Part Four: Victorian and Edwardian Housing

The period between the accession of Queen Victoria and the start of the First World War encompasses two architectural era's; Victorian (1837–1901), covering the reign of Queen Victoria; and Edwardian (1901–1914), the latter also covering the first four years of the reign of King George V as well as the reign of King Edward VII. When Victoria became Queen in 1837, the country was still essentially a rural economy, but by 1914, it had become essentially an industrialised nation.

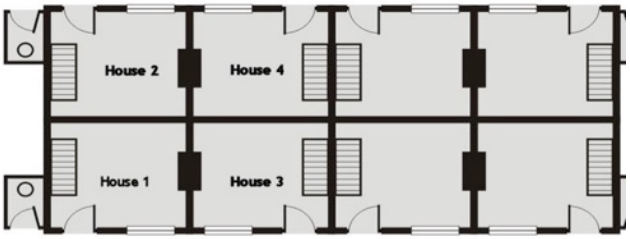
A Victorian Terrace as a 'continuation' of terraced houses from the late Georgian/Regency period.

A dwelling from the last decade of the nineteenth century.

Edwardian semi-detached houses (the house in the background is from the later inter-war period)

As observed earlier in regard to Georgian housing The Industrial Revolution of the late eighteenth century and the nineteenth century led to the mass movement of the population from the countryside to those urban centres where manufacturing took place. It created the need for huge numbers of houses to be constructed for workers, managers and employers. The total population roughly doubled between 1801 and 1851. It did so again between1851 and 1911 to approximately 43 million people. Much of the demand for new housing was achieved by speculative development. Landowners and builders often undertook this in a piecemeal fashion and this can be seen today where Victorian streets often follow original field patterns. Housing for workers was rapidly erected as cheaply as possible in streets of small and medium-sized terraced housing, generally of two to four storeys but sometimes five-storey buildings, many being subdivided to house several families. Separate streets of higher-quality and more spacious terraced houses together with semi-detached and detached villas were also constructed for managers and employers. The total number of houses rose by about five-fold between 1801 and 1911 (from approximately 1.6 million to 7.6 million). House building had mini-peaks in the 1830s, 1840s and 1850s.These were followed by major building booms in the late 1860s and the late 1870s as well as at the turn of the twentieth century.

Some of this Victorian property expansion did provide houses and suburbs ranging from good to reasonable in terms of appearance, internal design and external space. Unfortunately, the cheapest housing, especially in the first half of the period, was of extremely poor quality and this resulted in many thousands of sub-standard houses constructed with questionable materials and design, e.g. the use in some areas of sun-baked bricks, poorly constructed walls, undersized roof and floor joists and the lack of a foundation. Such houses were also adversely affected by rising and penetrating damp, had little or no proper natural light and ventilation and normally had no water or toilet facilities, the occupants having to make use of communal standpipes and toilets. The extremely high density of much of the housing development was another problem and resulted in overcrowding. That is, they were built from new to provide ‘slum conditions’.



It is sometimes thought that the term 'back-to-back' housing refers to rows of small terraced houses with a cramped 'courtyard' at the rear and a back alleyway between the rows. These in fact are usually referred to as 'through terraced houses' as they have a front door and a back door (usually leading onto the small courtyard). This is in contrast to a back-to-back terrace as we can see from the two images above. In the photograph the vertical dividing line of this end wall from the ridge downwards (conveniently highlighted because the right hand side brick is painted) is the dividing (party) wall between a row of dwellings on the right and a second row on the left. That is (apart from these two end dwellings) the houses only have windows facing onto the street. The back of the house is a wall with no openings because it is the wall shared between the houses on each terraced row. That is for each house the rear and both side walls are shared with the neighbour. This can be seen in the plan. The through houses would have a privy located in the courtyard and direct access to an alleyway or minor road behind, but with a back-to-back they would have to rely on a shared privy located perhaps at the end of the terrace (again as indicated in the drawing).

Part of the underlying causes for these types of development was that, before the First World War, 90 per cent of housing was rented. Landlords (not just speculators, but also factory owners) often had little or no incentive to provide buildings of better quality, while they had every incentive for high-density developments, as both factors directly affected the return on their property investment.

From the middle of the nineteenth century onwards, there was a gradual realisation and acceptance by various authorities and, finally, by Parliament, of the link between poor and overcrowded housing and ill-health. This resulted in various Acts of Parliament including the Public Health Act 1875. This, together with the introduction of various regulations and the 1877 model by-laws, set minimum basic standards of design and construction as well as layout for new housing. Minimum requirements and standards were also set for sanitation, water supply, natural light and ventilation as well as the prevention of damp. In modern terms, these standards were relatively low and they were not applied retrospectively to houses already in existence. Subsequent legislation by central and local government in the remainder of the nineteenth century, as well as the twentieth and early twenty-first centuries, has periodically raised these early standards to the current level of building standards and regulatory control.

This photograph is a view to the rear of rather typical working-class houses with a rear annexe (usually referred to as a back addition or offshot).

The courtyards to these working-class houses have been turned into gardens following a regeneration scheme in which neighbouring terraces were demolished.

Larger more middle class Victorian houses also had back additions.

Although speculative building at the lower end of the housing market still took place, the new regulations led to better standards of construction generally, especially at the upper end of the housing market. Many houses built in the last decade of the nineteenth century and the first decade or so of the twentieth century (the Edwardian Period) are considered by many to be of the highest quality in terms of workmanship and materials, in particular, the timber and craftsmanship used for carpentry and joinery.

Architectural styles

A number of different architectural styles were developed over the period. The term 'battle of the styles' is sometimes used to refer to the arguments about not only the aesthetic qualities but also the values represented by various approaches. The term is loosely applied to all the styles referred to below in reference to a sense of the various approaches falling in and out of favour. But the 'battle' was particularly fierce between the adherents of Classical Architecture and the Gothic Revival. The arguments here were not confined to just the aesthetics of the two styles but extended to debates about what was the authentic style for buildings in this country. For example, it was argued that Classical architecture was a 'foreign' intrusion and that Gothic (i.e. buildings that aesthetically made reference back to the medieval period) were to be admired for their connection to the past and particularly the time before the Industrial Revolution.

The main architectural styles (which it should be noted were rarely reflected in cheaper housing which was usually of unadorned brickwork or render) were:

Classical. Essentially an extension of the architecture of the Georgian period that was inspired by classical Greece and Rome and used the same stylistic approach of symmetrical design features, with their façades referencing columns and pediments and often involving the use of stucco.

This terrace of houses, which could be mistaken at first glance as being Georgian, was constructed well into the Victorian period (1875).

A Victorian terrace with clear references to classical columns and entablatures and finished in render.

Gothic revival. Based on medieval buildings, the heyday of the Gothic Revival was between 1855 and 1885. Such houses often had an extravagance of detail to their roofs and elevations, asymmetrical features and pointed arches above external openings. The movement was to a large extent inspired by the writings of Augustus Pugin (*Contrasts* and *True Principles of Pointed or Christian architecture*) and John Ruskin (*'The Seven Lamps of Architecture* and *'The Stones of Venice') who both* extolled the virtues of the medieval period and its architecture.

This photograph of Victorian almshouses illustrates the rather extravagant detail used on some gothic revival buildings particularly the steep roofs pointing up to the sky (and therefore to God !). This particular building was actually built over a period of time (1861- 1883) and modelled on the French Burgundian Gothic Revival style.

Again the gothic references in these two houses can be seen in the pointed arches above the windows and the steep roof.

Old English. This style was in some ways similar to Gothic Revival. It had steeply pitched roofs, pointed gables with finials and elaborate detailing as well as false half-timbering, that was usually painted black.

Two examples of the Old English style

The Arts and Craft Movement. An influential, but to some degree peripheral style at least in its purest form, this movement, led by William Morris, flourished from the 1880s until the beginning of the First World War. To some extent, it was a development of the Gothic Revival with its idealised reverence for the supposed virtues of the past. In this, it was clearly an anti-industrial movement and was based on the use of local building materials by traditional craftsmen and a return to medieval, Romantic or folk styles of decoration. The movement was pioneered by some of the most famous architects this country has produced including CFA Voysey, Norman Shaw, Philip Webb, William Lethaby, Charles Ashbee and Edward Lutyens. In theory, the movement reflected the political and social (i.e. socialist) ideas of Morris and therefore would produce houses of quality and craftsmanship for the masses. In reality, the majority of the work was carried out for the middle and upper classes. The movement did however have considerable influence on the Garden City Movement and on the designers of Garden Suburbs (see later) and many of its ideas, albeit in a diluted form, were picked up by some of the builders of relatively modest dwellings of the interwar period.

These two photographs are of houses that reflect the inspiration of The Arts and Crafts movement with their emphasis on bold roofs and the use of 'rustic' vertical tile hanging and roughcast render (right-hand image) and rubble walls, the bold chimney and deliberate assymmetry in the distribution of window openings (left-hand image). Note also that the windows are casement rather than sliding-sash – another theme of the movement.

Housing layout, landscape and amenity

The terraced house was the most common form of construction for working-class and middle-class housing. The sheer number of terraced houses built in the Georgian, and particularly the Victorian period has had a significant impact on the layout and look of many towns and cities. However there are of course also many examples of semi-detached and detached middle and upper-class houses from the Victorian and Edwardian period –also the terraces of the Edwardian period tended to be shorter than those that went before. The images below show some examples of each type.

The four photographs above show Victorian terraced houses from different cities.

Semi-detached Victorian Houses

A detached Victorian 'Villa' and a detached Victorian cottage.

From the 1860s onward, the quality of the environment within which a house stood was also recognised as an important factor of housing quality. Dense housing layouts, as well as the lack of amenities in terms of private gardens, public open spaces, trees, and the like were identified as being detrimental to both the health of the occupants and the quality of life generally.

The initial impact of this enlightenment was on middle-class suburban development. In 1875, Bedford Park in Chiswick, West London, designed by the aforementioned Norman Shaw, was developed. Whilst not a true **Garden Suburb**, it was an early forerunner as it included houses of different designs and appearances and, although the layout was rather too cramped, the houses did have the benefit of being set in an informal and unregimented environment that retained existing trees. Bedford Park also had some influence on future house appearance, especially in the period 1890–1910, with its use of gables of red brickwork and/or tile-hanging and multi-paned leaded windows. However, most developments continued to be based on the grid-iron layout of straight and parallel 'by-law' streets beloved by local authorities of the time, with the focus on terraced housing (which comprised almost 90 percent of all housing by 1911). Bedford Park had a considerable influence on a number of enlightened employers who sought to improve the living conditions of their employees. As a result, a number of industrial **model villages** were created, including Port Sunlight, Cheshire, in 1886 (Lever Bros), Bourneville, Birmingham, in 1894 (Cadbury) and New Earswick, York (Rowntree) in 1904. These villages ranged in size from a few hundred inhabitants to the 25,000 of Bourneville, where the houses were of traditional design, but with modern interiors and large gardens and set among parks and recreation areas.

These two photographs show houses in Bournville.

Another scheme for creating a higher-quality residential environment in terms of housing and an attractive man-made landscape was **Hampstead Garden Suburb** in North London. This development started in 1906 and was based on a planning design by Raymond Unwin, the joint designer of Letchworth Garden City. It was aimed at all classes of people and income and involved low-density housing with natural boundaries of hedging rather than walls, and wide, tree-lined roads with woods and public gardens.

In 1898, Sir Ebenezer Howard inspired the **Garden City Movement** with his book *Tomorrow: A Peaceful Path to Real Reform*. A social and political reformer, he argued for a self-contained city for 32,000 people planned on a concentric pattern of open spaces, public parks and greenbelt, plus six radial boulevards and better-quality housing for the working classes. From 1904, he developed **Letchworth Garden City** in Hertfordshire, although the final design was more 'organic' and less symmetrical than Howard's original proposals. The next Garden City was not developed until after the First World War (Welwyn Garden City, again in Hertfordshire, in 1919) and further Garden Cities were subsequently developed in the UK and elsewhere in the world.

Construction

Construction during this period was based on a mixture of traditional and newly introduced building techniques and materials. The industrialisation of manufacturing processes linked to mass production and efficient transportation by the increasingly extensive railway system reduced the cost of materials and components. Research and development of chemicals, metals and other base materials led to both new building materials and new ways of using existing materials. However, the basic principles of domestic construction did not change a great deal from those

used in the seventeenth and eighteenth centuries. (Note: This section is intended to give just a brief overview of construction of the period– the appropriate elemental chapter in the textbook should be consulted for more detail).

Roof Structure.

Timber-pitched roofs, generally of softwood, were formed with common rafters and often incorporated purlins. Trusses, including King Post trusses and Queen Post trusses, were commonly used. Mansard roofs were sometimes formed to provide accommodation or storage. Terraced houses often had a butterfly roof construction, the roof slopes draining to zinc or lead valley gutters that ran from front to back. In speculative housing, flat roofs were generally only constructed for small projections, such as above bay windows. They were formed with softwood joists and boarding and covered with lead or zinc sheeting.

This photograph shows a typical pitched roof of a Victorian terrace built around the last decade of the 19th century. Note the double height bays that were common in this quality of dwelling. The roofs were covered in clay roman tiles. The party walls are taken up through the roof to form a parapet wall to help in preventing the spread of fire between properties. This type of detail was common in some parts of the country – but by no means all.
Note also that the houses in the background (top left) are Georgian era houses with Mansard roofs.

Note that unlike the terrace in the previous photograph the party wall in these Victorian houses is not taken above the roof-line.

The right hand photograph shows a terrace of houses that are stepped to take account of the sloping topography. The parapet walls hide the butterfly roofs. The left hand image shows butterfly roofs and the parapet wall - from a different terrace.

This photograph shows a mansard roof to an Edwardian dwelling.

Roof Covering

These were normally of clay tiles or slates although the use of thatch or stone slates continued in some country areas. Clay tiles were supplied in a number of profiles including pantiles and plain tiles. Both of these had been in use for some time, but fell out of general use in the nineteenth century, although clay plain tiles became popular again in the Edwardian period. On the other hand, single and double roman clay tiles, first produced in the nineteenth century, were extremely popular roof coverings. Slates were produced in their millions during this period in Cornwall, Wales and the Lake District, and because of cheap rail transport were used as a roof covering throughout England and Wales.

Plain clay roof tiles cover this Arts and Crafts inspired rural dwellings roof and the first floor walls.

The hipped roof of this detached house has a slate roof covering.

The hipped roofs of these semi-detached houses are covered in double roman tiles– some are still the original clay but others have been replaced with concrete versions.

Roof drainage

The roofs of many houses drained to cast-iron ogee gutters fixed to fascia boards. In some areas of the country other materials, including timber, were used. Parapet walls were formed around the roofs of many Victorian houses in the nineteenth century, but fell out of favour in the Edwardian period. Roofs behind parapet walls drained into parapet gutters of lead or zinc over softwood boarding, zinc being used for cheaper construction. Valley gutters, which were

formed between two or more adjoining roof slopes, and hidden box gutters (which drained through a roof void), as well as flashings and soakers, were also formed in lead or zinc.

External Walls

These were normally of solid construction and in a range of thicknesses similar to those set down for Georgian houses. Early forms of cavity wall construction (known as hollow walls) were sometimes built from the 1830s onward, initially with vitrified clay wall ties, latterly ties of cast or wrought iron; sometimes, these metal ties were dipped in tar to slow down the effects of rust.

External walls were constructed of brickwork or stonework, sometimes a mixture of both. Frequently, stone details (or bricks of a different type) were provided around door and window openings and for stringcourses, plinths, quoins and other details.

This photograph shows a common arrangement of a rubble façade with brick walls to the side elevation. Bricks would also have been used on the inner skin of the stonework and the rear walls. Sometimes the brick would be covered with render.

As with Georgian houses, the provision of fireplaces in most rooms meant that the chimney structure played an important role in the structure and stability of party walls.

Other materials, such as terracotta (fine-grained and very durable unglazed fired clay of various colours) or faience (glazed fired clay) were also used for moulded facings and details. Render in the form of stucco was used as was roughcast render particularly in the Edwardian period. Vertical tile hanging also became popular in the Edwardian period.

Terracotta detailing on late Victorian houses.

Roughcast render was popular in Edwardian Arts and Crafts inspired houses because of its 'rustic' appearance

Brick, stone or terracotta arches provided structural support above door and window openings. Window sills were commonly formed in stone or terracotta. Timber lintels were commonly provided behind the masonry or brick external arches.

Many houses had basements, which were formed with thicker walls, as with Georgian houses. Sometimes, external walls would be coated with asphalt externally (as an early form of vertical damp-proof membrane) before being covered up.

Bay windows were a common feature. These were popular because they let more daylight into the room. They were often constructed in ashlar in contrast to a rubble surround as can be seen in the image below.

A double storey bay constructed in ashlar limestone and a single storey bay in terracotta (both with sliding sash windows).

Single story bays might have a parapet and a flat lead roof as in the photographs above or a pitched roof as shown in the previous photograph.

Bricks

Brick sizes gradually became standardised from 1850 onwards and, in 1859, mass production commenced. This enabled many varieties of machine-made brick to become available, e.g. Flettons from the 1870s.
Flemish bond was often used for more expensive property, while English bond was used for cheaper, speculative construction. Snapped header bond was also used where more expensive bricks with snapped headers (sometimes called blind headers) were used for the outer course, secured every so often to a solid inner wall so that it replicated Flemish bond in appearance. Another form of brick construction was rat-trap bond, where bricks were laid on edge in two skins and bonded by a through brick, i.e. a form of early cavity; it formed a cheaper, but not strong, wall.

Stonework

As in earlier periods, local stone was often used, especially where it was a readily available and cheap material. It was also transported to other parts of the country for more expensive housing and, as the century progressed and transportation costs dropped, for cheaper housing.
Buildings could be constructed wholly of stone or, frequently for reasons of cost, were built of brick with stone details. Often, a stone face was applied to a brick or cheaper stone backing. The stone could be finished in various ways, e.g. ashlar (smooth-faced) or rubble (crudely finished) and built in courses or in a random fashion.

Mortars

Throughout the nineteenth century, bricks were bedded in lime mortar, which was also used for stonework. Lime mortar sets slowly and because of its inherent flexibility can accommodate reasonable levels of initial settlement and other movement within a building. Portland cement (PC) was invented in 1824 and by the end of the nineteenth century the use of PC mortar for brickwork was becoming popular. However, it was not in widespread use for residential buildings until after the First World War. However, while it was cheaper than lime mortar and had a fast set, it is a less flexible mortar, cracks more easily and is less tolerant of building movement.

Internal walls

Construction was similar to that used in the Georgian period, i.e. internal walls of common bricks or stonework; non-load-bearing walls of place bricks, i.e. improperly fired/soft bricks; walls normally only a half-brick thick, even for structural walls of tall buildings of several storeys, and faced with lime plaster. Internal partitions of timber studding, sometimes braced to act structurally, sometimes in-filled with brick to give sound insulation, and all covered in lath and plaster were common.

Damp-proof course (DPC)

The Public Health Act 1875 made DPCs compulsory for new houses – although they were often not installed. A variety of DPC materials were used, including lead-cored felt, bituminous felt, two courses of dense (engineering) bricks or slates laid in cement mortar to break joints.

Foundations

In the earlier years of the period, more expensive houses had some form of foundation which might be of stone slabs or, as the nineteenth century progressed, corbelled brickwork became more frequently used. Cheaper housing often had no foundation or merely a simple shallow layer of flat stones or clinker. By the end of the century, concrete foundations (often with corbelled brickwork as well) were required for all buildings unless built on rock.

Windows, doors and joinery

Fully rebated timber sash windows were the norm throughout most of the period, although timber and metal casement windows did appear in the late Victorian period and the Edwardian period due to the influence of the Arts and Craft Movement and the development of Edwardian housing.

Sliding sash windows were the preferred option for most of the period. Advances in glass manufacturing meant that larger panes could be used so that glazing bars were no longer necessary.

Edwardian houses tended to have casement windows especially those more obviously associated with the Arts and Crafts movement (bottom image).

Removal of the special taxes on glass (in 1845) and windows (in 1851) plus the development of plate glass in 1832 meant that, by the mid-1800s, the number of windows in a building was no longer restrained and larger panes of glass could be used. This also resulted in fewer glazing bars, although horns were needed to strengthen the sashes. Cords were used for smaller sashes and metal chains for larger windows.

Doors throughout most of the period were of four panels comprising two long panels above two short panels, usually of pine (i.e. softwood), sometimes of pitch pine or oak, and meant to be painted.

Softwood joinery in cheaper housing was painted or, occasionally, stained. More expensive hardwood joinery of oak or mahogany was polished or varnished.

Upper floors.

These were constructed with timber joists (usually of softwood), herringbone strutting and softwood floorboards, plain-edged for cheaper housing and tongued and grooved (T&G) for more expensive houses. Ceilings were formed with lime plaster over softwood laths. Moulded details, e.g. cornices, friezes, were often incorporated in better-quality houses.

Ground and basement floors.

Ground floors of suspended timber construction with softwood joists and pine floorboards were the norm. The floorboards were plain-edged in cheaper housing, but tongued and grooved for better-quality work. Rear extensions, which often housed a kitchen or scullery, had flagstones or brick paviors directly over compacted earth. At the basement level, a solid floor was formed of flagstones or, sometimes (for cheaper housing) of beaten earth.
The floor of the main entrance vestibule (and, sometimes, the hallway) was often finished with fired clay floor tiles, also known as pammets. These could be encaustic tiles (coloured and patterned tiles that were normally unglazed), geometric clay tiles (smaller shaped tiles, often triangles or lozenges), or quarry tiles (plain and square, often red or brown), or a mixture. Quarry tiles were frequently used for floors in kitchens and outhouses.

Services

In the first half of the nineteenth century, the provision of services generally had remained little changed from the previous century. From the 1870s onwards, cheaper houses had a sink with cold water and a coal-fired range for cooking and hot water as well as an outside water closet at the rear, or an earth closet in rural areas. No bathroom was provided except in more expensive houses, some of which also had a back boiler, often behind a range, to provide hot water from a direct cylinder.

All houses had coal fires for heating the living rooms and the bedrooms. Mains services and internal carcassing for water and gas were via lead pipes. From about 1880, a few houses had electricity, but only for lighting. Lighting was normally by gas (from about 1840) or oil lamps. Urban houses were connected to combined storm and foul water drains formed in salt-glazed clay pipes from about 1860 onwards. However, rural houses continued to use traditional cesspits throughout the period.