Appendix C (Drawings)

DESIGN ADAPTABILITY OF THE 2NDSKIN PROJECT IN THE NORTHERN EUROPEAN MARKET OF RESIDENTIAL BUILDINGS

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Application of 2ndSkin project to case study in Germany
Floor plan
Scale 1:100
West elevation
Scale 1:100
East elevation
Scale 1:100
Window design
Scale 1:25
Short window cross section
Scale 1:40

Balcony cross section
Scale 1:40
Wall cross section
Scale 1:40

Long window cross section
Scale 1:40
Section A
Window details
Scale 1:20
Section B
Window details
Scale 1:20
Vertical window Detail 1
Scale 1:10
Horizontal window Detail 2
Scale 1:10

- Interior finishing board
- Wooden beam 38x68mm

Existing construction:
- Concrete load bearing
- Brick cladding 105mm

Plant system panel board:
- Ventilation pipe Ø 80mm
- Prefabricated panel 220mm:
  - Fiber cement sheet 10 mm
  - EPS Insulation Board 200mm
  - Ventilated cavity 42mm
  - Wooden batten 42x42mm
  - Thermowood pine cladding: profile 21x118mm

- Wooden beam 60x290mm
- U-steel profile
- Wooden post 70x250mm
- Bitumen vapour barrier
Vertical balcony Detail 1
Scale 1:10

- Rockwool insulation 60mm
- Wooden floor beam 40x40mm
- Wooden laminated floor profile 21x330

Thermowood pine cladding:
- profile 21x118mm
- Ventilated cavity
- Wooden batten 42x42mm
- Stainless steel wood nails

Existing structure:
- Balcony concrete slab 130mm
- Concrete block 105mm
- U-steel profile
- Wooden beam for slab extension 100x260mm

Window supporting structure:
- Wooden beam 26x120mm
- Rockwool insulation 63x120mm

Aluminium window with integrated shading system
Interior lining board 12mm

- Rockwool insulation 100mm
- Bitumen vapour barrier
- Exterior finishing board 21mm
Horizontal balcony Detail 2
Scale 1:10

Window supporting structure:
- Wooden beam 40x140mm
- Rockwool insulation 40x140mm

Aluminium window with integrated shading system
- Rockwool insulation 100mm
- Bitumen vapour barrier
- Wooden floor beam 40x40mm

- Existing slab projection
- Wooden beam for slab extension 100x260mm
- Stainless steel wood nails

- U-steel profile
- Wooden post 70x250mm
- Thermowood pine cladding: profile 21x118mm
- Ventilated cavity
- Wooden batten 42x42mm

- Existing structure:
  - Load bearing wall
  - Brick cladding 105mm
  - Prefabricated panel 220mm:
    - Fiber cement sheet 10 mm
    - EPS Insulation board 200mm
    - Bitumen vapour barrier
Designing additional elements
Closed balcony vertical section
Scale 1:20

- Wooden balcony floor
- Steel C-beam 45x120mm

- Steel angle
- Prefabricated panel 220mm
- Fiber cement sheet 10 mm
- EPS Insulation Board 200mm
- Bitumen vapour barrier
- Steel I-beam 140mm
Closed balcony horizontal section
Scale 1:20

- Prefabricated panel 220mm:
  - Fiber cement sheet 10 mm
  - EPS Insulation Board 200mm
  - Steel C-beam 45x120mm
  - Wooden balcony floor, stripes 300mm
  - Thermowood cladding: profile 21x118mm

- Steel I-beam 140mm
- Bitumen vapour barrier
Sunshades  horizontal detail
Scale 1:20
Elevator corner
Horizontal section
Scale 1:20
Elevator concept
Floor plan
Scale 1:100