UK Construction Industry.

The total number of people in the construction industry is falling. These figures are pre-Covid and pre-Brexit
The age cohort has a huge proportion in their mid 50's to 64 and beyond.
The number over 65 (92k) is larger than the number in their teens having just joined as apprenticeships.

	16-20	21-30	31-40	41-64	65+	total	Housing Completions
2010	87k	455k	700k	890k	55k	2.2m	151k
2019	83k	310k	550k	1180k	93k	2.3m	204k

The above is taken from ONS; other sources indicate the number of workforce over 55 years is close to 50% of the total.

In 2016 the CITB undertook a survey across the industry by trade, the results are below (blue = women)

Brickies (148k 350) sparks (125k 284) chippies (190k 71) plumbers (45k 13) painters (32k 462) roofers (77k 0) scaffolders (31k 229) together with a plethora of other key trades. There are no numbers on wider diversity. Of the total 1.22m manual workers, only 75k are trainees.

Mark Farmer recently wrote that post Covid and post Brexit the industry has lost a further 400,000 from the workforce.

More importantly, the above numbers represent people working in construction to build factories, schools, offices, retail, leisure, and housing, (Table 1) and many will not work as sub-contractors in house building preferring to work as small jobbing repairs and small works. (Tried getting a plumber or sparks lately? If so, please share their contact details)

<u>Regional Differences.</u>

While Europeans made up a proportion of the on-site workforce, (pre-Brexit) it was disproportionally concentrated in London and southeast, with some sites consisting of up to 70% foreigners. The impact enabled sites to start and finish and ensure a supply of skilled workers, although many required weekly salary payments rather than monthly.

The following table (Table 2) illustrates the proportion of UK construction workforce. The map illustrates that if Levelling Up is dependant upon the construction industry, there may be an insufficient supply of labour in that location. Indeed, on one housing site in Selby, the house builder was using roofers based in Plymouth.

300,000 New Homes

Conservative Governments have repeatedly stated a target of 300kpa new homes. Never achieved even with a booming economy and Help to Buy.

So, if in 2019 it took 2.3m construction workforce to deliver 204,000 new homes, we can assume it may take closer to 3m workforce to deliver the 300k new homes. This leaves to one side issues around planning, development finance, mortgages, build cost inflation (fewer workforce = higher cost) and increase in raw material imports (67% of housing materials are imported)

MMC is not the silver bullet, nor is Custom/Self Build.

New Build v Refurbishment.

The UK has a commitment to be Carbon Net Zero by 2050. So new homes will be fitted with Air Source Heat Pumps, which will get homes to an average temperature of 18 degrees, together with Solar and PV. For the 24m existing homes in the UK, some 1.6m only have oil as a primary heating source, and 380,000 buildings are listed, the many being residential. Achieving Net Zero on these latter two categories will be challenging.

But if all 25m homes must be retrofitted to Net Zero, to achieve this target, it requires 24,000 homes per week to be retrofitted to achieve the 2050 target. Currently only 32% of ASHP fitted in England are manufactured in the UK, although the majority of the components are imported (see Table 3) The largest consumer of HPs is Europe. Given ASHP predominantly requires plumbing skills for the 24,000 retrofits, there are only 45,000 qualified plumbers in the industry, so this potentially reduced new build numbers to just 100,000 pa.

Conclusion.

It is not enough to talk about the need to deliver 300,000 new homes pa, as we need to pay just as much attention to who is doing the building with an ever decreasing and aged workforce.

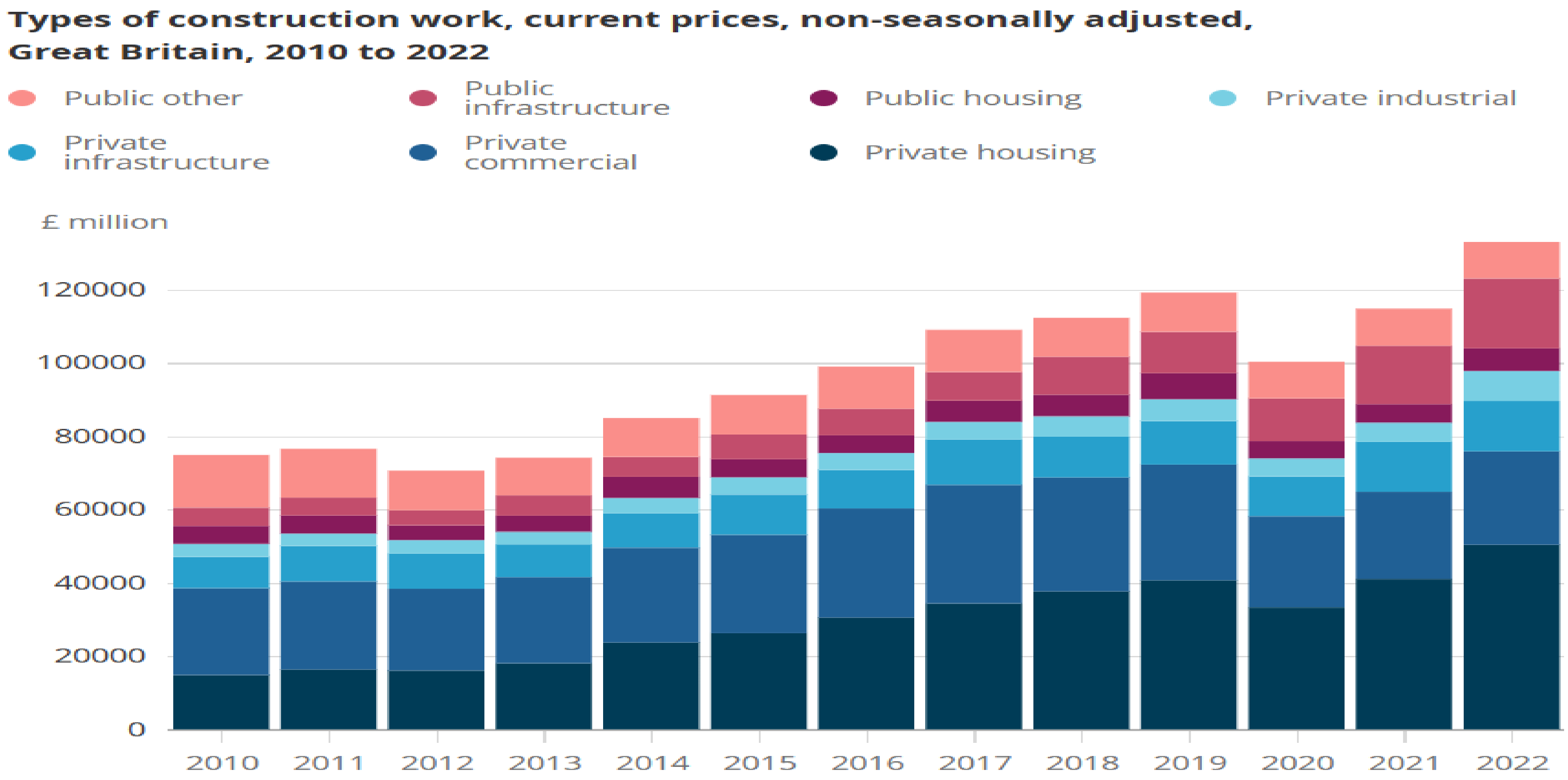
In the same way that 67% of building material is imported (glass, timber, white goods, M&E etc) and open is increases in costs.

The need to achieve Net Zero in existing residential is lagging, and this will absorb a workforce currently focussed on new build and materials that are for the most part manufactured from abroad, thus reducing new build numbers.

Government needs to focus on the workforce if it is to achieve any target.

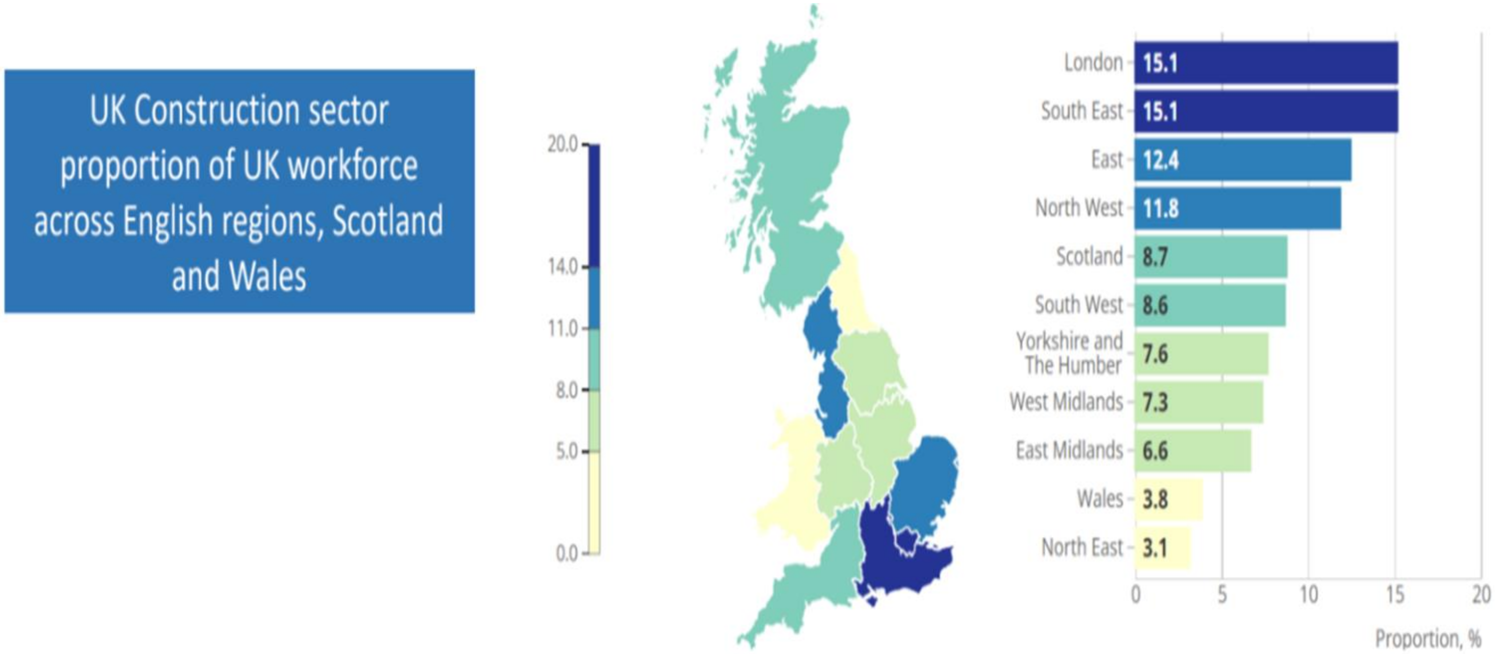
Terry Fuller **18.4.24** UKconstructnumbers

Table 1.



<u>Note the largest at over £40,000,000,000 (£40 billion) by Price is in Private house building</u>

Table 2. The spread of the construction workforce in the UK.



Note, the lowest number of workforces is in the North East and Wales.

Table 3. The proportion of key components in Energy systems for homes and offices etc dependent upon imports.

United Kingdom							Current Prices (£'000)
		2014	2015	2016	2017	2018	2019
Pumps (circulating)	Imports	37,205	38,310	47,261	38,761	65,214	76,338
	Exports	6,894	12,767	10,483	13,573	8,978	9,494
Central Heating Boilers	Imports	590,564	584,030	624,423	640,815	664,916	622,219
	Exports	63,436	75,463	110,656	152,292	180,696	173,005
Radiators	Imports	181,277	184,085	191,200	210,206	213,025	226,528
	Exports	41,046	40,929	45,208	49,243	50,045	40,353
Water Heaters	Imports	122,971	127,898	139,385	148,614	153,555	164,460
	Exports	58,529	65,808	65,569	71,045	73,064	68,307
Space Heaters	Imports	126,100	130,099	140,966	150,464	165,358	155,836
	Exports	30,221	31,490	32,277	40,711	47,546	56,944
Fan Systems	Imports	223,294	245,360	291,210	205,348	237,937	267,822
	Exports	151,261	143,119	129,268	84,271	106,124	140,883
Air Conditioning Equipment	Imports	534,282	518,087	585,067	663,142	659,164	652,275
	Exports	269,524	284,946	340,891	374,499	412,136	403,328
Air Purifying Equipment	Imports	82,949	78,450	97,383	104,833	128,375	153,039
	Exports	223,275	229,591	280,094	253,924	277,036	284,498
Meters	Imports	59,692	97,599	170,651	308,905	224,724	195,800
	Exports	76,447	73,939	68,224	65,336	41,624	26,422
Electrical Wires	Imports	1,573,631	1,555,575	1,722,019	1,927,463	1,902,786	1,849,576
	Exports	643,696	685,189	711,411	855,361	866,414	873,821