BRITAIN TRANSFORMED

1945 -1960

High Street

Southampton

1946 1956

These startling images of the transformation of Southampton High Street are by no means unique. Bombing raids of Britain's strategic Cities were compounded by the series of Baedeker raids which laid waste to the centres of many significant historic towns and cities. Port-war modernisation was rapid. The cramped historic buildings which housed the traditional small market businesses of towns like Butchers, Bakers, Greengrocers, homeware, clothes and trinkets were displaced by large, modern steel-framed structures providing spacious retail floors only affordable by large national and international companies. The individualism of town High Streets was lost to uniformity as companies like Woolworths, Boots the Chemist, Marks and Spencer and large fashion, shoe and jewellery stores took over everywhere. The small businesses were pushed to the suburbs or squeezed out of business completely. Within a few short years, therefore, the ethos and culture of Britain's cities was transformed. The public mood was for modernism. People wanted to banish echoes of the past and build a new Jerusalem.

The same attitude also revolutionised the redevelopment of many suburbs. Much concentrated bomb damage also occurred in the inner city residential areas. Especially the densely populated Victorian terraces and tenements built to house the labouring classes. Since, by the standards of the day, even those that survived the blitz were considered obsolescent, many Councils took the opportunity to demolish large swathes of these buildings to make way for an entirely new vision of urban development. The new utopia hinged on the construction of 'Tower Blocks; of creating 'cities in the sky' surrounded by large green open spaces for recreation. The new apartments which offered space and every amenity were attractive but they were less family friendly and the vision of community cohesion and spirit – so much part

of the culture of the war and the inner city tenements did not re-emerge. Nevertheless by 1960 large areas of the inner cities were unrecognisable.

Much the same can be said for the outer suburbs. The demand for housing and rehousing caused the inevitable expansion of residential areas into green-field sites. Council and privately developed housing estates, often of unimaginable scale, devoured many peripheral villages causing them to merge into an ever extending 'suburbia'. With less pressure on land these estates were more influenced by the 'garden city' image with more generous space, gardens and community facilities. There was attention to uniformity. Council estates in particular consisted of acres of identical houses, some of pre-fabricated, modular design created for ease, economy and speed of erection. Universally, however, the houses were modern, well equipped and were more spacious than their pre-war predecessors. Between 1945 and 1950 a million were built countrywide with a further 300,000 per year throughout the early 50's. The environmental impact was huge.

The same utopian vision was applied to the design and construction of the new towns nominated in the 1946 New Towns Act. The Act specified the size (Pop: 60,000); the sites

(Greenfield) and ruled that they should accommodate predominently single family housing of low density; that houses should be organised in neighbourhoods around Schools, Pubs and shops selling the staple foods; and that there should be a balance between housing and jobs. With the aim of relieving population pressure in the large metropolitan cities, 8 were envisaged within 50 miles of London, 4 in the North-West, 3 in the North-East and 3 in the Midlands. With blank sheets of paper planners and architects had a field day. Hitherto towns had grown organically over time according to the demands and fashions of the times. Most were becoming unsuitable for modern living, especially the demands of the motor car. The opportunity to design a town to meet every modern need from scratch was unique and exciting. A range of creative solutions integrating industrial, commercial, leisure and residential needs evolved across the 18 sites. With the connective infrastructure the impact on the rural landscape was huge, not only in the coverage of concrete but also the broader impact on the culture and economies of the areas in which they were situated.

Building is a slow process. The urgent need for housing in 1945 was predicted by the government as early as 1942 and plans were put in place to manufacture houses on an industrial scale cheaply and quickly. Thus was born the 'Prefab'. Factory built in sections they were cleverly designed to be erected very quickly. The first was built within a month of the wars end followed by over 156,000 in the following 2 years. Although their life span, predicted at 10 years, was short, they provided a surprising level of comfort. Fitted kitchens and bathrooms, coal fires with back boilers to provide hot water and central heating were vastly beyond the expectation of homeless families. Such was the demand for housing that every conceivable building was converted to domestic use. Among them were the now obsolete Nissan huts built for military use during the war.

The winds of change were also blowing through the agricultural lowlands, though it was more of a breeze than a gale. The 1947 Agricultural Act which guaranteed prices to farmers

raised confidence to invest in machinery. (Output of machinery in 1938-9 was £2.5 million; in 1951 it had increased to £100 million.) Subsidies for ploughing, introduced in 1939 to stimulate food production and briefly withdrawn in 1949, also helped, and advances in crop science producing new strains more resilient to climate and disease also improved productivity. The future looked bright and the change across 15 years to 1960 was startling, especially in cereal production.

1945

1959

Gone were the old harvest practices of Reaping and Binding, Stooking, Ricking and threshing – all now combined in one machine – the Combine Harvester. As a result, intensive farming became increasingly extensive. Hedgerows became an impediment to the passage of the machine and were torn up to provide uninterrupted swathes of open farmland. The famous patchwork pattern of English fields was changed for ever in the arable lands of the eastern counties. The need for labour also plummeted. The rural population declined along with a fair slice of natural habitat.

Much the same situation applied to dairy farmers. With the use of machinery, sown temporary grassland replaced much permanent pasture and hand milking was ousted by machine milking.

1945

1959

Necessity is the mother of invention. And so it proved during the 2nd World War which was the first truly technological war. Competition to produce the best aircraft, tanks, vehicles, armaments and ordnance was intense. It was knife edge stuff. The slightest difference in

performance and reliability in some theatres of war determined success or failure, life or death. With some urgency, therefore, the best minds were brought to bear on the problems, and the frontiers of science were pushed forward quickly. From it emerged the seeds of revolution along a broad front especially in Nuclear Science, Computing, Jet Engines, Plastics and Transistors to name but a few. It was the start of the Technological revolution set to totally transform life in the future.

An area which immediately 'took off' was in aeronautics. Again progress was swift and the change startling.

1945 Spitfire

English Electric Lightning

Spitfire Short range fighter

Engine : Merlin Piston

Top Speed: 369 mph

Armament : 8, 7.7mm guns

Max Height: 36,000ft

Range: 410 nautical miles in combat

Lightning

Engines: 2 Rolls Royce Jets

Top Speed: 1300 mph (Mach 2)

Armament: 2, 30mm Aiden guns

Redtop Air to Air missiles

Max height: 60,000 ft

Range: 850 miles

Lancaster

Vulcan 1956

Avro Lancaster:

Engines: 4 Rolls Royce Merlins

Top Speed: 282 mph

Armament: Bomb load to 12,000 lbs

Machine guns (3 turrets)

Max Height: 24,500 ft

Range: 2,500 miles

Hawker Siddeley Vulcan:

Engines: 4 Olympic Turbo Jets

Top Speed: 625 mph

Armament: Nuclear Weapons

Max Height: 50,000 ft

Range: 3000 miles

Civil aviation was not far behind:

1946

1952

Douglas DC 6

Engines: Pratt & Whitney piston

Range: 4580 miles

Cruise Speed: 311 mph

Max Height: 25,000ft

Passenger No: 48 - 56

Comet

Engines: Ghost Turbo-jet

Range: 2500 miles

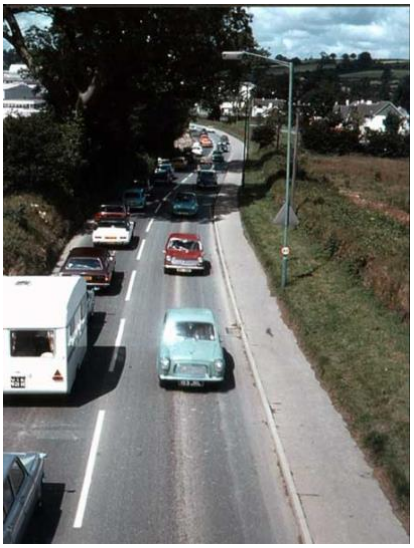
Cruise Speed: 520 mph

Max Height: 45,000 ft

Passenger No: 74 - 81

The development and refinement of the jet engine set in train a revolution in passenger air travel but only after a series of mishaps and failings of the Comet's airframe were rectified during the mid- 50s. The aircraft was finally reborn as Comet 4 in 1958 by which time competition was developing with the introduction of the Russian Aeroflot Tu-104 in 1955, the Air France Caravelle in 1956 followed by Boeing and De Havilland. By 1960 the potential of air travel for the masses was on the threshold of being realised especially by the developing travel and tourism industry who were not slow to exploit the opportunities,

Another, more noticeable revolution was taking place on the roads. Vehicle production soared in the post-war period and by 1949 the UK supplied 52% of the world's exported vehicles. Not many found their way into the domestic market, however, and cars were still hard to come by. The nationalised steel companies, by government diktat, gave priority to businesses which exported 75% of production. Thus by 1950 75% of cars and 60% of vans were exported. This remained the case until the mid-50s by which time the methods of production had been revolutionised by big business. Most small companies were swallowed up by 5 large organisations (BMC, Fords, Rootes, Standard-Triumph and Vauxhall) who each created huge modern assembly plants producing 90% of British cars. Mass production techniques plus the increasing wealth of the populace made vehicles more affordable and sales rocketed. Registered vehicles therefore rose from 4 million in 1950 to 8.5 million in 1960 (compared to 34 million in 2018). Thus whilst only 14% of families had a car in 1950; 27% had achieved that status by 1960 (compared to 79% in 2018. Not unnaturally rising numbers of vehicles began to put a strain on the road infrastructure and the traffic jam became an unwelcome feature of life especially for commuters and on high days and holidays. The solution to that created yet another hit to the British landscape.



Whilst the technology of cars improved considerably during this period the most noticeable transformation was in style. Short, stubby and black became long, sleek and coloured – a recurring theme of mid-century fashion. Initially the modern thrust of design was much

influenced by America but over time this was somewhat moderated by British conservatism and design became less brash producing a uniquely British style better fitted to road space and offering more practical functionality. The Oil / petrol shortages arising from the Suez crisis of 1956 and the higher prices that followed also brought into focus the need for economy and tempered the market for large petrol guzzling cars. By the end of the 50's, therefore, the small run-about became more popular with the emergence of the Bubble car and especially the Mini with its ground breaking transverse engine and front wheel drive.

Ford

1947 Prefect

1953 Consul

1959 Zephyr

Rootes

1947 Minx 1

1953 Minx 111

1959 Minx 111A

Standard- Triumph

1947 Standard 8

1952 Vanguard

1958 Triumph Herald

BMC

1947 Austin 7

1953 Morris 1000

1959 Austin Mini

Vauxhall

1947 HIY Ten-Four

1952 Victor F

1960 Cresta

The same penchant for long' sleek and colourful also invaded the home and by 1960 interior design was on the cusp of revolution. The traditional furniture encumbered living room with papered walls, picture rails, dark painted doors and windows, often heavily curtained, lino covered floors with standard carpets and large dominating hearths and fireplaces usually ornamented with a mirror above and an abundance of china knick-knacks was slowly overtaken by bare emulsioned walls with only the occasional framed picture, plain doors, light paintwork and colourful long, low, streamlined studio couches, sideboards and coffee tables. Light and airy replaced snug and claustrophobic – it was almost like throwing off repression for freedom. Much the same was happening in the kitchen. The advent of emulsion paint and more imaginative colour combinations, Formica, plastics stainless steel along with more integrated designs for cupboards breathed new life into the work hub of the house. The new modern demanded decluttering, space and simplicity.

By far the biggest household revolution of the 50's, however, was in technology. Living rooms were reorganised to accommodate the Television which became the dominant focal point of the room. Little developed faster or more noticeably during this period

1948 10 inch screen

1954 14 inch screen

1959 17 inch screen

The wireless (or radio), a much treasured feature of the war-time living room, was transformed by the invention of the transistor. It too became almost unrecognisable, not only in design and small size but also in its portability.

In the kitchen the emerging technological revolution began to alleviate the drudgery of housekeeping. The washing machine, dryer, and fridge fundamentally changed routines and began to liberate women to pursue more economically productive lives. An increasing variety of gadgets and gizmos like Toasters and food processors further lightened the load in a world where all food had to be cooked from scratch and ready meals and take-aways were unheard of.

By now it must be becoming evident that during this period the process of change was itself changing. Initially stark and frenetic, driven by the urgency of reconstruction and a need to find a new normal, it was revolutionary in its speed, scope and ideology. Over time change became less reactionary and more evolutionary. As such, in the moment, it became less noticeable and only now, in retrospect can the advances be truly appreciated. A great deal of the groundwork for the technological revolution that followed had its roots in the research and development of the 50's.

Sometimes unexpected events provide a kick start to change. So it did with Coal in 1952. Coal was then King! It fuelled the Gas Works, Power Stations, most of Industry and the railway transport system and provided chemicals to a swathe of industries including pharmaceuticals and plastics. It also heated the nation's homes, in the absence of any other viable alternative. Though only 1% on coal production was used for this purpose it became the flashpoint that instigated change.

There can now be little doubt that climate is changing. Back then weather events occurred which are nowadays rare. Winters were colder with more frequent frost, snow and fog. In December 1952 London especially was plagued with dense smog – yellow, greenish or blackish fog polluted with the soot and poisonous sulphur dioxide emitted by thousands upon thousands of coal fires. Visibility was reduced to little more than 6 feet and breathing rasped at the throat. 4000 deaths were reported in two days followed by a further 8000 in the following weeks. It was the final wake-up call which led directly to the enactment of the Clean Air Acts of 1956 and 1958 which regulated smoke emissions. This set in motion an evolutionary change to limit the use of fossil fuels which continues to this day.

Early developments in that process began just after the war. Early in the 1950's Britain developed, tested and adopted its own Atomic weapons. A nuclear facility to produce plutonium and advance nuclear science was built at Harwell, Oxfordshire. From it emerged

the ability to use nuclear fission to produce electricity. In 1956 therefore. Calder Hall Power Station at Sellafield with four Magnox reactors became the first to generate electricity for the National Grid.

The quiet revolution also embraced the development of the computer. Whilst the first major steps were taken during the war with the development of the 'Colossus', built in America for use in the military, the first generation ENIAC computer (Electronic Numerical Integrator and Computer) was built in 1946, greatly aided by Alan Turing at Bletchley Park, Britain's code breaking centre. It weighed 30 tons and comprised 18,000 vacuum tubes. The real advances, however, came in 1951 with the advent of the Universal Automatic Computer (UNIVAC 1) which used the recently discovered transistor to replace the vacuum tube, reducing the size to 8ft high X &.5ft wide X 14.5ft long. This was rapidly succeeded by the IBM 650 and 700 Series. Advances with programming followed with the development of over 100 programming languages, along with tape and disk storage and operating systems, culminating in 1958 with the discovery of the micro-chip and integrated circuitry. Few people were then aware of what was happening or of the technological revolution that would unfold as a result.

This was not true, however, of the development of 'plastics! ' . By the end of the 1950s, in one form or another, they had invaded almost every sphere of life. Plastic – a word that originally meant 'pliable and easily shaped' was applied to a category of materials called 'polymers' which consist of long chains of molecules which abound in nature. The discovery before the war of how to make synthetic polymers using cellulose and carbon from fossil fuels created a revolution. It became possible to manipulate molecules not only to create new materials but also to design and manufacture materials with specific qualities for specific purposes. The first fully synthetic plastic was Bakelite invented as far back as 1907 but it was not until the war with the demand for innovation and the growing need to preserve scarce resources that the production of synthetic materials became a priority. Nylon, invented in 1935 as synthetic silk became a pioneer and was rapidly adapted for use in parachutes, body armour, helmet liners and more. Plexiglass provided an alternative for aircraft windows. With the versatility and potential thus proven, by 1950 the manufacture of synthetic materials went into overdrive. Acrylics, Polyesters, Silicones, Polyurethanes and Halogenated plastics emerged in quick succession and were quickly adopted. By 1959 they were commonplace with !/3 of production going into buildings (piping, plumbing vinyl etc., 1/3 going into packaging and fabrics and a further 1/3 into cars, furniture and toys.

Innovation between 1945 and 1960 did not stop there.

1945 Mass produced DDT

Microwaves

1948 Long Playing Records, the Jukebox

Polaroid Camera

1950 Antihistamines for the treatment of allergies

1951 A.E.C. produces electricity from atomic energy

1st Heart / Lung machine

1953 Double helix of DNA

Vaccine for Polio

1954 1st microwave ovens manufactured

Contraceptive Pill

Solar Cell

1956 Hovercraft

1st Computer hard disk

1957 Pacemaker

1958 Integrated Circuits

Stereophonic Recording

These are but a sample of the inventions that changed the world. There is no doubt that Britain was transformed in the immediate post-war period. Change was dramatic, extensive, revolutionary and often surprising. But how did it penetrate the lives of ordinary working people? How far were their lives transformed? Let's find out.