

SKETCHES

Luminous Minds:
enhancing cognitive performance and knowledge acquisition
in future libraries through the lighting landscape

AR3AH115

Graduation Studio - Revitalising Heritage

Bart Johannes Mooren | 5644747

b.j.mooren@student.tudelft.nl

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Tutors:

Prof. Dr.-Ing. Uta Pottgiesser (Design tutor)

Ir. Paddy Tomesen (Building Technology tutor)

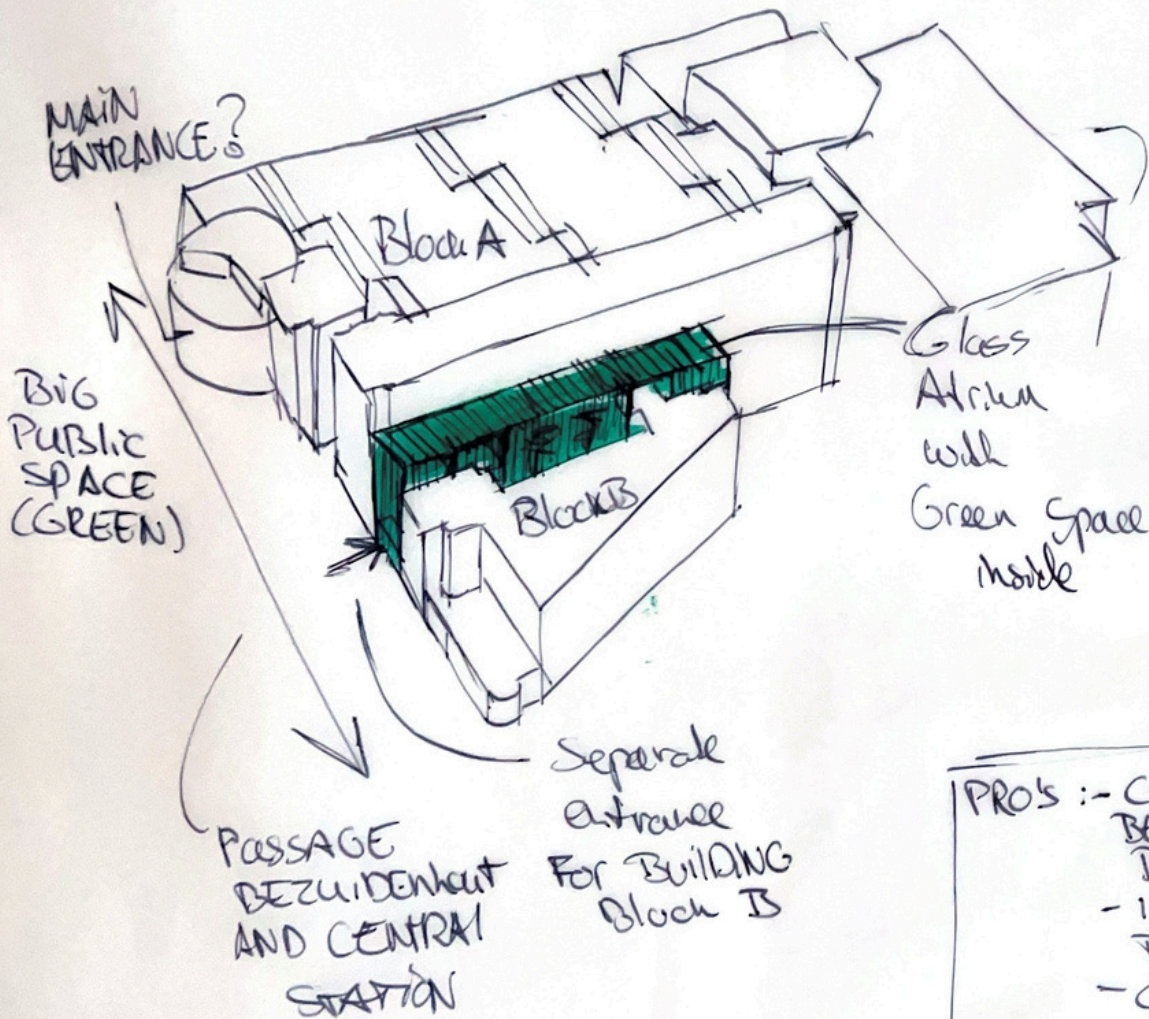
Dr. M. (Emeline) Lin (Research tutor)

Delft University of Technology

Faculty of Architecture and the Built Environment

- VALUES:
- ACCESSIBILITY
 - DAYLIGHT PENETRATION
 - Good View to NATURE

CREATION OF AN CONNECTION BETWEEN Block A & B



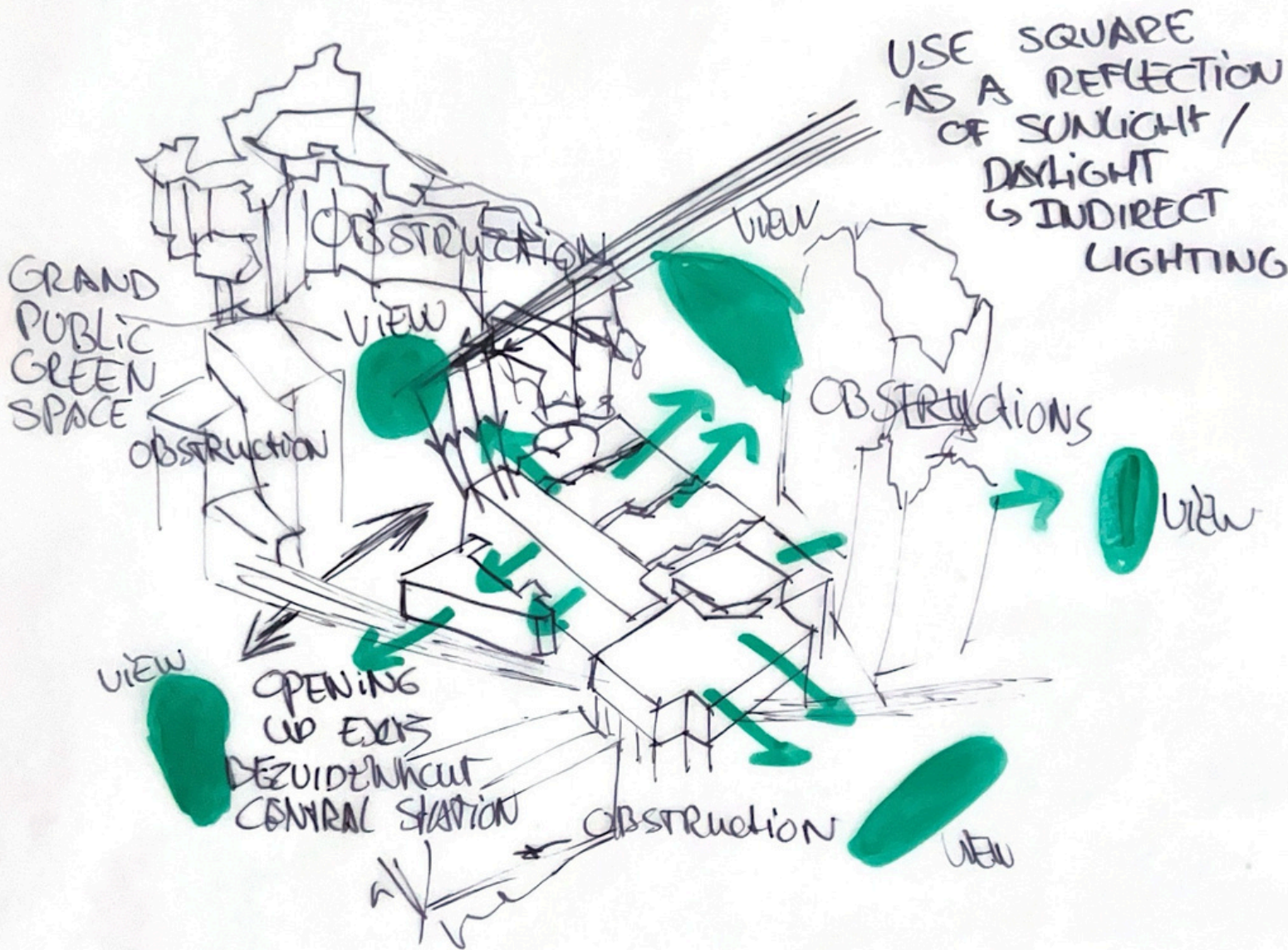
- PROS :-
- CREATES BETTER CONNECTION BETWEEN Block A
 - IMPROVES PASSAGE DEZUIDENHOOF - C
 - CREATION OF INTERIOR GREEN SPACE AND SO BETTER VIEW
 - IMPROVES Lighting Possibilities

CONS: HEATING ISSUES
WE NOT IMPLEMENTED
CORRECTLY

DESTROYS A LOT OF THE
CURRENT BUILDING MASSES

... - Good view to outside

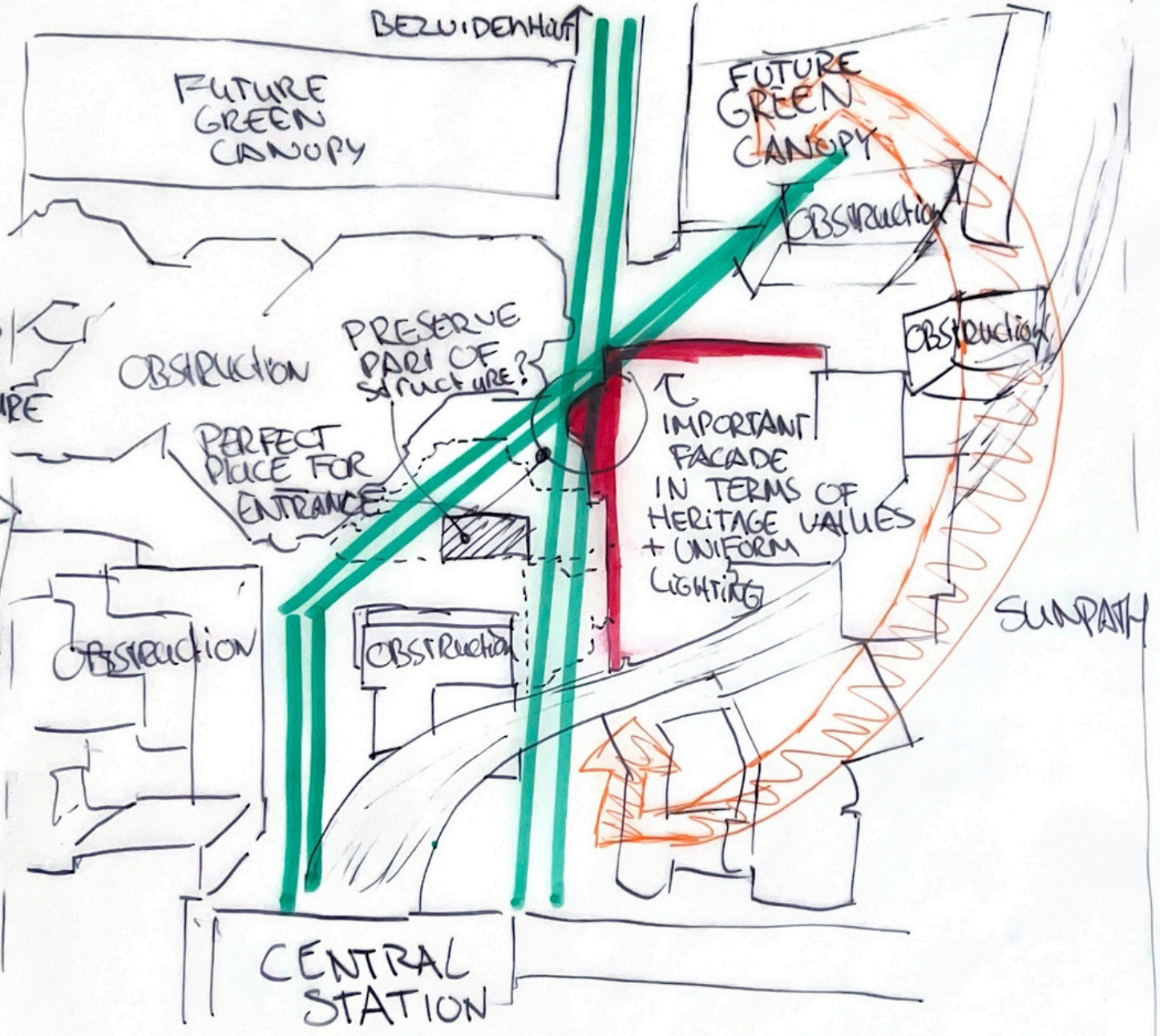
OPTIMIZE VIEWS



PRO'S : * MAKE SPACE IN OVERCROWDED BUILDING SITE FOR BETTER VIEWS
+ DAYLIGHT
* AXIS CS - DEZUIDENHOUT

CON'S : * VERY LARGE PUBLIC SPACE CREATED, HOW TO FILL IN?
* LOTS OF CURRENT BUILDING MASSES DESTROYED

URBAN CONTEXT
& IMPORTANT FACADE
→ CREATE UNIFORM LIGHTING



INNER COURTYARDS VARIANTS

- 1: AMBIENT LIGHT
- 2: FOCAL Glow
- 3: SPARKLE

CURRENT IMPORTANT SEPARATION IN BUILDING BETWEEN OPEN FLEXIBLE SPACES & MORE CLOSED OFF SMALL ROOMS

INNER COURTYARDS CREATING INTIMATE WORKSPACES WITH GOOD VIEWS TO NATURE

Structure

EXTRA TOPLIGHTING ON PLACES OF CURRENT SAWTOOTH ROOF

OPEN

FLEXIBLE SPACES

MORE CONCENTRATED SPACES

VIEW TO THE HARBOR SKYLINE + COURTYARDS

3: SPARKLE

MAIN ENTRANCE

ENTRANCE (BICYCLE PARKING UNDERGROUND)

LIGHTWELLS WITH 'WATERFALL LIKE' STRUCTURE

2: FOCAL glow

1: AMBIENT LIGHT

LINKED FOREIGN TING AND HIT PENETRATION

- CON'S: *TO LITTLE VIEWS
- * VERY POINT SPECIFIC
 - * DEMOLISH A LOT
 - * RANDOM DESIGN
 - * BICYCLE PARKING TOO IMPORTANT

- PRO'S: CREATION OF INTIMATE SPACES WITH 'High Quality view

HISTORIC VALUE FACADE

FACADE VARIANT

LET IN MORE DAYLIGHT WHILE PRESERVING FACADE STRUCTURE & VALUES

LIGHTING FROM MULTIPLE SIDES + DIFFUSE

THE TWO MOST IMPORTANT FACADES IN TERMS OF DAYLIGHT

'WATERFALL LIKE' LIGHTWELLS

OPENED UP FACADE FOR DAYLIGHT PENETRATION

PRESERVING FACADES HERITAGE

EXTRA TOPLIGHTING ON PLACES OF CURRENT SAWTOOTH ROOF

3: SPARKLE

TWO LEVELS INSTEAD OF 4 TO CREATE MORE DAYLIGHT INSIDE THE BUILDING

MORE RECOGNISABLE ENTRANCE WITH COLUMNS LINKED TO MINISTRY OF FOREIGN AFFAIRS, REFLECTING STATELINESS AND IMPROVE DAYLIGHT PENETRATION

CURVE

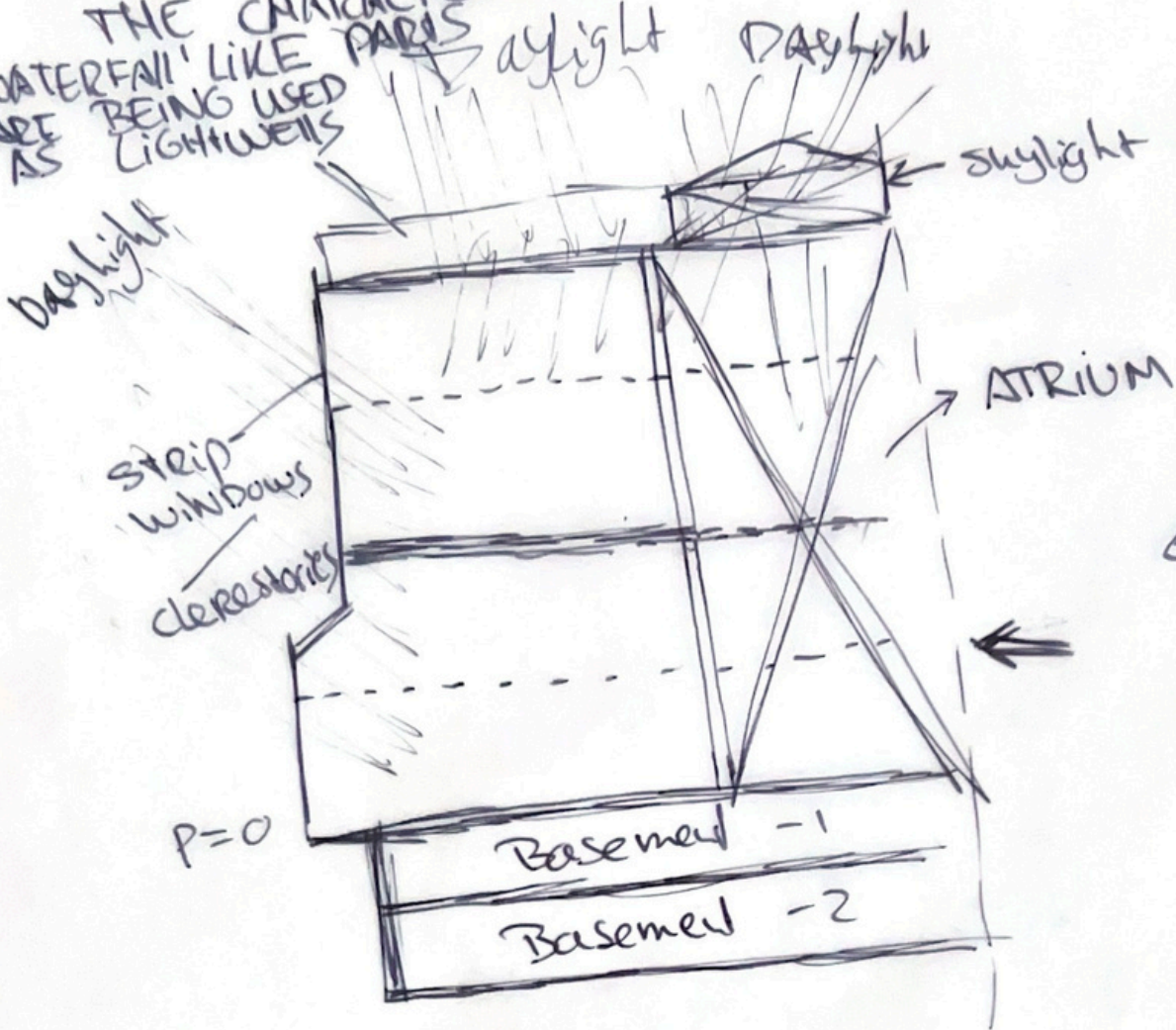
OPEN

FLEX

Light 'wa



THE CHARACTERISTIC
'WATERFALL' LIKE PARIS
ARE BEING USED
AS LIGHTWELLS



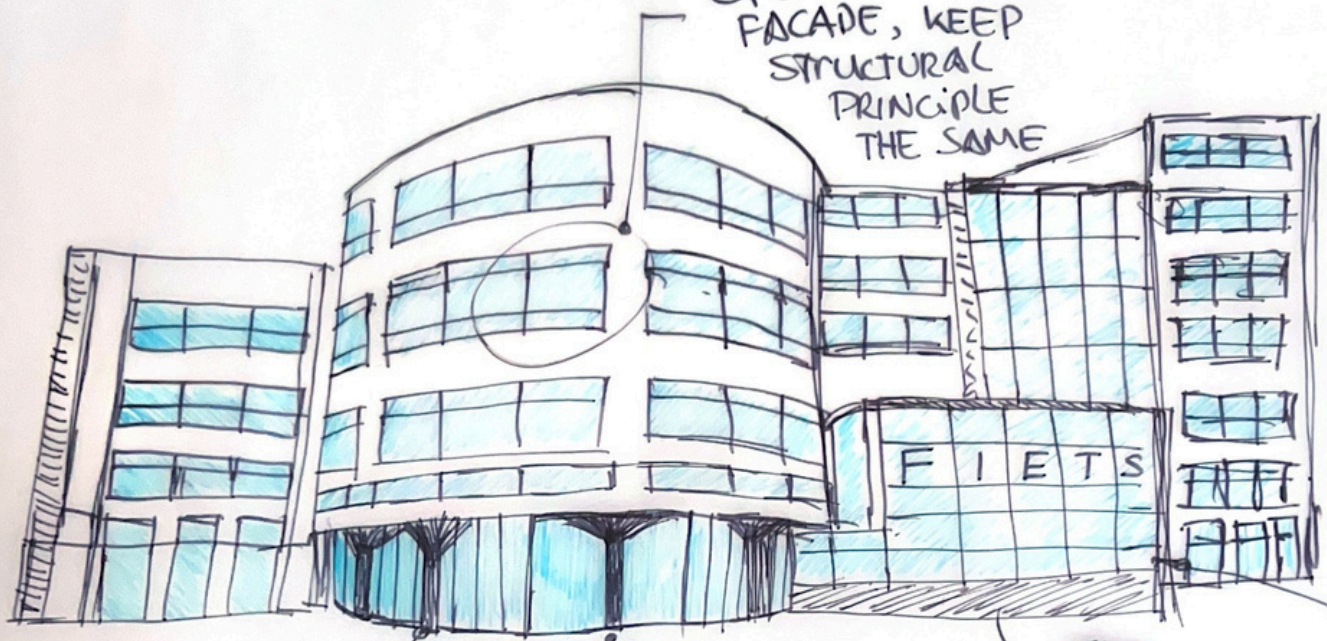
PRO'S:

- USE FLOOR HEIGHTS IN CLEVER WAY TO CREATE BETTER LIGHTING
- ATRIUMS LOCATION → CONNECTED WITH MAIN ENTRANCE

CON'S

- VERY LITTLE CHANGES
- NO CONCEPT

IMPROVE DAYLIGHT
AND VIEWS BY
OPENING UP
FACADE, KEEP
STRUCTURAL
PRINCIPLE
THE SAME



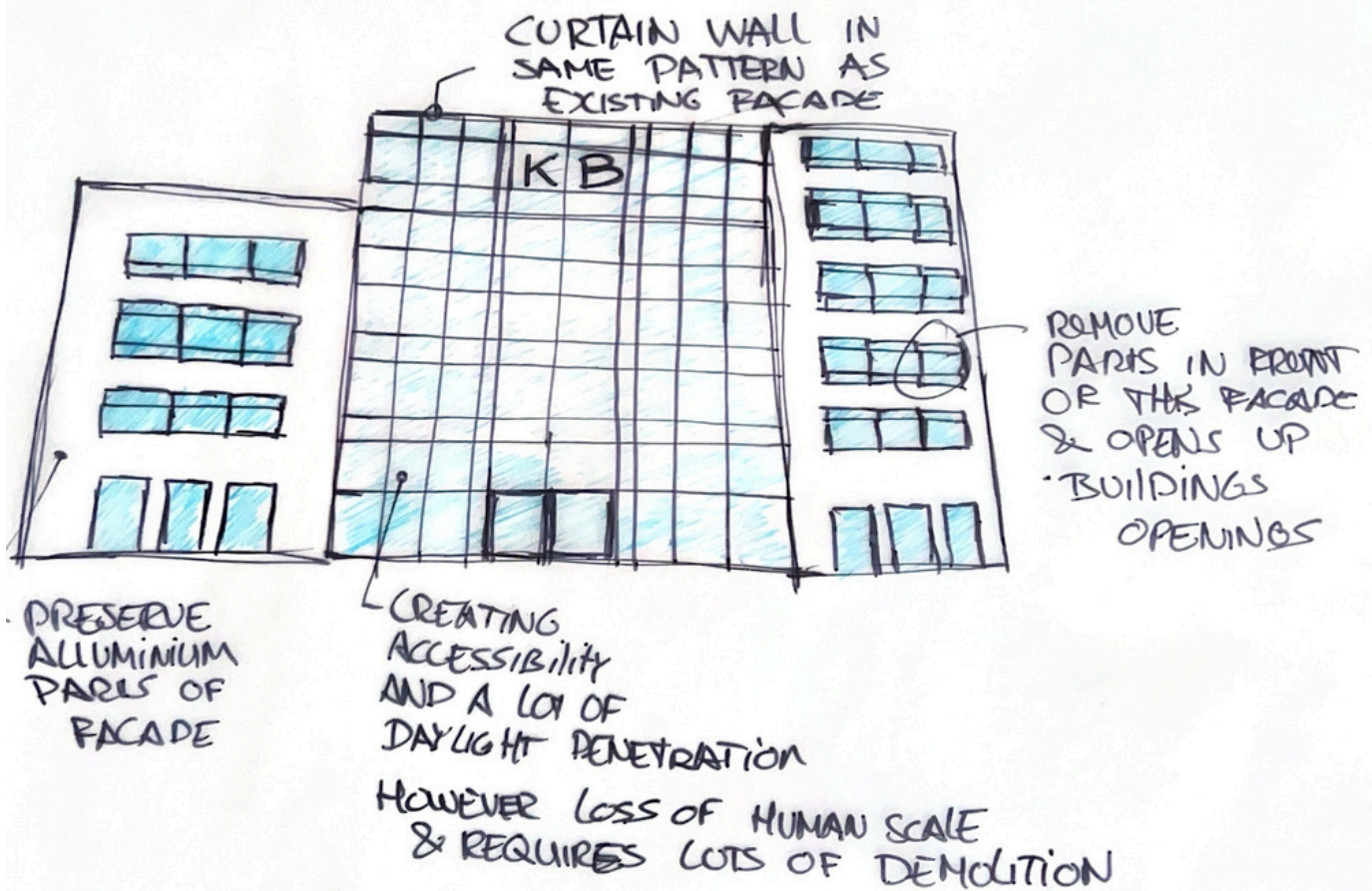
STATELINESS
COLUMNS
REFERING TO
MINISTRY OF
FOREIGN AFFAIRS

ENTRANCE
KB

BICYCLE PARKING
UNDERGROUND
ON DEMOLISHED
PARTS

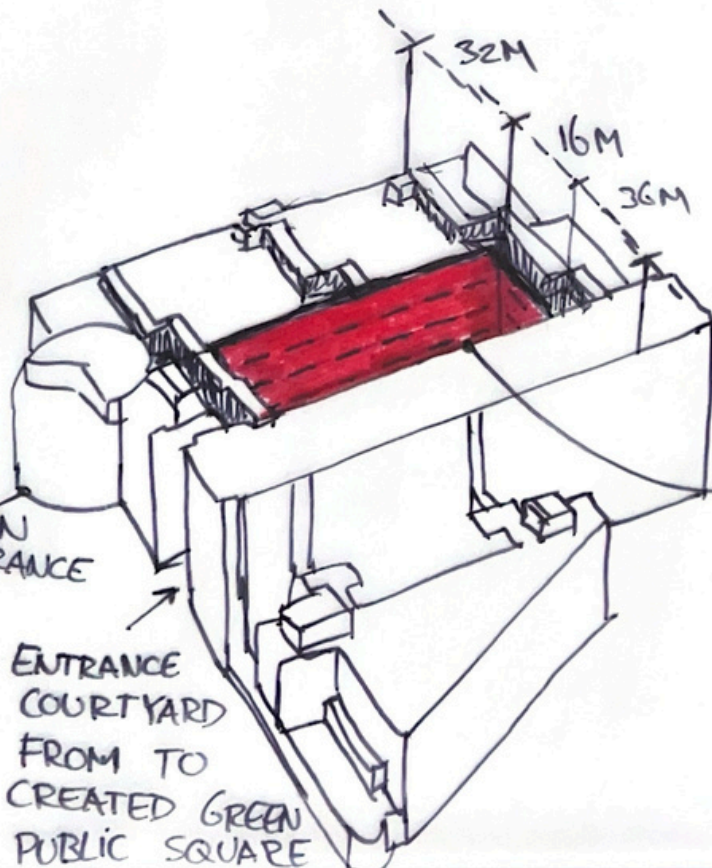
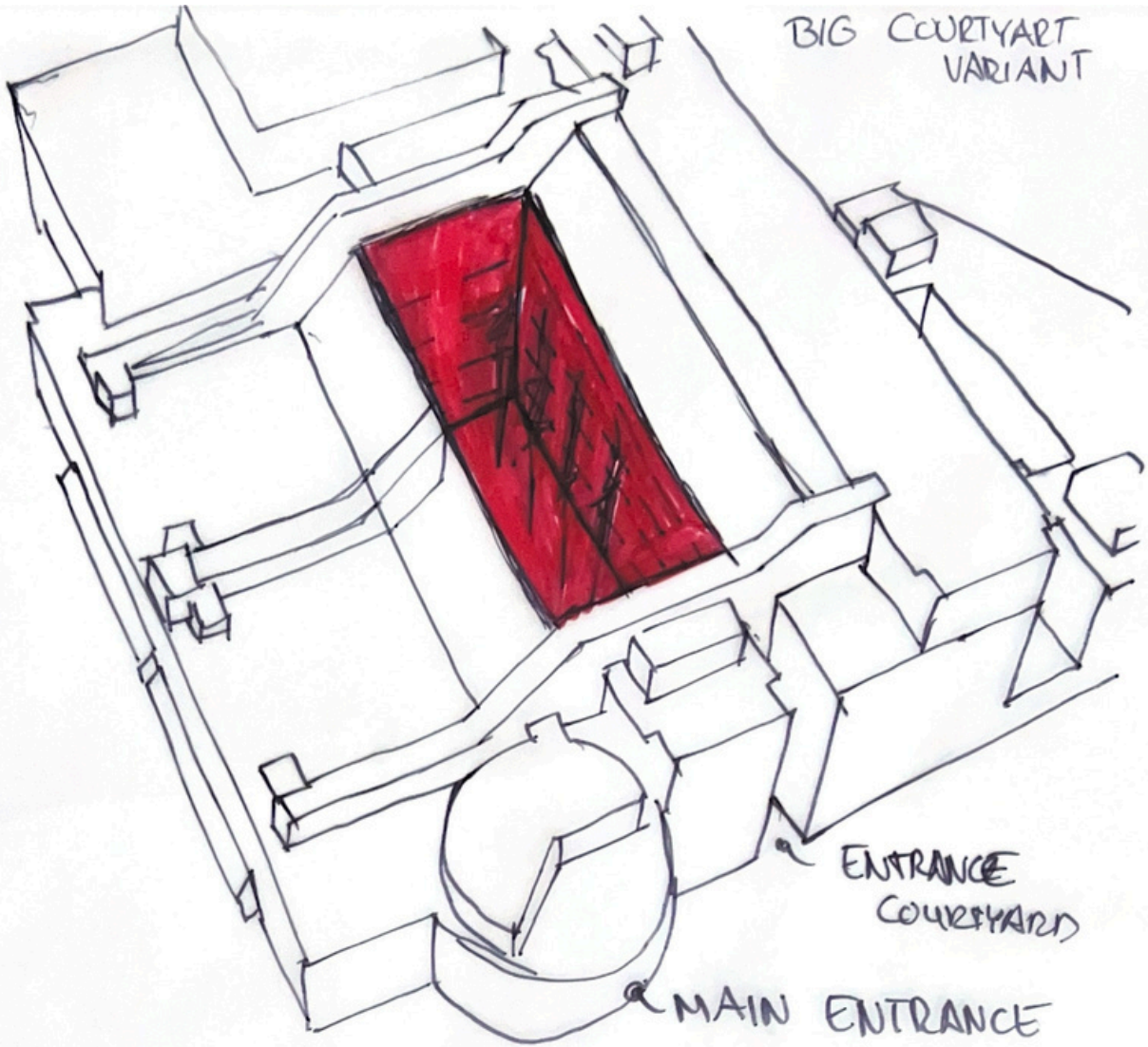
ENTRANCE
BICYCLE PARKING

VARIANT ON FACADE
MAIN ENTRANCE
PRESERVING RHYTHM
OF CURRENT FACADE



CONS: + HUMAN SCALE PRINCIPLE LOSS | PRO'S: ACCESSIBILITY IMPROVED

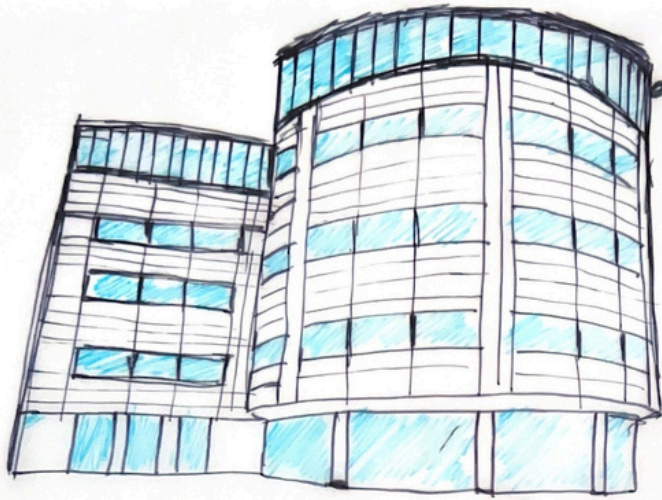
- DESTROYS A LOT OF CURRENT BUILDING
- PRIVACY
- GLARE
- * UNRECOGNIZABLE



THIS CREATES
A LOT OF
DAYLIGHT
OPPORTUNITIES
AT THE
CORE OF THE
BUILDING

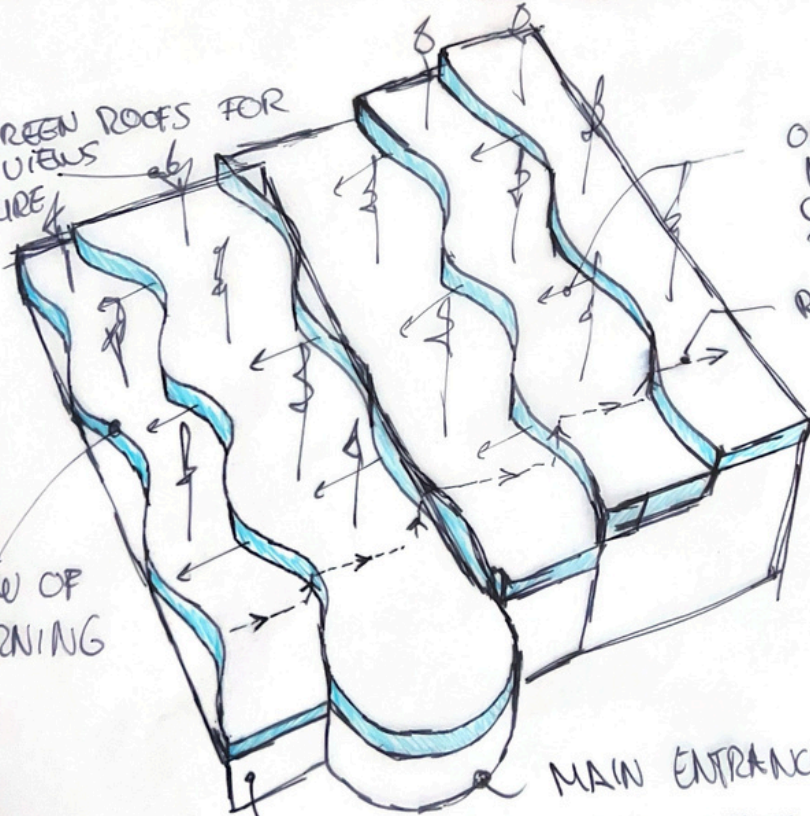
BIG
COURTYARD
LOCATED AT
AND ADJACENT
TO CURRENT
VOIDS IN
FLOOR PLANS

CONCEPT



TOP UP WITH FULLY GLAZED TRANSPARENT FACADE, WORKING SIMILAR AS A KIND OF CLERESTORIES

GREEN ROOFS FOR GOOD VIEWS TO NATURE



ORIENTED ALL TO NORTH-EAST WHICH CREATES PERFECT DIFFUSE DAYLIGHTING

RECREATING THIS 'WATERFALL LIKE' STRUCTURE OF THE EXISTING BUILDING IN A NEW WAY

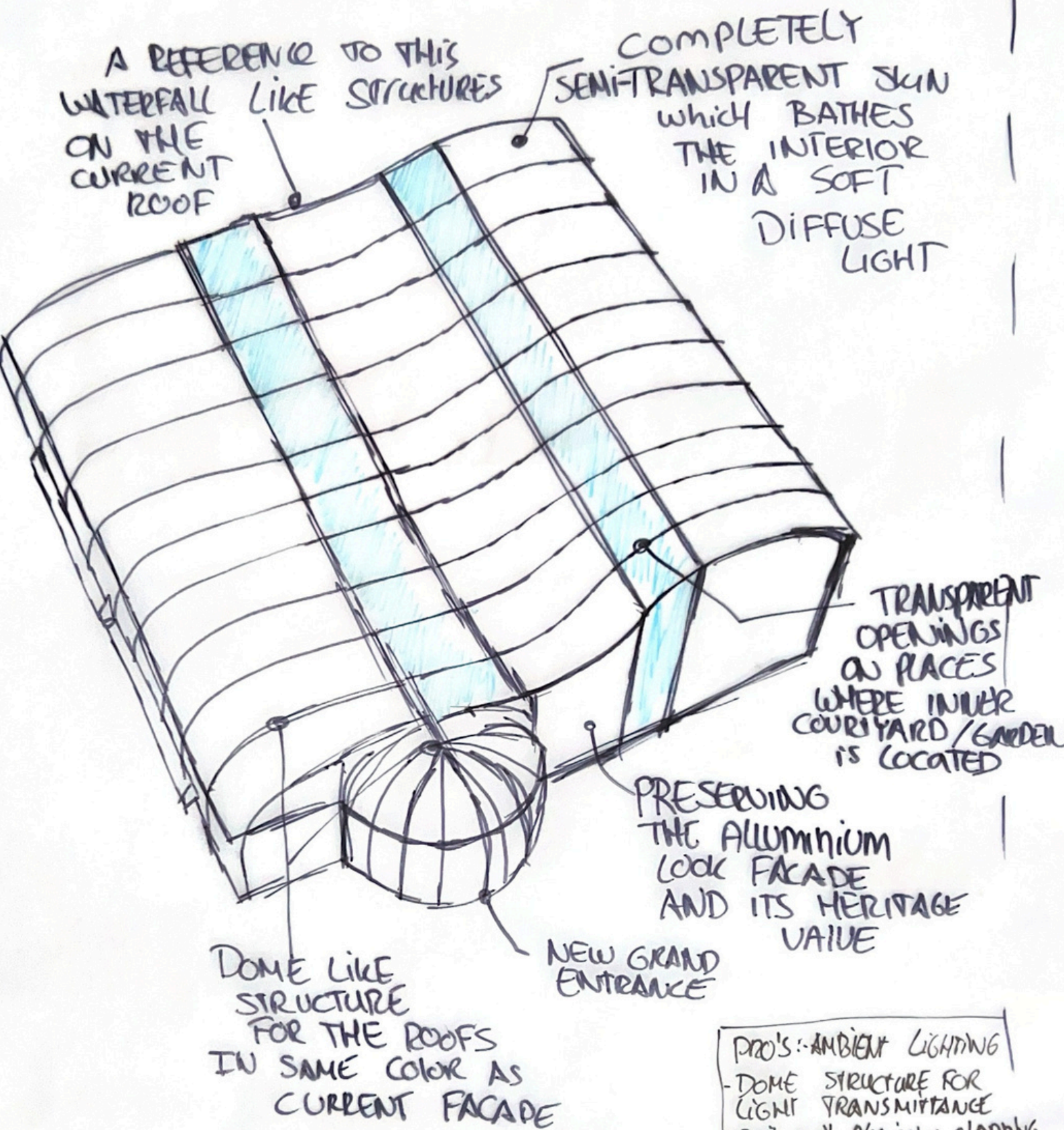
FLOW OF LEARNING

MAIN ENTRANCE

KEEPS MOST OF THE ORIGINAL STRUCTURE

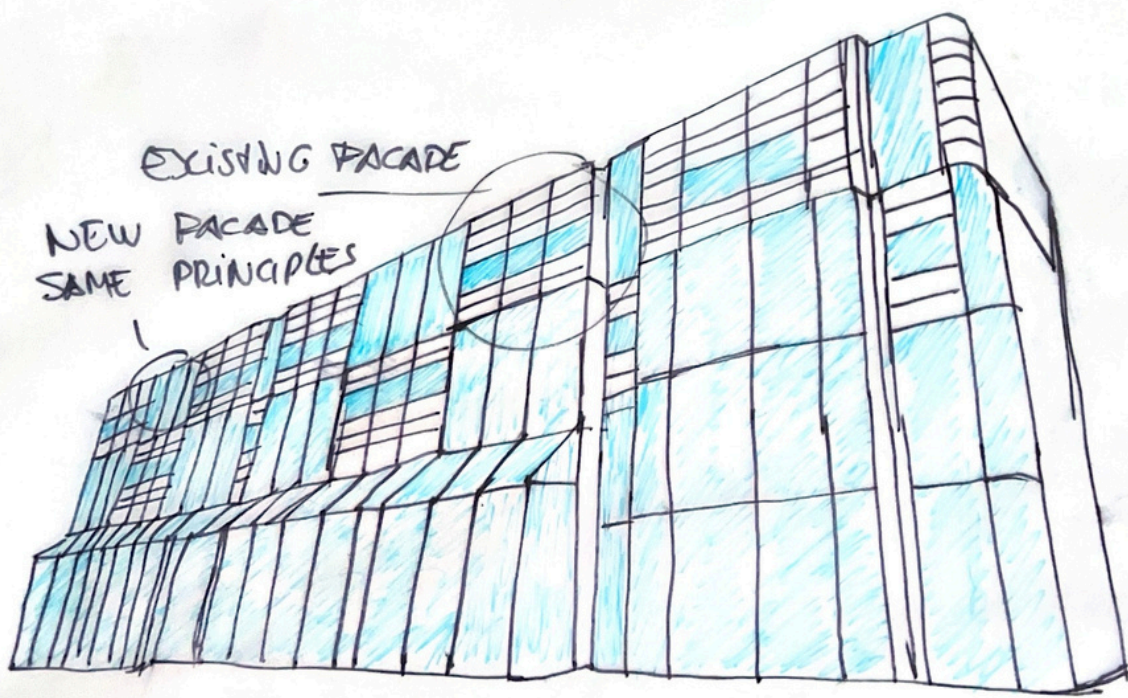
PRO'S: EACH LEVEL IS FOCUSED ON NORTH-EAST WHICH CREATES LOTS OF DIFFUSE LIGHT
- RECOGNIZABLE AS LB BUILDING (HERITAGE)

CONS:
- RANDOM CONCEPT
- NOT ENOUGH LIGHT AT BOTTOM?



PHILOLOGISCHE BIBLIOTHEK, BERLIN

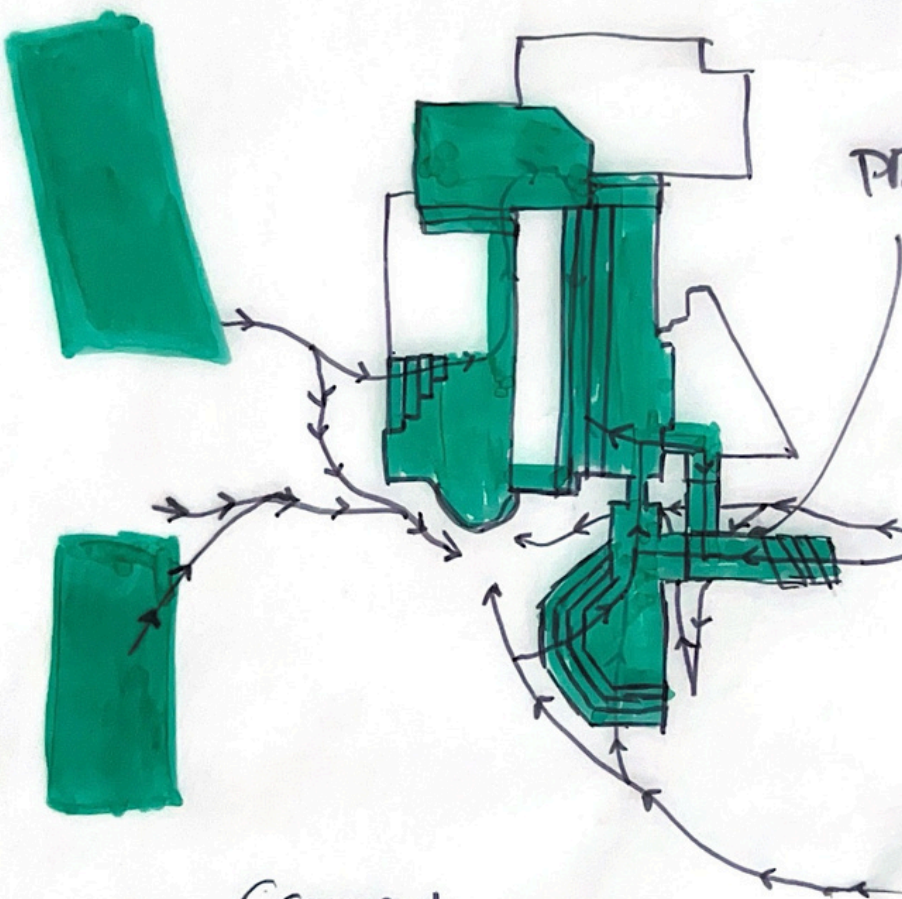
- PRO'S: AMBIENT LIGHTING
- DOME STRUCTURE FOR LIGHT TRANSMITTANCE
 - SUITS WITH ALUMINIUM CLADDING
- CONS: OVERHEATING
 WHAT HERITAGE IS PRESERVED?
 VIEW TO OUTSIDE?
 POSITION INNER LIGHTWELLS?



EXISTING FACADE

NEW FACADE
SAME PRINCIPLES

OPENING UP THE FACADE FOR BETTER LIGHTING
WHILE PRESERVING THE FACADE'S PRINCIPLES IN SHAPE

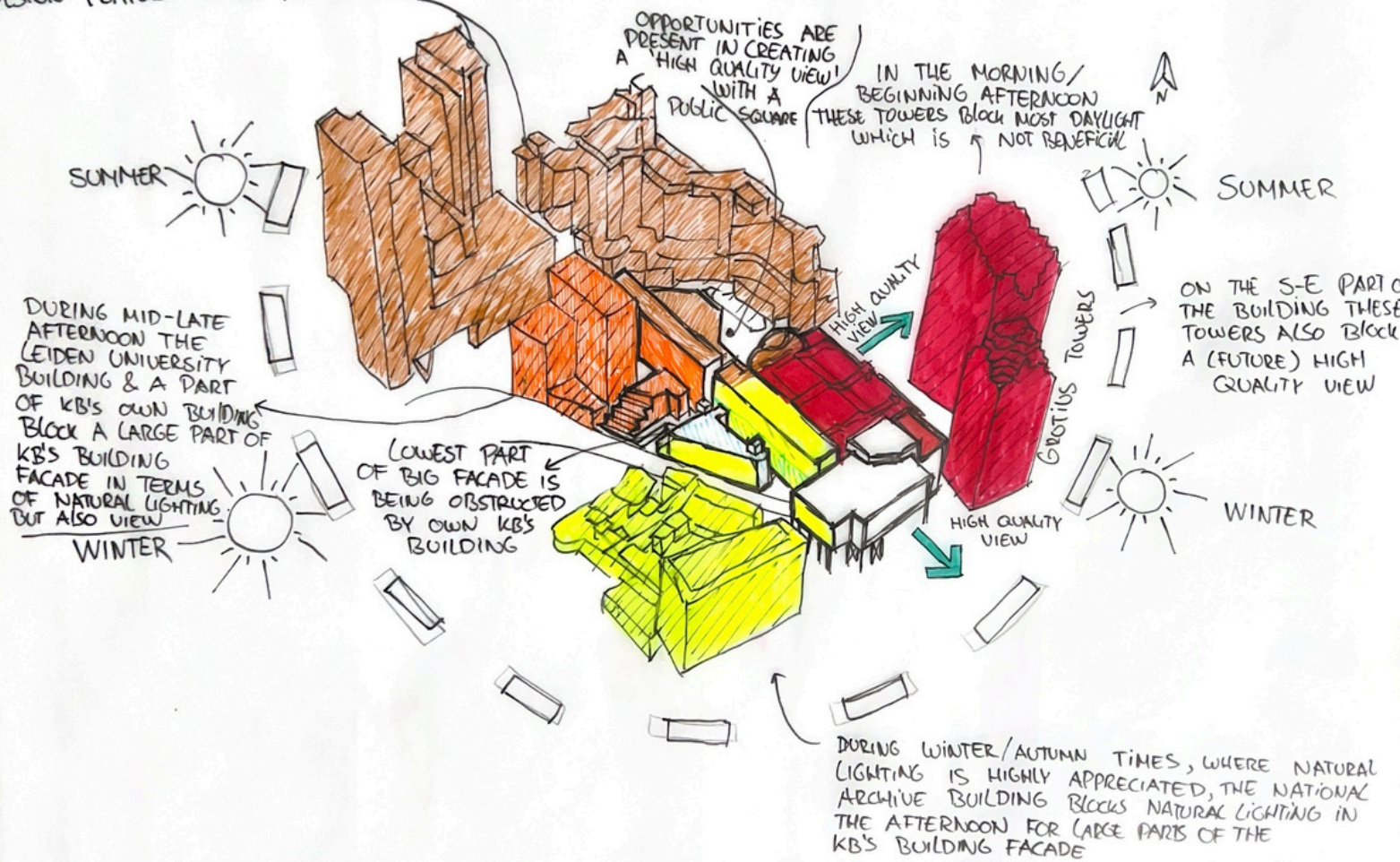


PRESERVING
THESE PLOTS
AND USE
THEM AS
A CONNECTION
OF GREEN
WALKWAYS
FOR BETTER
VIEW OF
NATURE

Connect
Future Green
CANOPY'S with
GREEN ROOF 'JUNGLE'
INTERCONNECTED with EACH OTHER

EVEN THOUGH THE TEMPORAL
 ERNMENT BUILDING & THE BABYLON
 DING DO NOT DIRECTLY OBSTRUCT THE
 BUILDING FROM NATURAL LIGHTING, THEY
 SO WITH OBSTRUCTING THE 'HIGH QUALITY VIEW'
 TO THE KOEKAMP, WHICH WAS AN INITIAL
 DESIGN FEATURE OF THE ARCHITECT

OBSTRUCTION ANALYSIS VIEW & DAYLIGHT/NATURAL LIGHT



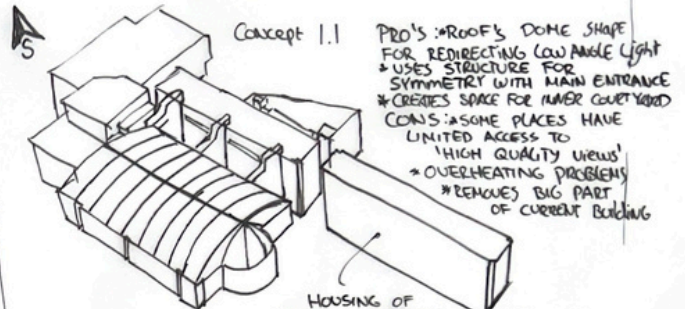
DURING WINTER/AUTUMN TIMES, WHERE NATURAL LIGHTING IS HIGHLY APPRECIATED, THE NATIONAL ARCHIVE BUILDING BLOCKS NATURAL LIGHTING IN THE AFTERNOON FOR LARGE PARTS OF THE KB'S BUILDING FACADE

CONCLUSIONS : * IMPORTANT FACADES ARE BEING OBSTRUCTED BY SURROUNDING BUILDINGS IN RECEIVING ENOUGH NATURAL LIGHTING
 → SOLUTION : TOPLIGHTING & SURFACE REFLECTANCE (HIGH ILLUMINANCE VERTICAL WALLS)
 * HIGH QUALITY VIEWS ARE SOMETIMES OBSTRUCTED BY SURROUNDING BUILDINGS
 → SOLUTION : CREATE THESE AT PLACES WHERE OTHERWISE IMPOSSIBLE

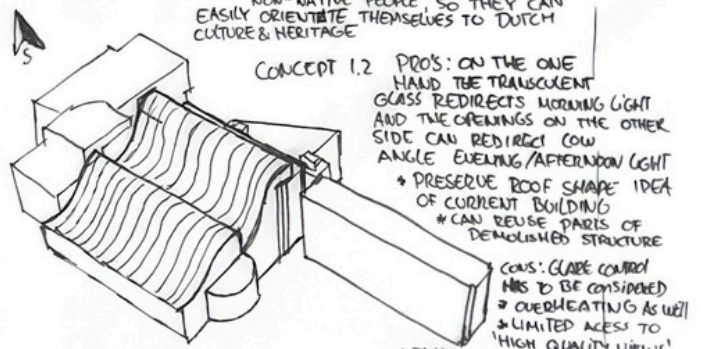
*BEST WAY TO ILLUMINATE A BUILDING WITH THESE KIND OF DEEP-PLAN LAYOUTS, SUCH AN CLIMATE (MAINLY OVERCAST) AND THESE OBSTRUCTIONS IS VIA TOPLIGHTING/OVERHEAD SURFACES. WHY NOT MAKE THE WHOLE CONCEPT TURN AROUND THIS PRINCIPLE?

*PRESERVE THE HIGH VALUABLE PARTS WITH LONG-NARROW FLOOR PLAN
 *TRANSCULENT GLASS WHICH CREATES AMBIENT LIGHT, MORE DISTRIBUTED UNIFORMLY WHICH IS HIGHLY DESIRED IN LIBRARY SPACES
 *THE DOME LIKE SHAPE CAN STILL MANAGE TO REDIRECT LIGHT TO PLACES WHICH WERE OTHERWISE OBSTRUCTED FROM NATURAL LIGHTING BY ITS SURROUNDING BUILDINGS
 *ALUMINIUM CLADDING IS HIGHLY VALUED AND PLAYS A BIG ROLE IN THE BUILDINGS HERITAGE, THIS WILL BE PRESERVED AND IN TERMS OF AESTHETICS AND MATERIALS, THE CURRENT CLADDING SUITS WITH THE TRANSCULENT GLASS ROOF
 *GLARE IS BEING REDUCED WHILE STILL IMPROVE THE LIGHTING CONDITIONS
 *EASY DISTINCTION BETWEEN THE MORE PUBLIC AND THE PRIVATE SPACES ARE POSSIBLE
 *CREATES MORE SPACE FOR THE COURTYARD IN FRONT OF THE MAIN ENTRANCE, WHILE PRESERVING A LARGE PART OF GUREN CHILDRENS BOOK MUSEUM BUILDING

CONCEPT 1: THE ROOF AS A LEARNING DOME

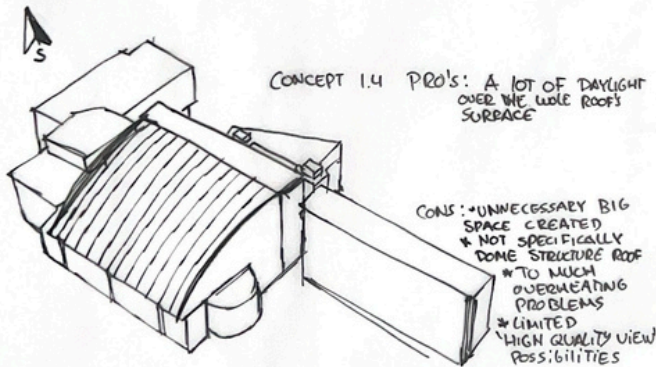


Concept 1.1
 PRO'S: ROOF'S DOME SHAPE FOR REDIRECTING LOW ANGLE LIGHT
 * USES STRUCTURE FOR SYMMETRY WITH MAIN ENTRANCE
 * CREATES SPACE FOR INNER COURTYARD
 CONS: SOME PLACES HAVE LIMITED ACCESS TO 'HIGH QUALITY VIEWS'
 * OVERHEATING PROBLEMS
 * REMOVES BIG PART OF CURRENT BUILDING



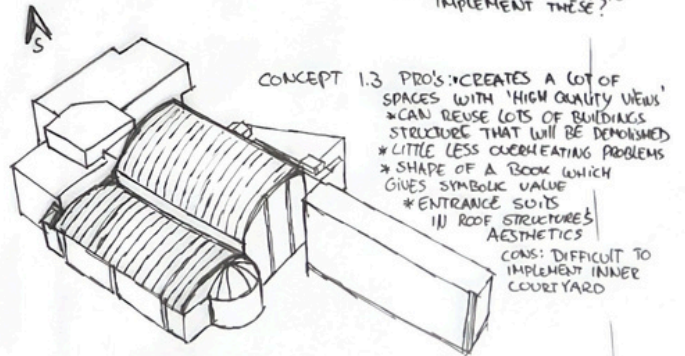
Concept 1.2
 PRO'S: ON THE ONE HAND THE TRANSCULENT GLASS REDIRECTS MORNING LIGHT AND THE OPENINGS ON THE OTHER SIDE CAN REDIRECT LOW ANGLE EVENING/AFTERNOON LIGHT
 * PRESERVE ROOF SHAPE IDEA OF CURRENT BUILDING
 * CAN REUSE PARTS OF DEMOLISHED STRUCTURE

CONS: GLARE CONTROL HAS TO BE CONSIDERED
 * OVERHEATING AS WELL
 * LIMITED ACCESS TO 'HIGH QUALITY VIEWS'
 * INNER COURTYARDS, WHERE AND HOW DO YOU WANT TO IMPLEMENT THESE?



Concept 1.4
 PRO'S: A LOT OF DAYLIGHT OVER THE WHOLE ROOF SURFACE

CONS: *UNNECESSARY BIG SPACE CREATED
 * NOT SPECIFICALLY DOME STRUCTURE ROOF
 * TO MUCH OVERHEATING PROBLEMS
 * LIMITED 'HIGH QUALITY VIEW' POSSIBILITIES



Concept 1.3
 PRO'S: *CREATES A LOT OF SPACES WITH 'HIGH QUALITY VIEWS'
 * CAN REUSE LOTS OF BUILDINGS STRUCTURE THAT WILL BE DEMOLISHED
 * LITTLE LESS OVERHEATING PROBLEMS
 * SHAPE OF A BOOK WHICH GIVES SYMBOLIC VALUE
 * ENTRANCE SUITS II) ROOF STRUCTURE'S AESTHETICS

CONS: DIFFICULT TO IMPLEMENT INNER COURTYARD

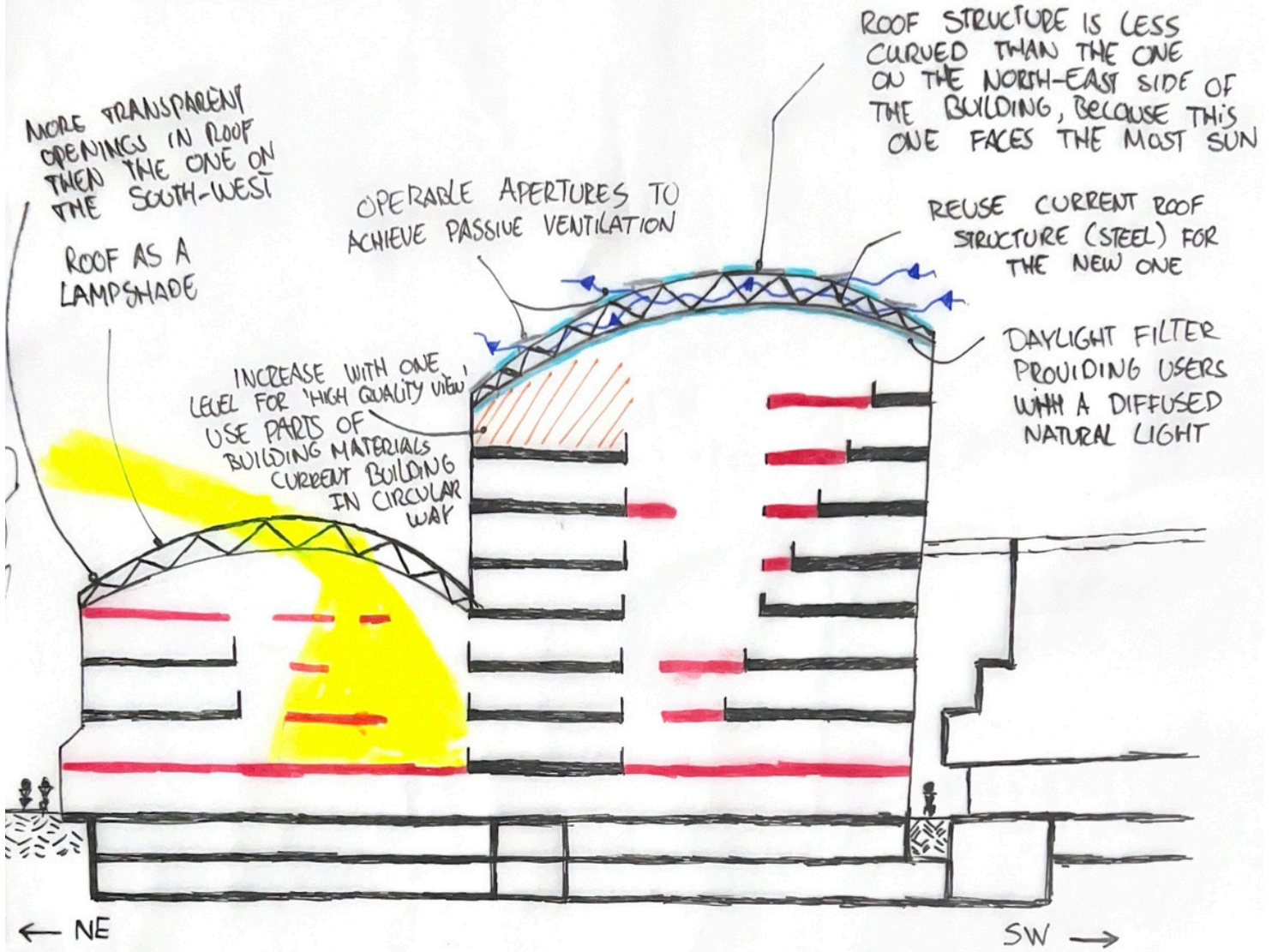
RES
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OPENING
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V. LESS
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 & WHOLE

COMBINATION OF CONCEPT 7.9 + 1.1

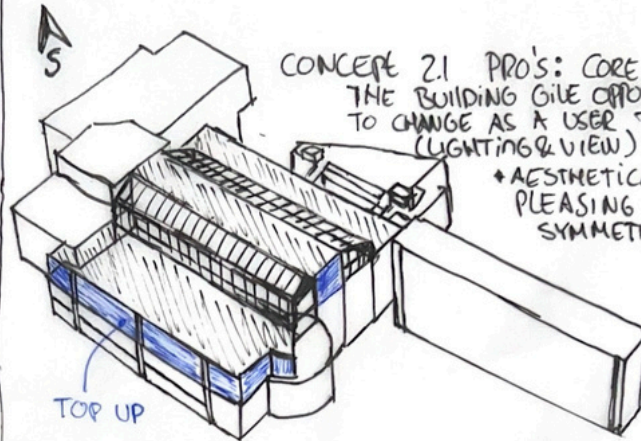


* ALSO HERE VISITORS CAN ADJUST THEIR WORKING CONDITIONS TO THEIR PERSONAL PREFERENCE. DO THEY WANT DIFFUSE LIGHT, CUT OFF FROM THE OUTSIDE WORLD, OR DO THEY WANT A VIEW

- * FLOOR PLAN AND STRUCTURE OF THE BUILDING IS BUILT IN SUCH WAY THAT IT INTERACTS WITH THE LOCATION'S SUN PATH
- * CAPTURE NATURAL LIGHT AND REFLECT IT DEEP DOWN INTO THE BUILDING EXACTLY WHEN AND WHERE IT IS MOST NEEDED (EARLY MORNING/LATE AFTERNOON)
- * POSITIONED IN SUCH WAY THAT IT BLOCKS MOST OF THE HARSH AFTERNOON/SUMMER SUN WITH RELATIVELY SMALL HORIZONTAL OVERHANGS
- * CAN USE LOTS OF THE BUILDING MATERIALS OF THE PARTS THAT WILL BE DEMOLISHED
- * OPPORTUNITIES FOR CREATING A LOT OF 'HIGH QUALITY VIEWS'
- * YOU CAN USE THE LOWEST TWO BUILDING LAYERS (BASEMENTS) WITHIN THE PROGRAM OF THE DESIGN
- * VOIDS IN DESIGN INTERACT AND MATCH A LOT WITH CURRENT VOIDS IN FLOORS OF THE CURRENT KB BUILDING
- * DIVIDES THE DEEP-PLAN LAYOUT OF THE CURRENT KB BUILDING INTO THREE LONG-NARROW FLOOR PLANS WHICH IS HIGHLY DESIRABLE
- * REMOVES PARTS WHICH DIDN'T REALLY HAD FUNCTIONS RIGHT NOW, OTHER THAN INSTALLATION ROOMS

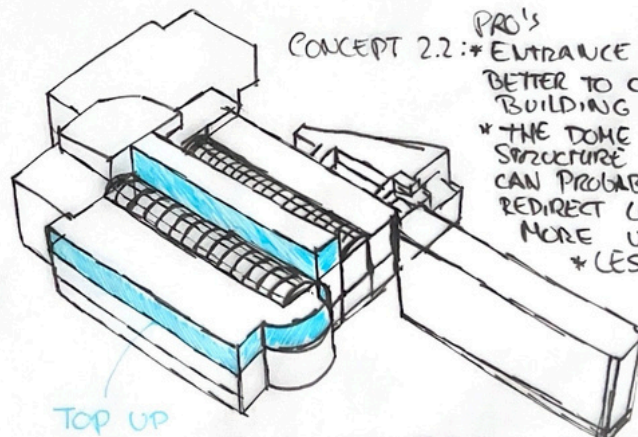
* WHY NOT CREATE THESE SO DESIRED LONG-NARROW FLOOR PLANS OUT OF THE DEEP-PLAN CURRENT BUILDING, AND LET THEM EACH INTERACT WITH THE LOCATION'S SOLAR-PATH AND CLIMATE/LIGHTING CONDITIONS?

CONCEPT 2: THE LIGHT CORRIDORS OF COGNITION



CONCEPT 2.1 PRO'S: CORE MASS OF THE BUILDING GIVE OPPORTUNITIES TO CHANGE AS A USER TO YOUR (LIGHTING & VIEW) NEEDS
 * AESTHETICALLY PLEASING WITH THE SYMMETRICAL ROOFS

CONS: * YOU HAVE TO TAKE MEASURES TO ENSURE THAT MORNING/LATE AFTERNOON SUN NOT ONLY COMES AT ONE SIDE INSTEAD OF TWO
 * TAKE OVERHEATING INTO ACCOUNT



CONCEPT 2.2 PRO'S: * ENTRANCE SUITS BETTER TO CURRENT BUILDING
 * THE DOME LIKE STRUCTURE ROOF OPENINGS CAN PROBABLY BETTER REDIRECT LIGHTING MORE UNIFORMLY
 * LESS OVERHEATING ISSUES

CONS * AESTHETICALLY LESS PLEASING, DOESN'T LOOK LIKE A WHOLE

* BE A B KINI LAY CLI AND IS ONE WH WH ARC

COMBINATION OF
CONCEPT 2.1 & 2.2

A CLEAR DISTINCTION BETWEEN THE
PUBLIC & PRIVATE ZONES, WHICH WAS HIGHLY VALUED

PUBLIC

PRIVATE
(MEMBERS KB + EMPLOYEES)

GREEN ROOF HELPS
TO REDUCE HEAT
STRESS IN SUMMER
& CREATES A PLACE
TO RELAX

LIGHT SHELF
TO BRING IN
MORE NATURAL LIGHT
DEEPER IN THE ROOM

CORRIDORS
TO REDUCE
HEATING STRESS

LARGE PARTS OF
THE HIGHLY VALUED
HERITAGE FACADE
WILL BE PRESERVED

WINTER
MORNING SUN

SUMMER
EVENING SUN

REMOVE PART OF EXISTING
STRUCTURE (INSTALLATION ROOM)

THE WIND-DIRECTION
IN THE HAGUE USUALLY
COMES FROM THE
WEST IN SUMMER, WHICH
IS IDEAL FOR PASSIVE
VENTILATION

← NE

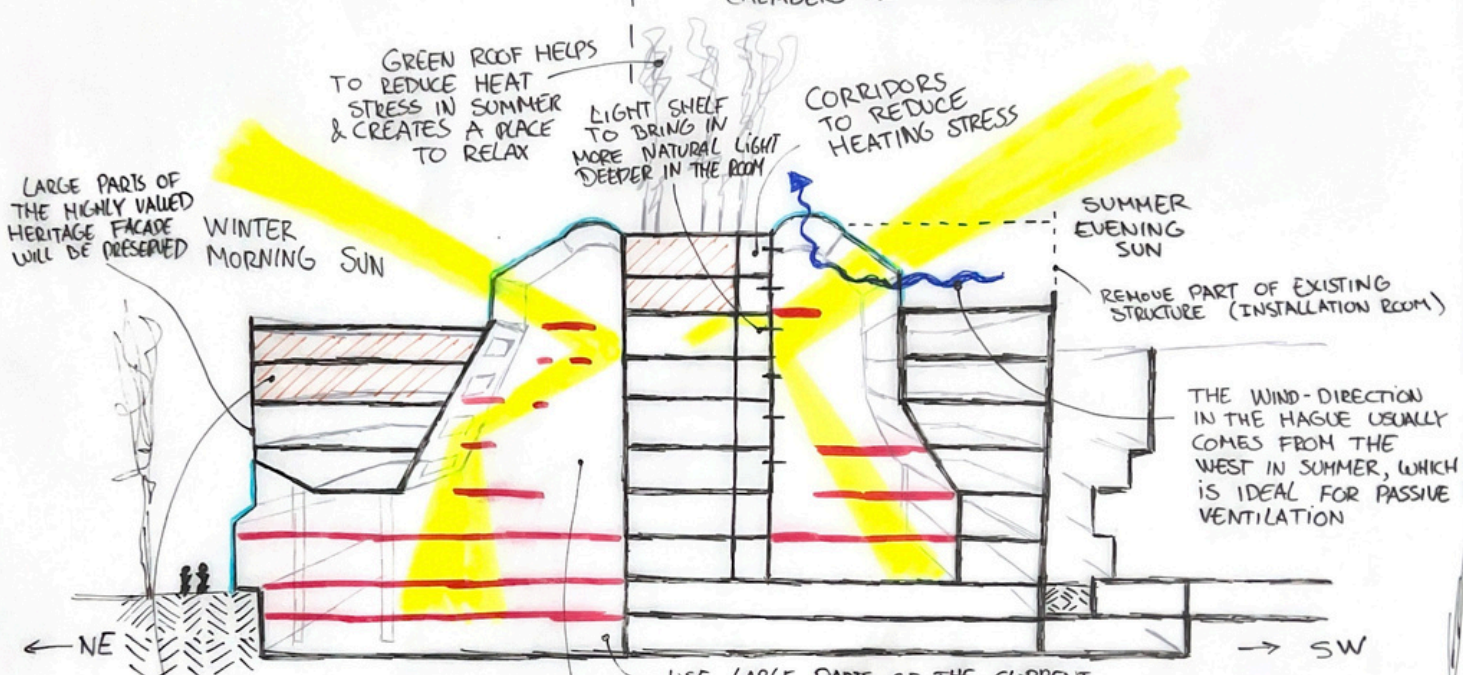
→ SW

NEW BUILT FLOOR LEVELS
A LOT OF ELEMENTS CAN BE
USED FROM THE DEMOLISHED
PARTS OF THE BUILDING, IN A
CIRCULAR WAY, TO BUILD THESE
NEW PARTS

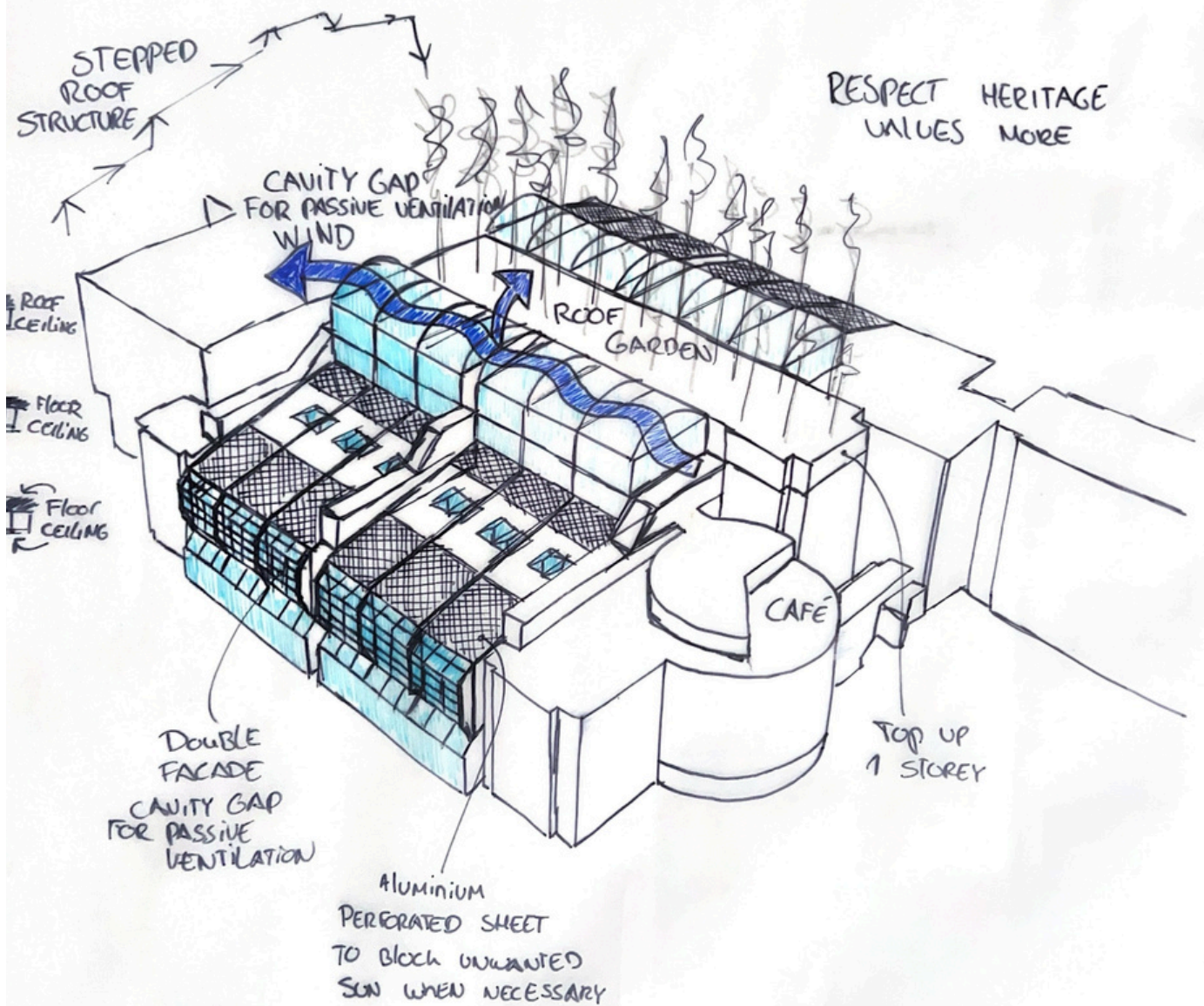
USE LARGE PARTS OF THE CURRENT
BASEMENT LEVELS IN AN EFFICIENT WAY

BOTH ATRIUMS ARE POSITIONED IN
SUCH WAY, THAT THEY
CORRESPOND PRETTY GOOD WITH
THE CURRENT VOIDS IN THE
FLOORS OF THE BUILDING
(THE ONES REMOVED), ARE
HIGHLIGHTED IN RED)

* VISITORS & USERS HAVE THE
OPPORTUNITY TO COMPLETELY
DETERMINE THEMSELVES IN
WHAT KIND OF CONDITIONS
THEY WORK (LIGHT/VIEW)
BRIGHT/DARK/EXCLUSIVE/INCLUSIVE
THIS CAN ALSO BE DEPENDING
ON THE SEASONS AND DIFFERENT
TIMES OF THE DAY



CONCEPT: REFLECTIVE CORE
(THE LIGHT CORRIDORS OF COGNITION)



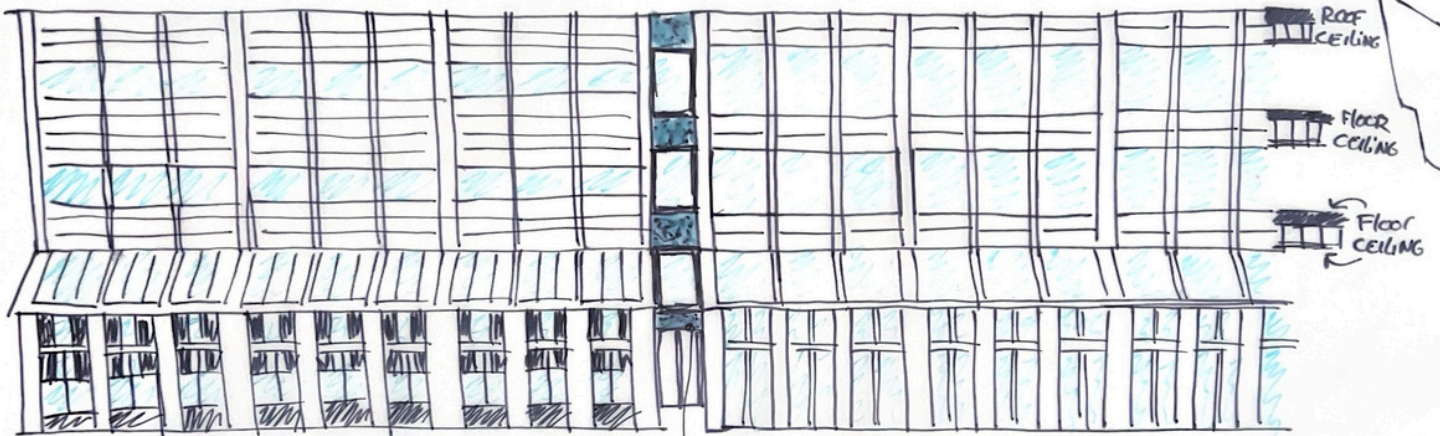
STEP 1
OPENING UP THE NORTH EAST FACADE | PRESERVE HERITAGE VALUES

STEP 2
ROOF STRUCTURE,

CURRENT



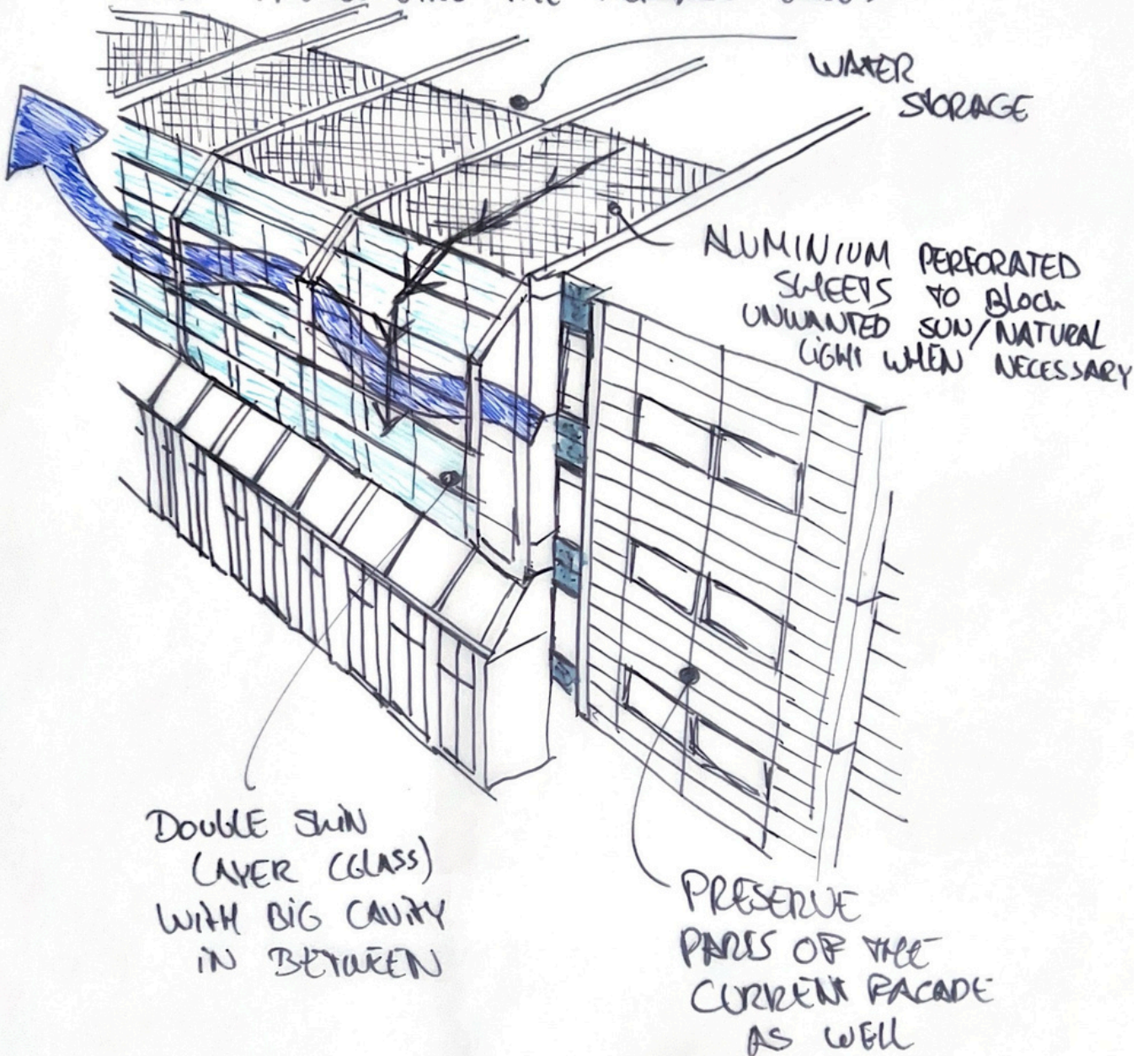
NEW ($\pm 200\%$ MORE) DAYLIGHT



SMALL GREEN FACADE IN BETWEEN

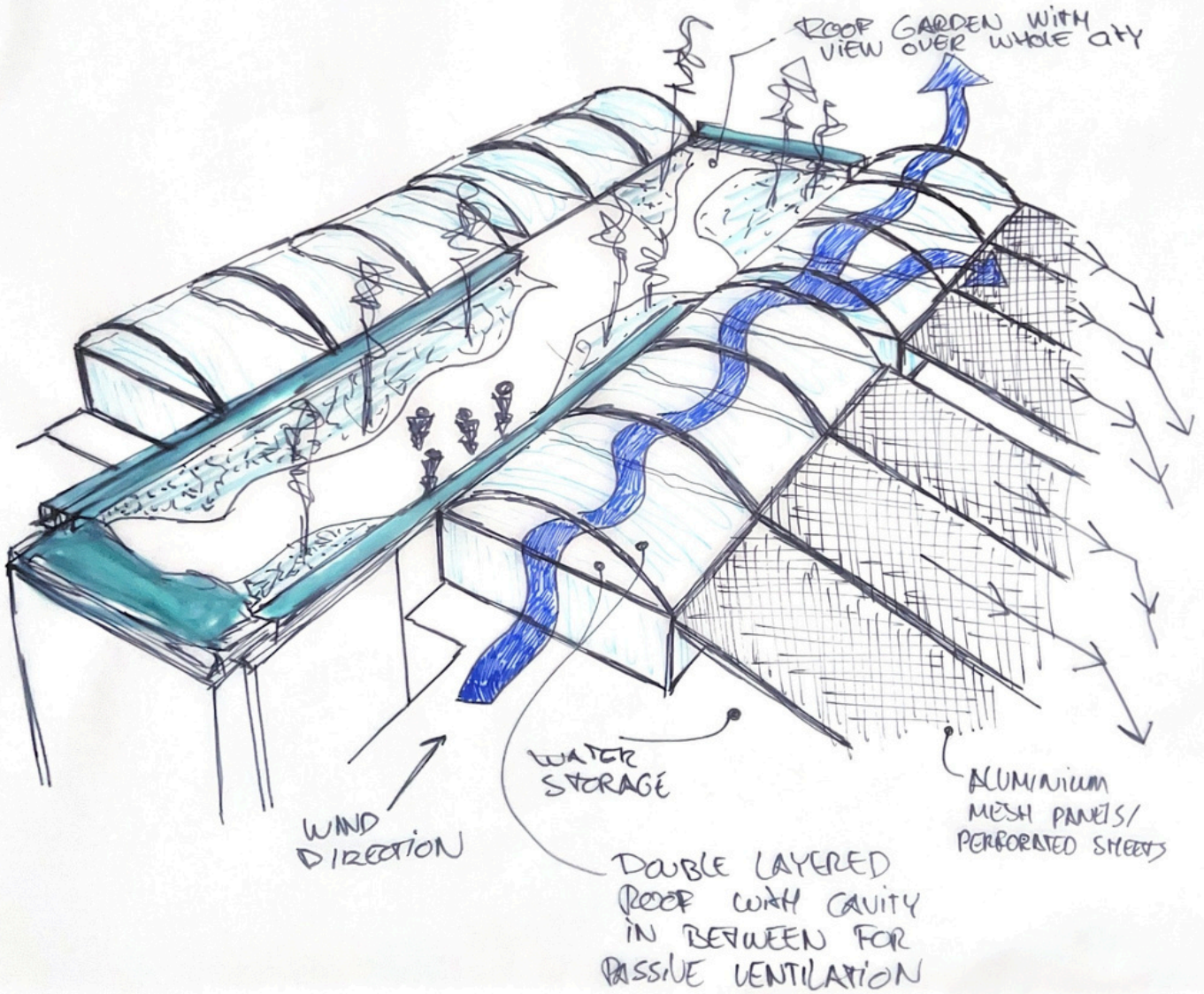
STEP 2

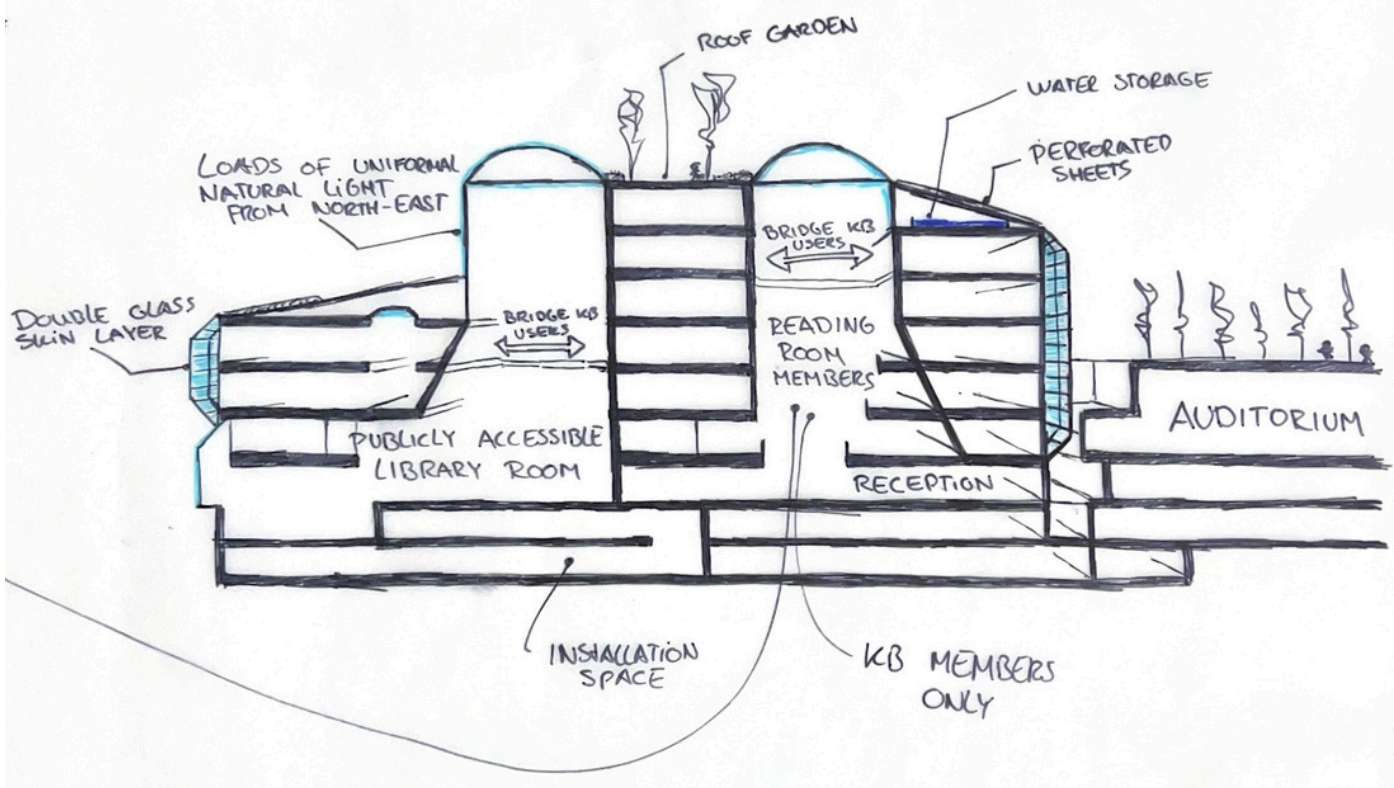
CREATE A DOUBLE SKIN FACADE
WHILE PRESERVING THE HERITAGE VALUES

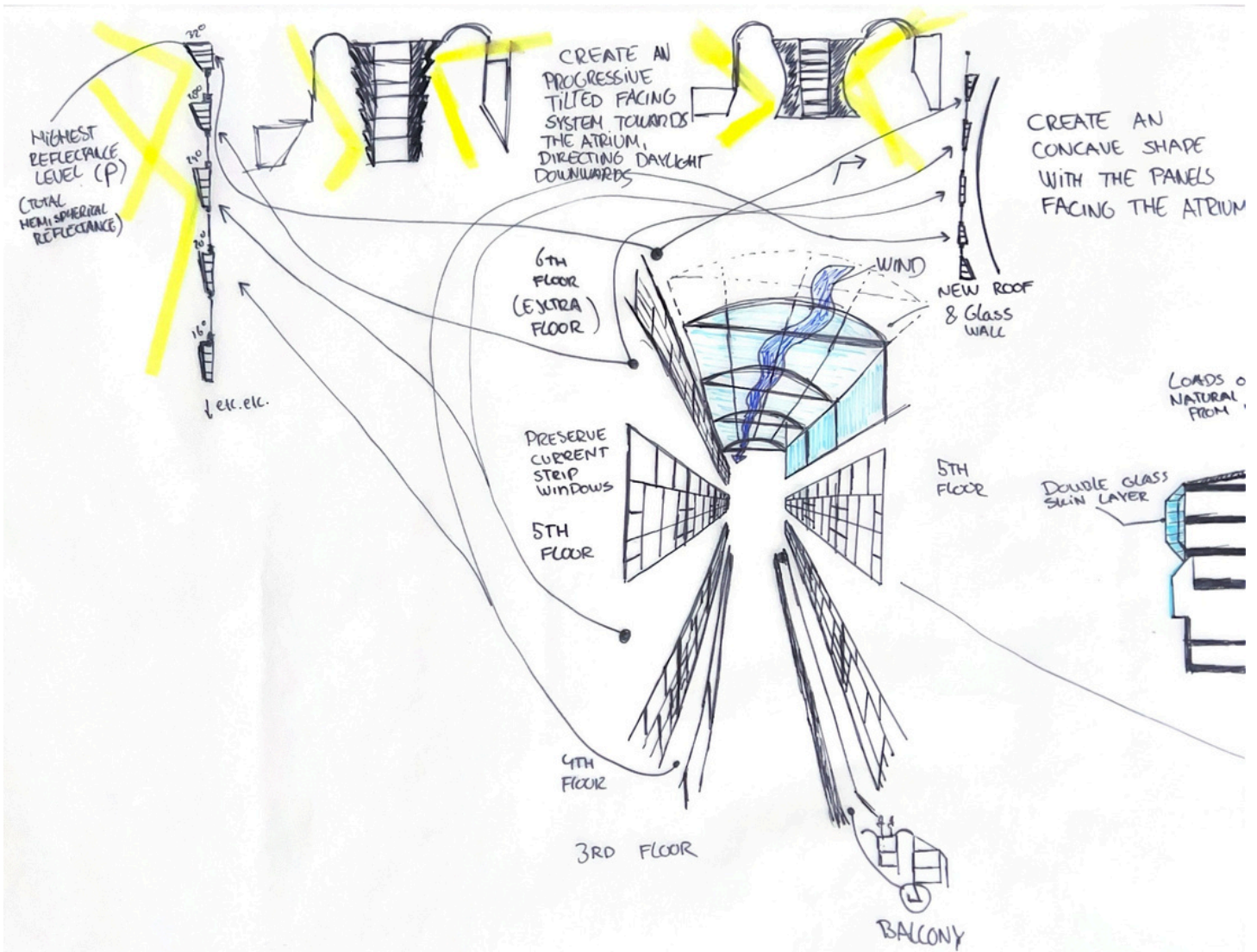


STEP 3

INNER CORE WITH TWO
DOME LIKE STRUCTURAL ROOFS ON
EITHER SIDE FOR MAXIMUM DAYLIGHT

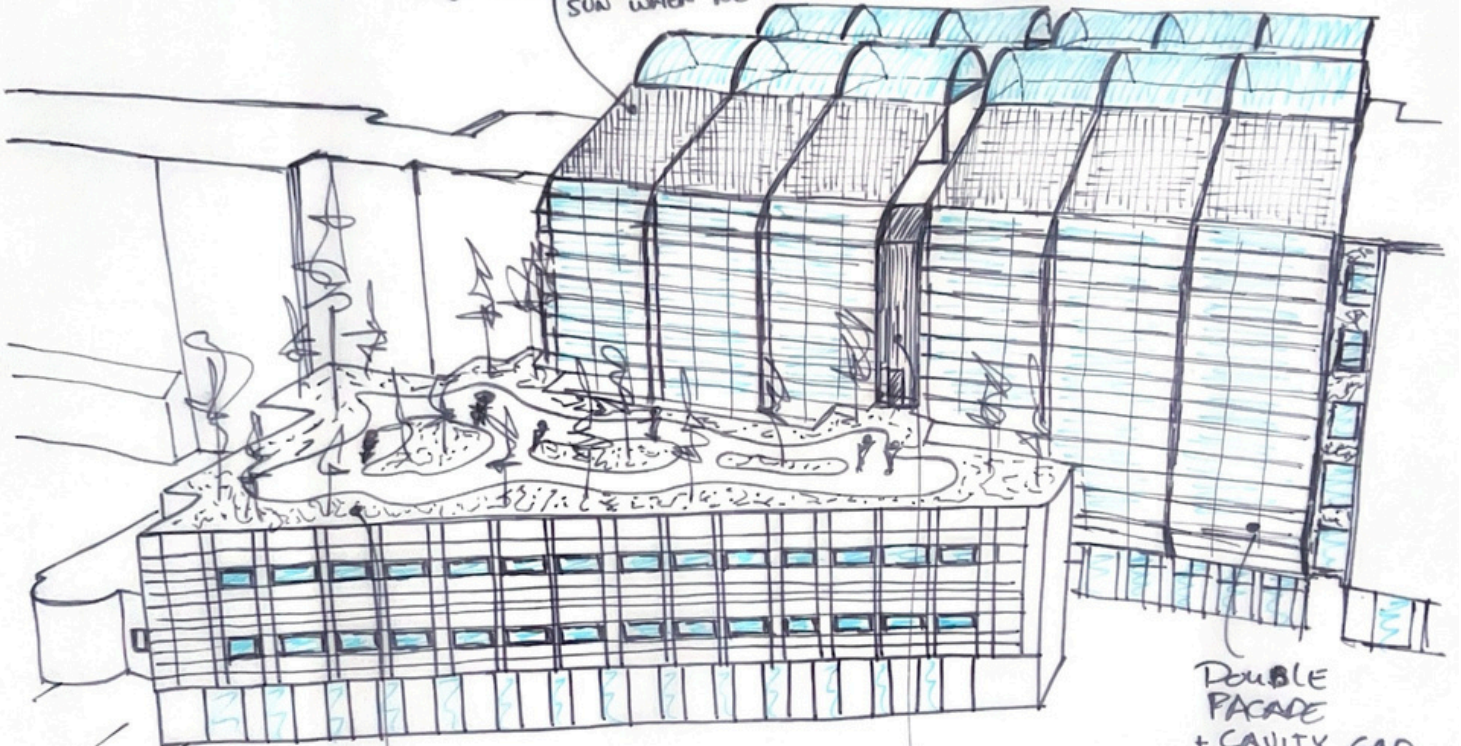






SOUTH/WEST FACADE

ALUMINIUM PERFORATED SHEET TO BLOCK UNWANTED SUN WHEN NECESSARY



DOUBLE FACADE + CAVITY GAP

NATIONAL ARCHIVE

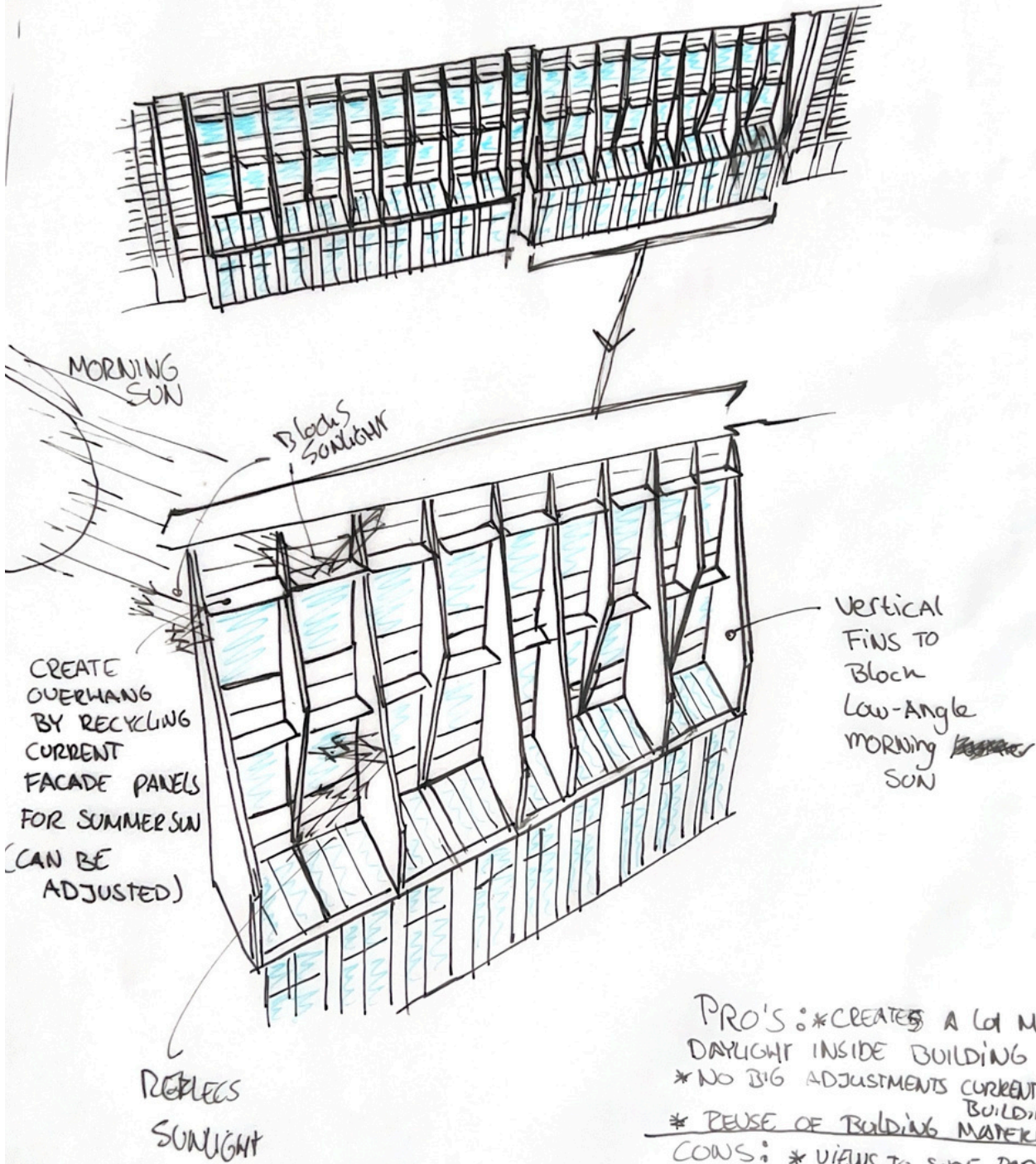
DESTROY UPPER TWO LAYERS AND CREATE AN 2ND ROOF GARDEN WHICH IS CONNECTED TO THE OTHER ROOF GARDEN

CONNECTION TO OTHER ROOF GARDEN

Side Lighting

#1: VERTICAL FINS

NORTH-EAST FAÇADE

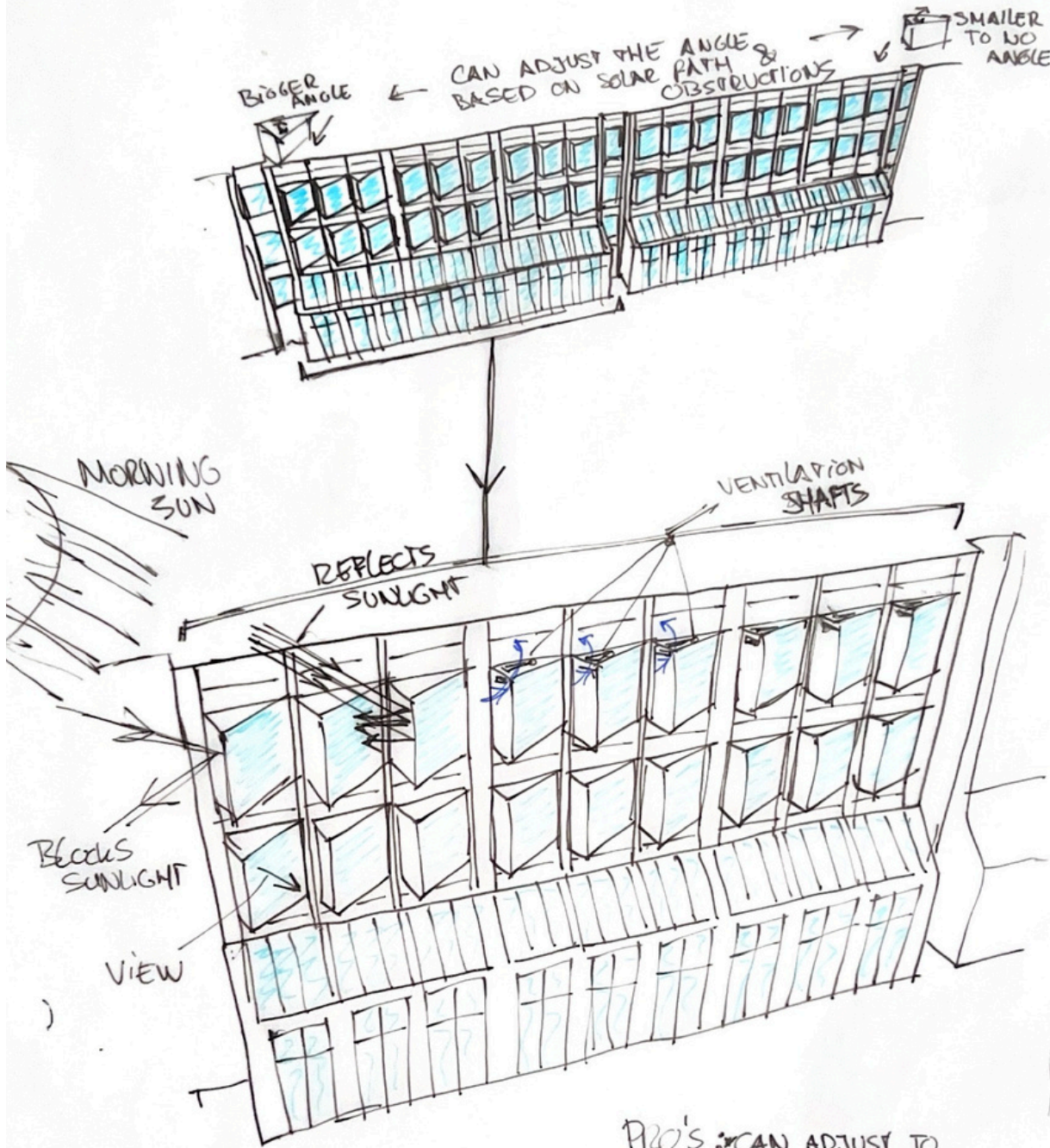


- PRO'S: * CREATES A LOT MORE DAYLIGHT INSIDE BUILDING
* NO BIG ADJUSTMENTS CURRENT BUILDING
- * REUSE OF BUILDING MATERIALS
- CONS: * VIEWS TO SIDE PARTIALLY OBSTRUCTED
* CHANGES SOMEWHAT THE HERITAGE

Sidelighting

#2 SAWTOOTH WINDOWS

NORTH-EAST FAÇADE



CONS: SOMEWHAT CHANGES
MERITAGE VALUES

- * WINDOWS STICK OUT OF ORIGINAL STRUCTURE

PRO'S: CAN ADJUST TO
HIGH QUALITY VIEW

- * REFLECTS INDIRECT LIGHTING TO INTERIOR
- * PASSIVE VENTILATION WHEN NECESSARY

SING KB

Sidelighting

#3 DAYLIGHT SCOOPS

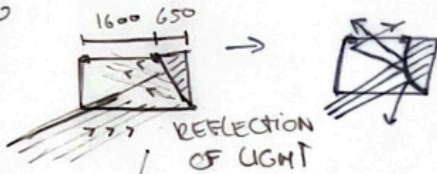
NORTH-EAST FAÇADE

EMATIC
RMS



MORNING
SON

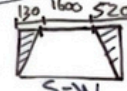
1600 650



REFLECTION
OF LIGHT

CAN ADJUST
DEPTH BASED
ON NEEDS

1000



OPTIONAL OVERHANG
WITH RECYCLED PANELS

REFLECTS
DIRECT
SUNLIGHT

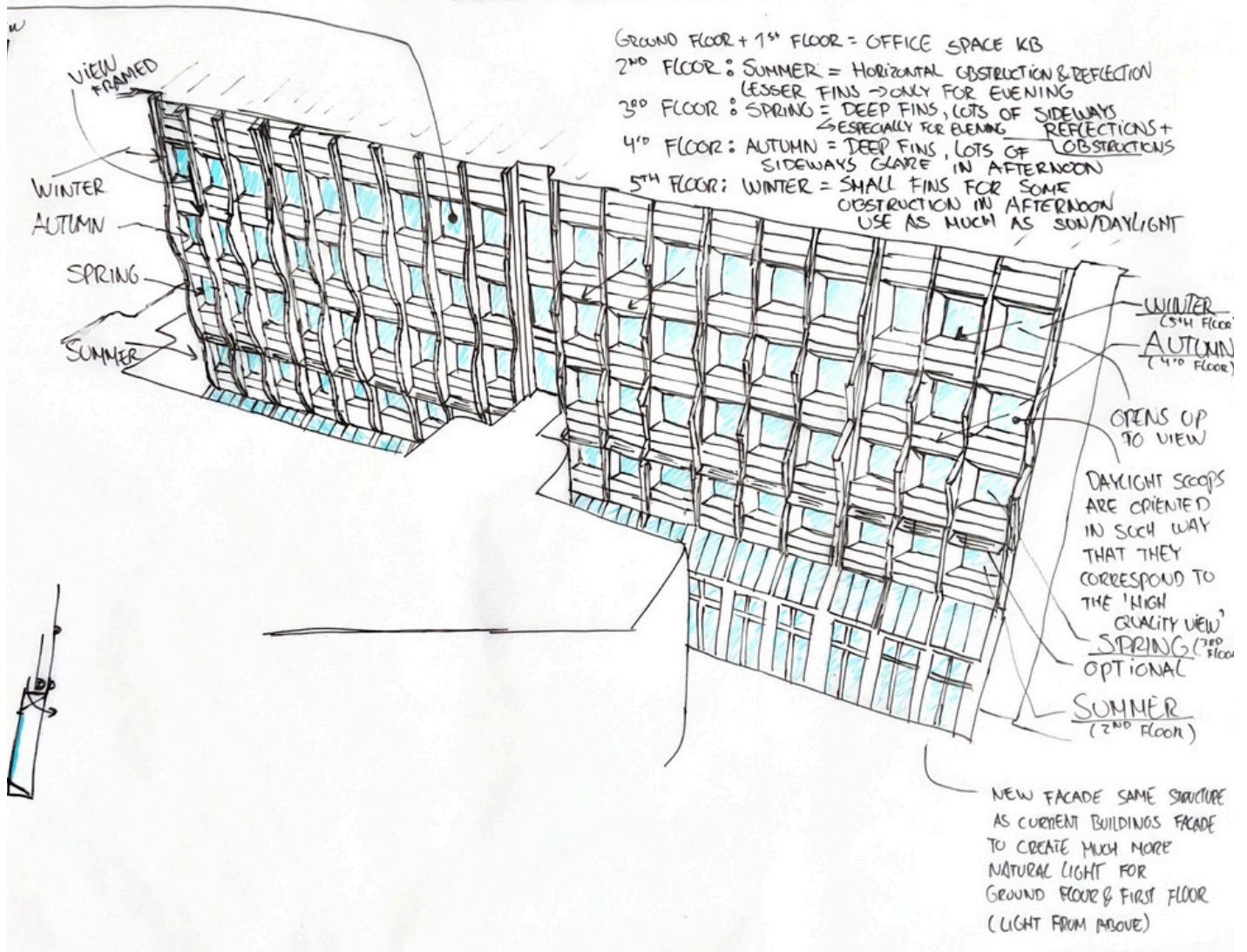
GLARE ISSUES
SIZES

Blocks
Direct
Sunlight
REFLECTS
LOW ANGLE
TO INTERIOR

CONS: * LOST SPACING
INTERIOR
* NEEDS CORRECT
SHAPE FOR REFLECTION

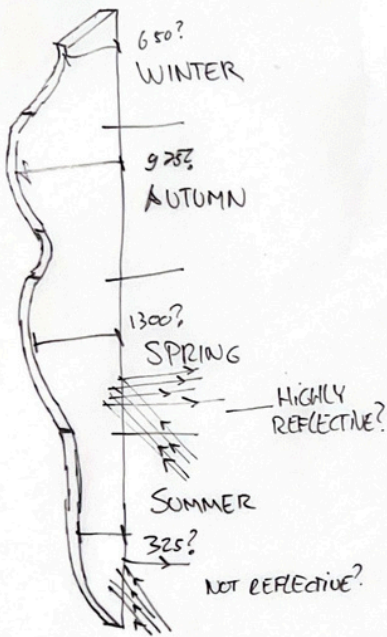
PRO'S: * CHANGE PARAMETERS
OF SCOOPS BASED ON
THE VIEW & LIGHT NEEDS
* PRESERVE THE MOST OF
THE HERITAGE VALUES

SEASONAL LIGHT STACK
 SOUTH-WEST FAÇADE
 (EACH FLOOR IS TURNED TO A SEASONAL SOLAR CONDITION)
 FORMING A VERTICAL CALENDAR OF LIGHT



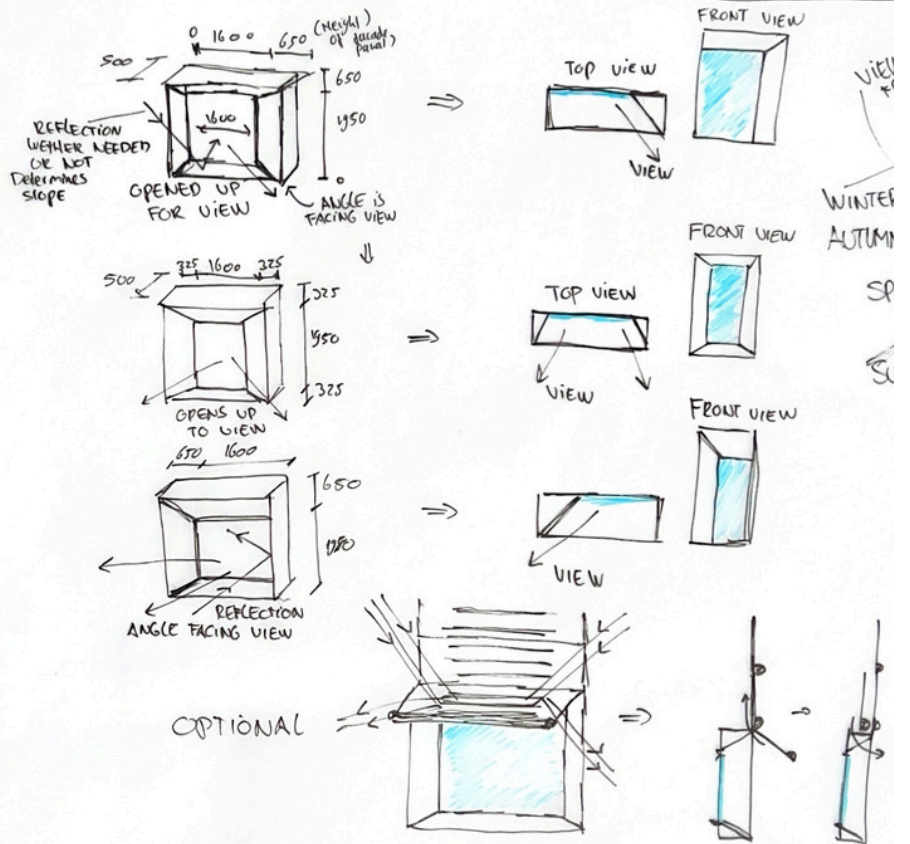
PARAMETERS TO CHANGE BASED ON SEASONS & VIEW

4 VERTICAL FINES



CHANGE DEPTH BASED
ON THE DIFFERENT
SEASONS & GLARE PROBLEMS
#3 REFLECTION
CHANGE ON REFLECTIVENESS
ON THE DIFFERENT SEASONS
& GLARE PROBLEMS

#1. DAYLIGHT SCOOPS



CREATES AN DYNAMIC BUILDING BASED ON
THE SEASONAL DIFFERENCES, WHICH CAN
BE ADJUSTED THROUGH DIFFERENT PARAMETERS
& RESPECTS THE HERITAGE VALUES, WHILE
IMPROVING DAYLIGHT & VIEW PERSPECTIVES

SUN ANGLE & GLARE

- >40° → LEAST GLARE/NO GLARE
- 25-40° → MILD GLARE
- 5-25° → A LOT OF GLARE
- HOWEVER IN WINTER MONTHS NOT SO CRITICAL
- 0-5° → VERY MILD GLARE

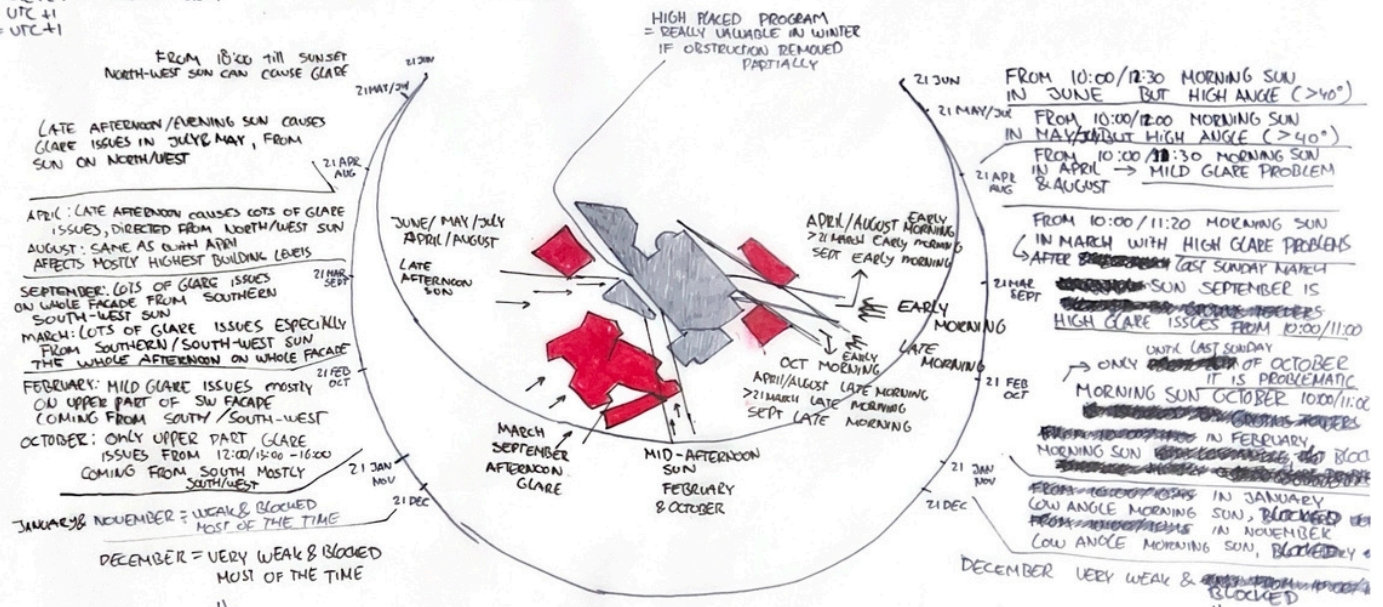
- JAN = UTC+1
- FEB = UTC+1
- MAR = UTC+1 / LAST SUNDAY = UTC+2
- APR = UTC+2
- MAY = UTC+2
- JUNE = UTC+2
- JULY = UTC+2
- AUG = UTC+2
- SEPT = UTC+2
- OCT = UTC+2 / LAST SUNDAY = UTC+1
- NOV = UTC+1
- DEC = UTC+1

GLARE BUT MOSTLY DIFFUSE LIGHTING
 GLARE MOST CRITICAL
 OVERHEATING PROBLEMS + GLARE IN MORNING/EVENING
 GLARE MOST CRITICAL
 GLARE BUT MOSTLY DIFFUSE LIGHTING & YOU WANT THE SUN FOR PSYCHOLOGICAL REASONS & WARMTH AS MUCH AS POSSIBLE

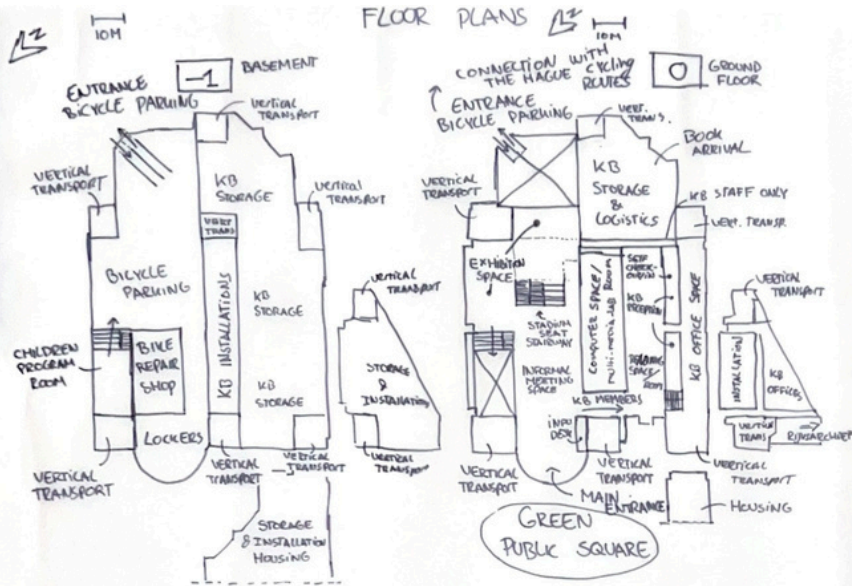
	10:00	12:00	15:00	17:00	19:00
JAN	8,6°	16,9°	21,8°	0,2°	N.U.T.
FEB	16,5°	25,9°	27,8°	8,6°	N.U.T.
MAR	25,0°	34,0°	31,0°	16,6°	N.U.T.
APR	30,0°	44,6°	46,6°	33,3°	15,6°
MAY	37,1°	52,6°	54,3°	39,8°	21,6°
JUN	39°	55,1°	57,9°	43,2°	25,0°
JUL	36,1°	52,1°	55,7°	41,7°	23,4°
AUG	30	44,9°	47,6°	34,5°	16,0°
SEP	22,7°	35,1°	36,0°	23,5°	6,0°
OCT	13,4°	23,2°	23,7°	12,6°	N.U.T.
NOV	11,2°	17,9°	11,0°	N.U.T.	N.U.T.
DEC	6,0°	14,0°	8,6°	N.U.T.	N.U.T.

10:00 OPENING KB
 17:00 MOSTLY CLOSING
 19:00 LAST HOUR OPENING KB TUESDAYS

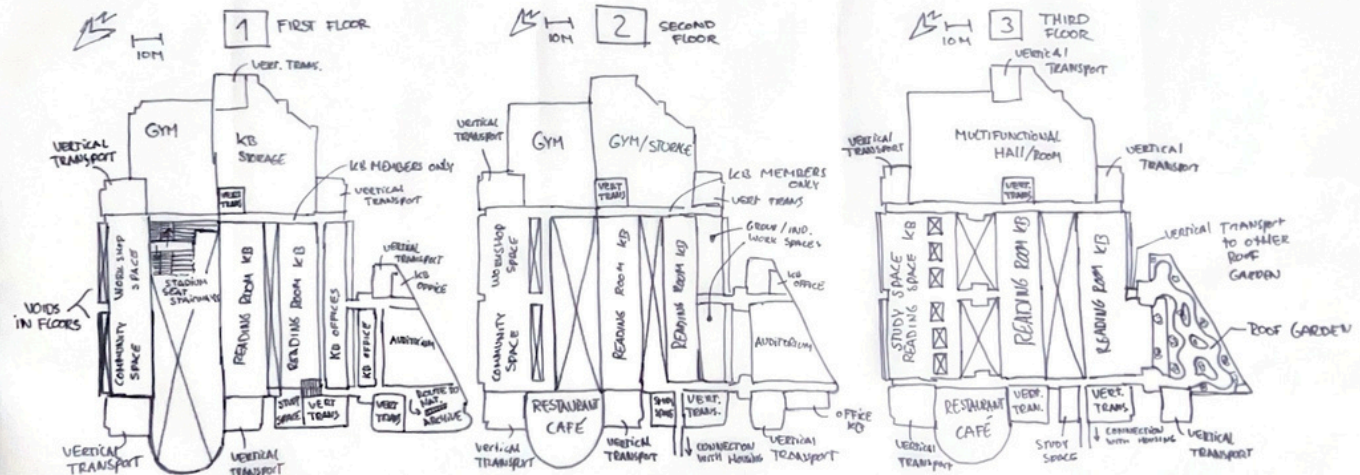
MOST PROBLEM TIMES IN TERM OF GLARE

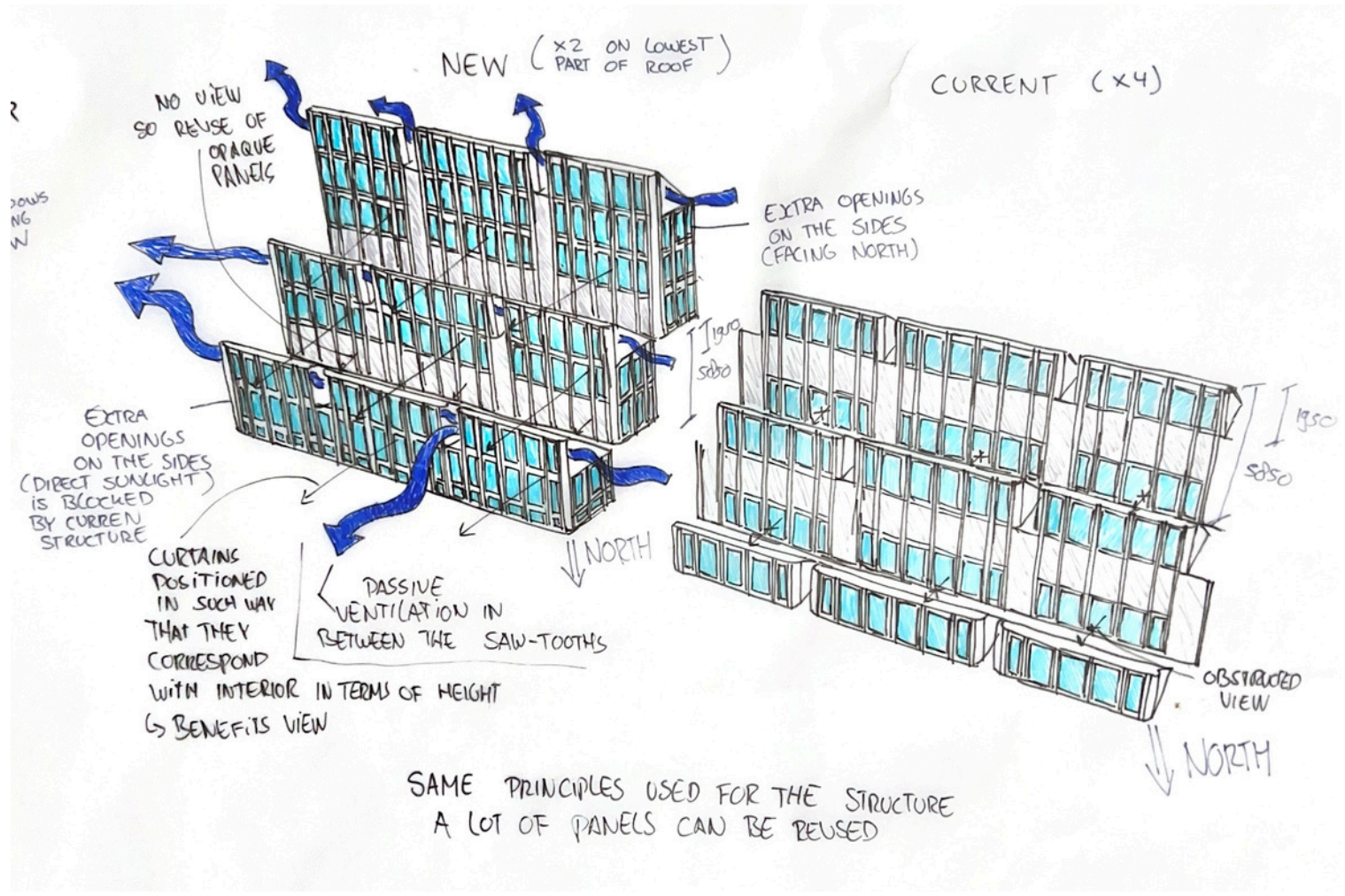


SEPTEMBER & MARCH CAUSE LOTS OF GLARE ISSUES → MOSTLY DIRECTED FROM SOUTH/SOUTH-WEST
 FEBRUARY/OCTOBER: UPPER PART OF BUILDING FACES GLARE ISSUES IN MID AFTERNOON
 MARCH/SEPTEMBER: SOUTH/SOUTH-WEST SUN CAUSES LOTS OF GLARE WHOLE AFTERNOON
 JUNE/MAY/JULY/APRIL/AUGUST: LATE AFTERNOON/EVENING SUN FROM NORTH/WEST CAUSES GLARE ISSUES



* THE SPATIAL PROGRAMME IS STRUCTURED SO THAT SPACES DEDICATED TO KNOWLEDGE ACQUISITION AND COGNITIVE PERFORMANCE (E.G.: READING ROOM/STUDY ROOMS/MAKERSPACE) ARE STRATEGICALLY PLACED TO RECEIVE OPTIMAL NATURAL LIGHT.





NEW SAW-TOOTH ROOF
2X LOWEST PART
OF ROOF/BUILDING

REMOVE OF THE
OPAQUE PANELS, WHERE
BEHIND THE STRUCTURE
IS POSITIONED

TRUSS
ROOF
STRUCTURE

NORTH-EAST

NEW ROOF

NEW CURTAIN
WALL IN SAME
STYLE

6TH FLOOR

PV
PANELS

EXISTING
ROOF CURRENT
BUILDING

1950
950

5TH FLOOR

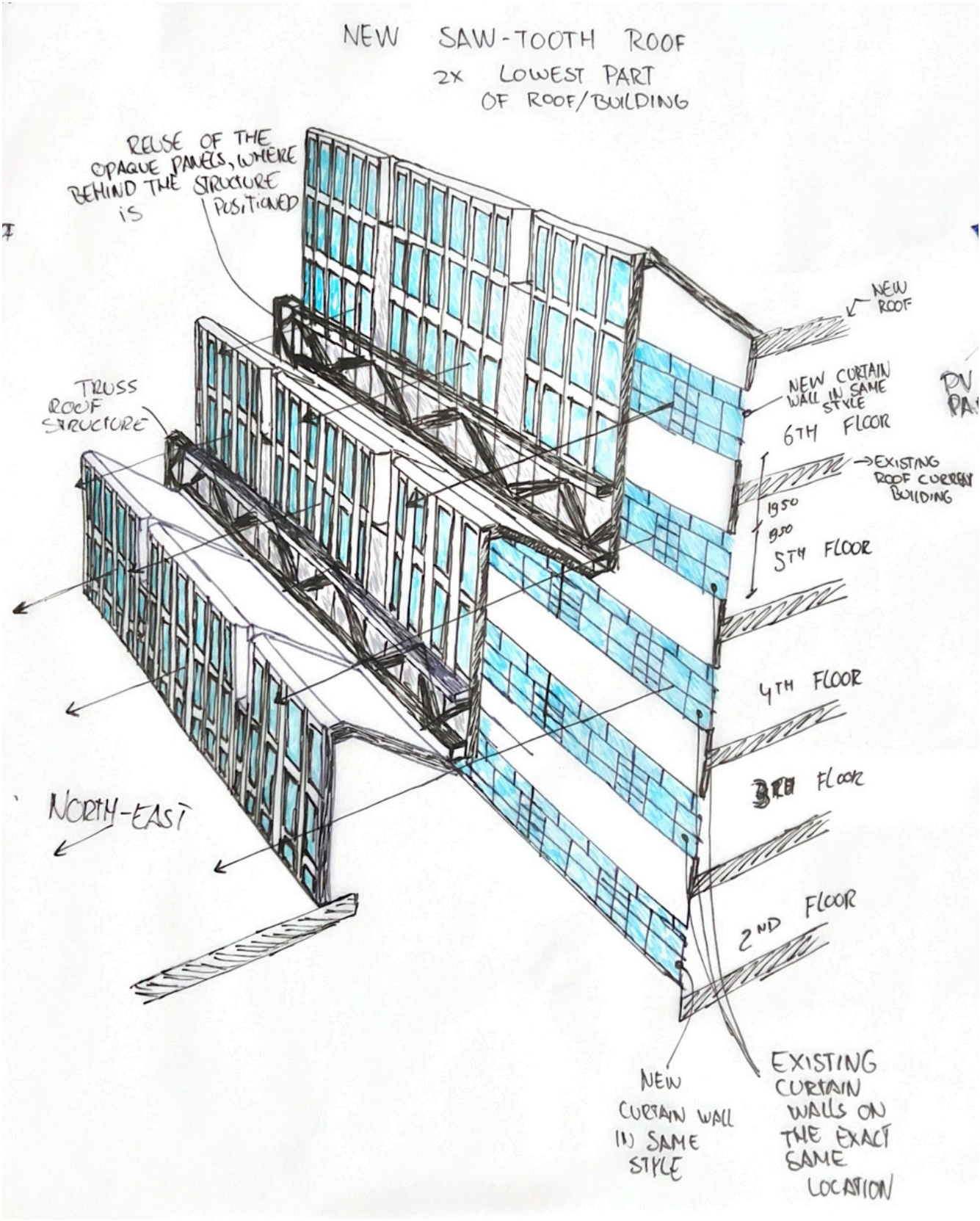
4TH FLOOR

3RD FLOOR

2ND FLOOR

NEW
CURTAIN WALL
1) SAME
STYLE

EXISTING
CURTAIN
WALLS ON
THE EXACT
SAME
LOCATION



NEW (x2 ON HIGHEST PART OF ROOF)

OPENED UP THE VIEW FOR 6TH FLOOR

HORIZONTAL OVERHANG

WINDOWS FACING SW

PV PANELS

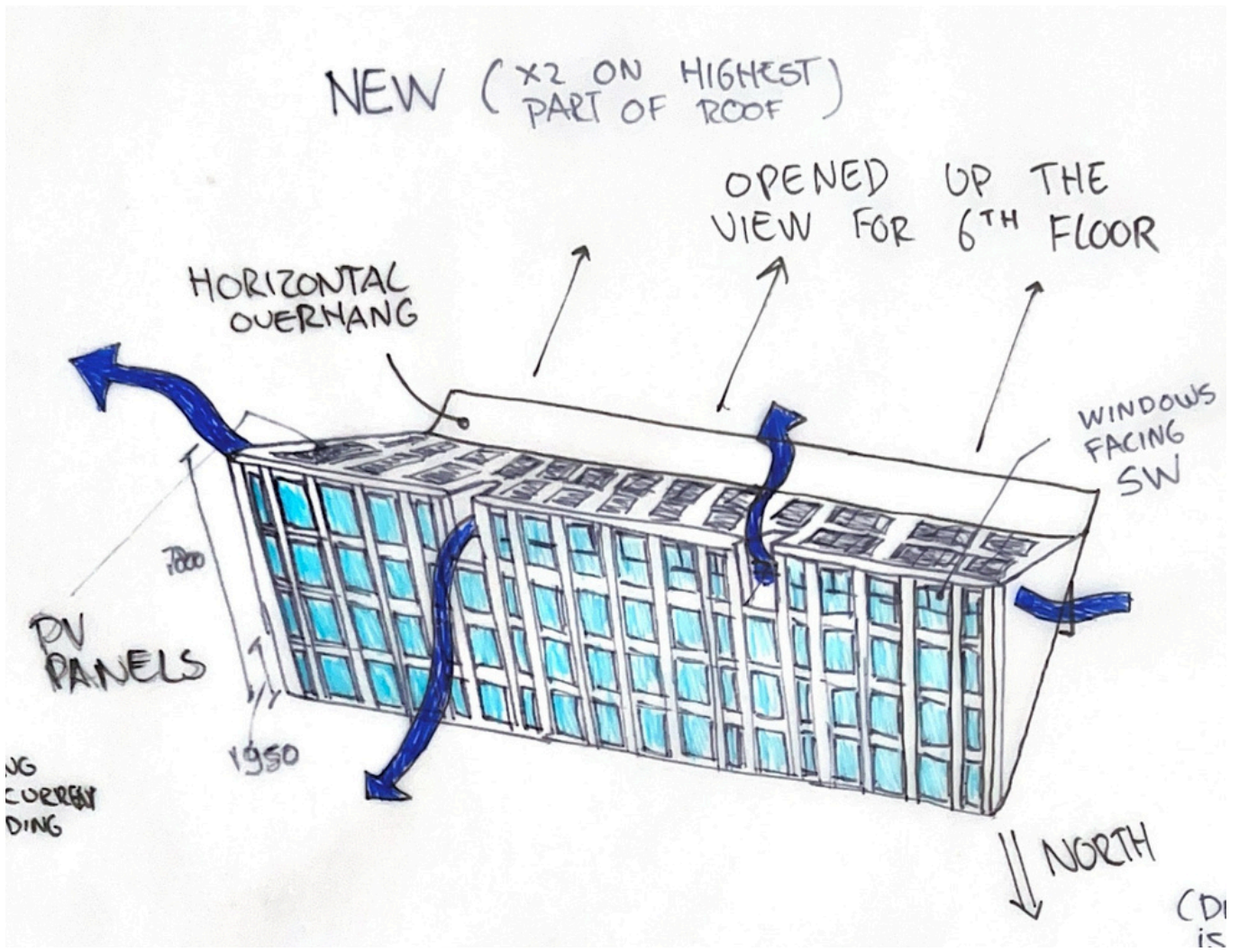
7000

1950

NG
CURRENT
DING

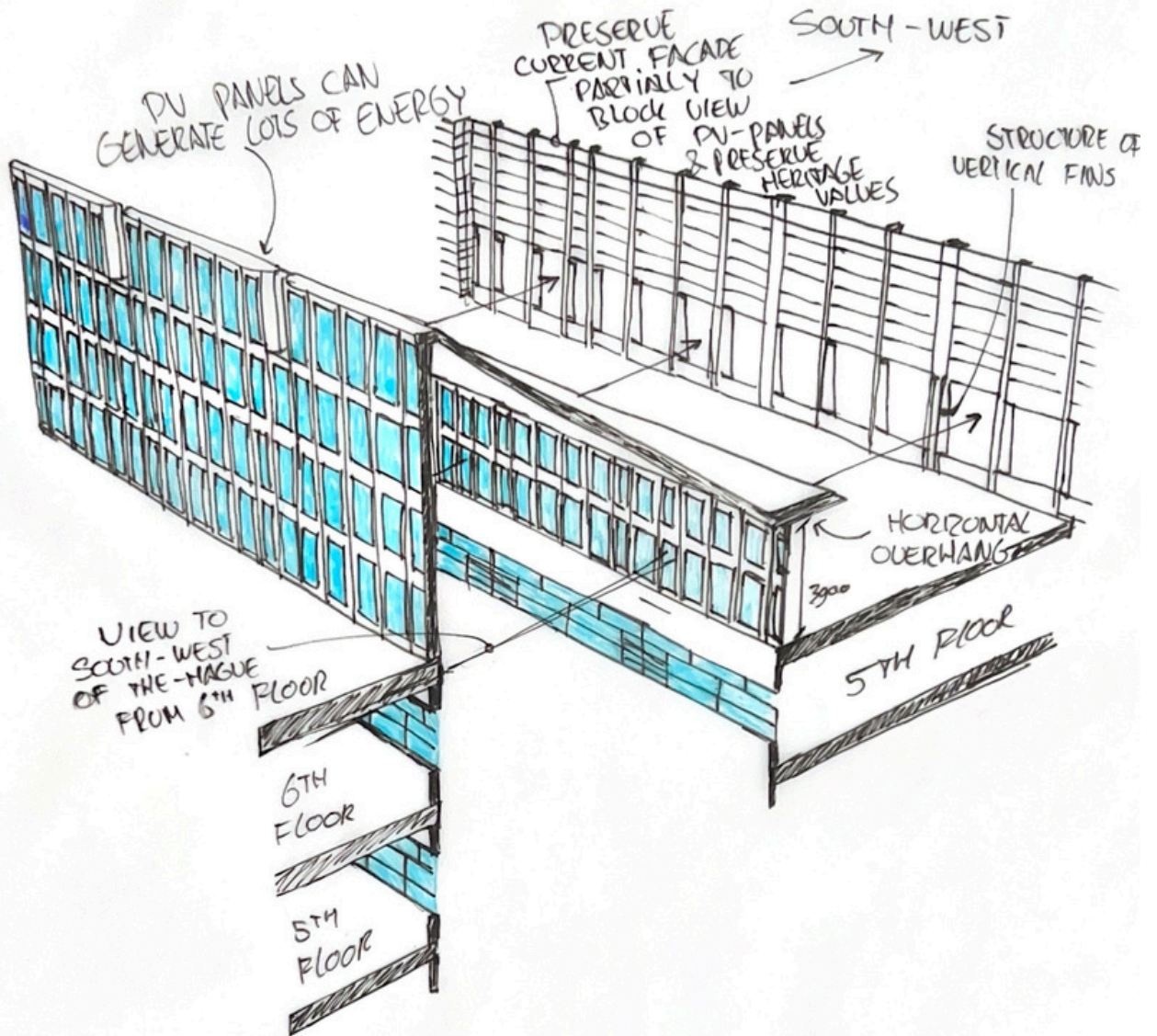
|| NORTH

(D)
is



→ PRESERVE SAME ROOF STRUCTURE
'WATERFALL LIKE' IDEA AS CURRENT
BUILDING (HERITAGE VALUE)

NEW SAW-TOOTH ROOF
2X HIGHEST PART
OF ROOF/BUILDING

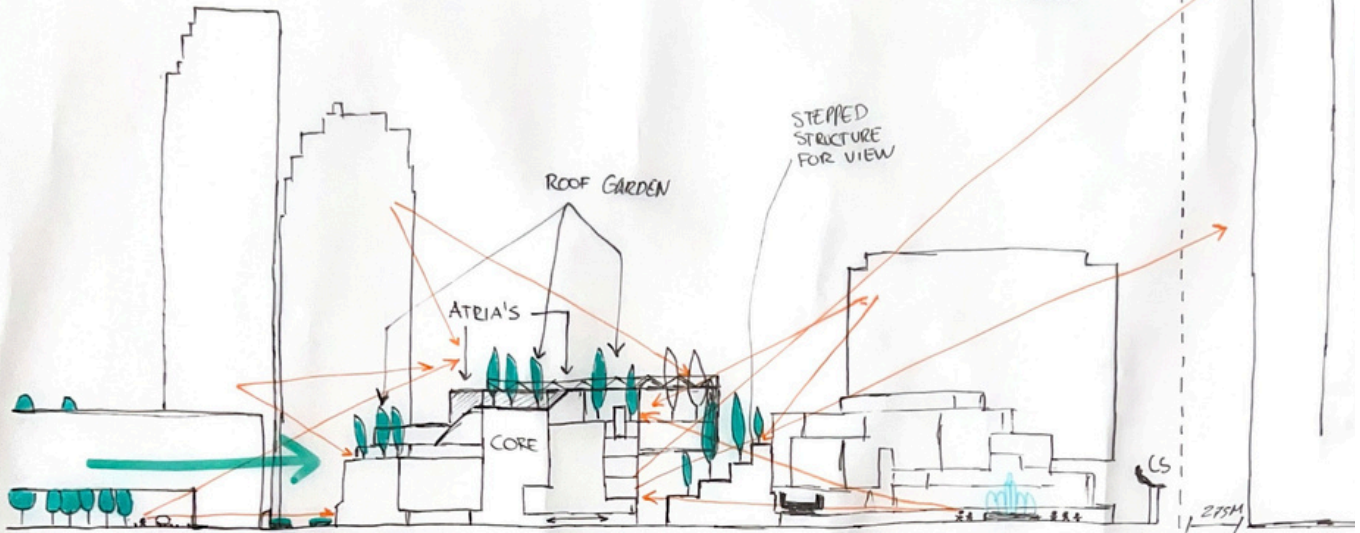


CREATES A VIEW FROM 6TH FLOOR TO S-W OF THE HAGUE
WHILE BLOCKING & PREVENTING HEAT STRESS,
PRESERVES HERITAGE & CREATES A ENORMOUS
AMOUNT OF DIFFUSE NORTH-EAST DAYLIGHT
WHICH IS VERY BENEFICIAL FOR READING ROOM

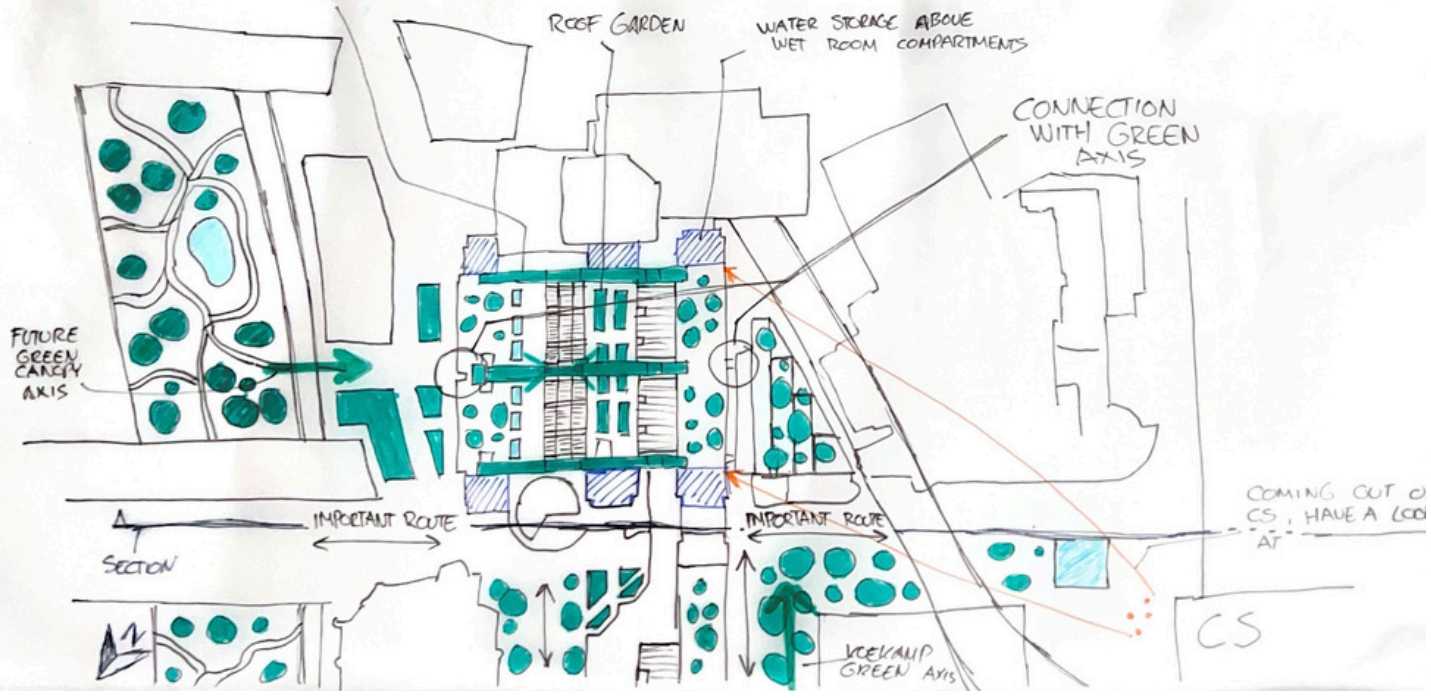
INCLUDE THE KOCKAMP
AN AXIS TO IT?

TYPICAL
VIEW OF
THE HAGLE
SKYLINE

JOB B

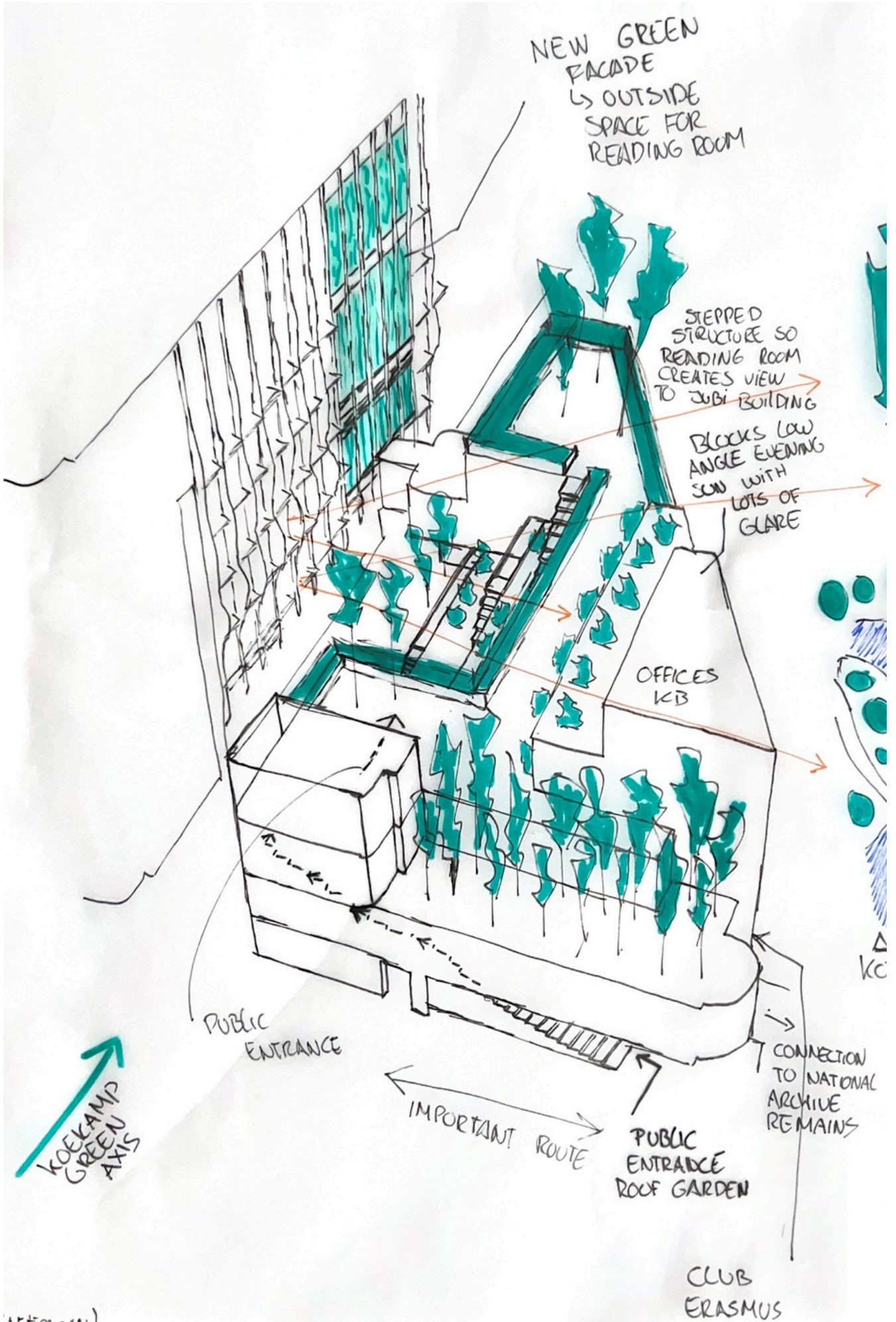


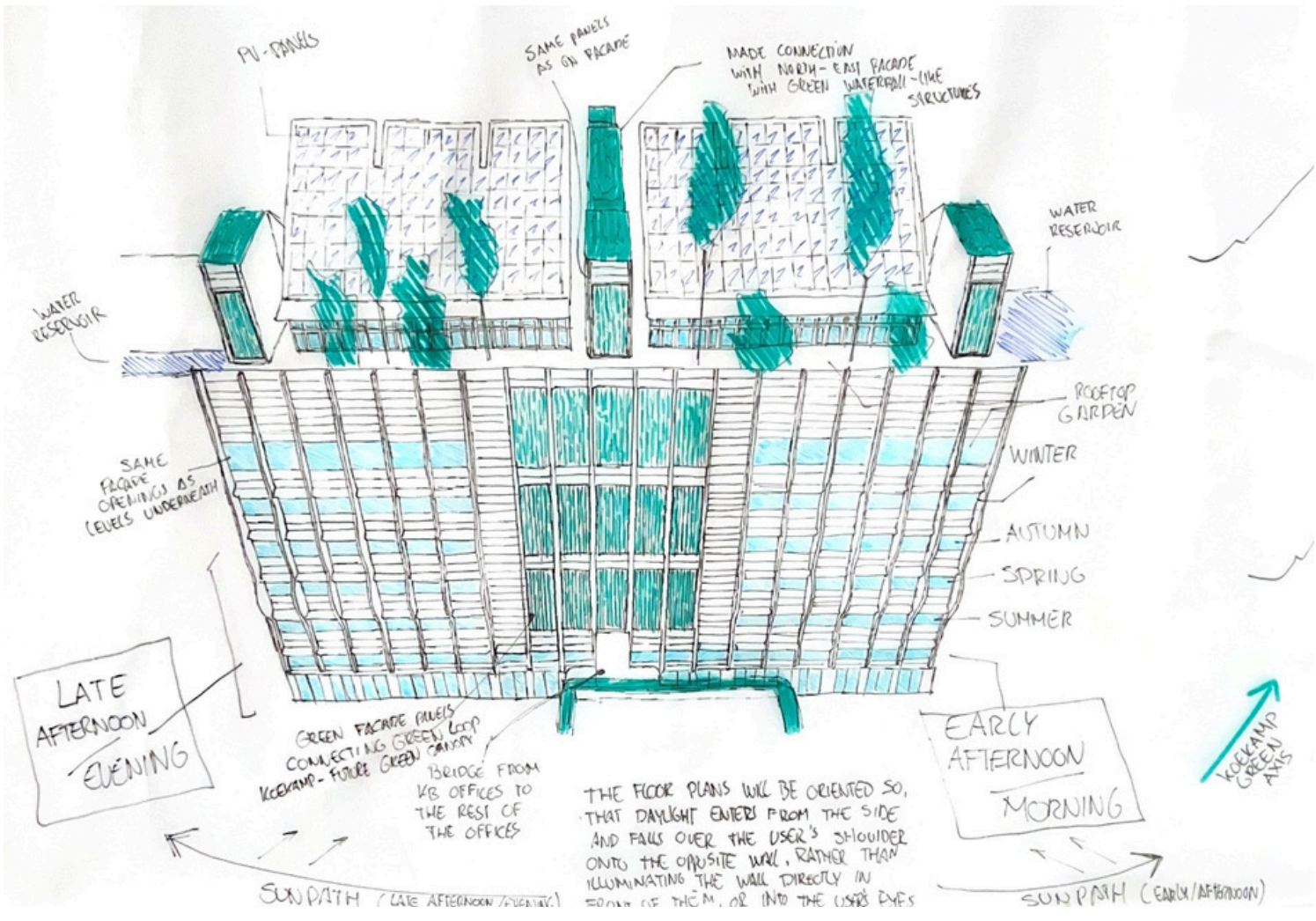
GREEN CONNECTORS
CLOSING OFF AXIS LOOP

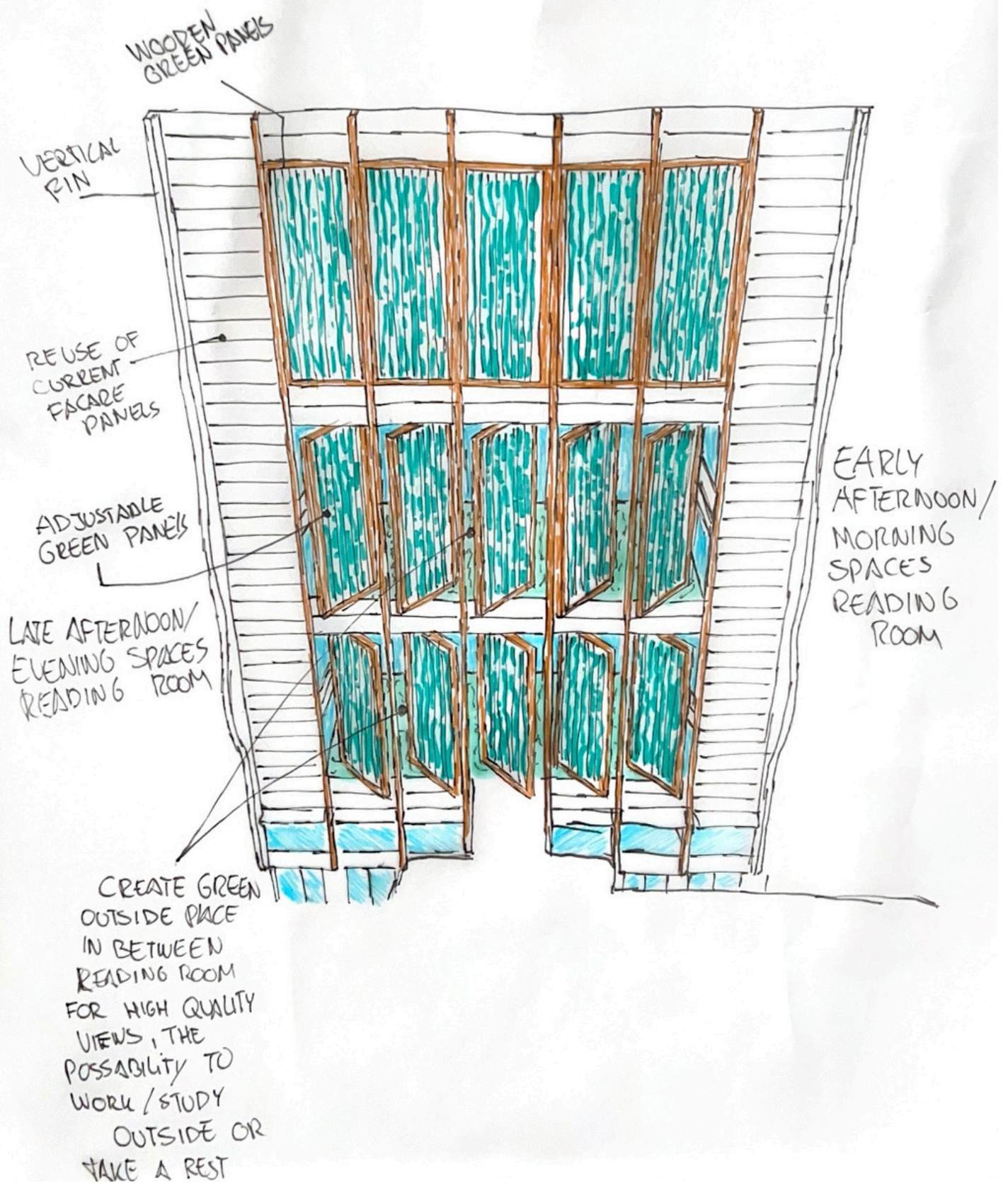


INITIAL IDEA ARIE HAGCOORT WAS TO INCLUDE THE KOEKAMP
→ WHY NOT DO IT NOW AND MAKE AN AXIS TO IT?









SKETCHES

Luminous Minds:
enhancing cognitive performance and knowledge acquisition
in future libraries through the lighting landscape

AR3AH115

GraduationStudio - Revitalising Heritage

Bart Johannes Mooren | 5644747

b.j.mooren@student.tudelft.nl

2026-01-16

Tutors:

Prof. Dr.-Ing. Uta Pottgiesser (Design tutor)

Ir. Paddy Tomesen (Building Technology tutor)

Dr. M. (Emeline) Lin (Research tutor)

Delft University of Technology

Faculty of Architecture and the Built Environment