Dwellings Graduation Studio
Dutch Housing

3rd Golden Age

P5 Presentation

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2017-2018
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I. FUTURE SCENARIO
HISTORICAL BACKGROUND

FIRST GOLDEN AGE
(1600-1700)

TRADE / VOC

STOCK EXCHANGE

WORLD CENTER OF TRADE

MASS IMMIGRATION

AMSTERDAM, 1623
HISTORICAL BACKGROUND

SECOND GOLDEN AGE (1800-1900)

TRADE

INDUSTRIAL REVOLUTION

PALEIS VAN VOLKSVLIJT
BEGINNING OF 2nd G.A.

DESTRUCTION BY FIRE
END OF 2nd G.A.

PALEIS VAN VOLKSVLIJT, COMPLETED IN 1864 - DESTROYED BY FIRE IN 1929
TURNING POINT: BREXIT

Financial firms in talks with Amsterdam over relocation from London

AMSTERDAM WINS EU MEDICINE AGENCY, 900 JOBS LEAVING LONDON OVER BREXIT

By Zack Newmark on November 20, 2017 - 18:58
AMSTERDAM AS A POTENTIAL BUSINESS HUB

SCHIPHOL AIRPORT
4th in EU

SEAPORT AMSTERDAM
4th in EU

INTERNATIONAL RAIL CONNECTIVITY

PROximity TO EU INSTITUTIONS

LONDON
BRUSSELS
PARIS
FRANKFURT

AMSTERDAM
SOCIOECONOMIC IMPACT

ECONOMIC GROWTH RESULTING IN MORE JOBS

POPULATION GROWTH PROGNOSIS

RISING IMMIGRATION & HOUSING DEMAND
II. RESEARCH
THE NOTION OF A METROPOLIS: A CITY OF HEIGHTENED POSSIBILITIES

Ancient Greek trade & colonisation, 500 B.C.

Paris restructuring: before & after

British & French empire, 19th century

London restructuring: before & after
ICONS OF THE 19th CENTURY METROPOLIS - ARCADES & CRYSTAL PALACES

Paris arcades

London Crystal Palace, exterior

Crystal Place, interior exhibitions

Amsterdam Paleis van Volksvlijt
ICONS OF THE MODERN METROPOLIS - HIGH RISE

The metropolis of tomorrow - Hugh Ferris

Manhattan: The embodiment of the modern metropolis
ICONS OF CONTEMPORARY/FUTURE METROPOLIS - GREEN HIGH RISE?
PROBLEM STATEMENT: HOUSING SHORTAGE AS A DETERRENT FOR EXPATS

Expats ‘shun’ Amsterdam due to housing and education shortages

Private sector rents continue to rise, shortage of housing intensifies
TARGET GROUP

CHARACTERISTICS
- International background
- Highly educated
- In employment

EXPECTATIONS
- High quality
- Service
- Culture
- Recreation
- Wellness
- Facilities

HOUSEHOLD COMPOSITION & PARTICULAR NEEDS
- Singles
- Couples
- Small families
  - Meeting Spaces (cafes, bars, restaurants)
  - Children facilities (daycare, playgrounds)
THE CASE FOR HIGH RISE

High Land Values

Paris announces seven skyscrapers to boost post-Brexit business

Jessica Mairs | 27 February 2017 | 40 comments

Frankfurt embarks on Brexit building boom with new high-rises by BIG, UNStudio and more

Amy Frearson | 19 October 2017 | 7 comments
RESEARCH QUESTIONS

• What are the most important design criteria for lively and safe public spaces in a metropolitan high rise environment?

• How can high rise structures be incorporated into the city fabric through the use of the plinth and eye level perception?
PLINTH QUALITIES

PLINTH ARCHITECTURAL TREATMENT

- Blind Plinth
- Transparency

HYBRID ZONE TREATMENT

- Weather Protection
- Externalised activity
- Softening boundaries
PLINTH FUNCTIONS

PLINTH PROGRAM

Mix of functions for 24/7 activity

Frequency of occurrence

Amount of people in close proximity

24/7

HORECA
Retail
Residential
Business
III. ARCHITECTURAL DESIGN
SITE: DE NEDERLANDSE BANK, FREDERIKSPLEIN

http://media.nu.nl/m/ix4x69tahyu5_wd1280.jpg/nederlandsche-bank-overweegt-goudvoorraad-verhuizen.jpg
SITE FACTS

PUBLIC TRANSPORT CONNECTIVITY

Amsterdam Noord
CS
Amsterdam Zuid
VUZELGRACHT
WEESPERPLEIN

LOW DENSITY

Density: Inhabitants per km²

SITE HISTORY

Amsterdam Zuid
VUZELGRACHT
CS
WEESPERPLEIN

Amsterdam Noord
CS

http://images.memorix.nl/ams/thumb/500x500/de14c99e-1193-49ee-d7bb-425367e1a2e8.jpg


http://images.memorix.nl/ams/thumb/500x500/de14c99e-1193-49ee-d7bb-425367e1a2e8.jpg

http://images.memorix.nl/ams/thumb/500x500/de14c99e-1193-49ee-d7bb-425367e1a2e8.jpg
SITE PLAN
PROGRAM: UNDERGROUND LEVEL
PROGRAM: GROUND LEVEL
GROUND FLOOR PLAN
PROGRAM: UPPER LEVELS
LOW RISE UNIT TYPES - GROUND BOUND DWELLINGS

7 x 154m²
LOW RISE UNIT TYPES: GARDEN BOUND DWELLINGS

8 x 95m²

10 x 125m²
LOW RISE UNIT TYPES: GALLERY APARTMENTS

- 47 x 49m²
- 34 x 70m²
2nd FLOOR PLAN
3rd FLOOR PLAN
LOW RISE LONGITUDINAL SECTION
LOW RISE CROSS SECTION
HIGH RISE FORM
HIGH RISE UNIT TYPES: CORNER APARTMENTS

- 8 x 120m²
- 16 x 92m²
- 61 x 57m²
HIGH RISE UNIT TYPES: MIDDLE APARTMENTS

- 39 x 60m²
- 77 x 32m²
HIGH RISE UNIT TYPES: MIDDLE APARTMENTS

17 x 92m²

16 x 93m²
HIGH RISE UNIT TYPES: INSET APARTMENTS

- 41 x 48m²
- 17 x 65m²
HIGH RISE TYPICAL FLOOR PLANS
HIGH RISE TYPICAL FLOOR PLANS
HIGH RISE CROSS SECTION
IV. BUILDING TECHNOLOGY
HIGH RISE DETAILED FRAGMENT
LOW RISE DETAILED FRAGMENT
1:5 HIGH RISE DETAILS

- 12mm laminate flooring
- 25mm vacuum insulation
- 40mm high performance flat roof
- Drainage pipe
- 60x60x20mm paving slabs
- Plastic supports
- Glass balustrade
- Insulated aluminium capping
- Anodized aluminium fin (fixed to mullion with thermal break)
- Balustrade anchor to slab
- Overflow pipe
- Insulated aluminium spandrel panel
- Curtain wall anchor (fixed to slab)
- Structurally glazed curtain wall mullion
- Triple glazed unit
- Drainage channel
- 50mm pressure proof insulation
- 250mm reinforced concrete slab
- 50mm screed with integrated underfloor heating
- 12mm laminate flooring
- 40mm high performance flat roof
- 25mm vacuum insulation
- Triple glazed sliding door
1:5 HIGH RISE DETAILS

- anodized aluminium fin (fixed to mullion with thermal break)
- insulated aluminium spandrel panel
- curtain wall anchor (fixed to slab)
- structurally glazed curtain wall mullion
- anodized aluminium sandwich panel
- sandwich panel anchoring
- triple glazed aluminium door
- structurally glazed curtain wall mullion
- glazed spandrel panel
- curtain wall anchor (fixed to slab)
1:5 LOW RISE DETAILS

- aluminium capping
- anodized aluminium window sill
- KOLUMBA FETERSEN brick
- 40mm cavity
- 100mm insulation
- cavity closer
- steel angle
- overflow pipe
- glass balustrade
- balustrade anchor to slab
- triple glazed aluminium window
- triple glazed aluminium door
- 12mm laminate flooring
- 50mm screed with integrated underfloor heating
- 50mm pressure proof insulation
- 250mm reinforced concrete slab
- triple glazed aluminium floor
- balustrade anchor to slab
- 50mm pressure proof insulation
- 250mm reinforced concrete slab
CLIMATE CONCEPT
TECHNICAL INSTALLATIONS
SHADOWS IMPACT

21/06

21/09

21/12
WIND IMPACT
MAINTENANCE: MONORAIL BMU
V. PHOTO ESSAY
PLINTH - LOBBY & GYM
PLINTH - RETAIL FUNCTIONS
PLINTH - LEISURE FUNCTIONS
PLINTH - DWELLING FUNCTION
HIGH & LOW RISE CLOSE-UP
HIGH RISE CLOSE-UP
INTERIOR VIEW - PATIO DWELLING
INTERIOR VIEW - COURTYARD DWELLING
INTERIOR VIEW - CORNER APARTMENT
INTERIOR VIEW - STUDIO APARTMENT
INTERIOR VIEW - INSET MAISONETTE
PUBLIC ROOFTOP - VIEWING & SITTING PLATFORMS
PUBLIC ROOFTOP - REFRESHMENT BAR & SITTING AREA
PUBLIC ROOFTOP - SKY BAR/RESTAURANT
NIGHT SCENE
THANK YOU!