The Home Front in the Factories, Docks and Mines.   
  
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'The work you do this week fortifies and strengthens the front of battle next week… The production you pour out of your factories this week will be hurled into desperate struggle next week'  
  
Lord Beaverbrook, Minister of Aircraft Production, Summer 1940.  
  
More than in any previous conflict the Second World War was a war of technology, where the battle for increased production in the factories, docks and mines was of equal importance to that on the ground, air or sea. By December 1942 over 11 million workers were directly engaged in work for the Ministry of Supply at around 30,000 firms. As key strategic targets factories were also now in the front line, and the work was often dangerous - either due to the materials and processes involved or the threat of aerial attack. Total war placed new and unprecedented strains on British industry, ushered in fundamental changes to productive technology and produced significant improvements for those employed on the home front.   
  
The factory war had actually begun with the start of re-armament in 1936. The government encouraged the expansion of aircraft production with the intention of producing 12,000 aircraft in just three years. Car manufacturers, electrical engineering firms and chemical producers were all brought into a 'shadow factory' scheme designed to enhance military output. Forty new Royal Ordnance factories were built from 1936 onwards, ultimately employing over 300,000 men and women, while re-armament brought a much-needed interwar boost for the declining nineteenth century heavy industries of coal, iron and shipbuilding. The outbreak of hostilities brought little further direct intervention in industry until after the collapse of Chamberlain's coalition. Churchill formed a government in which the Labour Party played a key role, none more so than Ernest Bevin as Minister of Labour. Immediately he entered into negotiations with the trade unions with a view to securing their support, gained enormous powers to control labour through the Emergency Powers Act, supplemented the existing collective bargaining machinery with a binding National Arbitration Tribunal and made strikes and lock-outs illegal under Order 1305. Bevin also acted to end the 'poaching' of skilled workers by rival employers, as the Restriction on Engagement Order of June 1940 made it compulsory for recruitment to occur only through employment exchanges or an approved trade union. In this way thousands of men and women were directed out of civil industries into war work. Effective arrangements were also made for the dilution of skilled labour and the curtailment of restrictive practices for the duration of the war. As a result of this shift in the industrial landscape during 1940, there developed a new spirit of co-operation in industry. Fewer working days were lost to strikes that year than for half a century and while deliveries of tanks and field guns increased only slowly, there was a dramatic leap in aircraft production. Inspired by urgent calls from the Ministry of Aircraft Production, factories worked twenty-four hours a day, seven days a week. SU Carburettors in Birmingham doubled its weekly output in less than a fortnight. Bank holidays and 'wakes weeks' were cancelled. Concern for finished appearance was ignored, as was routine factory maintenance. Normal working hours were set from 8 a.m. to 7 p.m. but almost all workers exceeded them, many working until midnight then sleeping on the factory floor. In the munitions works, where immediate increases were regarded as essential, the problem became how to prevent overworking. At Metro-Vickers in Manchester those involved with radar worked solidly for forty-eight hours to produce 8 urgently needed transmitters. But in the longer term, excessive hours produced fatigue, poor health and increased absenteeism, with no great gains in productivity, to the extent that in June 1940 Bevin limited women to a 60-hour week and advised that men be restricted to the same.  
  
As the war continued and a position of full employment was attained, the 'manpower budget' was balanced with a further extension of state control over industry through the Essential Works Order (EWO) of March 1941. Powers were taken to declare work done in any establishment 'essential' and within 9 months had been applied to 30,000 undertakings employing almost six million workers in engineering and aircraft factories, shipyards, mines and the building industry. Those employed in factories covered by an EWO could not leave without permission, nor could the employer sack any worker without the permission of the Ministry of Labour thus ending unnecessary movement of labour and finally preventing the poaching of skilled workers. The demand for skilled labour was also eased by the transferring of workers from other sectors into engineering and by further measures of dilution including the upgrading of semi-skilled workers and training in the Government Training Centres. By late 1941, as an extra 1,750,000 men were recruited into the services and the demand for munitions workers continued to grow, additional shortages of labour saw the compulsory registration for work of all men over 41 and all unmarried women between 19 and 30 years.   
  
Realising that forcing people to work for low wages in primitive factories would provoke discord and damage morale, Bevin ensured the EWO contained important provisions to compensate the workers for their loss of freedom. All 'essential' undertakings were required to satisfy requirements on wages and conditions. Partly as a result of EWO, partly due to the longer hours worked and partly due to Bevin's extension of the Trades Boards to provide minimum wage rates for an additional million low paid workers, by 1943 average weekly wage rates had risen 35% above their 1938 level and average earnings in the metal, engineering and shipbuilding industries peaked at around £7 in January 1944 - a rise of £3 a week since 1940. Furthermore, employers were required under EWO to make adequate provision for the welfare of their employees. Factories with more than 250 employees were compelled to appoint a Welfare Officer. Advances were made in lighting and ventilation, the provision of rest rooms, canteens and medical facilities as well as a growing understanding of the value of music and entertainment in maintaining productivity.

Trade union membership was also expanded greatly during the conflict, up one-third from 6,053,000 in 1938 to 8,174,000 in 1943. Growth was concentrated mainly in the Transport and General Workers' Union, the Amalgamated Engineering Union and the General Municipal Workers' Union, who all recruited greatly amongst semi-skilled workers in the munitions factories. Further advances were also enabled by the operation of the EWO in firms such as the Ford Motor Company and Morris Motors Ltd, who had previously resisted organisation through the routine sacking of activists. This was now prohibited and allowed the unionisation of hitherto unorganised sectors of industry, especially as the unions were also able to utilise the pressing demand for labour to force their nominees into the shops. Employers were also put under pressure to establish Joint Works Production Committees (JPCs). Championed by the Engineering and Allied Trades Shop Stewards Council, JPCs were intended to encourage mutual co-operation to increase production and gradually adopted across industry, they enabled the remarkable development of consultative machinery at factory level and hugely strengthened the shop stewards' movement.  
  
Work in the collieries was of supreme importance in keeping the wheels of manufacturing industry turning. Mining, however, had an aging and depleted labour force and its long legacy of troubled industrial relations meant that it was responsible for between one-third and one-half of working days lost in 1943-4. Mining remained a dirty, dangerous and poorly paid industry that seemed unwilling to modernise and from which over 80,000 men had left to join the army by 1942. Unwilling to take direct government control over the industry, an EWO was applied to mining. Bevin compelled young men from mining backgrounds to remain in the pits and, from December 1943 a ballot of those coming of age for national service selected 1 in 10 for service in the mines - the famed 'Bevin Boys' scheme that propelled many of the middle class into the pits and made apparent what miners had suffered for so long. Although the EWO set minimum wages, this was insufficient to cancel out the setbacks of the interwar period. The Miners Federation insisted more pay was the only solution to the recruitment crisis in the industry and at rank and-file level impatience at the lack of progress resulted in many unofficial stoppages. The increases in basic rates proposed by the 'Greene Board' (1) and the 'Porter Award' (2) established a new national minimum and paved the way for the amalgamation of the district unions of the Federation into one National Union, but failed to increase miners' wages ahead of the rising cost of living. Furthermore the 'Porter Award' disrupted cherished differentials provoking a nationwide stoppage in 1944 until the government stepped in to impose the highest minimum wage in the country on the employers.   
  
As the country became increasingly reliant on imports of arms and food from the US, improving efficiency in Britain's West Coast ports became a key objective in the battle to maintain supplies. The slow turn around of ships and poor labour relations were both fostered by the traditional system of casual working, where men would report at 'pens' along the dockside each morning and be picked out for work on the whim of the foreman. Bevin, who as a trade unionist had campaigned to end what was a horrifically insecure form of employment for over thirty years, saw his opportunity to make an advance. During 1940, Regional Port Directors were appointed for the Mersey and the Clyde and steps were taken to both regularise employment and increase the mobility of labour. Dockers were registered as a permanent labour force and guaranteed a minimum weekly wage. Welfare provisions on the waterfront were made for the first time and employers were no longer directly able to engage, pay or discipline dockers, all these powers transferring instead to the Port Director. In return, dockers agreed to work when and where they were required and the success of the scheme, which raised productivity by 40%, saw Bevin extend it to all Britain's major ports in late 1941 with the creation of the National Dock Labour Corporation. Controlled by representatives from government, employers and trade unions, by June 1944 this had ended the casual system for some 43,000 dock workers.  
  
Advances were made across industry as a result of its war effort. Bevin used his position as Minister of Labour not only to ensure increased production, but also to secure many of the advances that the trade union movement had campaigned for over the previous thirty years. Union membership, wages and working conditions were improved in manufacturing. The hated casual system was ended in the docks. The terrible conditions, low pay and poor employers suffered in the mines were acknowledged and began to be challenged. Union officials and rank-and-file activists all felt they had earned their right to have a say in how industry was managed. As the war ended, organised labour intended both to consolidate these gains, in particular the achievement of full employment, and to extend them.  
  
  
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