



Preamble

The single-family dwelling built from 1700 to 1914 constitutes the most common housing type in Brussels. It is rare to see multi-family houses or apartment buildings appear before the First World War except for some unsuccessful attempts on the boulevards of the centre.

Originally designed as single-family houses for the Brussels middle class, middle-class houses today still constitutes the life style of many families. While they have often been adapted to new living styles or subdivided into several dwelling units, many of them have kept the essential of their original design: three rooms in succession, the lateral stairwell, the raised main floor, the semi-buried cellar level and a long narrow garden. If they initially fit a stereotyped programme (strict ranking between reception, living and service spaces), the spatial properties of the rooms enable contemporary use and arrangements. The new functions (toilets, kitchen, etc.) can be integrated easily into the existing volumes without questioning the original systems of distribution and spatial organisation.

According to the analysis of the Brussels housing stock, carried out on the basis of the land registry table No. 212AM (situation at 01.01.2012), pre-1918 middle-class houses represent around 43 % of the Brussels pre-1945 housing stock. A little over half of them have since been converted into multi-family dwellings.

It is clear that many middle-class houses have also been converted into office spaces. These were not considered in the study since the land registry table No. 212AM (situation at 01.01.2012) used only gave information on plots dedicated to housing.

Around the « pre-wars middle-class house » type, there are many variations of volume and living area that generally depend on the owner's social status.

According to their year of construction, three types of pre-war middle-class houses were defined :

- the **pre-1850 middle-class house** (type 1a) which represents less than 1 % of the housing stock;
- the **neoclassic middle-class house** (type1b), built between 1850 and 1874, which represents 2 to 3 % of the housing stock;
- the **main floor middle-class house**, built between 1870 and 1914, which represents 40 % of the housing stock. Main floor middle-class houses were classified into three categories, according to their size :
 - small, from 120 to 170 m² represent 10 % of the housing stock (type 2a);
 - medium, from 171 to 250 m² represent 15 % of the housing stock (type 2b);
 - large, from 251 to 350 m² represent 14 % of the housing stock (type 2c).

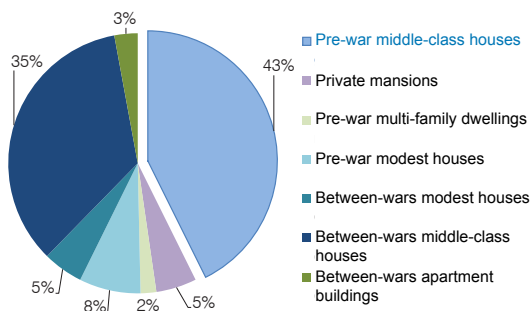


Figure 1a: Representation of middle-class houses in the Brussels dwellings stock before 1945

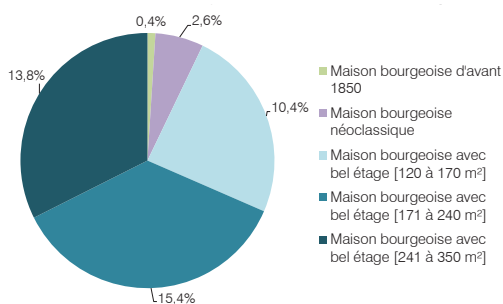


Figure 1b: Distribution of pre-war middle-class houses, into subtypes

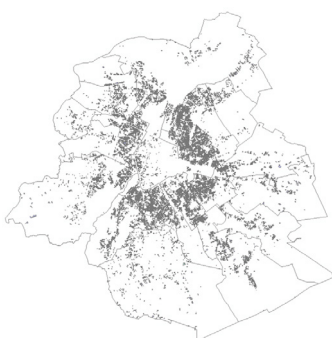


Figure 2: Urban distribution of middle-class houses (before 1914)

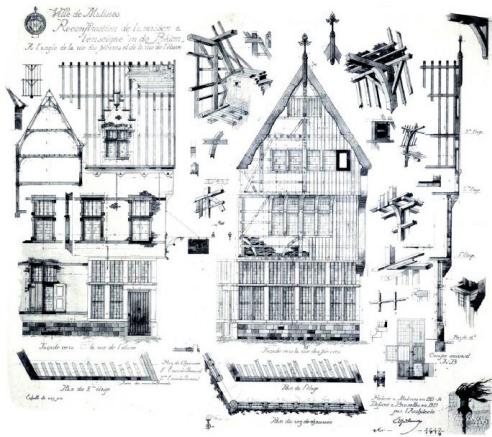


Figure 3: Timber framed house - principle

Source: G.LEDENT, HABITER BRUXELLES, la maison bourgeoise individuelle, articulation typologique de l'extension du 19ème siècle, unpublished study

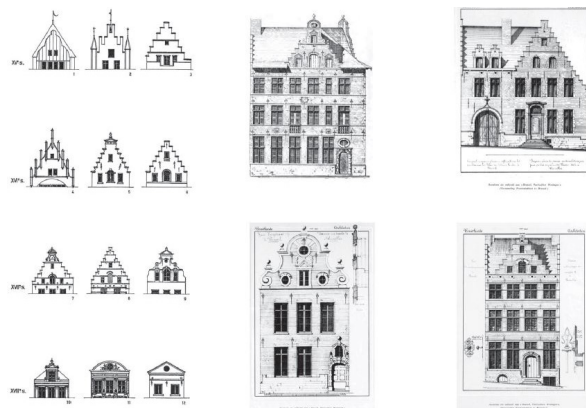


Figure 4: Evolution of gables in façade

Source: G.LEDENT, HABITER BRUXELLES, la maison bourgeoise individuelle, articulation typologique de l'extension du 19ème siècle, unpublished study

General description

This housing type has its origin in the wood-frame gable-end houses of the 15th and 16th century, houses which appeared after the raising of the first built enclosure (between the 11th and 13th century).

In the 17th century, following numerous fires, decrees multiplied requiring builders to :

- cover roofs with tiles (and not with thatch)
- not to use wood for the construction and/or repair of the façades.

The French bombardment in 1695, which set fire to almost the entire Brussels housing stock, really put an end to this type of construction.

From 1700, most wood-frame houses are rebuilt in masonry of bricks or stone. The roofs are covered with terracotta or slate tiles. These new dwellings are constructed on the foundations of the former wood-frame houses, and keep the same dimensions and same spatial organisation.

During the 18th century, the gable-end façade (stepped, triangular or rounded pediment) disappears gradually because the adjoining gutters common to two houses become a significant source of conflict. Their mutation into cornices takes place in successive stages: hipped roofs, horizontal cornice in façade, common and fire break gable. The consequences of this mutation cause a radical change of the urban landscape.

Another change in the urban landscape is the mandatory rendering of façades from 1808.

Throughout the 19th century, this housing type undergoes a significant stylistic evolution. It nevertheless maintains a number of general characteristics. On the basis of an almost immutable plan, the façades evolve according to the styles, from neoclassical to eclecticism.

Towards the mid-19th century, the uniformly classical appearance of the street disappears to give way to successions of more individualised houses. The basic neoclassical scheme, composed of a façade with symmetrical composition generally with three levels and three spans, is maintained but the façades are faced with ornaments, often loaded.

From the 1880s, with the growing importance of the national mood, rendered façades are given up to visible natural materials (whether brick and/or local stone) that are combined to achieve a polychrome result. Initially, these materials are displayed fairly discretely, the brick or natural stone facing being all that departs from the rendered façade. Then, gradually, the decorative and architectural elements are released from stylistic canons, and new creations and combinations appear.



Figure 5:
Neoclassical middle-class house - rue Amazone in Ixelles (1887)
© www.irismonument.be



Figure 6:
Middle-class house in eclectic style - rue Américaine in Ixelles (1896) © www.irismonument.be

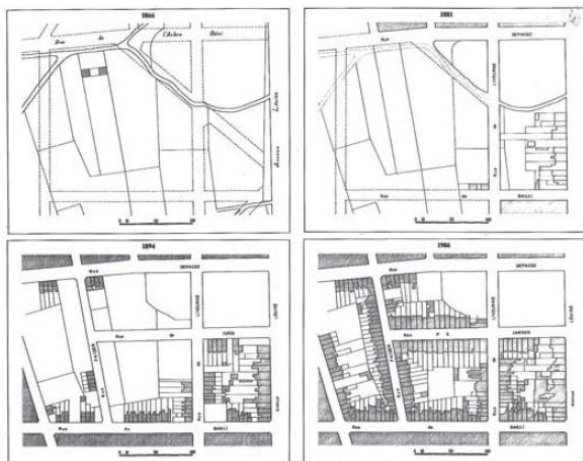


Figure 7: Evolution of the Brussels plots - along Avenue Louise
Source: G.LEDENT, HABITER BRUXELLES, la maison bourgeoise individuelle, articulation typologique de l'extension du 19ème siècle, unpublished study

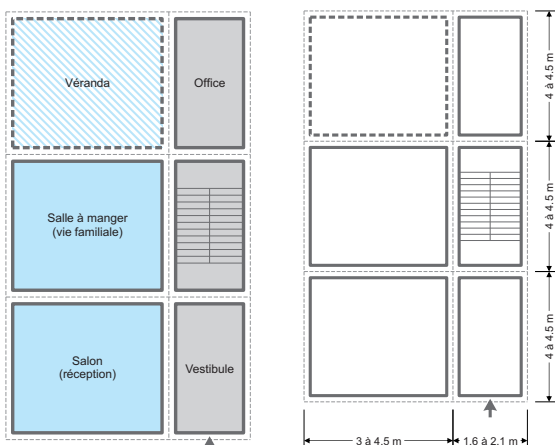


Figure 8: spatial organization of the middle-class house - principles and dimensions

Main characteristics of middle-class houses

The main characteristic of this dwelling is its small width of façade (around 6 metres).

This width results from the conjunction of two factors:

- the dimensions of beams used in the wood-frame house from which this housing type stems;
- the narrowness of the building plots given the significant expansion and densification of the islands.

This housing type contributes to the formation of residential ensembles characteristic of the era and to the urbanisation of the Brussels conurbation.

Urban situation

The middle-class house is a town house. It is an adjoining family dwelling with a tall narrow façade.

This housing type is to be put into direct relationship with the urban morphology of Brussels characterised by the island. The island establishes a clear sealed limit with the public space. The island is constituted by the alignment of a series of middle-class houses that form its outer limit. The gardens of these houses create in interior space visually shared by all the inhabitants. The limits created by the island lead to two housing qualities: one, participation in the makeup of the public space (street façade, reception rooms, etc.) and two, special and sometimes opposed functions are located in front and behind the house.

• Middle-class house – pre-1830

Up to 1800, the first middle-class houses are mainly located in the inner-city. From 1819, these houses are also located on the promenade boulevards, by the former ramparts of the second enclosure.

• Middle-class house – neoclassical type (from 1830 to 1870)

The « neoclassical » middle-class house appears at the start of the 19th century, under the French influence and the building of certain prestigious ensembles like the Place Royale or Place Saint-Michel, etc.

This housing type is located along the belt boulevards and new avenues, in the new inner-city quarters, in the first expansions of the city out of the Pentagone (Léopold Quarter) and in the rehabilitation of some quarters in the Pentagone (Béguinage Quarter).

• « Main floor » middle-class house (from 1870 to 1914)

The « main floor » middle-class house is located along the boulevards and avenues in the comfortable middle-class quarters to the east and south-east of the city, beyond the outer boulevards, in the peripheral communes.

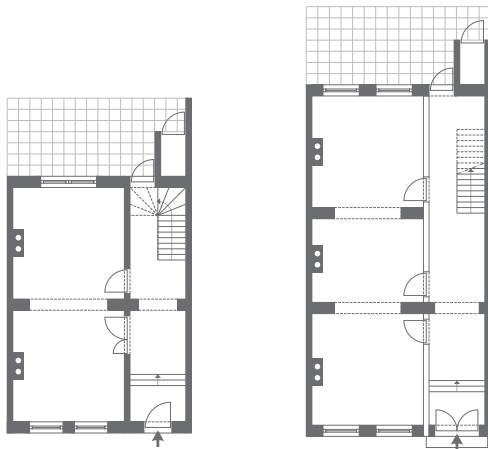


Figure 9: Spatial organization of middle-class house - before 1830

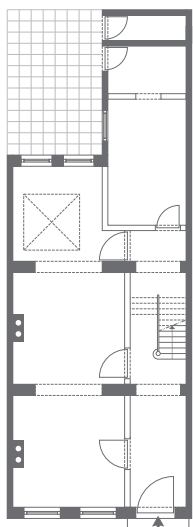


Figure 10: Spatial organization of neoclassical middle-class house

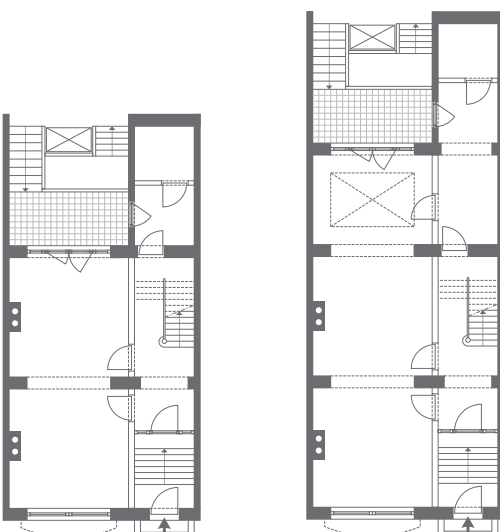


Figure 11: Spatial organization of middle-class house «bel étage»

«In the second half of the 19th century, the characteristics of the middle-class house are clearly established and they become a reference model for the development of the city's residential quarters outside its medieval limits. Many Brussels quarters still owe their physiognomy to the typology of these houses, to the structure of the plots, the alignments and cornice heights that characterise these extensions.» Source: <http://www.irismonument.be>

Spatial organisation/programme

The Brussels middle-class house well reflects the life style of the middle-class family of the 18th and 19th centuries.

It encloses all the spaces required for its daily life. This is organised according to three modes: reception, family spaces and services or domestic spaces.

In general, the middle-class house is organised around two types of living rooms:

- the main rooms or living rooms;
- the secondary rooms which group the services and circulations.

The distinction between these two spaces is made according to a longitudinal division which separates the house into two distinct spans in the ratio 2/3 – 1/3.

The main rooms have great ceiling height, significant width (3 to 5 metres) and are mainly lit by large glazed bays.

The secondary rooms have width from 1.6 to 2.1 metres and can have less ceiling height.

The interior plan is organised with two or three rooms in succession with depth of 4 to 4.5 metres. On the upper floor, this succession is generally reduced to two rooms to enable natural overhead lighting of the last room on the ground floor. Some adaptations were made according to the construction period while keeping the main basic principles.

• Middle-class house – pre-1830

The pre-1830 middle-class house is characterised by:

- generally two living levels plus the attics;
- a ground floor raised 60 centimetres from the pavement and kitchens-cellar located in the basement and lit naturally;
- a succession of two rooms on the ground floor then three rooms (the central room can have very reduced width – up to 2 metres);
- a succession of two rooms on the first floor, the room located above the hallway being assigned to an office or a bedroom;
- first winding stairs then straight flight stairs, in the second span;
- toilets located in the interior court;

• Middle-class house – neoclassical type (from 1830 to 1870)

The neoclassical type middle-class house is characterised by :

- generally two sometimes three living levels, plus attics and roof with two slopes;
- the ground floor is not raised above street level;
- unlit cellars, the kitchens and laundry are relegated in an annexe located in the extension of the circulation span;

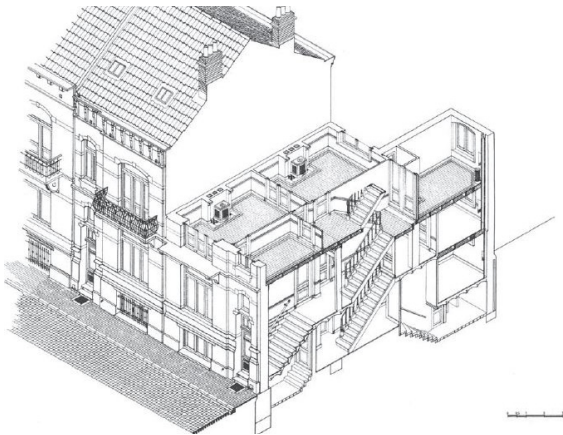


Figure 12: Middle-class house «bel étage» - staircases and indoor circulation
Source: DELBROUCK, R. 1981. Vers une typologie analytique de la maison bourgeoise du XIXème siècle à Bruxelles.

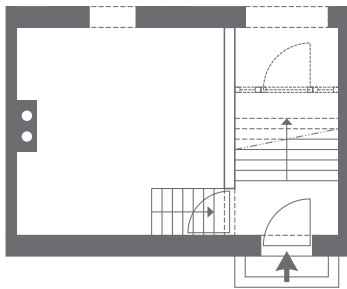


Figure 13: Middle-class house «bel étage» - vestibule and stairs

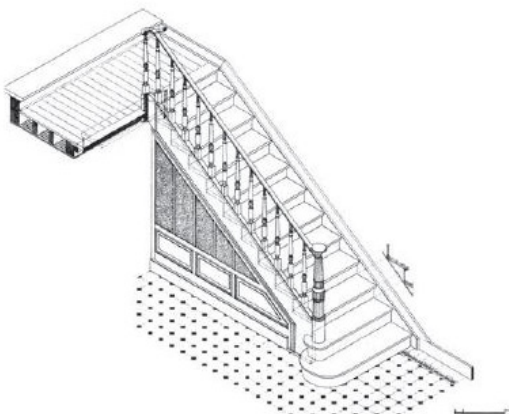


Figure 14: Middle-class house «bel étage» - staircase leading to the floors
Source: DELBROUCK, R. 1981. Vers une typologie analytique de la maison bourgeoise du XIXème siècle à Bruxelles.

- a succession of three rooms, on the ground floor, which ends with a veranda, on the garden side
- a succession of two rooms on the first floor, the room located above the hallway is assigned to an office or a bedroom
- toilets still located outside, in the extension of the kitchens

• « Main floor » middle-class house (from 1870 to 1914)

The « main floor » middle-class house is characterised by :

- three living levels, plus attics and roof with two slopes
- a main floor raised 150/180cm above street level; kitchens-cellars located in the basement, semi-buried and lit naturally. These kitchens-cellars also open on the ground level to a low court on the garden side;
- location of a low court on the garden side, made mandatory by the 1848 building regulations. This court is lower than the garden which is generally retained by the construction of a rain water tank;
- a succession of three rooms, on the main floor, which ends with a veranda or greenhouse (winter garden);
- a succession of two rooms on the first and second floor, the room located above the hallway being assigned to an office or a toilet;
- installation of latrines and toilets in the entresol spaces (on the central landing of the stairs).

Circulation and stairs

Access to the house is by a porch with one or two outside steps in front of the entrance door. Internal circulation takes place in the narrower secondary span.

• Middle-class house – pre-1830

Some steps provided in the hallway raise the ground floor around 60cm and so give the living and reception floor a certain intimacy in relation to the public space.

The stairs giving access to the upper floors are wooden (usually oak or beech). They are located at the end of the succession in the narrow span. These stairs are firstly winding (memory of the wood-frame house). They then become straight.

• Middle-class house – neoclassical type (from 1830 to 1870)

Only the entrance threshold distinguishes the level of the hallway and the living and reception floor from that of the street.

The stairs leading to the upper floors are wooden (usually oak or beech). They have two flights, thus creating an intermediate landing which has to be passed under to reach the annexe.

• « Main floor » middle-class house (from 1870 to 1914)

The hallway has a ceiling height usually more than 5 metres, conditioned by the raising of the main floor. The entrance door is topped with a glazed impost which largely lights the hallway.

The hallway gives access to several types of circulation :



- modest wooden stairs, concealed behind a door, give access to the kitchens-cellars and to the service spaces located in the basement;
- main stairs for accessing the main floor whose steps are usually marble – preferably white – on brick arches. The handrail is brass, wrought iron or polished or varnished wood (mahogany, oak or walnut). For heating reasons, these stairs are separated from the main floor by a glazed door. Through this glazed door is the main floor corridor, functional space serving the dining room and the veranda and leading to the functional spaces.

The stairs leading to the upper floors are located at the back of the narrow span on the garden side. They are wooden (usually beech) and have two flights with an intermediate landing. The first two flights are asymmetrical, the first being longer enabling passage under the first landing. Arranged on the landings are intermediate rooms, entresols, dedicated to the services.

Construction system

The construction methods are the same for the three variants of the middle-class house and stem from the evolution of the wooden house. These construction methods are codified from 1846 by various building regulations.

The construction system for this housing type is mainly governed by the urban fire protection rules. It is also based on the construction system of the wood-frame house, which is at the origin of this housing type.

The partition walls are brick, of local origin, whose thicknesses are codified from 1800 by various building regulations. These partition walls are not load bearing: it is prohibited to embed the structural beams of the floors in these walls in order to prevent fire propagation.

The floors bear perpendicularly to the street on the façades and shear walls. Wooden joists are spaced from 35 to 40 cm. The thickness of the bearing walls is also codified by the building regulations to ensure their stability. The 1857 regulations (article 58¹) stipulate :

- the minimum thickness of shear walls and gables is 28 centimetres, plaster not included;
- The thickness of the façades along the public street is determined by their elevation. Façades of less than 15 metres high have minimum thickness of 36cm at the ground floor and 28 cm at the upper floors. Façades 15 metres high and above have minimum thickness of 46 cm at the ground floor; 36 cm at the first floor and 28 cm at the upper floors.

The loads of the floors and the stability of the walls are catered for by a combination of relieving arches and metal lintels, distributed in the façade and bearing walls.

The ground floor floors are partly made with hard materials. They are tiled or coated with marble. In this case, brick arches are used resting on metal beams.

The cellar floors are usually made of dirt.

There are two exceptions to this construction system :

¹ Source: DELBROECK, Vers une typologie analytique de la maison bourgeoise du XIX^e siècle à Bruxelles, 1981

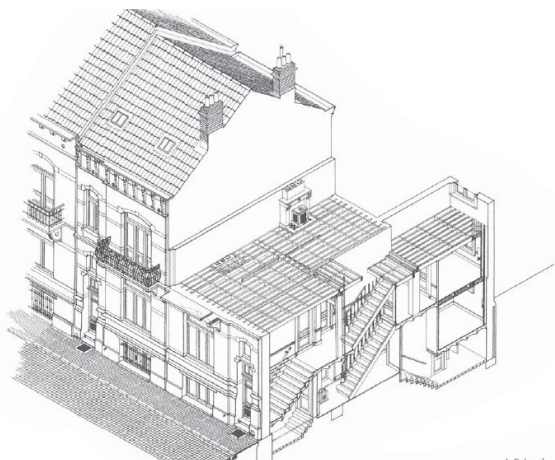


Figure 15: building system -timber structure of the floors
Source: DELBROUCK, R. 1981. Vers une typologie analytique de la maison bourgeoise du XIX^e siècle à Bruxelles.

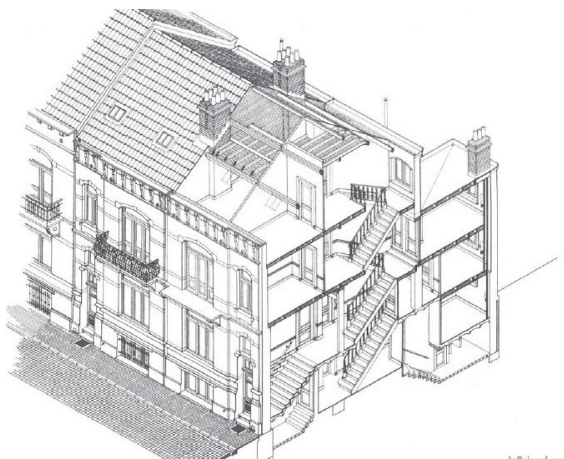


Figure 16: building system - timber structure of roof
Source: DELBROUCK, R. 1981. Vers une typologie analytique de la maison bourgeoise du XIX^e siècle à Bruxelles.



- the roof structure: the purlins rest on partition walls, crossing the span between the partitions;
- the structure of the ground floor. The thickness of the partition walls at this level has a projection with passage of 60/80 cm to 28 cm. It is then possible to have the joists held by this projection without embedding them in the partitions.

Façades and materials

Partition walls are blind since the turnover of roofs at the start of the 18th century.

If the two façades, street and garden, are largely pierced with bays, there are nevertheless great differences in their composition. The « garden » façade in the 19th century is not considered as a real « façade ». Not intended to be seen, it is the subject of very little research and care. The bonding in brick is sober, plane and rendered. There are metal lintels and visible thresholds, etc. and the cornices are reduced to simple cantilevered wooden troughs.

The main materials used are :

- terracotta bricks for all façade walls;
- natural stone (mainly granite) for some elements: window-sills, porch, window surround, etc.
- oak for exterior furnishings;
- lime plaster when façades are rendered.

Les façades à rue ainsi que les matériaux qui les composent vont évoluer en fonction des différents styles : néoclassique, éclectique, Art Nouveau, Beaux-Arts... Elles seront beaucoup plus personnalisées et décorées, souvent en fonction du niveau social du propriétaire.

• Middle-class house – pre-1830

The street façade of this house is still strongly inspired by the wood-frame house and its gable-end. Thus, wooden gables are quite naturally succeeded by stepped or corbie step gables (crow-stepped) and more ornamental gables, influenced by the classical style and the baroque² style. Each step is covered with a slightly projecting stone slab.

The façade is brick and is divided into two or three spans. According to the occupant's social status, the street façade is ornamented or not with decorative elements. The gable starts to atrophy from the 17th century and gives way to the addition of a small triangular or curved pediment, sometimes decorated with a shell.

• Middle-class house – neoclassical type (from 1830 to 1870)

The composition of the street façade evolves according to the classical influence. This classical composition of the street façade in the first place fits in with the urban order. Individual design gives way to homogenisation of the whole. The façade is divided into three equivalent spans with bays of the same dimensions.

The brick street façade is rendered (white or light grey co-

2 Source: P.CHARRUADAS, CH.DESSOUROUX, Etude historique de la Région Bruxelloise, des grandes formes urbanistiques et de la législation sur le bâti, ULB – IGEAT, AATL, Brussels, 2003

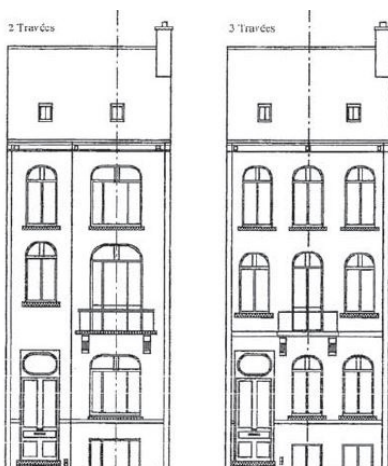


Figure 17: Evolution of front façade - from two to three bays

Source: G.LEDENT, HABITER BRUXELLES, la maison bourgeoise individuelle, articulation typologique de l'extension du 19ème siècle, unpublished study



Figure 18: Neoclassical front façade with moldings

Source: G.LEDENT, HABITER BRUXELLES



Figure 19: Neoclassical front façade - rue Alsace Lorraine 15 (1850)

© www.irisonmonument.be



Figure 20:
Three various front façades based on the same plan - middle-class house «bel étage»
Source: G.LEDENT, HABITER BRUXELLES, la maison bourgeoise individuelle, articulation typologique de l'extension du 19ème siècle, unpublished study

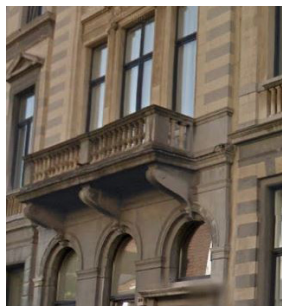


Figure 21
Decorative elements of front façade
• a) Entrance door with transom window, mailbox and scraper
• b) Balcony with guardrail and balusters
• c) Bow-window

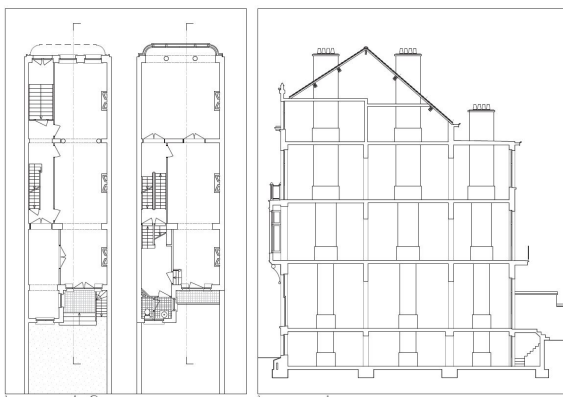


Figure 22: Middle-class house «bel étage» - 3 rooms in a row and 3 levels
Source: G.LEDENT, HABITER BRUXELLES, la maison bourgeoise individuelle, articulation typologique de l'extension du 19ème siècle, unpublished study

lour). The decoration elements gradually disappear until the arrival of the simplest geometric expressions and to elementary volumes. The gable-end is replaced by a classical cornice.

During this period, there are :

- The plane façade which constitutes the most sober type and the shape most completed with neoclassical principles. The façade consists of a simple plastered plane surface, with no form of decoration. The window openings have no stone framing and are distributed regularly.
- the moulding façade which differs from the previous by the introduction of mouldings. These first appear in band form between the ground floor and the first floor. They then contribute to the ordering of each floor using freezes and cornices

• « Main floor » middle-class house (from 1870 to 1914)

The composition of the street façade undergoes two evolutions. One, it responds to the internal ranking of the house, the bays are distinguished by the span in which it's found and two, it is individualised in relation to the street.

The rhythm of the streets has an alternating appearance that marks the individual character of each house. This individualisation is reinforced by a dash to emulate styles and decorative elements. The materials used play a dominant role in this variety.

Wider bays mark out the «noble» span. The two bays of this span are replaced by one single bay that echoes the openings that link the three succeeding rooms.

The main span has a projection of 5 to 10 cm in relation to the street alignment.

There are certain distinctive decorative elements :

- a glazed impost, often in a stone surround, above the entrance door;
- a balcony with balcony door on the first floor, with balustrade guardrail in stone or iron or cast iron grill;
- an oriel or bow-window on one or two levels;
- a « rear-view » mirror or « spyhole » for seeing without being seen
- a wooden letterbox, usually attached to the inside of the entrance door with horizontal cast iron opening flap
- a shoe cleaning system, as a small barred niche with metal scraper;
- putlog holes under cornice blanked with white wood caps, plain or decorated with lion heads;
- rainwater down pipes, with cast iron gargoyles which extend to the pavement.

Variants

The middle-class house has several variants. These variants take on a series of features of the middle-class house such as the plot size, the scale and height of the façade, the spatial organisation, the construction system and methods, and the materials used, but is distinguished from it both by their function and their situation in the island.

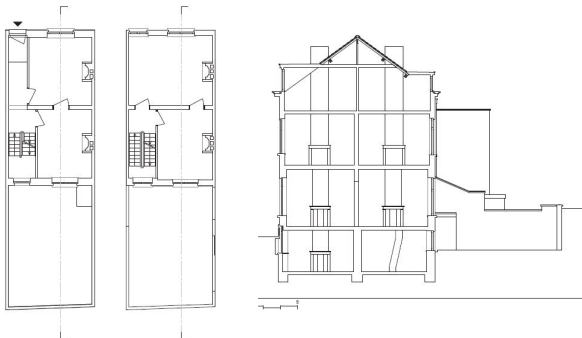


Figure 23: Middle-class house «bel étage» - 2 rooms in a row and 2 levels
Source: G.LEDENT, HABITER BRUXELLES, la maison bourgeoise individuelle, articulation typologique de l'extension du 19ème siècle, unpublished study

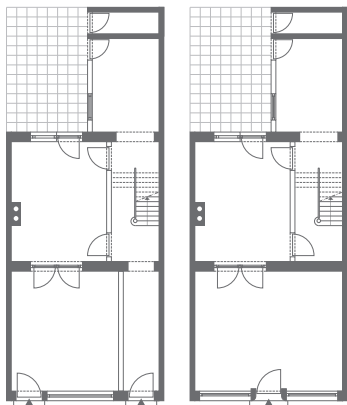


Figure 24: Spatial organization of merchant's house - ground floor

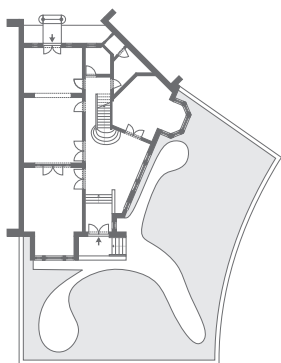


Figure 25 : Spatial organization of the corner house

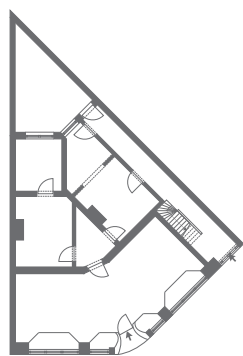


Figure 26 : Spatial organization of corner multiple dwellings house

• The merchant's house

The house with ground floor shop is a variant of the middle-class house. It is distinguished from it by a series of characteristics and by its situation :

- to enable access to the shop from the street, the house is not raised above street level. The cellars are no longer habitable for lack of natural light. The kitchen is relegated to the annexe in the inner court
- two entrances are often needed to enable one, access to the dwelling and two, access to the shop. The shop entrance is either on the side of the façade, or in its centre.

• The investment property

The investment property, while dedicated to housing several families, can be considered as a variant of the middle-class house. This housing type is often inserted between two middle-class houses or on one of the corners of the island. These properties sometimes form veritable assemblies as in the case of the Cité Hellemans which is composed of seven rows of such buildings

This variant is the subject of another explanatory sheet.

• The corner house

The creation of the island produces a special accident at its four corners. On these four plots, relationships to the interior of the island are limited or non-existent and the creation of « front » and « back » positions is more difficult.

In this case, the middle-class house undergoes an adaptation to the specific conditions of the plot. This special position gives rise to several possibilities of layout and housing type:

- the whole of the plot is built and the dwelling privileges one street over the other;
- a garden or court is arranged in relation to the street. This space is then protected from the street with a high wall pierced with a grill;
- the corner plot is occupied by a building having a ground floor shop and dwellings on the upper floors



Figure 27 : Middle-class house, rue Rubens, 92 in 1030 Schaerbeek. Location in Brussels.

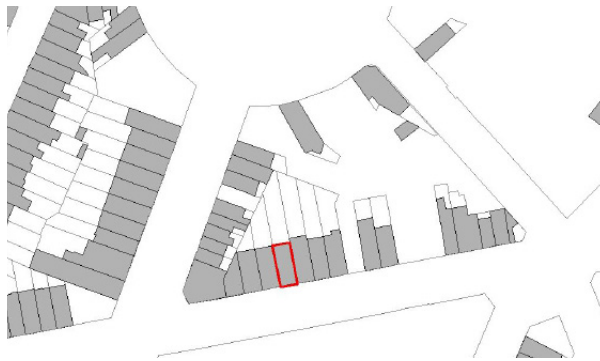


Figure 28 : Middle-class house, rue Rubens, 92 in 1030 Schaerbeek. Implantation.



Figure 29 : Middle-class house, rue Rubens, 92 in 1030 Schaerbeek. Front façade

Example No. 1 – a neoclassical middle-class house

Address: Rue Rubens, 92 - 1030 Schaerbeek

Year of construction: 1888

Architect: -

Classified building: no

Considerable renovation since construction: yes, in 2008
(award-winning renovation in BATEX competition)

Location:

- between adjoining buildings
- in second crown perimeter
- mixed quarter with shops, offices, services, housing
- dense environment with little vegetation

Scale:

- 3 levels (under cornice height around 13 metres)
- roof with two slopes
- fronting the street
- 3 spans
- back garden

Street façade:

- oriented south-south-east
- composed of bluestone on ground floor and solid rendered bricks (light colour) on the upper stories
- roof with two slopes covered with terracotta tiles, of local origin, wooden cornice
- largely pierced with bays all with the same dimensions, and distributed regularly with no distinction between the noble span and the service span (behind the entrance door)
- glazed impost above the entrance door
- ironwork balcony
- putlog holes (for erecting scaffolding) under cornice, blanked with wooden caps
- some mouldings and freezes marking the floors
- painted wooden window frames
- much more worked than the back façade, very plain, flat and rendered

Construction system

- bearing façades and shear walls in solid bricks
- non-bearing partition walls in solid bricks (of local origin)
- wooden floors (oak) which span from façade to façade, joists spaced from 35 to 40 cm
- roof purlins resting on partitions
- brick arch ceiling on metal beams in cellars

Composition :

Basement: accessible by going under the second stair flight, no access to natural light, access to stairs to the garden.

Ground floor: hallway, beech stairs with two flights in service span, three rooms in succession in the rest of the width, tiled or marble covered floors, plastered walls, ceiling with mouldings

First and second floors: two rooms in succession, one office above the hallway, oak floors



Explanatory sheet (types 1a, 1b, 2a, 2b & 2c) Pre-wars middle-class house



Figure 30 : Plans (ground floor, first and second floor), section and front façade after renovation.

Description:

- organised around 2 types of rooms: living rooms and servant spaces
- longitudinal division in 3 spans (1 span for servant spaces, 2 spans for living rooms)
- interior layout and finishes according to owner's social status

Hallway and circulations:

- in the narrowest span
- entrance door into hallway

Bathroom:

- after renovation, on first floor

Toilets:

- in the entresol between the first and second floors

Kitchen:

- wood-fired cooker
- less wide (1.5 to 2.1 metres) than the living rooms
- ceiling height less than the living rooms

Bedrooms:

- less wide (1.5 to 2.1 metres) than the living rooms
- ceiling height less than the living rooms

Living room:

- _high ceiling height (3.5 to 4m on ground floor and first floor) and very wide (3.5 to 4m)
- _coal-burning stove in each living room (today gas condensing boiler)
- fireplace in natural stone (light or dark marble)

Remark on renovation:

Despite some modifications during its 2008 renovation, the house retained its initial characteristics, while being more energy efficient. The construction techniques and materials used originally are still used today. While the house's habitable area and its spatial organisation enable division into apartments, the 2008 renovation retained a single-family dwelling. Spatial reorganisation has enabled the integration of new technologies like a ventilation system and solar panels.



Figure 31 : Interior view



Figure 32 : Front façade



Figure 33: Middle class house «bel étage», avenue Trooz 12, in Woluwe St Pierre. Location in Brussels



Figure 34: Middle class house «bel étage», avenue Trooz 12, in Woluwe St Pierre. Location in Brussels / neighborhood



Figure 35: Middle class house «bel étage», avenue Trooz 12, in Woluwe St Pierre. Front façade

Example No. 2 - a main floor middle-class house

This main floor house is part of a set of two houses symmetrical in relation to the party wall. Originally, one of the two was better finished as intended to be occupied by its owner while the other was intended for rental. While constructed just over one hundred years ago, this house today still retains all its construction features. Some decorative elements like the fireplaces have however been removed.

Address: Avenue de Trooz, 12 - 1150 Woluwé-Saint-Pierre

Year of construction: 1914

Architect: N. Deulens

Classified building: no

Considerable renovation since construction: no

Location:

- between adjoining buildings
- beyond the second crown
- residential quarter

Scale:

- 2 levels (under cornice height around 10 metres)
- roof with two slopes
- fronting the street
- 2 spans
- back garden

Street façade:

- oriented east-south-east
- plinth in bluestone and varnished bricks (light colour) raised with bluestone bands
- roof with two slopes covered with terracotta tiles, of local origin, wooden cornice
- largely pierced with bays which mark the division into two spans: one wide bay for lighting the noble span, narrower bays for lighting the servant space
- glazed impost above the entrance door
- ironwork balcony with balcony door
- a cast iron/iron grill protects the window giving onto the cellars
- painted wooden window frames
- much more worked than the back façade, very sober, plane and rendered

Construction system:

- bearing façades and shear walls in solid bricks
- non-bearing partition walls in solid bricks (of local origin)
- wooden floors (oak) which span from façade to façade, joists spaced from 35 to 40 cm
- roof purlins resting on partitions
- brick arch ceiling on metal beams in cellars

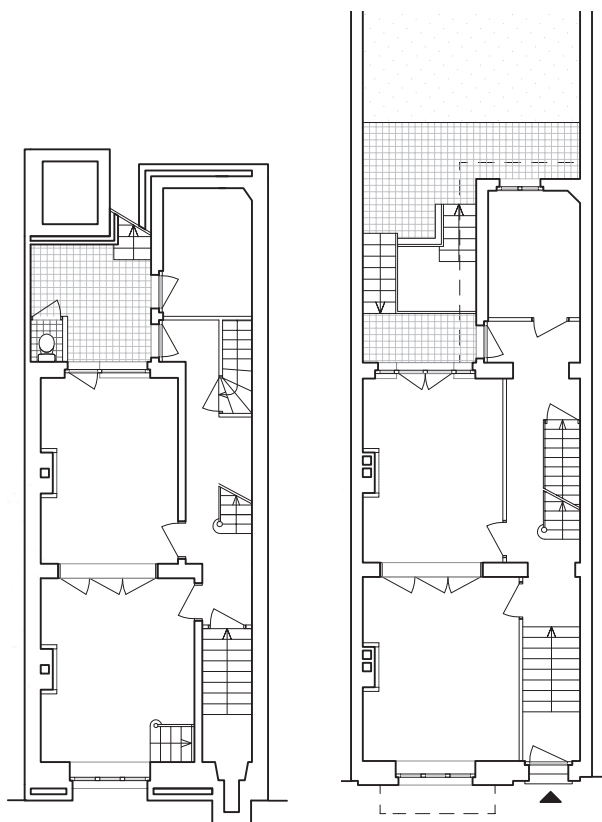
Composition :

Basement: lit naturally, with opening onto a court below the garden, court which is often retained by a rain water tank

Entresol: bathroom and toilets

Main floor: 2 rooms in succession with depth around 4.5 metres, a scullery in the secondary span

Upper floor: bedrooms



Description:

- organised around 2 types of rooms: living rooms and servant spaces
- extra height of main floor 1.5 to 1.8 metres above the street
 - longitudinal division into two spans (1 narrow span for servant spaces, 1 wider span for living rooms)
 - interior layout and finishes according to owner's social status

Remark on renovation:

The house's original state is mainly conserved while some modifications were made (the fireplaces were removed, the original ceiling mouldings are kept, the originally coal heating has been re-placed with gas heating).

The habitable area makes it possible to divide the house into apartments without too much difficulty, ideally two apartments of +/- 130m². The spatial organisation enables the installation of new technologies like a «C» venti-lation system. The roof orientation (east/west) is not ideal for installing renewable energies.

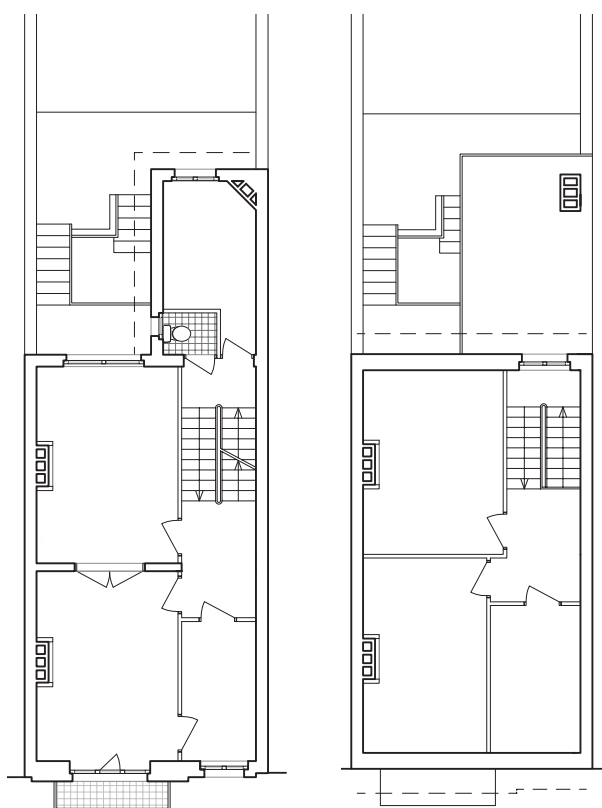


Figure 36 : House plans: the) basement, b) ground floor, c) first floor d) roof