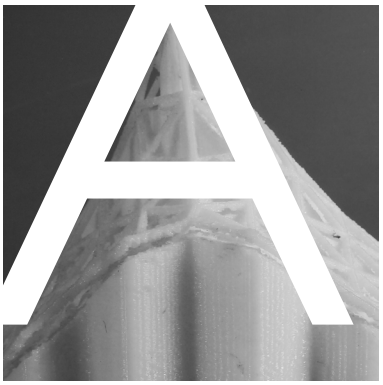


rchitectural Portfolio

Biyu Yan
颜　碧玉

PERSONAL DETAILS

Name: Biyu Yan

Dob: 09/03/96

CONTACT DETAILS

Personal Email:
yanbiyu2019@outlook.com

Mobile Number:
+86 13329751876

SKILLS

SketchUp
●●●●●
Rhinoceros
●●●●○
Grasshopper
●●●●○
Autodesk-AutoCAD
●●●●●
Adobe Suite
●●●●●
Enscape
●●○○○
Revit
●○○○○
Microsoft Office
●●●●●

ACADEMIC RECORD

- University of Dundee (09/2018 - 06/2019)

Master of Architecture (RIBA Part II)
Award received: Master of Architecture with Distinction(1st grade in the studio)

- University of Dundee (09/2017 - 06/2018)

Bachelor of Arts in Architectural Studies (Honours) with Wuhan University
Award received: Upper Second-Class Honours

- Wuhan University (09/2013 - 06/2017)

Bachelor of Architecture (joint program with University of Dundee)
Academic results: GPA 3.3/4

WORK EXPERIENCE

- 2019.8-Now Architect, THDL (Tianhua Design Lab), Shanghai

Assisting concept design and design delevopment;
Participating in diverse large-scale design schemes;

EXTRACURRICULAR ACTIVITIES

- "Plannign Chaos" Workshop (2015.7) , Publication/Jan.2019/Southeast University Press

\ Team leader, investigating recycling and utilization of waste in an old community of Wuhan
\ Core member of the editorial board

- Hiking society - Wuhan University, Committee for publicity

REWARDS

- Wuhan university: International Exchange Scholarship(2017)
- University of Dundee: Globle Excellence Scholarship(2018)

个人信息

姓名：颜碧玉

生日: 09/03/96

联系方式

个人邮箱:
yanbiyu2019@outlook.com

手机号:
+86 13329751876

技能

SketchUp
●●●●●
Rhinoceros
●●●●●
Grasshopper
●●●●●
Autodesk-AutoCAD
●●●●●
Adobe Suite
●●●●●
Enscape
●●○○○
Revit
●○○○○
Microsoft Office
●●●●●

教育经历

- University of Dundee (09/2018 - 06/2019)

建筑学硕士学位 (RIBA Part II)
获得 Master of Architecture with Distinction(小组最高分)

- University of Dundee (09/2017 - 06/2018)

建筑学中外合作办学 交换项目
获得建筑学本科二等一荣誉学位

- 武汉大学 (09/2013 - 06/2017)

建筑学（五年制）本科学位
绩点：3.3/4

工作经历

- 2019.8至今 建筑师, 创作一所，上海天华

协助概念设计和扩初设计
参与多个大型商业办公项目的投标和委托设计

社会活动

- 混乱的规划”暑期工作坊（2015.7），成果于东南大学出版社2019年1月出版

\ 担任组长，用Mapping的方式调研武汉老社区的废品循环线路
\ 参与编辑出版书籍

- 武汉大学跋涉者协会宣传部部长（2014.5-2015.5）

奖项

- 武汉大学本科生出国交流学习专项奖学金(2017)
- University of Dundee: 国际杰出学生奖学金(2018)

Selected Professional Works
/ 工作项目选

01

上海浦东金桥通用汽车备用地四 14 号地块综合体

JINQIAO COMPLEX
SHANGHAI(UNDER CONSTRUCTION)

02

上海闵行科力远莘庄办公楼

KELI YUANXINZHUANG OFFICE BUILDING
SHANGHAI(UNDER CONSTRUCTION)

03

北杨人工智能小镇北区概念方案

NORTH AREA OF BEIXIANG ARTIFICIAL
INTELLIGENCE TOWN, SHANGHAI(PROPOSAL)

04

前滩 54-01 地块项目前期规划设计

PRELIMINARY PLANNING AND DESIGN OF
QIANTAN 54-01 PLOT PROJECT(PROPOSAL)

05

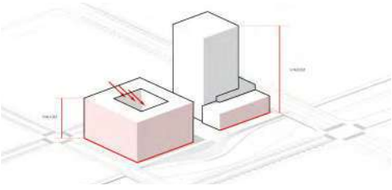
临港新城青少年活动中心

JUNIOR ACTIVITIES CENTER OF LINGANG
NEW TOWN(PROPOSAL)

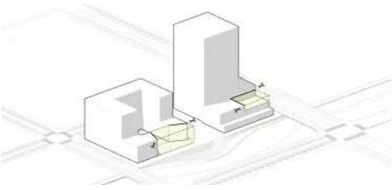
06

成都大熊猫基地熊猫馆舍概念设计

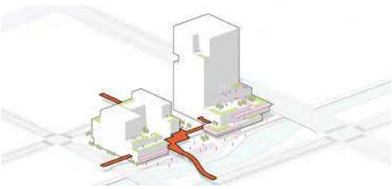
CONCEPT DESIGN OF PANDA EXHIBITION
CHENGDU(UNDER CONSTRUCTION)



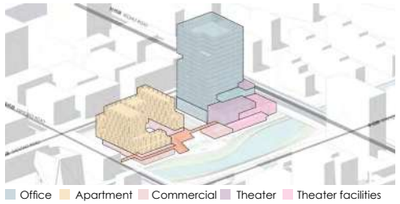
Site restrictions



Open for view



Vertical Landscape



Function

01/

'GEOGRAPHIC URBANSCAPE'

A RESHAPED SHANSHUI

Description: The basic design concept is to rationally reorganized the function of the office tower and the apartment, thus forming a livable and efficient with shared lifestyle and commercial atmosphere.The multi-leveled continuous roof garden forms a spatial system connecting the two blocks and organically changes according to the programmes.
The bottom of the tower is open to the public and mixed with co-working spaces and other programs for youngsters. Outdoor sky terraces are set every 4-5 floors, providing a healthier lifestyle.The waterfront is well connected to the architecture spaces and formed both a urban square and a vibrant retail street with bars and restaurants.

Job Duties: Responsible for the drawing of design development phase of the office tower, participating in the conceptual design phase modeling, presentation preparation and diagram drawing / 负责办公塔楼扩初阶段全套图纸绘制，参与概念设计阶段建模、文本制作及分析图绘制

NOV. 2019

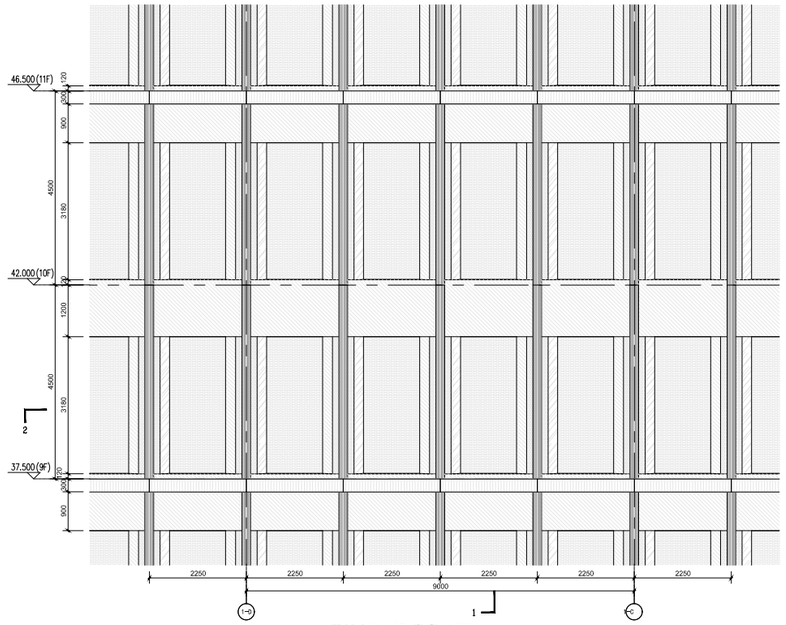
JINQIAO COMPLEX, SHANGHAI

上海浦东金桥通用汽车备用地四 14 号地块综合体

INDEX

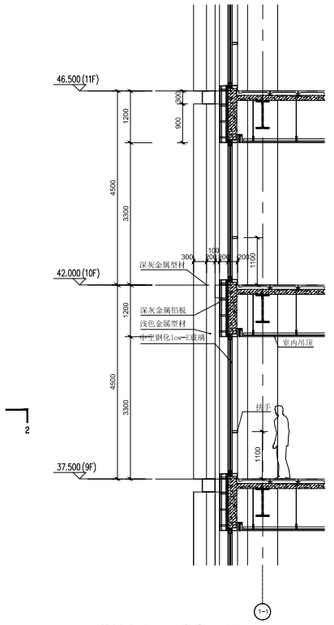
Program: Apartment, Office, Retail, etc.
Site Area: 16,044 m2
AREA: 79,830 m2
FAR: 3.0

STATUS: UNDER CONSTRUCTION



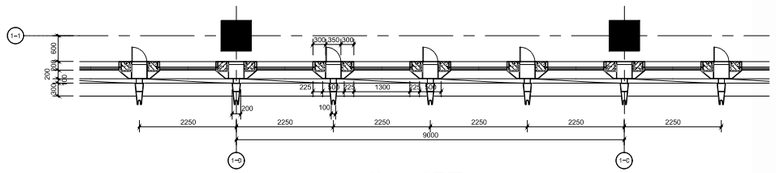
1#塔楼标准段墙身立面

Office tower standard elevation



1-1 1#塔楼标准段墙身大样图

1-1 Office tower standard detial section



2-2 1#塔楼9F局部平面

Office tower plan 9F

Site Strategy

Fire Strategy

Function Zoning

02/

'DESIGNED TO CONNCET'
BOTH THE URBAN PLANNING AND ARCHITECTURE OF EVOLVED

Description: Keli Yuanxinzhuang is designed as a social campus that brings innovators, founders, and tech leaders together in one collaborative workplace. Taking cues from the neighborhood's industrial character, the design stacks a series of brick forms that nod to the materials and proportions of the nearby warehouses. The floors are staggered, creating a ziggurat-shaped building that juts in and out, and rises towards the sky to create one collaborative workplace. The short ends of the facade are capped in soaring floor-to-ceiling windows that flood the interiors with sunlight and offer commanding views of the Manhattan skyline and Brooklyn.

Job Duties: As the main member responsible for the whole elevation design process from concept design to design development / 作为主要人员负责从概念到扩初的造型立面的全过程设计

NOV. 2019

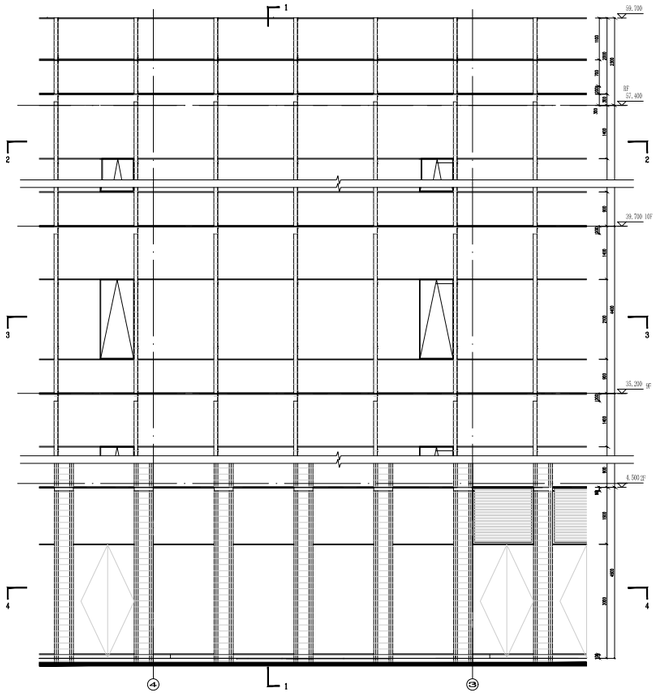
KELI YUANXIN ZHUANG OFFICE BUILDING, SHANGHAI

上海闵行科力远莘庄办公楼

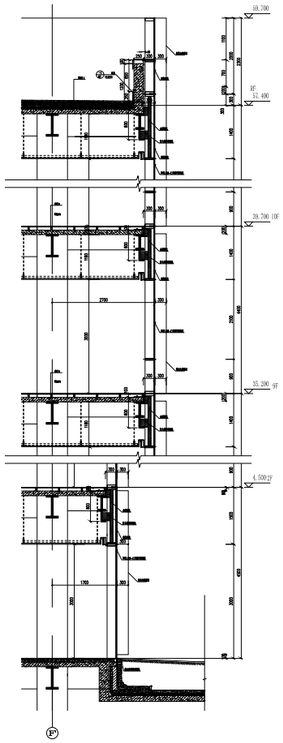
INDEX

Program: Retail, Office Building
Site Area: 19,340 m2
AREA: 58,800 m2
FAR: 3.0

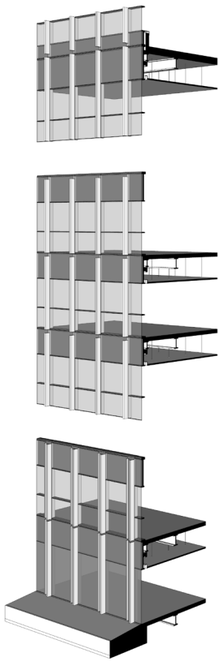
STATUS: Under Construction

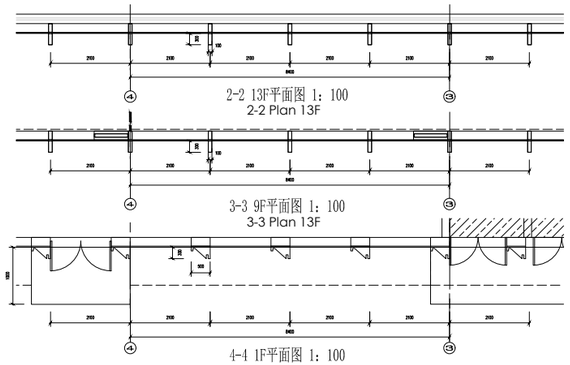


标准墙身大样立面图
Standard elevation



1-1标准墙身大样图
Detail Section





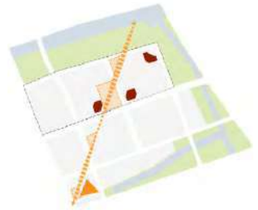
2-2 13F平面图 1：100
2-2 Plan 13F

3-3 9F平面图 1：100
3-3 Plan 13F

4-4 1F平面图 1：100
4-4 Plan 13F

Integration

Integrate decentralized green belts to form the "central green lung" of the whole regions.



Axis

According to the science and technology innovation axis, the two towers are treated symmetrically to create the "Beiyang Twin Towers".

Connection

Multi-dimensionally increase the connection between north and south areas and network "three-dimensional living belt".

Vitality

Enrich the planning of waterfront activities, make full use of hydrophilic resources, and jointly develop "waterfront vitality zone" with the third-stage cultural zone.

03/

'CENTRAL PARK' CONTINUITY OF PUBLIC SPACE ON THE INTERFACE OF AXIS

Description: Through the interpretation of the original GMP planning strategy and the understanding of the project positioning, starting from the design pain points of the original scheme, the project analyzes and deduces step by step, and reconstructs the overall planning and design, mainly starting from the differentiated products in the central area. By combing the planning structure, this chapter divides the original functional divisions into: central area, headquarters office area, social area and riverside vitality area. Through the whole slow traffic system, the four regions are connected in series and connected to the north and South regions.

Job Duties: Design and model building for the central gardern part, diagram drawing/ 负责中央花园区的设计和建模，参与文本制作及绘制分析图

JUL. 2020

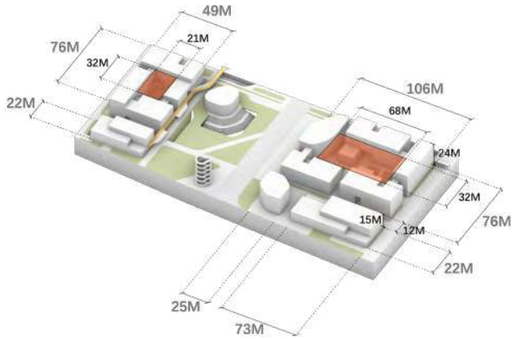
NORTH AREA OF BEIXIANG ARTIFICIAL INTELLIGENCE TOWN, SHANGHAI

北杨人工智能小镇北区概念方案

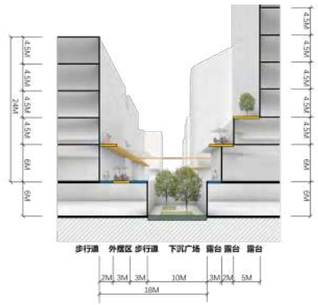
INDEX

Program: Retail, Office Building
Site Area: 115,175 m2
AREA: 329,700 m2
FAR: 1.5~3.5

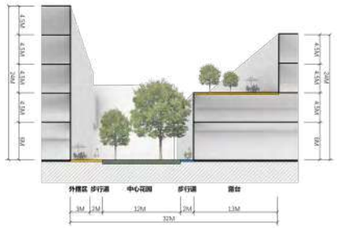
STATUS: PROPOSAL



Central Garden Diagram



Road Section

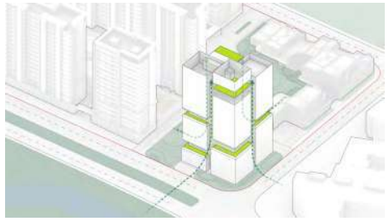


Garden Section

VIP viewing elevator to the top floor

Traffic core connects diverse spaces

Viewing platform



Multiple Terrace

04/

'THE GEM OF NEWBUND'

THE GREEN CORE OF CONNECTING LUXURY WORKING EXPERIENCE AND DIVERSITY LIFE

Description: The project is located in block 54-01 of Pudong Newbund International Business District. It is 800 meters away from the subway station of Oriental Sports Center. The surrounding of the site has rich education resources, landscape resources, commercial resources, medical treatment resources and infrastracture facilities. As a residential and office mixed land at the southern end of the Newbund area, all kinds of products should be in line with the overall positioning of the Newbund area to create a modern style of comprehensive projects. Each type of programs should be independent in the above-ground part of the space, but has a reasonable entrance and exit to reduce the interference between the traffic flow and line of sight.

Job Duties: Participating in the conceptual design phase modeling, presentation preparation and diagram drawing / 参与概念设计阶段建模、文本制作及分析图绘制

APR. 2020

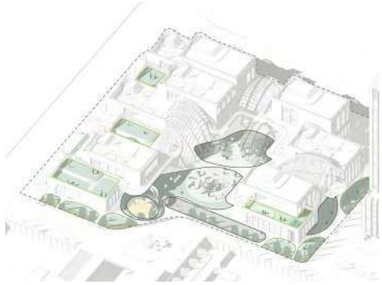
PRELIMINARY PLANNING AND DESIGN OF QIANTAN 54-01 PLOT PROJECT

前滩 54-01 地块项目前期规划设计

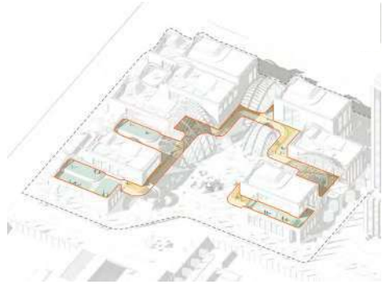
INDEX

Program: Kindergarten, Office Building
Site Area: 25,782 m2
AREA: 85,940 m2
FAR: 3.33

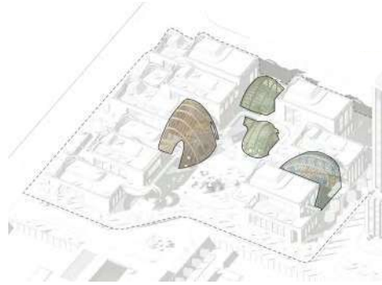
STATUS: COMPETITION



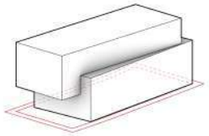
Playground Zoning

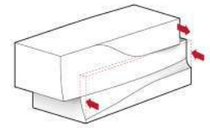


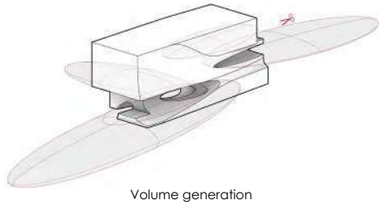
Second-floor corridor connection



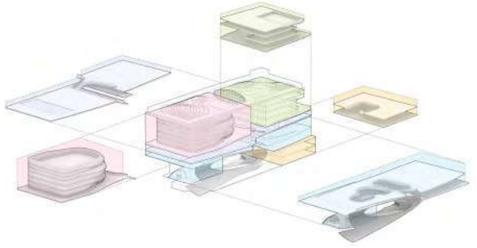
Organic bubbles







Volume generation



Funtion Zone

05/

'A FUTURISTIC CULTURAL CENTRE'

A LANDMARK IN LINGANG NEW AREA

Description: The design fully considers the local cultural and climatic conditions of Lingang New Town, Shanghai, and the natural and traffic conditions around the base. In combination with the intention of "lake, sea and sky" for landmark buildings such as Dishui Lake, navigation museum and Shanghai planetarium, the design is based on "dry stone on the sea". The public landscape resources can be connected through the form of caves, and the flow of people can be introduced into the public space like a trickle, and freely connected in the overall architectural space.

Job Duties: Participating in the conceptual design, modeling, presentation preparation and diagram drawing / 参与概念设计、建模、文本制作及分析图绘制

MAY. 2020

Junior Activities Center of Lingang New Town

临港新城青少年活动中心

INDEX

Program:Exhibition, Entertainment, Education
Site Area: 18841 m2
AREA: 28818.16m2
FAR: 1.530

STATUS: COMPETITION

06/

'THE INFINITE HILLS' CREATE SPACE TO EXPLORE AND FALL IN LOVE WITH PANDAS

Description: The Infinity Hill is located in the hinterland of the whole area, taking on the cultural experience and business services of the crowd gathering. Whole area is divided into four parts: the theme commercial and cinema group, the mountain forest exploration giant panda exhibition venue group, the natural recreation small panda exhibition venue group and the dense forest recreation area. The concept relies on the unique hilly terrain of the site to create a smooth architectural pattern, indoor and outdoor smooth dynamic line conversion, for visitors to provide more interaction with the panda and the natural environment of the space experience.

Job Duties: Participating in the conceptual design, modeling, presentation preparation and diagram drawing / 参与概念设计、建模、文本制作及分析图绘制

SEP. 2019

Panda Exhibition Hall Of Infinite Hills Area Concept Design, CHENGDU

成都大熊猫基地无限山丘片区熊猫馆舍概念设计

INDEX

Program:Exhibition, Entertainment, Retail, Research
Site Area: 304800 m2
AREA: 31500m2
FAR: 0.1

STATUS: UNDER CONSTRUCTION

Selected Academic Works
/ 学术项目选

01

新能源活动中心

ENERGY RESEARCH CENTRE

- 32 -

02

邓迪社区改造：社会住宅

SOCIAL HOUSING PROJECT

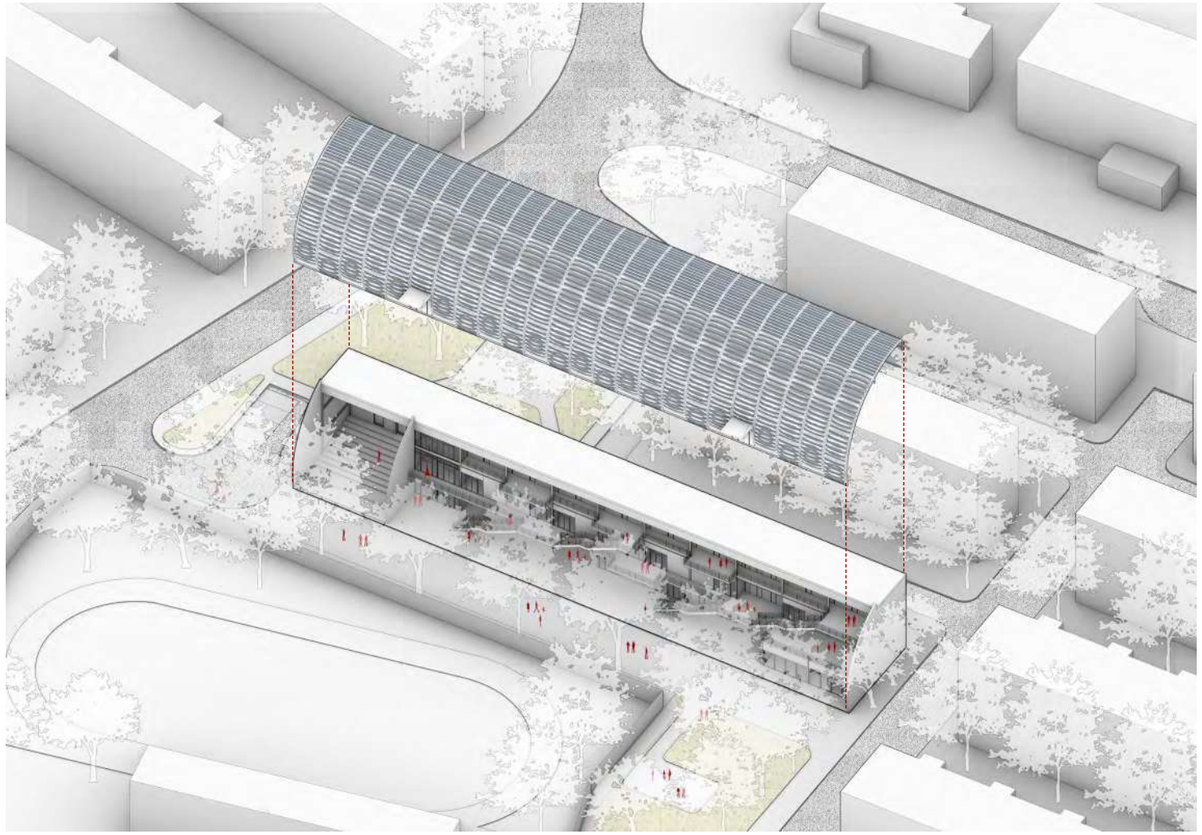
- 36 -

03

邓迪机场设计

REDEVELOPMENT OFDUNDEE CITY AIRPORT

- 40 -

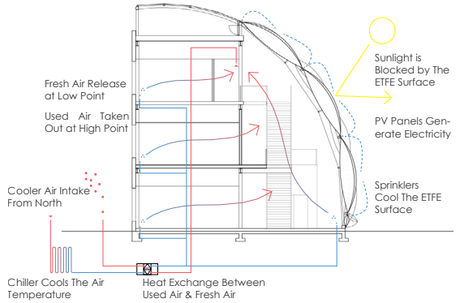


01/

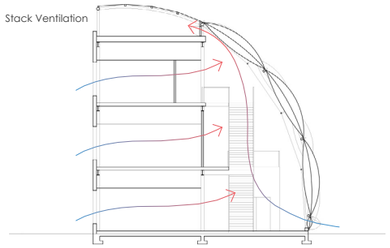
Energy Research Centre

Design Task: Energy Research Centre Proposal
Location: Wuhan, China
Time: Year 4 / 2017
Duration: 9 weeks
Area: Approximately 2000 m²

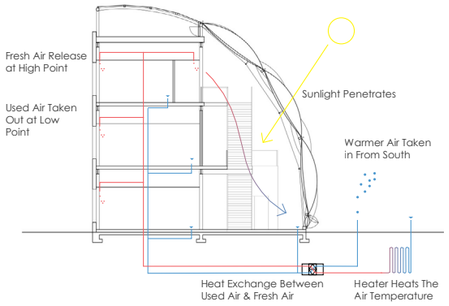
Description: Wuhan's climate can be challenging, classified as 'humid subtropical' with distinct seasons and heavy rainfall. A bespoke environmental strategy is therefore crucial. This project explored a combination of passive and active environmental strategies. The resulting design uses a comparatively low amount of energy and does not require extensive maintenance. Natural stack ventilation helps regulate air-flow and is supplemented by a mechanical system when natural ventilation alone is not sufficient. An intelligent mechanically operated shading system (shown on the next page) was employed. The south-facing sloping roof is made of triple-layered ETFE cushions. Flexible photovoltaic panels attach to the first layer of cushions providing the electricity needed for the building. The second layer of cushions are used to control light. There are two separate cavities which can be inflated, filling one cavity will allow sunlight to pass through the patterned surfaces (typically used in winter), while filling the other will cause the patterned surfaces to overlap blocking the sunlight (typically used in summer).



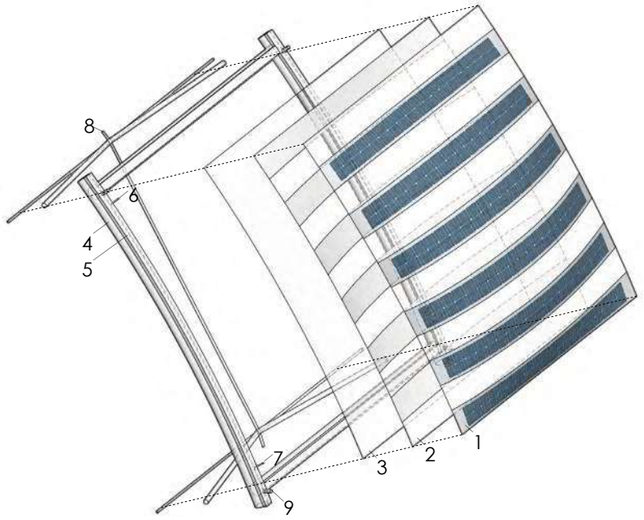
Summer Mode



Spring & Autumn Mode



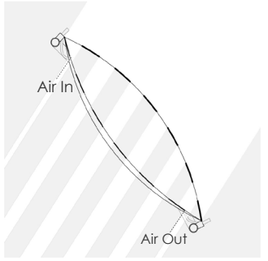
Winter Mode



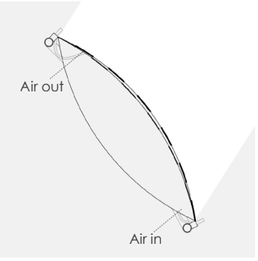
Envelope Exploded View

Diagram Key:

1 Flexible Photovoltaic Panels Integrated Within The First ETFE Cushion
2 ETFE Second Layer with Print Pattern
3 ETFE Third Transparent Layer
4 Ø 152mm Circular Steel
5 Tube Utilised for Inflation & Sprinkler Cables
6 Inflation
7 Inflation
8 Bracing Cables
9 Sprinklers



Open Cushion in The Winter:
50 % Sunlight Infiltration



Closed Cushion in the Summer:
No Direct Sunlight

Different Modes of ETFE Cushion

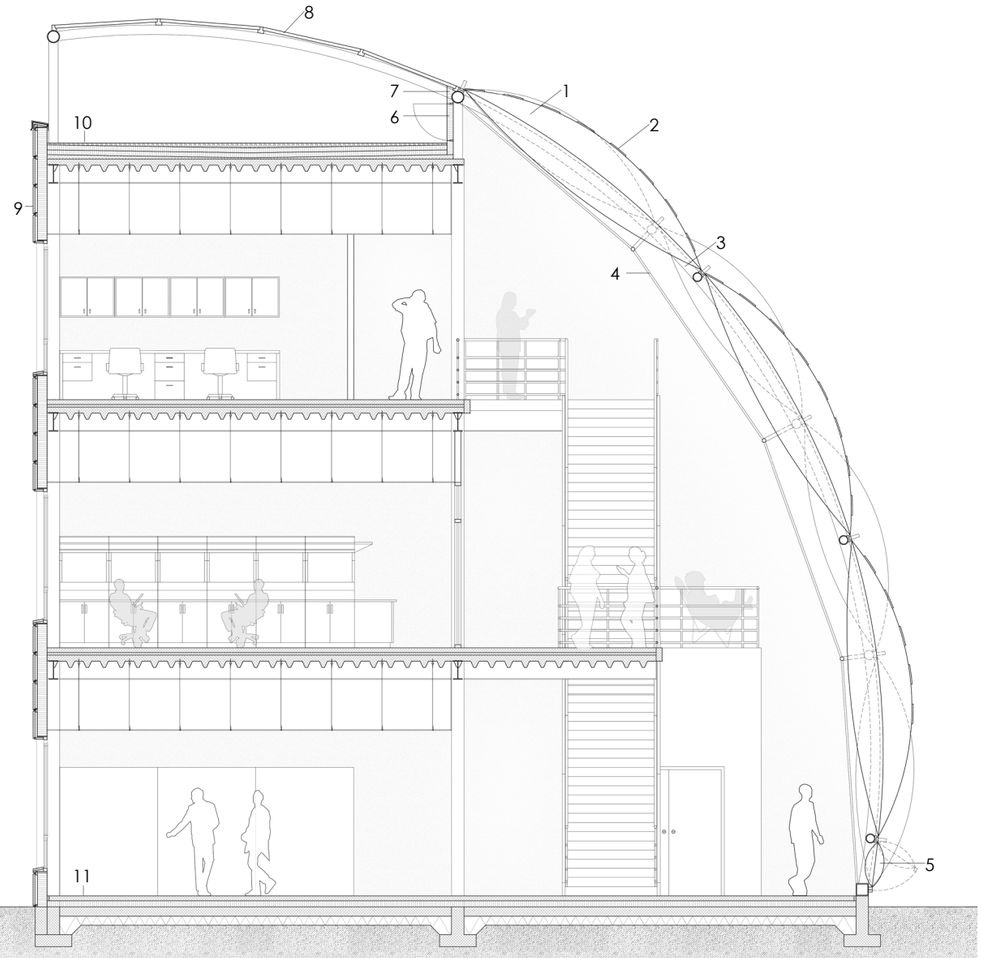
Section Key:

1 Three-Layer ETFE Cushion
2 Flexible Photovoltaic Panels Integrated Within The First Layer of ETFE Cushion
3 Ø 152mm Circular Steel
4 Bracing Cables
5 Operable Cushions
6 Operable Windows
7 Insulated Aluminium Faced Panel
8 Photovoltaic Panels

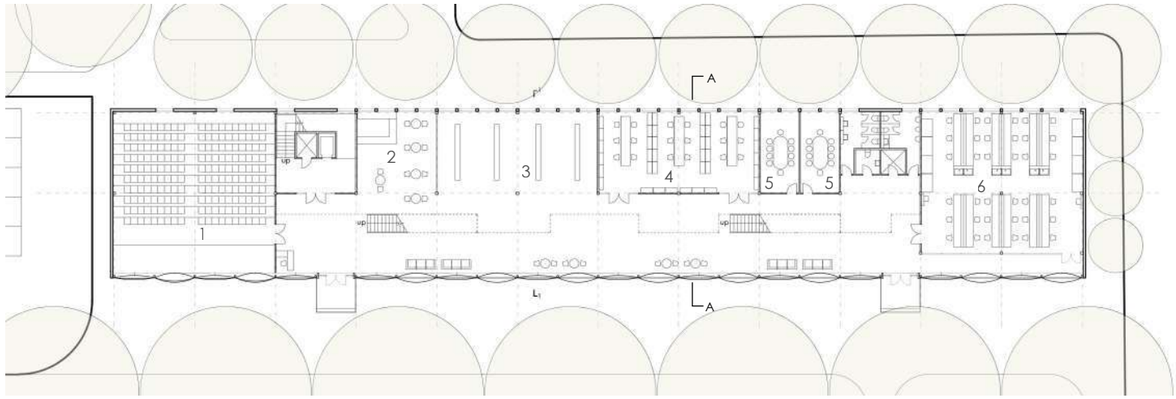
9 External Wall Construction
- 30 mm Clay Brick Panels
- 40 mm Ventilated Cavity
- 160 mm Thermal Insulation With Moisture Barrier on Both Sides
- 12.5 mm Plasterboard

10 Roof Construction
- 30-80 mm Gravel
- Synthetic Roofing Felt
- 160 mm Thermal Insulation
- Vapour Barrier
- 20-70 mm Screed Laid to Falls
- 90 mm Concrete Slab on Metal Sheeting

11 Floor Construction
- 80 mm Concrete Slab
- 100 mm Thermal Insulation
- Waterproof Membrane
- 150 mm Concrete Slab
- 150mm Consolidated Hardcore



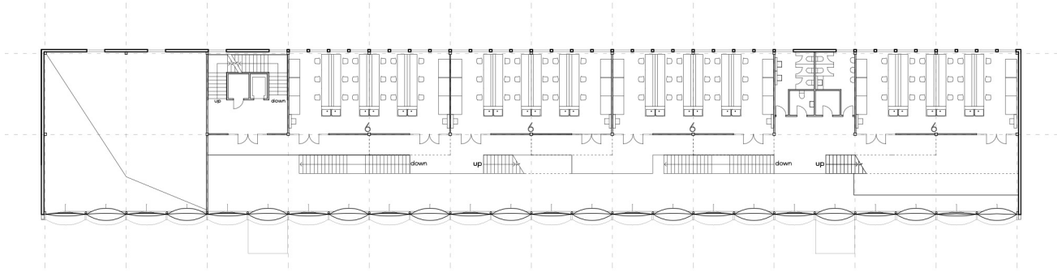
Cross Section A-A Drawn @ 1:100



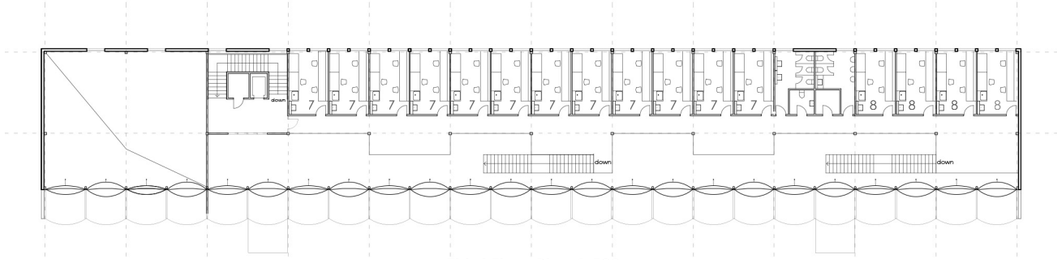
Ground Floor Plan 1:500

Building Key:

1 Lecture Hall 2 Café 3 Exhibition Space 4 Library 5 Meeting Room 6 Laboratory 7 Research Room 8 Offices



Second Floor Plan 1:500



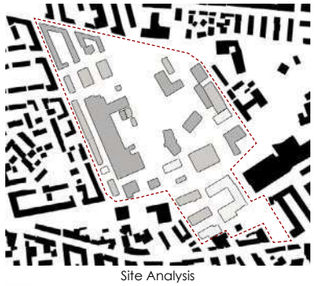
Third Floor Plan 1:500

02/

Social Housing Project

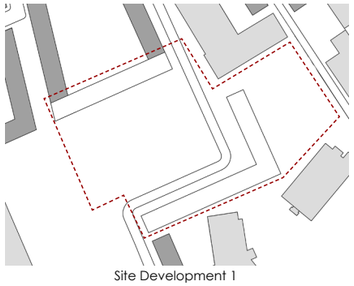
Design Task: Community Planning & Social Housing Design
Location: Dundee, Scotland
Time: Year 4 / 2018
Duration: 10 month
Area: Approximately 12,500 m²

Description: The year 4 project was a year-long integrated design, which began with a group urban analysis of Dundee. The analytical information gathered helped us to respond with strategies that could help regenerate an old industrial area between Blackness Road and Perth Road. Through careful contextual consideration, we planned a sustainable low-carbon community which also aimed to tackle social problems specific to Dundee. We then personally selected sites for further detailed development. For my chosen site I designed social housing for families and the elderly, which was linked to the wider development by a communal garden. Prefabricated modular concrete construction was chosen to minimise disruption on-site. This form of construction is also cost affective and lends itself to future expansion. The design aims to create a degree of density and variety with strong visual connections between the public areas and housing units. Natural ventilation and lighting have been used where possible.

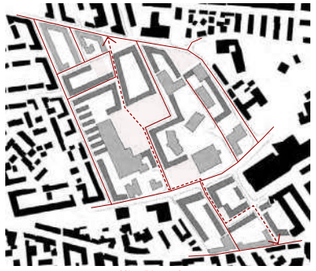


Site Analysis

Buildings & Services Worth To Be Kept
Businesses To Be Relocated Off-site
Businesses To Be Relocated On-site

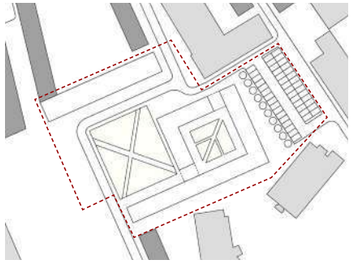


Site Development 1



Site Planning

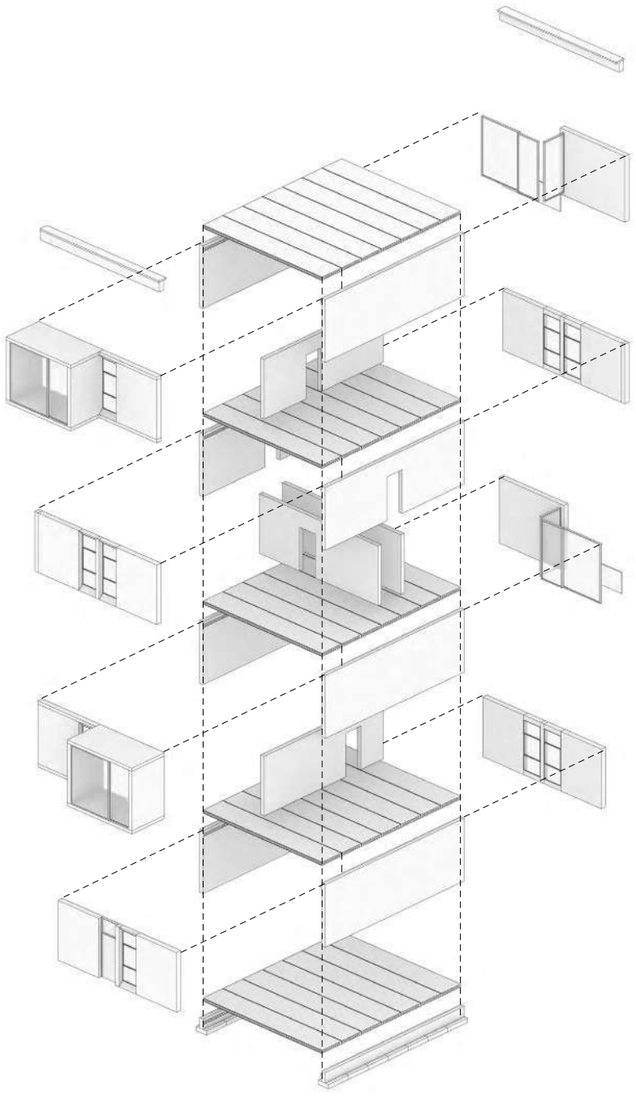
New Buildings
Key Public Spaces
Buildings Kept
Vehicle Road



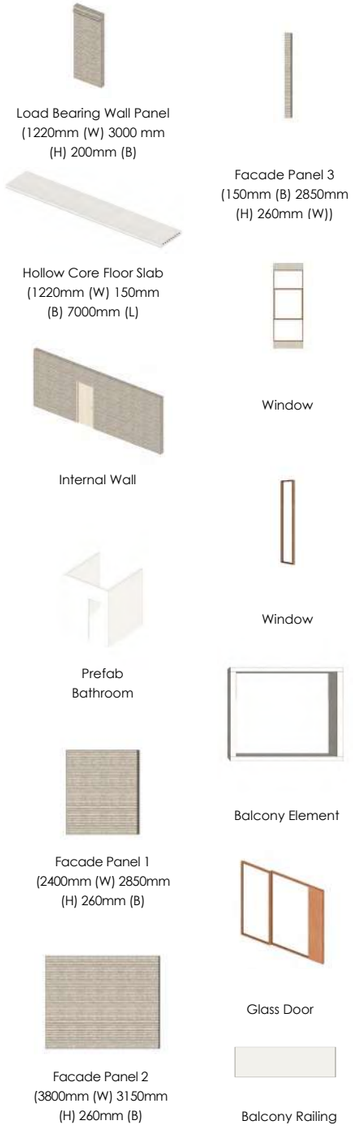
Site Development 2

Site Plan Originially drawn in 1:500

Exploded Axonometric of Unit



Exploded Axonometric of Unit



Components

Section Key:

1 **Roof Construction**
- 50 mm Concrete Flags
- 40 mm Gravel
- Synthetic Roofing Felt
- 150 mm Thermal Insulation
- Vapour Barrier
- 20-60 mm Screed Laid To Falls
- 150 mm Pre-cast Concrete Hollow Core Slab)
- 400 mm Dropped Ceiling

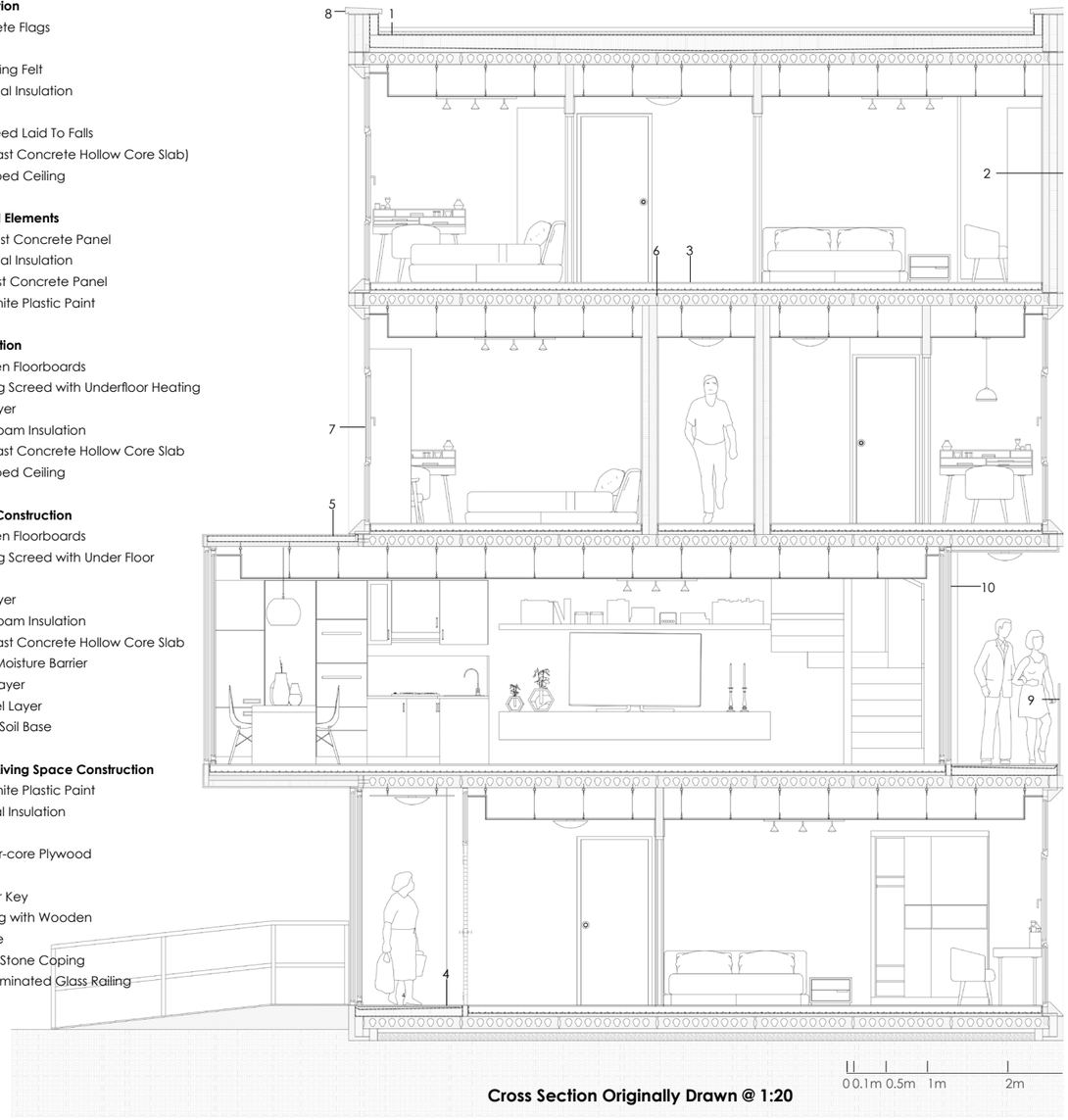
2 **Sandwich Wall Elements**
- 80 mm Pre-cast Concrete Panel
- 100 mm Thermal Insulation
- 80 mm Pre-cast Concrete Panel
- Plaster with White Plastic Paint

3 **Floor Construction**
- 20 mm Wooden Floorboards
- 80 mm Floating Screed with Underfloor Heating
- Separating Layer
- 40 mm Rigid Foam Insulation
- 150 mm Pre-cast Concrete Hollow Core Slab
- 400 mm Dropped Ceiling

4 **Ground Floor Construction**
- 20 mm Wooden Floorboards
- 80 mm Floating Screed with Under Floor Heating
- Separating Layer
- 40 mm Rigid Foam Insulation
- 150 mm Pre-cast Concrete Hollow Core Slab
- Polyethylene Moisture Barrier
- 51 mm Sand Layer
- 100 mm Gravel Layer
- Stable, Dense Soil Base

5 **Cantilevered Living Space Construction**
- Plaster with White Plastic Paint
- 65 mm Thermal Insulation
- Vapour Barrier
- 60 mm Lumber-core Plywood

6 Grouted Shear Key
7 Double Glazing with Wooden Window Frame
8 Reconstituted Stone Coping
9 Embedded Laminated Glass Railing
10 Sliding Door



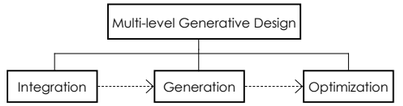
Cross Section Originally Drawn @ 1:20

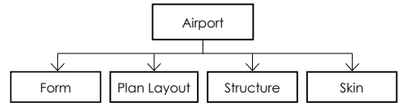
03/

Dundee Airport/ Thesis Project

Design Task: Airport design & Thesis
Location: Dundee, Scotland
Time: Year 5 / 2019
Duration: 10 month
Area: Approximately 12,500 m²

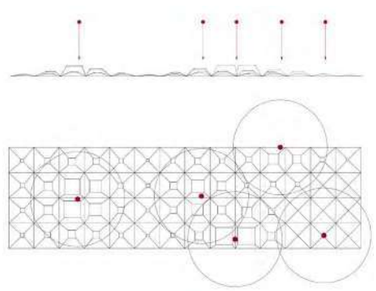
Description: The final year design started with the question of whether it is possible using current emerging technologies to create a fully automated design process. It also examined how generative design can be used to improve conventional design methodologies. Through academic research and the design of an airport, the thesis proposed a multi-level generative design approach in which designers interact with computers in order to expand the capability of traditional design methods. The framework of the multi-level generative approach consisted of three key parts: integration, generation and optimization. The thesis text compared the conventional design process with computational design. It also introduced the idea of multi-level generative design and evaluated it using different parameters including: structure, room, space arrangement and urban planning. The design methodology was further tested on a proposed design for a newly redeveloped Dundee City Airport.





FORM GENERATION

Attracting Points - used to control the height and size of apertures.

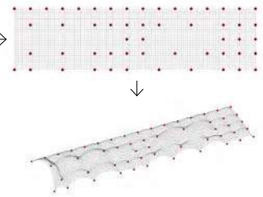


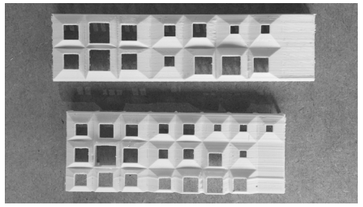
Physical Simulation of Funicular Form

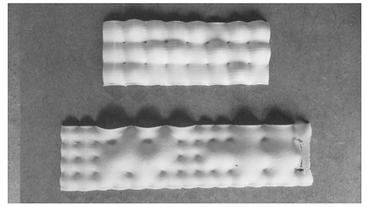
INPUT DATA

Grid lines used to anchor points of Hanging force

Form is controlled by forces applied to each points and the distance between anchor points

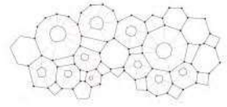


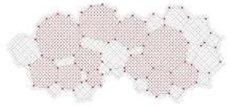


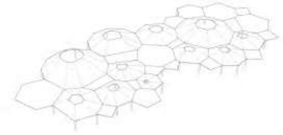


Apply rule set 1 to the plan

Apply rule set 2 to the plan

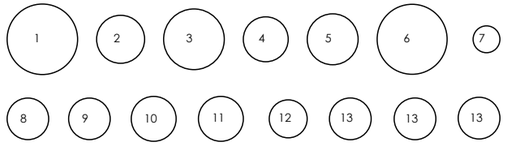






PLAN GENERATION

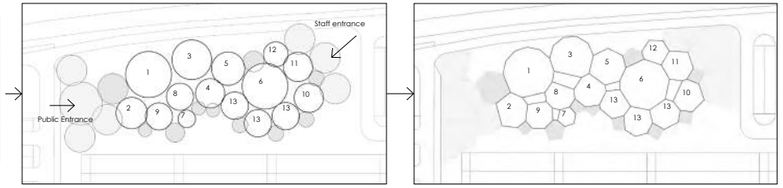
Circles represented rooms with adjustable sizes responsive to different inputs



1	Departures concourse
2	Arrivals concourse
3	Check in
4	Departure baggage
5	Security
6	Departures lounge
7	Immigration check
8	International baggage reclaim
9	Domestic baggage reclaim
10	Offices
11	Admin block
12	Plant room
13	Gate holding area

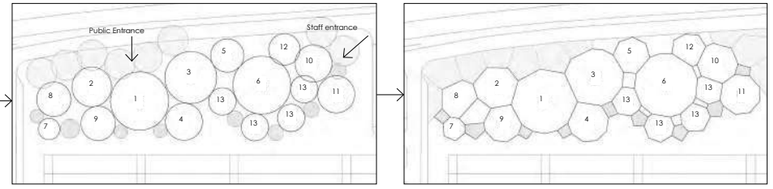
INPUT 1

Annual Passenger Number	500,000
Largest aircraft passenger number	110
Aircraft Stands Number	3
Site	Site option 1



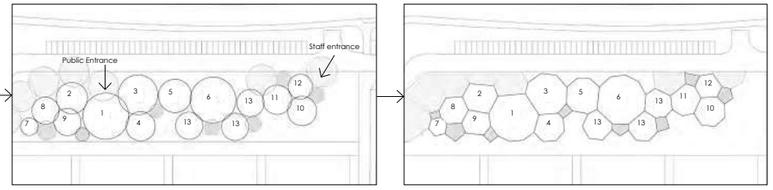
INPUT 2

Annual Passenger Number	800,000
Largest aircraft passenger number	110
Aircraft Stands Number	4
Site	Site option 1



INPUT 3

Annual Passenger Number	500,000
Largest aircraft passenger number	110
Aircraft Stands Number	3
Site	Site option 2



STRUCTURE GENERATION