

KONSTANCIN-JEZIORNA
HOUSING ESTATE STANDARDS



Warsaw, April 20th, 2011

ARCHITECTURAL DESCRIPTION

DFA – SMALL ARCHITECTURAL STRUCTURES – ACC. TO THE ARCHITECTURAL DESIGN

1. Benches, garbage bins
2. Playground for children: sets of facilities along with special ground – (swings, toys, slides); – Gutek Profil company or equivalent
3. Pavements: Belgian blocks – integrally coloured, homogenous.
4. Streets: 8 cm Belgian blocks – grey, integrally coloured, homogenous.
5. Parking places: 8 cm Belgian blocks – grey, integrally coloured, homogenous.
6. Fence: acc. to architectural design, locked gates and video entry phone – video entry phone network, 3 keys per each residential apartment)
7. Gatehouse
8. Gravel strip along the buildings
9. Green areas
12. Sports infrastructure acc. to architectural design

FUNCTIONAL AND DEVELOPMENT SOLUTIONS

Residential apartments

The design stipulates the development of intense plot ratio and a differentiated structure of apartments (type A, type B, type C). Each of the above-mentioned apartments has got a separate entrance, access road and underground garage with 2 parking places.

The internal layout of apartments provides for the division into two functional areas: day- and night- use.

The sizes of rooms were adjusted to the required standards, as well as to the provisions of the construction law.

BUILDING DESCRIPTION

BUILDING'S STRUCTURAL WORK

The buildings were designed using a monolithic reinforced concrete structure as a beamless slab, slab framed system.

Foundations

Strip and pad footing - cast-in-situ.

Walls of underground floors

Reinforced concrete walls cast-in-situ, 20 cm thick.

Supporting walls

External and internal supporting walls from hollow bricks of Porotherm type, 25 cm thick.

Slabs

Reinforced concrete slabs cast-in-situ, of square or rectangular cross section.

Ceilings

Reinforced concrete ceilings cast-in-situ, app. 20 cm and 30 cm thick.

Staircases

Reinforced concrete stairs cast-in-situ, double, with landings, thickness of the plate – app. 15 cm.

Binding joists

Reinforced concrete binding joists cast-in-situ.

INFILL WALLS

Brick walls

For plastering:

Walls of a thickness of 25 cm, from ceramic elements, e.g. Porotherm, bricks laid on thermo insulating mortar or equivalent.

For stone elevations:

Walls of a thickness of 25 cm, bricks laid on thermo insulating mortar or alternatively walls of a thickness of 25 cm, from solid bricks of 100 cl., on a cement – lime mortar of grade 5.

EXTERNAL WALLS FINISHING

Walls in lining from natural stone

Stone plates from impregnated sandstone, granite on base of a thickness of 15mm –assembled with the use of insulation glue.

The following is also permitted:

Walls in plaster lining

Wall finished with a skim coat plaster:

DRYVIT acryl system on a polystyrene foam or equivalent solution

Walls in lining from impregnated wood

Elements from impregnated wood of a thickness of 22mm of a timber framing.

PARTITION WALLS

Partition walls inside apartments

Brick walls from ceramic materials of a thickness of app. 12 cm.

Walls separating kitchens and bathrooms made from ceramic materials of a thickness of app. 12 cm.

Ceramic partition walls with gypsum plaster on both sides and painted with topcoat emulsion paint. Partition walls with expansion joints (from the roof) made from elastic material in accordance with the final design e.g. mineral wool or other.

SUB FLOORS

Sub floor on the level of basements

Garage sub floor – concrete underlayment smooth trowelled with slopes.

Technical rooms sub floor - smooth trowelled concrete underlayment.

Walls in basements painted with emulsion topcoat (1x).

Sub floor on the level of wall base

Base for sub floor is composed of the cement screed reinforced with a steel net laid on an acoustic mat

of the thickness of 1.5 cm or on acoustic polystyrene foam of the thickness of 4cm, in the form of floating flooring. Sub floor with expansion joints (at the entrance door to the apartment) made from acoustic polystyrene foam of 2 cm thickness.

ORDINARY ROOFS

Gable roof of the roof slope of 30 degrees, covered with high quality metal sheets – graphite coloured.

BALCONIES

Sub floor made from floor tiles frost resistant laid with the use of mortar fix.

Sub floor laid on the cement screed with the slope of 1.5%, of the thickness of min.4 cm, reinforced with a steel net of a 3 mm wire, on geotextile fabric and on polystyrene foam boards ~ of a thickness of 5cm. Water insulation from PVC insulation foil.

In the case of terraces, heavy-duty insulation – weldable roofing membrane.

INTERNAL WALLS FINISHING

Internal walls finishing

Concrete plastered walls in the basement and technical and up-keep rooms.

Walls of residential rooms – gypsum plaster or cement – lime plaster painted with top-coat paint.

Walls painted once with emulsion paints.

WINDOWS AND EXTERNAL DOORS

Timber frames (windows and doors)

Timber windows and balcony door – fair wood.

Vents – at least one in each room or equivalent solution. Heat transfer ratio – 1.4 W/m²K for windows.

Windows of acoustic resistance at least RA 2 – 30 dB.

Standard insulated glass units, colourless, on the ground floor – anti-burglary glass units.

Window fittings ensuring trickle ventilation.

Garage gate

At the entrances to garages – segment-type lift gates: Hormann type or equivalent. Insulation panel. Electrically powered gates. Vents in the gates ensuring ventilation. Two remotes or cards per each residential apartment.

Mailboxes

Mailboxes of the same colour as metal sheets used in finishing or from RENZ stainless steel or equivalent.

Keys

3 sets of keys to the entrance door, the dumpster and fence gates.

INSULATION

Thermal insulation of walls

Ceramic-based insulation from mineral wool and polystyrene foam of the thickness of app.12cm – acc. to the architectural design. Mounted to the walls in acc. with the manufacturer's instructions.

Garage walls insulation at the depth of 1.20 m below the projected ground level, from extruded polystyrene foam boards or equivalent solution, glued to the wall all over the surface.

Insulation of ceilings and roof

Garage ceiling insulation from mineral wool.

Roof insulation from mineral wool of the minimum thickness of app. 18cm.

Balconies insulation from extruded polyurethane with the finishing of 2% roof slopes.

Damp proof and water proof insulation

Water insulation of the underground garage walls and foundations – weldable roofing membrane or equivalent. Expansion joints secured with the PCV sealing tape of KAB type – Tricosal or equivalent. Vapour barrier membrane of ceilings – PE foil.

Wind barriers

Roof wind barriers from polypropylene foil or equivalent solution.

Acoustic panels

Acoustic panels of the transformer station walls, of the dumpsters – hard mineral wool of the thickness of 5 cm, impermeable of 100 cl. or equivalent solution, lined with dry walls on a grid.

DRAINAGE SYSTEM

Drainage system on the roofs – with the use of rain gutters. Downspouts mounted outside in the insulation layer.

OTHER ELEMENTS

Roof work

Roof work regarding attics, cornices, canopies, external window sills etc. from pre-painted steel.

External railings

Railings at balconies, loggias and terraces from steel profiles with steel hand-rails, powder coated, filled with pre-stressed glass, smaller profiles or a steel powder coated net.

EXHAUST (NATURAL) VENTILATION

In bathrooms, kitchens, toilets and walk-in wardrobes - natural ventilation.

