undertake Access and Participation planning, reporting, and monitoring at an institutional level;
2. The impact of centralised University Admissions on student recruitment and selection; and
3. The major differences in protected characteristics between subject areas.

2.1 HE Access and Participation planning, reporting, and monitoring

There is a long-standing, high-level commitment to the principles of FIR/ EDI, commonly termed ‘Access and Participation’ (A&P), within HE. This is evidenced, for example, by the Office for Students (OfS) and letter from Rt. Hon. Michelle Donelan MP, former Minister of State for Higher and Further Education, dated 24.11.2021.

The history of funded activity in this area can be traced back to the first special funding programme for widening participation that was announced in June 1998 (Selby, 2018) which then led to the requirement for institutional Widening Participation strategies. There were also a series of special programmes for regional and later sub-regional collaborative initiatives, and further changes in

government policy in 2006, when the initial focus was to encourage fair access, and in 2011 to include widening participation and success for students from disadvantaged backgrounds more generally (ibid).

Knowledge about what the issues in widening participation were, how to measure disadvantage, and how to identify good practice in achieving it were rapidly increasing.

Office for Students (OfS) is now the independent regulator of Higher Education in England, with the aim to ensure that “every student, whatever their background has a fulfilling experience of higher education...” (OfS, 2022a). It set ambitious, long-term targets to eliminate inequalities, overseen by a Director for Fair Access and Participation. This is John Blake from November 2021.

There is an A&P framework for the sector which sets out the expectations from all universities and colleges registered with the OfS in terms of who they consider underrepresented groups to include and the key priorities for access and participation (OfS, 2022b).

Table 1. the Office for Students access and participation framework (OfS, 2022b)

<i>Underrepresented groups</i>	<i>Priorities for access and participation</i>
<ul style="list-style-type: none"> • students from areas of low higher education participation, low household income or low socioeconomic status • some black, Asian and minority ethnic students • mature students • disabled students • care leavers • carers • people estranged from their families • people from Gypsy, Roma, and Traveller communities • refugees • children from military families. 	<p>2018, to eliminate:</p> <ul style="list-style-type: none"> • the gap in entry rates at higher tariff providers between the most and least represented groups • the gap in non-continuation between the most and least represented groups • the gap in degree outcomes between white and black students • the gap in degree outcomes between disabled and non-disabled students. <p>2022, new priorities, to:</p> <ul style="list-style-type: none"> • partner with schools and other local organisations to raise the attainment of young people • develop more diverse pathways into and through higher education through more flexible courses • ensure access leads to participation on high quality courses and secures good graduate outcomes • improve the quality and volume of evaluation of access and participation plan activity • make access and participation plans more accessible in a way that prospective students, their parents, and other stakeholders can easily understand.

Universities are required to set A&P plans that show how they will improve equal opportunities for underrepresented groups (OfS, 2022b), including ambitious targets for improvement, and they are held accountable for meeting those targets, in order to achieve the “shared goal of improving equality of opportunity for disadvantaged and under-represented groups” (Donelan, 2021).

OfS publishes statistics as part of their specific duties under the Equality Act, as an annual information release about students with protected characteristics: age, disability, gender

reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex, sexual orientation. Beyond the duties of the Equality Act, the OfS publishes statistics relating to who they consider underrepresented groups to include, as listed below. Those marked with an asterisk (*) relate to one of the protected characteristics under the Equality Act (OfS,2022c).

- Age*
- Disability*
- Ethnicity*
- Religion or belief*
- Sex*
- Sexual orientation*
- Gender identity
- Parental higher education
- Free school meals (FSM) eligibility, an indicator of financial disadvantage for Key Stage 4 pupils
- Participation of Local Areas (POLAR4), an area-based measure reflecting higher education participation rates
- Index of Multiple Deprivation (IMD), an area-based measure of deprivation in England
- Care experience, indicating whether a student has been in care
- Household Residual Income (HRI), a measure of household income after accounting for certain costs
- Estrangement, indicating whether a student is no longer communicating with their parents
- Socioeconomic background
- Tracking underrepresentation by area (TUNDRA), an area-based measure that tracks state-funded mainstream school pupils in England into higher education (both TUNDRA by Lower Super Output Areas (LSOA) and TUNDRA by Middle Super Output Areas (MSOA) are included in this release)
- Associations between characteristics of students (ABCS) access quintiles, grouping young people with certain combinations of characteristics by the likelihood of access to higher education.

Table 2 shows a comparison of figures for undergraduate students for academic years 2010-2011 and 2020-2021.

Table 2. OfS 2010-2011 (OfS,2022d) and 2020-2021 (OfS,2022c) data on the protected characteristics and OfS defined underrepresented groups

The 2020-2021 trends have been given a Red (worsening), Amber (same or very similar) or Green (improving) rating over the 10 year period.

<i>Protected characteristics and OfS underrepresented groups</i>	<i>2020-2021</i>	<i>2010-2011</i>
Age*	Most commonly entrants on full-time courses are under the age of 21 on entry: 68.4%	Most commonly entrants on full-time courses are under the age of 21 on entry: 54.6%
	Most commonly entrants on part-time courses are 31-40 years of age on entry: 24.3%	Most commonly entrants on part-time courses are 31-40 years of age on entry: 26.5%
Disability*	14.8% of full-time entrants report having a disability	8.5% of full-time entrants report having a disability
	10.8% of part-time entrants report having a disability	7.6% of part-time entrants report having a disability
	3.7% of entrants report a mental health condition	0.7% of entrants report a mental health condition
Ethnicity*	70.4% White	78.7% White
	13.2% Asian background	9.5% Asian background
	9.3% Black	7.4% Black
	4.9% Mixed ethnic background	3.3% Mixed ethnic background
	2.3% Other minority ethnic groups	1.1% Other minority ethnic groups
Religion or belief*	46.2% No religion	48.2 % No religion
	32.1% Christian	32.1% Christian
	13.0% Muslim	11.1% Muslim (data from 2017-2018; 2010-2011 not available)
Sex*	Overall majority female: 56.5%	Overall majority female: 56.0%
	Male 43.4%	Male 44.0%
	Other 0.1%	
	Differences in the proportions of female and male students within certain subjects remain large: 82.9% of engineering, technology	Differences in the proportions of female and male students within certain subjects remain large: 85.6% of engineering, technology

	and computing entrants were male, where 80.7% entrants in education and teaching were female	and computing entrants were male, where 81.0% entrants in education and teaching were female
Sexual orientation*	8.5% identify as lesbian, gay or bisexual	(data not available)
	2.6% identify with a sexual orientation other than heterosexual, lesbian, gay, or bisexual	
Gender identity	1.4% Gender different from the sex registered at birth	(data not available)
Parental higher education	48.5% A parent with a higher education qualification	51.5% A parent with a higher education qualification (data from 2012-2013; 2010-2011 data not available)
Free school meals (FSM) eligibility	17.3% of full-time entrants were eligible for free school meals when they were in Key Stage 4	14.9% of full-time entrants were eligible for free school meals when they were in Key Stage 4 (data from 2014-2015; 2010-2011 data not available)
Participation of Local Areas (POLAR4)	29.7% entrants came from the most represented areas	31.7% entrants came from the most represented areas
	12.7% came from the least represented areas	10.6% came from the least represented areas
Index of Multiple Deprivation (IMD)	21.8% of entrants were from the most deprived areas	17.0% of entrants were from the most deprived areas
Care experience	1.1% of full-time entrants had been in care	0.8% of full-time entrants had been in care
	1.5% of part-time entrants had been in care	1.1% of part-time entrants had been in care (data from 2014-2015; 2010-2011 data not available)
Household Residual Income (HRI)	42.7% of full-time entrants who were dependent on their parents had HRI between £1 and £25,000	46.5% of full-time entrants who were dependent on their parents had HRI between £1 and £25,000
	69.8% students who were independent reported their HRI as £0	76.6% students who were independent reported their HRI as £0 (data from 2012-2013; 2010-2011 data not available)
Estrangement	1.0% of entrants aged under 25 were estranged	0.8% of entrants aged under 25 were estranged (data from 2014-2015; 2010-2011 data not available)

Socioeconomic background	26.9% parents from higher managerial and professional occupations	26.9% parents from higher managerial and professional occupations
	27.5% parents from lower managerial and professional occupations	27.0% parents from lower managerial and professional occupations (data from 2015-2016; 2010-2011 data not available)
Tracking underrepresentation by area (TUNDRA) by Lower Super Output Areas (LSOA)	29.4% of entrants came from the most represented areas	30.5% of entrants came from the most represented areas
	11.9% of entrants came from the least represented areas	10.7% of entrants came from the least represented areas
Tracking underrepresentation by area (TUNDRA) by Middle Super Output Areas (MSOA)	30.1% of entrants came from the most represented areas	30.0% of entrants came from the most represented areas
	12.2% of entrants came from the least represented areas	11.4% of entrants came from the least represented areas
Associations between characteristics of students (ABCS) access quintiles	40.5% were from quintile 5, with characteristics that were most strongly associated with access to higher education	38.2% were from quintile 5, with characteristics that were most strongly associated with access to higher education
	8.0% were from quintile 1, those least likely to access higher education	7.7% were from quintile 1, those least likely to access higher education

Table 2 shows that whilst progress has been made over the last decade, for the majority of protected characteristics, the gains have been marginal. The key positives are an increase of those with disabilities, improved ethnic diversity and a higher proportion from low HE participation areas. The gender diversity remains challenging with only 0.6% increase in male participation the last decade.

2.2 The Impact of Centralised University Admissions

Many universities operate a centralised Admissions Policy to be able to control total student numbers and provide the flexibility to adjust School / Department student intake depending on the popularity of courses and the outcome of entrance examinations. The University level commitment to A&P translates into Admissions practice (this is student recruitment and selection) in a variety of ways:

- Many Universities now explicitly note their welcome to applicants from diverse backgrounds and personal profiles on their web presence, social media, and recruitment materials.
- Many universities have made conscious moves to have imagery used of a better balanced and diverse population of students and staff on open days and campus visit days.
- University level A&P plans are communicated to the Admissions teams. Admissions tend to be heavily centralised, and focus is on the merit of each application, not FIR/ EDI data. The Admissions managers and associates that we spoke with evidenced indirectly that the Admissions Code of Practice is implemented,
“Behaviours that demonstrate this principle: Universities and colleges ensure admissions processes do not disadvantage applicants and actively seek to address any access gaps related to protected characteristics. Admissions form part of broader institutional equality, diversity and inclusion strategies.”
- ‘Contextual admissions’ allow for consideration of additional data that is automatically provided on the UCAS form. This may include living in an area of disadvantage or with low progression into higher education; the school or college where the applicant took their GCSEs/A-level equivalent has performed below the national average over multiple years; having been looked after in care for more than three months; and/ or having a refugee status.

It is important to note some variation in the Admissions practices for different types of courses: they are likely to be highly centralised and regulated for undergraduate courses (commonly managed external to any given university via UCAS), centralised but direct and managed in-house within universities for masters courses, and very close to the lead supervisor for PhD and professional doctorate courses. Degree apprenticeships appointment could be an existing employee of a company, or a person recruited with selection and admission by an employer and higher education provider having ‘equal’ power on describing position and enrolment.

2.3 Differences between subject areas, and the feasibility of course level considerations

Data at School/ Department/ Course level is not easily or widely accessible as universities regard these as highly confidential. This means that it is very difficult to gather knowledge about how construction courses are faring on A&P or to analyse trends over time. Arguably, the feasibility of School/ Department/ Course level targets or quotas or key performance indicators (KPIs) is somewhat questionable. Firstly, the problem is that the dataset is quite small at course level. Secondly, there are persistent differences in the perceived interest in certain courses, for example, by gender. The HESA classification that covers construction is “Architecture, Building and Planning” and “Engineering and Technology”. These subjects tend to be attractive to more men than women, vis-à-vis social sciences and education and teaching, which tend to attract many more female entrants. The OfS figures relating to the differences in the proportions of female and male students within certain subjects are supported by other data (HESA, 2022) as shown in Figure 1 below. The publishing of figures at a course level could potentially be dangerous and lead to misinterpretations

and bad publicity should they be read out of context. It could create an opportunity for malicious manipulating of figures by not so well intended members of the press for example. The negative reputational effect of such press may be devastating, not only to the institution(s) involved but also for the subject area more widely. Thus, while transparency is desirable and essential, data must be handled carefully so that it is read in the relevant context.

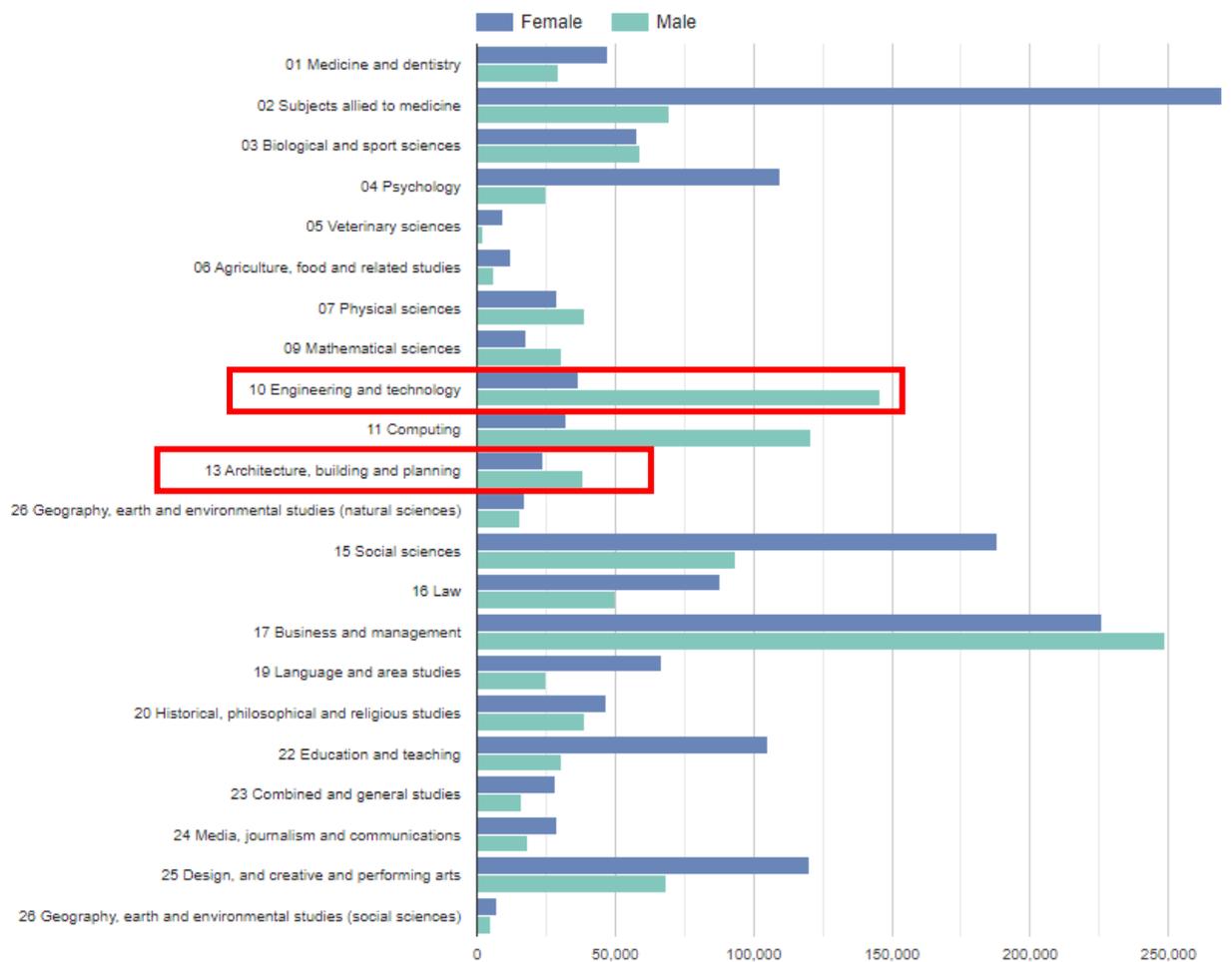


Figure 1. What do HE students study? Subject breakdown by gender (HESA, 2022)

Table 3 shows a comparison of figures for undergraduate students from the academic year 2020-2021 at the HE sector level and on construction courses within one institution. Data like this is difficult to obtain because universities do not make it publicly available. However, this data is from a post-1992 institution which historically attracts students with a more diverse background. The data illustrates well the industry specific skew on gender. We compared the data available for construction courses with data available on other courses within that institution and all the other measures (age, disability, ethnicity, sex, IMD, care experience) reflect more general trends within that institution, the locality, and student population they attract.

Table 3. OfS 2020-2021 data (OfS,2022c) on the protected characteristics and OfS defined underrepresented groups at the sector level and on construction courses within one post-1992 institution (data not available on all protected characteristics and OfS defined underrepresented groups)

<i>Protected characteristics and OfS underrepresented groups</i>	<i>Sector (HE)</i>	<i>Construction courses at a post-1992 institution</i>
Age*	Most commonly entrants on full-time courses are under the age of 21 on entry: 68.4%	Most commonly entrants on full-time courses are under the age of 21 on entry: 58%
Disability*	14.8% of full-time entrants report having a disability	11% of full-time entrants report having a disability
Ethnicity*	70.4% White 29.6% BAME	92% White 6% BAME 2% unknown
Sex*	56.5% Female 43.4% Male	19% Female 81% Male
Index of Multiple Deprivation (IMD)	21.8% of entrants were from the most deprived areas	11% of entrants were from the most deprived areas
Care experience	1.1% of full-time entrants had been in care	0% of full-time entrants had been in care

Thus Table 3 shows that, at this diverse, post-1992 institution, the construction courses underperform, by significant margins, on the listed protected characters in comparison to the overall HE sector.

Table 4. shows a comparison of figures (%) for applicants and entrants on undergraduate students on construction courses within the same institution.

Table 4. Applicants and entrants on undergraduate students on construction courses in a post-1962 institution

<i>Protected characteristics and OfS underrepresented groups</i>	<i>Applicants</i>	<i>Entrants</i>
Age*	Most commonly applicants on full-time courses are under the age of 21: 57.8%	Most commonly entrants on full-time courses are under the age of 21 on entry: 58%
Disability*	10.9% of applicants for full-time courses report having a disability	11% of full-time entrants report having a disability
Ethnicity*	66.7% White 7.1% BAME 26.2% unknown	92% White 6% BAME 2% unknown
Sex*	20.9% Female 79.1% Male	19% Female 81% Male

Index of Multiple Deprivation (IMD)	10% of applicants for full-time courses were from the most deprived areas	11% of entrants were from the most deprived areas
Care experience	0.7% of applicants for full-time courses had been in care	0% of full-time entrants had been in care

Comparison between Tables 3 and 4 show that both applicants and entrants to construction courses at this post-1992 institution has much lower FIR percentages compared to the HE sector but there is good correlation for conversion from applicants to entrants with the exception of ethnicity. In other words, this institution attracts a much less diverse pool of applicants, across all protected characteristics and it works hard to convert those applicants into entrants.

3. University Access Statements

In addition to the sector level data, Universities UK publish a range of good practice case studies¹ and several Universities publish statements about their longitudinal journeys in widening participation, including:

The University of Manchester²

The University of Manchester has operated a number of schemes over several decades now, including a Targeted Access Scheme, Gateways Access Manchester, Manchester Access Programme (MAP), contextual admissions, and school-based access initiatives such as Pathways to Law. Numbers of these schemes have grown from 100 students in 2003 to over 600 students in 2020.

Nottingham Trent University³

NTU has consistently recruited a greater proportion of its full-time undergraduate intake from Low Participation Neighbourhoods than the sector, and they are committed to paying particular attention to the under-representation of disadvantaged males (white and BME) for example through revised outreach and marketing. Black, Asian and other minority ethnic 18-year-olds are well-represented at NTU. For several years they have been strategically improving support for applicants and students with disability/ies, and the number and percentage of NTU's fulltime first degree entrants with a known disability has increased consistently.

Loughborough University⁴

As part of the University's commitment, we have invested in a range of initiatives designed to reduce the inequalities observed across the student lifecycle. Alongside a suite of aspiration and attainment-raising activities this includes use of contextual data and measures to identify applicants

¹ <https://www.universitiesuk.ac.uk/latest/insights-and-analysis/case-studies-new-approach-university>

² <https://www.access.manchester.ac.uk/a-history-of-wp/>

³ <https://www.ntu.ac.uk/policies/access-participation-plan>

⁴ <https://www.lboro.ac.uk/study/access-participation/>

to Loughborough with the greatest potential to succeed with their studies and to ensure that no groups are disadvantaged during the application process.

Universities' A&P Impact Reports show the progress made against the targets, objectives, and written commitments they had set out in their A&P plan each year. Commonly this includes analysis of longer-term trends.

4. Reflections on Priority 2: Access into Industry - HE

In terms of the CLC Skills Plan Actions for Priority 2: Routes into Industry (HE), to improve these percentages:

Every HE provider, due to the OfS mandate, already reviews, enhances and embeds their plans for Fairness, Inclusion and Respect within their recruitment criteria. This is largely met by the requirement to set and continually report on A&P plans. The HE sector is some way ahead of the construction industry specific planning. Our research has confirmed that the long-standing, high-level commitment to the principles of FIR/ EDI, is evidenced by institutional level strategy and practices and continuing improvement in the measures relating to the protected characteristics and OfS defined underrepresented groups. To move further would require a careful consideration of the possible unintended consequences of FIR/ EDI driven recruitment programmes. Concerns over positive discrimination often emerge in response to interventions which are seen to infringe the fundamental principle of meritocracy (Johns et al, 2014; Dobbin and Kalev, 2016). The HE Admissions practice is currently well aligned with both the principles of meritocracy and contextual consideration of specific circumstances. **Major effort in this regard is thus not sensible**, and instead, focus ought to be on enhancing the experience and learning on FIR/ EDI within HE, and also enhancing the workplace profile so that diverse entrants into the industry can be retained. The following key issues need to be addressed to ensure the pipeline of construction applicants into HE is much fairer and more inclusive.

Attractiveness of the Construction Sector: The data in Tables 4 and 5 shows that we are not able to attract diverse applicants to HE construction courses. Broader research identifies the following themes as of specific concern within the context of the construction industry and built environment as a sector: leadership; the image of the industry and career perceptions; gender; ethnicity; and disability. These issues intersect in complex ways to create an environment that is not attractive to new entrants generally and especially those from underrepresented groups (Raiden and King, 2022: 16; Missa and Ahmed, 2010).

Promoting Construction to Minorities: People from ethnic minority backgrounds face limited opportunities within the industry and an awareness of construction careers is minimal within this population (Holborough, 2015; Missa and Ahmed, 2010). Newton and Ormerod (2005) also found that employers in construction are unlikely to have specific policies or practices in place to support the employment of people with disabilities and instead tend to rely on broader equality and health and safety information in managing situations where a worker becomes disabled during at work. They largely ignore people with disabilities in the labour market (ibid: 1079).

Promoting Construction to Female Students: There is a wealth of research on gender in the context of construction and the built environment (see for example Bigelow et al, 2015; Dericks and Phua,

2020; Ginige et al, 2007; Murphy and Ren, 2010; Ness, 2010; Powell et al, 2004, 2005, 2010; Sang and Powell, 2012; Thevenin and Elliott, 2018) much of which points to problems with the image of the industry, perceptions of poor career options, family influences, gender stereotypes, male domination and lack of female peers. Baker et al (2021) find that leadership level gender diversity and initiatives which support work-life balance enhance both organisational performance and their ability to recruit diverse staff. Wilkes et al (2015) highlight concerns about the lack of visibility of construction careers. They find that it is primarily only students who know someone in the industry that are aware of the degree and other possibilities within the industry. Oo et al (2020) report that once women work in construction their job satisfaction tends to be relatively high, and this is increased when their career expectations are met. Thus, they propose that familiarisation and fulfilment of newcomers' expectations is an important aspect of retention. Other initiatives put forward by researchers include positive industry promotion focussing at pre school-leavers (Murphy and Ren, 2010; Powell et al, 2004) and breaking down gendered socialisation processes so that girls and boys are not biased towards particular career paths (Powell et al, 2004), increasing enrolment of women on construction courses through school careers counselling (Bigelow et al, 2015), the use of mentors and role models to inspire and motivate students on construction courses – this was found particularly effective for female students (Thevenin and Elliott, 2018), and publishing good news to showcase the technology and engineering achievements to society at large (Ginige et al, 2007).

Role of Professional Bodies: These are also committing to EDI. For example, the CIOB EDI campaign⁴ recognises that,

“When they leave our universities, students face a construction industry which still has a long way to go to become a more equal, diverse, and inclusive. In the UK, women account for about 15%, professionals from Black, Asian, and Minority backgrounds for about 6% of the construction workforce... [and aim] to discuss how change can be brought about which starts at the education level and might transform the industry our graduates will enter to fully embrace the Art of Building.” (CIOB, 2022)

Similarly, the RICS⁵ states that,

“The surveying profession needs a diverse workforce in order to utilise the innovative skills and technologies required by consumers in the built and natural environments; it is our responsibility to tackle barriers to entry and encourage a more diverse profession.

RICS has been committed to raising the awareness of surveying and the ambition for the profession to be more diverse. The Inclusive Employer Equality Mark is a response to the sector striving to move towards a more diverse and inclusive workforce.” (RICS, 2022)

The question becomes: How can the HE and professional body commitment be better aligned to achieve change in industry and practice? We take this forward in the action plan below.

⁴ <https://www.ciob.org/industry/politics-government/campaigns/equality-diversity-inclusion>

⁵ <https://www.rics.org/uk/about-rics/responsible-business/diversity-and-inclusion/>

5. Guidance for FIR in HE

Given that we are satisfied that HE in the UK has embedded the principles of FIR (or EDI) in student recruitment and selection for some time now, and our findings support the Skills Report statement: *“HE provision is performing well in terms of encouraging diversity”* (CLC, 2021: 28), there is no need for further action on this point for now. The system seems well equipped for encouraging continual improvement. However, the focus should include how we support a more diverse and inclusive student body.

We offer guidance for ‘doing more’ in different areas on three levels:

1. The School / Department level: Embed FIR/ EDI in the curriculum, and develop localised A&P planning and monitoring;
2. The University level: Make School/ Department/ Course level data available, assess staff profiles and evaluate staff development requirements on FIR/ EDI, investigate student support and retention.
3. External Stakeholders: Reflect on the terminology used, align FIR to the wider scope of the Sustainable Development Goals, the pipeline to HE, and the influence of the professional bodies

The School level

- Embed FIR/ EDI in the curriculum and make it an explicit module/ course learning objective for all construction and related courses curriculum so as to ensure future generations of construction managers, surveyors, architects, etc. have the skills and competencies related to FIR/ EDI in the workplace
- Develop localised A&P planning and monitoring
 - Make A&P data at School/ Department/ course level available so that relevant members of staff can develop knowledge about how our construction courses are faring and analyse trends over time, and then develop appropriate local action plans.
 - Instigate Schools specific FIR/ EDI planning and monitoring that is devolved from the university level policy and practice and equally feeds into that process. Record examples of changing and/ or practice.
 - Integrate FIR/ EDI into course review and development plans.

The University level

- Make School/ Department/ Course level data available to support localised A&P planning and monitoring
- Assess staff profiles to investigate whether there are the diverse role models within HE, and make information about staff diversity visible
- Evaluate staff training and development requirements re: FIR/ EDI, and review how well academic and support staff at Course level are equipped for supporting a diverse body of students; this may involve an investigation into how institutional level policy is communicated and actioned into practice on A&P beyond Admissions

- Investigate retention of students from under-represented groups and devise initiatives to support them through their learning journey.
- Trace how FIR/ EDI is currently embedded in a longitudinal manner to follow a student throughout their studies, from application to entry and throughout their learning journey onto successful learning outcomes and achievement of a qualification, and where necessary consider how this could be actioned (some of this may be devolved to school level too).

University X initiated several strands of work under the banner of “The Student Success Academy” to help primarily BAME students. It includes:

- Future Black Talent Programme;
- Academic Success Coaching;
- Placement Start-Up Funds; and
- Get Ahead Together.

External Stakeholders

- Review of the use of terminology – there is a need for common terms of reference. FIR does not align well with the OfS and HE policy and practice on A&P. The OfS approach is more specific and comprehensive (see Table 1), thus a consideration is needed to determine whether (a) their definitions and terminology are adopted for construction too; (b) how FIR is defined (i.e., is it a rebranding of EDI, and how are the core principles of fairness expressed and put into action, and measured and evaluated?). Such an articulation and developing an understanding of fairness is an opportunity for upskilling at HE level also.
- Consider connecting the CLC Skills Plan and actions to the UN Sustainable Development Goals (SDGs) to show connections to the wider global agenda, perhaps specifically and directly with reference to SDGs 5: Gender equality, and 10: Reduced inequalities; and indirectly SDGs 3: Good health and well-being, 4: Quality education, 8: Decent work and economic growth, 11: Sustainable cities and communities, 16: Peace, justice and strong institutions, and 17: Partnerships for the goals. HE institutions globally are committed to doing this (see for example EUA, n.d.; University of Manchester, 2022). As part of NTU’s strategic plan they state: *“We will align our activities with the United Nations’ Global Sustainable Development Goals, recognising environmental, social and economic sustainability in a triple bottom line and supporting our partners and suppliers to do the same.”* (NTU, 2022). This allows for integration of the skills plan into the wider organisational strategic planning and enhances the visibility and significance of specific actions, connecting the local to the global.
- Investigate and enhance the pipeline to HE (e.g., influence of careers counselling at schools, GCSE and A levels choices, local demographics, type of University)
- HE and professional body commitment to A&P and EDI need to be better aligned to achieve further improvements in practice. Professional institutions can highlight FIR/ EDI as an accreditation requirement at course level and hence bring it additional focus. A joint approach will allow Schools to learn from other Schools' good practice.

References

- Baker, M., Ali, M. and French, E. (2021) [Leadership Diversity and Its Influence on Equality Initiatives and Performance: Insights for Construction Management](#), *Journal of Construction Engineering and Management*, 147(10)
- Bigelow, B.F., Bilbo, D., Mathew, M., Ritter, L. and Elliott, J.W. (2015) [Identifying the most effective factors in attracting female undergraduate students to construction management](#), *International Journal of Construction Education and Research*, 11(03), 179-95
- CIOB (2022) The art of building: equality, diversity, and inclusion, *CIOB Conference Leaflet*, Coventry: CIOB
- Construction Leadership Council (CLC) (2021) *CLC Industry Skills Plan for the UK Construction Sector 2021 – 2025*, London: Construction Leadership Council
- Dericks, G.H. and Phua, F.T.T. (2020) [The occupational attractiveness of the built environment and the roles of individualism and collectivism: A hidden source of conflict and gender imbalance?](#) *Construction Management and Economics*, 38(9), 773–88
- Dobbin, F. and Kalev, A. (2016) Why diversity programs fail, and what works better, *Harvard Business Review*, July-August, <https://hbr.org/2016/07/why-diversity-programs-fail> [accessed 20 July 2022]
- Donelan, M. (MP) (2021) Minister of State for Higher and Further Education, *Letter*, re: “Appointment of the next Director for Fair Access and Participation and the long-term direction of support for successful access and participation by disadvantaged groups”, by e-mail, 24.11.2021
- EUA (n.d) *Universities and Sustainable Development - Towards the Global Goals*, European University Association, <https://eua.eu/downloads/publications/universities-and-sustainable-development-towards-the-global-goals.pdf> [accessed 20 July 2022]
- Ginige, K.N., Amaratunga, R.D.G. and Haigh, R. (2007) [Improving construction industry image to enhance women representation in the industry workforce](#), In: Boyd, D. (Ed.) *Proceedings 23rd Annual ARCOM Conference*, 3-5 September 2007, Belfast, UK. Association of Researchers in Construction Management, Vol. 1, 377–85
- HESA (2022) *HE students by CAH level 1 and sex*, Higher Education Statistics Agency, <https://www.hesa.ac.uk/data-and-analysis/students/what-study#characteristics> [accessed 19 July 2022]
- Holborough, A.M. (2015) [Ethnicity, education and the transition to the construction labour market: developing an equality framework using a capability approach](#), Unpublished PhD Thesis, Business School, University of Westminster
- Johns, N., MacBride-Stewart, S., Powell, M. and Green, A. (2014) When is positive action not positive action? Exploring the conceptual meaning and implications of the tie-break criterion in the UK Equality Act 2010, *Equality, Diversity and Inclusion*, 33(1), 97-113
- OfS (2022a) *Our strategy*, Office for Students, <https://www.officeforstudents.org.uk/about/our-strategy/> [accessed 13 January 2022]
- OfS (2022b) *Our approach to access and participation*, Office for Students, <https://www.officeforstudents.org.uk/advice-and-guidance/promoting-equal-opportunities/our-approach-to-access-and-participation/> [accessed 13 January 2022]

- OfS(2022c) *Equality, diversity and student characteristics data*, Office for Students, https://www.officeforstudents.org.uk/media/79a7bb57-83cf-4c50-a358-6bcfe80f165c/ofs2022_29.pdf [accessed 19 July 2022]
- OfS (2022d) *Equality, diversity and student characteristics data – get the data*, Office for Students, <https://www.officeforstudents.org.uk/data-and-analysis/equality-diversity-and-student-characteristics-data/get-the-data/> [accessed 19 July 2022]
- Missa, P. and Ahmed, V. (2010) [BME migrants' employment in construction: a multicultural perspective](#), In: Egbu, C. (Ed.), *Proceedings 26th Annual ARCOM Conference*, 6-8 September 2010, Leeds, UK. Association of Researchers in Construction Management, Vol. 1, 603–12
- Murphy, M. and Ren, Z. (2010) [Engaging female employees at technical and professional status in the South Wales construction sector](#), In: Egbu, C. (Ed.) *Proceedings 26th Annual ARCOM Conference*, 6-8 September 2010, Leeds, UK. Association of Researchers in Construction Management, Vol. 1, 553–62
- Ness, K. (2010) "I know Brendan; he's a good lad": the evaluation of skill in the recruitment and selection of construction workers, In: Egbu, C. (Ed.) *Proceedings 26th Annual ARCOM Conference*, 6-8 September 2010, Leeds, UK. Association of Researchers in Construction Management, Vol. 1, 543–52
- Newton, R. and Ormerod, M. (2005) [Do disabled people have a place in the UK construction industry?](#) *Construction Management and Economics*, 23(10), 1071-81
- NTU (2022) *University, reimagined*, Nottingham Trent University, <https://www.ntu.ac.uk/about-us/university-reimagined> [accessed 16 June 2022]
- Oo, B.L., Lim, B. and Feng, S. (2020) [Early career women in construction: Are their career expectations being met?](#) *Construction Economics and Building*, 20(03), 1-19
- Powell, A., Bagilhole, B.M., Dainty, A.R.J. and Neale, R.H. (2004) [An investigation of women's career choice in construction](#), In: Khosrowshahi, F. (Ed.) *Proceedings 20th Annual ARCOM Conference*, 1-3 September 2004, Edinburgh, UK. Association of Researchers in Construction Management, Vol. 1, 477–84
- Powell, A., Dainty, A. and Bagilhole, B. (2010) [Achieving gender equality in the construction professions: Lessons from the career decisions of women construction students in the UK](#), In: Egbu, C. (Ed.) *Proceedings 26th Annual ARCOM Conference*, 6-8 September 2010, Leeds, UK. Association of Researchers in Construction Management, Vol. 1, 573–82
- Powell, A., Dainty, A., Bagilhole, B.M. and Neale, R.H. (2005) [Coping in construction: Female students' perspectives](#), In: Khosrowshahi, F. (Ed.) *Proceedings 21st Annual ARCOM Conference*, 7-9 September 2005, London, UK. Association of Researchers in Construction Management, Vol. 1, 33–42
- Raiden, A. and King, A. (2022) *Social value in practice*, Abingdon: Routledge
- RICS (2022) Diversity equity and inclusion, <https://www.rics.org/uk/about-rics/responsible-business/diversity-and-inclusion/> [accessed 19 July 2022]
- Sang, K. and Powell, A. (2012) [Gender inequality in the construction industry: Lessons from Pierre Bourdieu](#). In: Smith, S.D. (Ed.) *Proceedings 28th Annual ARCOM Conference*, 3-5 September 2012, Edinburgh, UK. Association of Researchers in Construction Management, 237–47

Selby, J. (2018) HEFCE history: The early days of widening participation, *Wonkhe*, <https://wonkhe.com/blogs/hefce-history-the-birth-of-widening-participation/> [accessed 19 July 2022]

Thevenin, M.K. and Elliott, J.W. (2018) [The role of supportive others in academic decisions: differences in construction management students by gender](#), *International Journal of Construction Education and Research*, 14(04), 257–76

University of Manchester (2022) *Top ten in the world for sustainable development*, <https://www.manchester.ac.uk/discover/social-responsibility/sdgs/> [accessed 20 July 2022]

Wilkes, J.T., Nobe, M.C., Clevenger, C.M. and Cross, J.E. (2015) [Needs assessment: Identifying and addressing high school counsellors' perceptions of construction management](#), *International Journal of Construction Education and Research*, 11(03), 196-217

Bibliography

Bell, N., Powell, C. and Sykes, P. (2015) [Securing the well-being and engagement of construction workers: An initial appraisal of the evidence](#), In: Raiden, A. and Aboagye-Nimo, E. (Eds.) *Proceedings 31st Annual ARCOM Conference*, 7-9 September 2015, Lincoln, UK. Association of Researchers in Construction Management, 489–498

Bridges, D., Wulff, E., Bamberly, L., Krivokapic-Skoko, B. and Jenkins, S. (2020) [Negotiating gender in the male-dominated skilled trades: a systematic literature review](#), *Construction Management and Economics*, 38(10), 894–916

CIOB (2021) Equality, Diversity & Inclusion (EDI) - CIOB's Commitment, <https://www.ciob.org/industry/politics-government/campaigns/equality-diversity-inclusion> [accessed 22 July 2022]

Galea, N., Loosemore, M., Powell, A. and Chappell, L. (2014) [Gender equity in construction professions: A new institutionalist perspective](#), In: Raiden, A. and Aboagye-Nimo, E. (Eds.) *Proceedings 30th Annual ARCOM Conference*, 1-3 September 2014, Portsmouth, UK, Association of Researchers in Construction Management, 1111–9

Galea, N., Powell, A., Loosemore, M. and Chappell, L. (2015) Designing robust and revisable policies for gender equality: lessons from the Australian construction industry, *Construction Management and Economics*, 33(05), 375-89

Haizelden, J., Marasini, R. and Daniel, E. (2019) [An Analysis Of Diversity Management In The Construction Industry: A Case Study Of A Main Contractor](#), In: Gorse, C. and Neilson, C.J. (Eds.) *Proceedings 35th Annual ARCOM Conference*, 2-4 September 2019, Leeds Beckett University, Leeds, UK Association of Researchers in Construction Management, 465-474

Pender, G., Sang, K., Shinton, S., Bosché, F., Chrisp, M., Hogg, G., MacIntosh, R. and McLaughlin, S. (2022) *Disability Inclusive Science Careers – project conclusion*. <http://disc.hw.ac.uk/disability-inclusive-science-careers-project-conclusion/> [accessed 16 June 2022]

Powell, A., Galea, N., Salignac, F., Loosemore, M. and Chappell, L. (2018) [Masculinity and Workplace Wellbeing in the Australian Construction Industry](#), In: Gorse, C. and Neilson, C.J. (Eds.) *Proceedings*

34th Annual ARCOM Conference, 3-5 September 2018, Queen's University, Belfast, UK. Association of Researchers in Construction Management, 321–330

Powell, A., Hassan, T.M., Dainty, A. and Carter, C. (2009) [Exploring gender differences in construction research: a European perspective](#), *Construction Management and Economics*, 27(09), 803–7

Powell, A., Hassan, T., Dainty, A. and Carter, C. (2007) [Strengthening women's participation in construction research in Europe](#), In: Boyd, D. (Ed.) *Proceedings 23rd Annual ARCOM Conference*, 3-5 September 2007, Belfast, UK. Association of Researchers in Construction Management, Vol. 1, 347–56.

Powell, A., Hassan, T., Dainty, A. and Carter, C. (2008) [The under-representation of women in European construction research](#). In: Dainty, A. (Ed.), *Proceedings 24th Annual ARCOM Conference*, 1-3 September 2008, Cardiff, UK. Association of Researchers in Construction Management, Vol. 2, 881–90

Sang, K. (2007) [Health and well-being in the architectural profession and the influence of gender](#), Unpublished PhD Thesis, Department of Civil and Building Engineering, Loughborough University

Sang, K., Dainty, A. and Ison, S. (2007) [Gender: a risk factor for occupational stress in the architectural profession?](#) *Construction Management and Economics*, 25(12), 1305–17

Sang, K., Dainty, A. and Ison, S. (2008) [The impact of self-employment on architects' job satisfaction](#), In: Dainty, A. (Ed.) *Proceedings 24th Annual ARCOM Conference*, 1-3 September 2008, Cardiff, UK. Association of Researchers in Construction Management, Vol. 1, 13–22

Sang, K., Dainty, A. and Ison, S. (2004) [The impact of the structure and culture of the construction industry on employee well-being: directions for future research](#), In: Khosrowshahi, F. (Ed.) *Proceedings 20th Annual ARCOM Conference*, 1-3 September 2004, Edinburgh, UK. Association of Researchers in Construction Management, Vol. 1, 495–503

Sang, K., Ison, S. and Dainty, A. (2009) [The job satisfaction of UK architects and relationships with work-life balance and turnover intentions](#), *Engineering, Construction and Architectural Management*, 16(03), 288–300

Sang K., Calvard, T. and Remnant, J. (2021) Disability and academic careers: Using the social relational model to reveal the role of human resource management practices in creating disability, *Work, Employment and Society*, doi:10.1177/0950017021993737

Appendix 1

Priority 2: Routes into Industry – HE Task Group members:

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- Dr Andrew King, Workplace Tutor, Apprenticeships, NTU
- Prof Chris Gorse, Professor of Construction and Project Management, Leeds Beckett University
- Prof Craig Thomson, Professor in Sustainability and the Built Environment, Glasgow Caledonian University
- Dr Chrissi McCarthy, Director, Constructing Equality
- Briony Wickenden, Head of Training and Development, Civil Engineering Contractors Association (CECA)

A small number of Universities in the UK were selected for in-depth research so as to form an indicator of how student recruitment and selection in HE institutions works.