



SUSTAINABLE HOUSING PRODUCTION: THE NEED FOR HIGH QUALITY TRAINING AND DIRECTLY EMPLOYED WORKERS

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Aneurin Bevin - 1946

“When the honourable member says that the number of completed houses is not so great as he had hoped it would be, he must enquire for the reason into the organisation of the building industry, and not in the government’s plan for housing”

Characteristics of Construction Industry (UK)

- 2m employees, 9% GDP, importance of public client
- 194,000 firms – 40% 1-person, 6% 13+ employees, 0.06% large
- 75% manual workforce; 25% non-manual; varied occupations
- Performance-based wage structures, high levels subcontracting
- High ('bogus') self-employment; 770, 000 CIS
- Many little formal training e.g. 46% NVQ3 or equivalent
- Often casual, long hours
- Recruitment and promotion often 'word-of-mouth', informal + agencies though increasing CSCS checks
- Trade union rate = 17% , collective agreement coverage = 20%
- Often dangerous/poor working conditions (fatal major injuries 3x other industries + 'safety critical' jobs)
- Higher qualification demands with increasing mechanisation, digitalisation and prefabrication

An exclusive industry?



- **Women**
- male workers dominate the industry in manual occupations (99.7% of private-sector workforce)
- **Ethnic minorities**
- in construction = 2.8%, in economically active population = 7%
- **Trade unionists/health and safety representatives**
- Consulting Association raid 2009 found 44 construction firms paying to run blacklist database of construction workers
- **Migrants:** estimated 12%, higher proportions in lower positions; concentration in London

The need for radical transformation of VET

- **Decline in construction apprenticeships** in England completions 16,890 2009/10 → 8,030 2013/4
- **Increase in full-time college construction training** though overall entrants declining: 47,188 2005 → 14,121 2015
- **Lack of training infrastructure** due to fragmentation of employment (nearly half self-employed and/or agency labour) and firms (94% under 14 employees)
- **Employer disengagement** though employer-based system
- **Comprehensive, broad and recognised VET programme** at least NVQ3 level called for, not bolt-on skills'/ short training courses, fragmentation of certification and awarding bodies + private training providers

VET differences across Europe: the example of bricklaying

Continental system	English system
Occupational status embedded in sector	Trade
Broad competencies (knowledge, skills + personal/civic development)	Narrow, bounded skills
VET- dual system, 3+ years, dominant entry route, education based, permeability	Training, weak integration of educational elements, 2 routes: a) apprenticeship; b) full-time college (problem of work experience) Lack of permeability
Social partner-based VET, collective bargaining, high currency	Employer-based VET , low currency, often learning on job

Explaining the differences:

skills

vs

qualifications

UNTRAINED

roofer

plumber

architect

construction
manager

quantity

surveyor

bricklayer

site
manager

carpenter

joiner

Carpenter

Joiner

Bricklayer

Concrete
worker

Plumber

Site
Manager

Roofer

Building
engineer

Architect

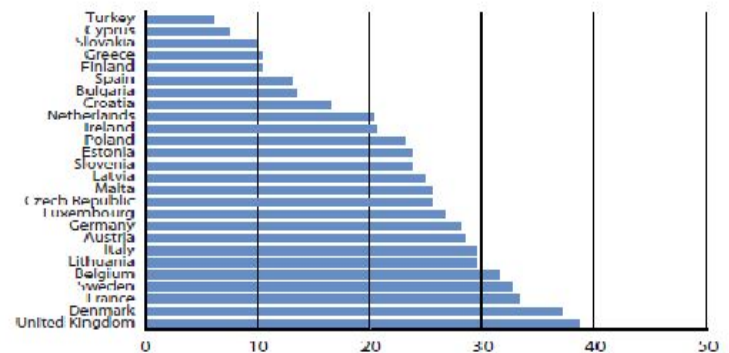
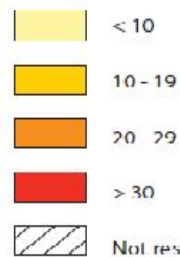
Problems in meeting EU 20/20/20 energy targets in construction?

- **Targets:** reduce energy use, increase renewable energy, reduce carbon dioxide (CO₂) emissions by 20% by 2020
- **Construction sector** = 40% EU CO₂ end-use emissions:
→ 'near zero emissions' for new + retrofitted buildings through energy efficient envelopes & on-site renewables supported by:
 - New qualifications
 - Quality assurance schemes and 'Green Deals'
- **Difficulties:**
 - Different pathways to low carbon economy
 - Different models VET
 - Performance gap

Initiatives to meet EU 20/20/20 energy targets in construction

- EU construction employs 14.5 million, 10.4% GDP
- *Build up Skills* – stakeholder roadmaps agreed in 30 countries, but low energy construction (LEC) barriers identified as:
 - ‘weaknesses of national vocational education and training (VET) systems’ including ‘borderline’ skills and unsatisfactory interdisciplinary training opportunities
 - ‘shortage of cross-trade knowledge and skills’
 - ‘insufficient coordination between occupations’
- *UK:*
 - Demand-led Action Plan to 2020 around plugging ‘skills gaps’
 - Green Deal 2013, collapsed, not built into VET system, could take 160 years to survey all UK housing
- *Germany:*
 - Small employer-led, focused on VET
 - Main problems identified: “interfaces between trades and lack of any understanding for a house/building as one integrated system”

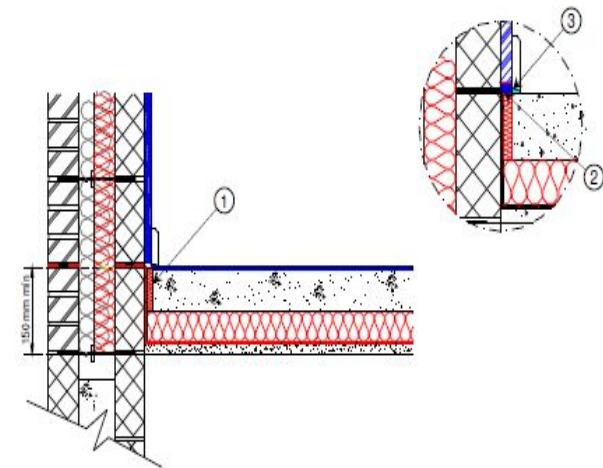
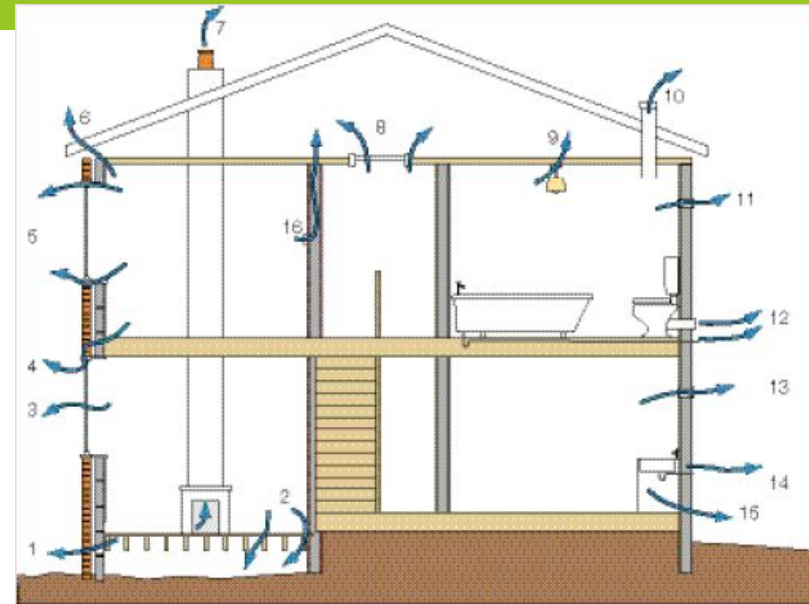
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- A map of Europe showing the membership of the European Council from 1995 to 1996. The map uses color-coding to represent different groups of member states: red for the original six (UK, FR, DE, NL, BE, GR), orange for the 1973 entrants (DK, IR, IT, PT, ES, IE), yellow for the 1981 entrants (GR, CY, EL, LU, SI, FI, SE), and hatched for the 1995 entrants (HU, PL, SK, CZ, SI, RO). Non-member states are shown in grey.



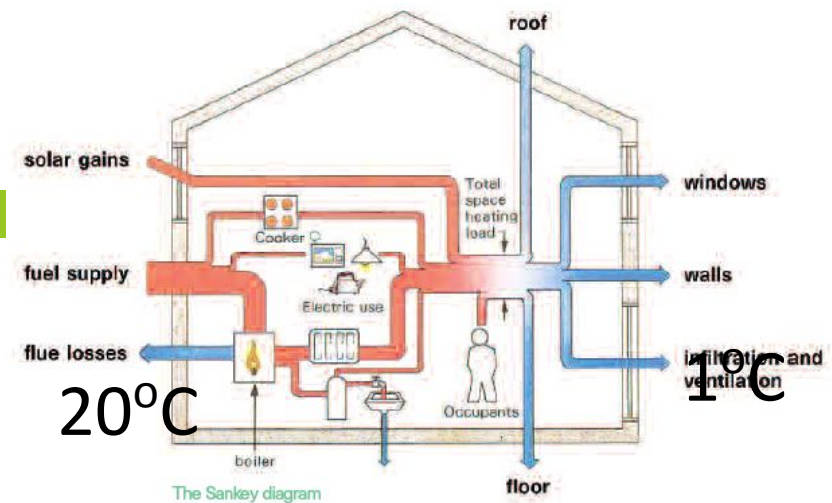
2005, <http://www.ceps.lu/pdf/6/art1143.pdf>

Problems with the construction labour process for energy inefficiency in buildings

- **building envelope occupations** (e.g. insulation, materials) key to emissions reductions but many workers without formal qualification
- **construction industry factional** professional silos, trades, and fragmented labour process
- **contractual divisions**: agency labour/ self-employed, labour-only subcontracting, long supply chains
 - reinforcing trade/ sectoral divisions
 - impeding integrated teamwork needed



Expertise needed for low energy construction



- **Need for ‘knowledge’** (e.g. how to eliminate thermal bridges, physics) and **‘know how’** (e.g. task specific competences needed for thermal performance) not generally in curriculum,
- → **Transformation of VET to develop occupational capacity** to understand overall project and occupational interactions i.e. comprehensive, high standard VET with broad occupational profiles
- **Bridge professional-operative divide** and create permeability
- **Integrated teamworking** through regulating subcontract chain and direct employment
- **Involving and valuing labour**, including educationalists, employees, trade unions

A Yorkshire good practice LEC example

Wakefield District Housing Social housing scheme (91) combining:

- Green technologies & traditional building techniques
- Direct labour and all different trades working together by (600 employed)
- Apprentice training at Leeds College
- Own (90 strong) repair and maintenance team
- Trade union involvement (UCATT)

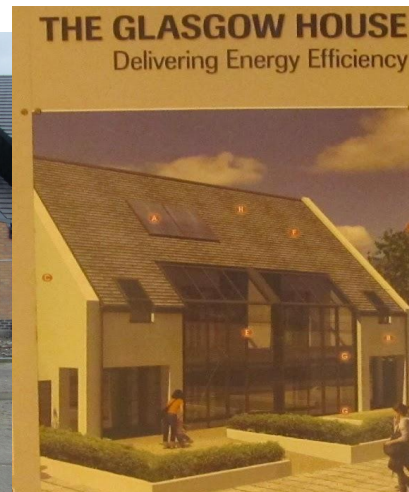


Only for families earning less than £25,000 pa



Glasgow City Building - 2017

- Direct labour force – 2,200 employed
- Large-scale training provision and workshops
- Manufacturing arm – 60% with disabilities
- Highly unionised
- Social housing combining green technologies & traditional building
- Own repair and maintenance team
- Joint Trade union Council, local authority + housing association (Wheatley)



Significance of DLOs

- Maintaining housing new build and R&M programme when private sector putting in exorbitant tenders or bankrupt
- Check on private contractors
- Providing complete building service, from design to construction to repair and maintenance
- Building good quality housing under stable employment, safe working conditions and fair wage
- Direct employment of labour, reduced subcontracting, no 'lump', and high levels of union organisation
- Good quality and high levels of training
- Inclusive, challenging exclusivity of construction sector
- Politically and economically accountable

London history of DLOs

- Set up under Housing of Working Classes Act 1890 when extremely bad housing conditions and serious problems with the building industry (scandals over ‘ringing of contracts’ and quality of work)
- First DLO LCC 1891, then Battersea, West Ham etc. by Progressives with trade union involvement
- Widely extended roles, from making school furniture, to new housing, to constructing power stations, from own architects’ department to new construction and repair and maintenance

“The establishment of a Works Department by the County Council ...was forced on us by contractors themselves... Their withdrawing of tenders and their systematic cornering of the Council.. The new Department has completely revolutionised the old corrupt order of things. It has made the Council independent in its public works.” John Burns 1898



Subsequent development of DLOs

- 1892 – 1907: LCC executed over 300 works, valued at over £3m (private contractors in London, 170 works)
- Moderate control of LCC 1907 → destruction of DLO, sacking 3,000 workers and selling equipment
- 1919 Housing Act sanctioned 70 direct labour schemes – 1924 DLOS building 10% new council houses (104,000 houses by 1928); private building industry ill-equipped to cope with scale of housing
- Wheatley Act 1924 provided subsidies and envisaged 15-year programme of housing built by local authorities at rents affordable by working classes

Expansion of DLOs post WW2

- Number DLOs doubled: 41 local authorities 1959 building by direct labour;
- 1967 200,000 employed, many trainees



Flats at Morland Court, Hammersmith.

Architecture of L. A. Butterfield, A.R.I.B.A.

81



Edmonstone balconies with "basket" balustrades—Edmonstone

Assistant Architect, W. Houghton-Evans. A.R.I.B.A.



London DLOs late 1970s



Local authority	Housing stock	DLO operatives	DLO turnover
GLC	224,000	5,000	£73m
Lambeth	34,000	1,000	£16m
Wandsworth	27,930	898	£10.6m
Hackney	25,000	1,060	£6m new
Hammersmith	46,210	1,068	£5m
Tower Hamlets	16,000	240	£2m
Islington	20,780	310	£2.6 (no new build)
Kensington & Chelsea	6,450	50	£0.3 (no new build)

Women in DLOs



The construction industry has always been a male preserve, but female workers like Jane Bennett (above) are challenging this dominance. She is a former carpenter with Camden DLO and performs work of an equal standard to her male counterparts. Photo: Sheila Cole.

Table 4: Number of women employed by some Inner London DLOs in 1988 and 1994

	Fully skilled	Adult trainees	Apprentices	Total women employed in 1989	Total women employed in 1994
Camden	4		11	15	n/a
Hackney	12	29	6	47	25
Haringey	60	24	18	102	9
Greenwich	9	3		12	n/k
Islington	8	7		15	22
Lambeth	10	18	4	32	n/k
Lewisham	3	23	17	43	8
Total	106	104	56	266	64

Sources: Pyke, 1989, LWAMT Newsletter, 1994.

Strategy needed to shift to high quality, inclusive, green social housing construction

- *New approach* to construction to achieve “near zero emissions” buildings
- *Transformation of VET system* – broad-based, high level with inbuilt ‘thermal literacy’
- *Integrated teamworking*
- *Inclusiveness* - opening up opportunities for women, disabled, older workers and ethnic minorities
- *Involving and valuing labour* in transforming labour process

Questions of a reading worker

Who built seven-doored Thebes?
In the books are the names of kings.
Did the kings haul the rocks?
And Babylon, many times destroyed-
who built it up these many times?
In which houses of golden-gleaming Lima
did the construction workers live?
In the evening, when the Chinese wall was finished,
where did the masons go?
The great Rome is full of triumphal arches.
Who erected them?
Who did the caesars triumph over?

Bertolt Brecht