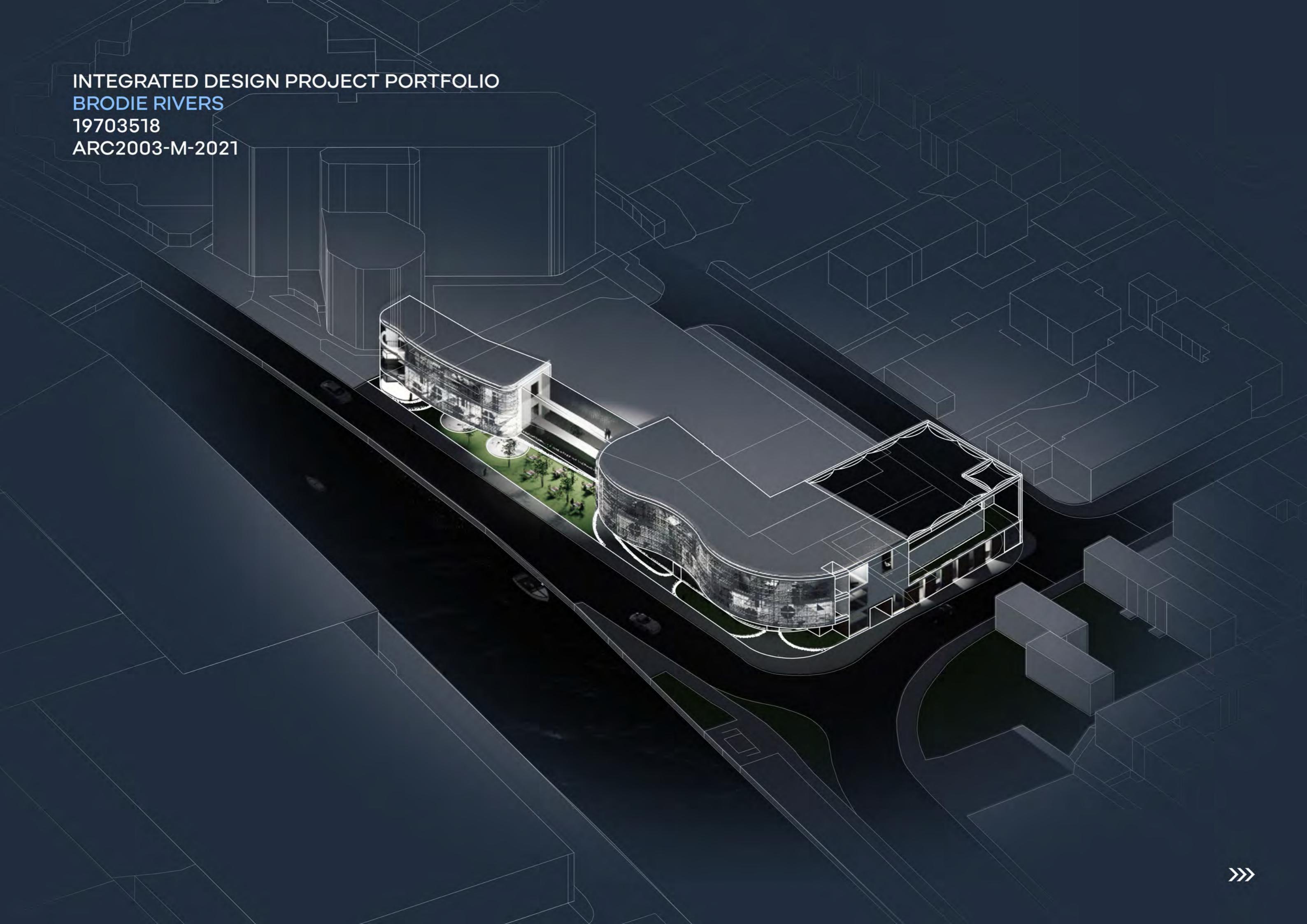


INTEGRATED DESIGN PROJECT PORTFOLIO

BRODIE RIVERS

19703518

ARC2003-M-2021



03 BREAKING DOWN THE BRIEF

THE FULL BRIEF - 104 WORDS

Music as a key element in **human culture** is seen in its **influence on architecture**, in the development of buildings designed to **accommodate music related activities; from intimate venues through to large concert halls**, and everything in between.

Regardless of whether or not we are able to read music or play an instrument, **music touches all us in one way or another**. We have a favourite artist, a favourite song, one that brings back memories of a memorable occasion or that carries us to a particular place or time. Regardless, there is no denying that music is a key part of our lives.



THE BRIEF - 25 WORDS

Music, **human culture**, influence on **architecture**, accommodate music related activities; from intimate venues through to large concert halls, **music** touches all us in one way or another.



THE BRIEF - 10 WORDS

Architecture that enhances the **impact of Music** within **human culture**.

**Architecture that enhances
the impact of music within
human culture.**

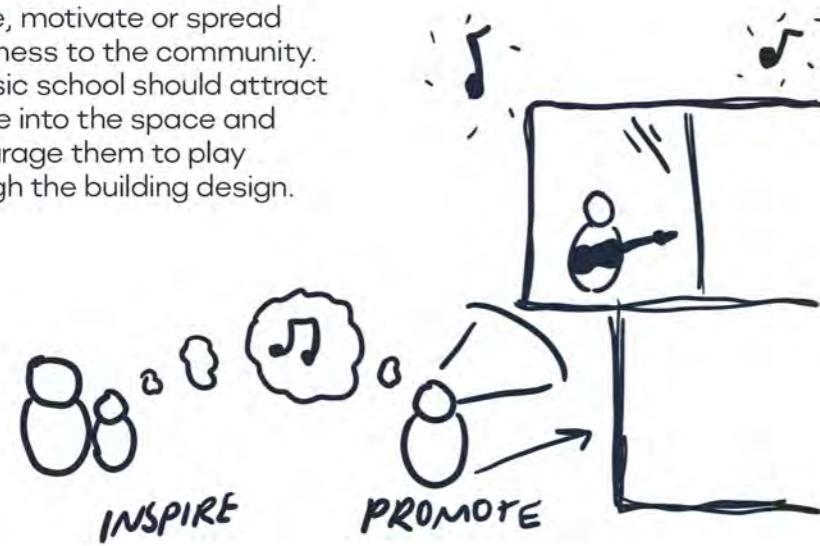
03 WHAT IS A [MUSIC] SCHOOL

[MUSIC]

The art of arranging sounds in time to produce a composition through the elements of melody, harmony, rhythm, and timbre.

_MusicInACommunity

Music can be used to inspire, motivate or spread happiness to the community. A music school should attract people into the space and encourage them to play through the building design.



_MultiUseConcertHall

The concert hall is the main focus of the building and will span two floors and use a grand space to amplify the performance sound.



_JamSpaces

Jam spaces will be located in full view of the public to attract people to the music school and also spread the sound of the performance to the city.



_RehersalSpaces

Rehersal spaces will be focused on function and will use a set length to width ratio to create the optimum acoustics for the performers.

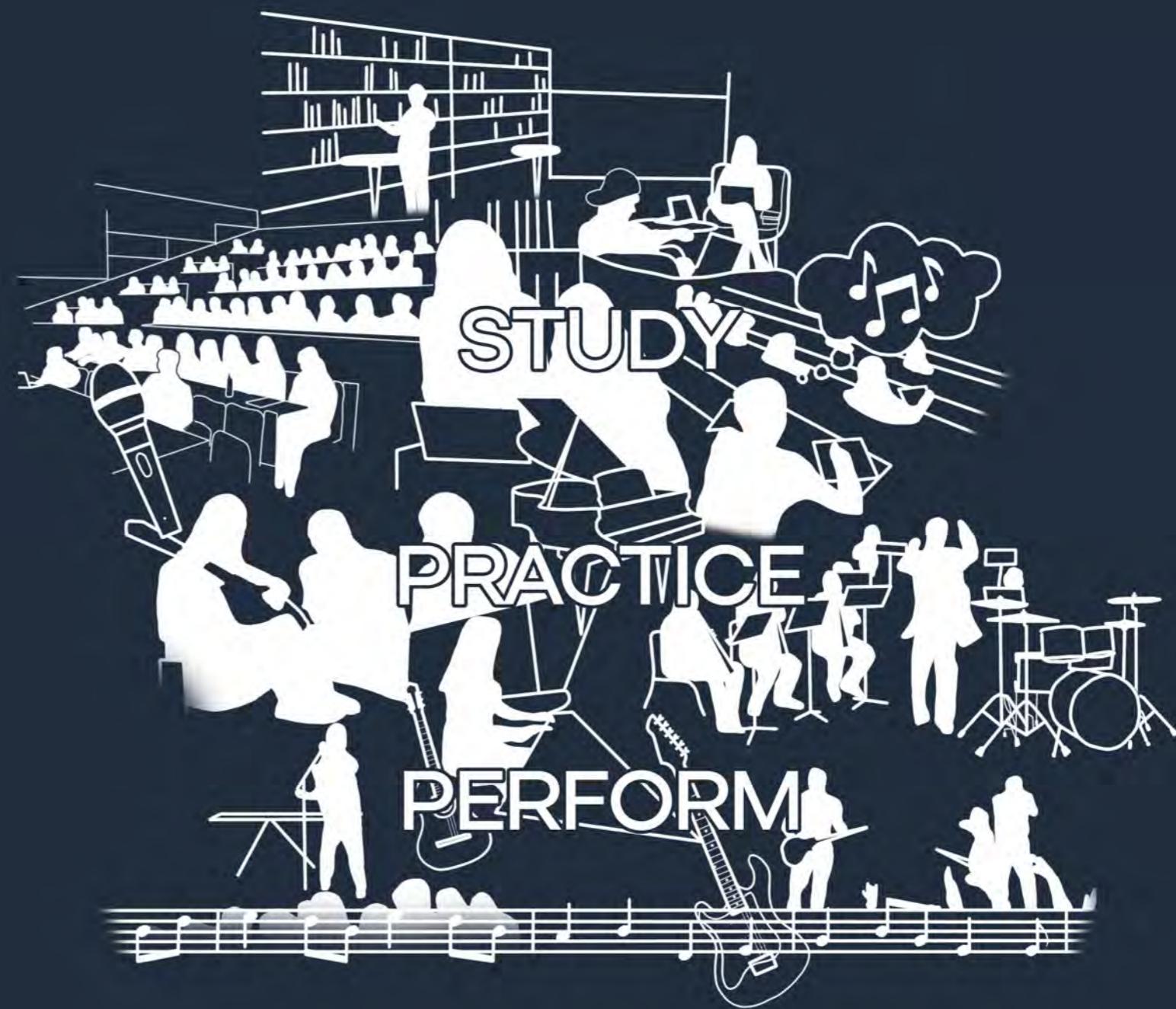


_OfficeSpaces

The office spaces will focus on being a quiet location and also positioned to make use of the cathedral or waterside views.



[MUSIC] SCHOOL MONTAGE



HOW TO CREATE ARCHITECTURE FOR [MUSIC]? DESIGNING TO SEPERATE ACTIVITIES AND NOISE LEVELS



03 WHAT IS MUSIC WITHIN A SOCIETY

AND HOW CAN IT BE ACCOMODATED
WITHIN ARCHITECTURE

IN SOCIETY / WITHIN THE BUILDING

Outdoor seating near a jam space
to socialise during live music



A SOCIAL EVENT

IN SOCIETY / WITHIN THE BUILDING

Large multipurpose concert hall with 150-200
seats and a spacious stage for performances



THE ABILITY TO EXPRESS YOURSELF

MUSIC CAN PROVIDE....

Music can take many forms depending on the genre and the activity associated with it. Practice rooms will be created for learning, quiet spaces will be created within libraries to escape, jam spaces will be created for socialising and a multipurpose concert hall will be created for performances and expression.

IN SOCIETY / WITHIN THE BUILDING

The library will offer resources aswell as
study space and headsets to let people
study with music.



MOTIVATION DURING DIFFICULT TASKS

IN SOCIETY / WITHIN THE BUILDING

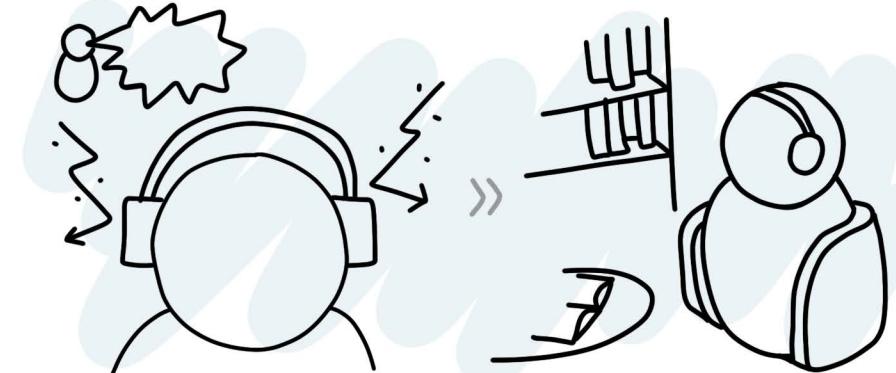
The building will also offer jobs in the
musical industry, helping the economy.



A CAREER

IN SOCIETY / WITHIN THE BUILDING

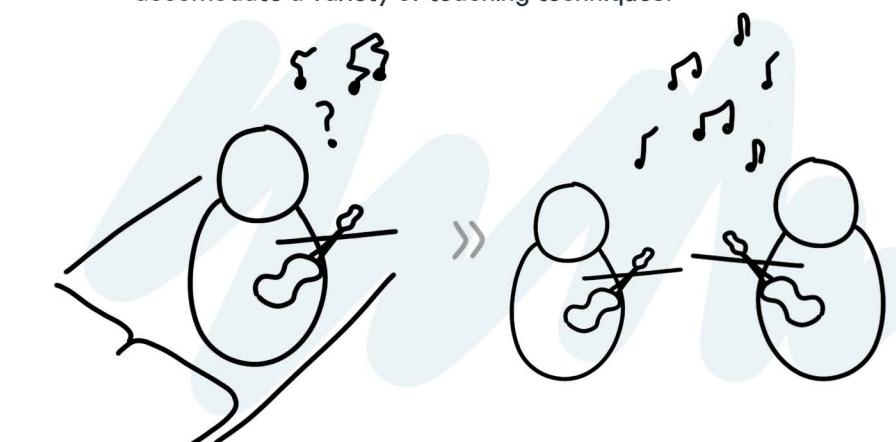
Quiet, comfortable library seating allowing the
user to have undisturbed reflection time.



THE ABILITY TO ESCAPE EVERYTHING

IN SOCIETY / WITHIN THE BUILDING

Multiple practice and lecture rooms will
accommodate a variety of teaching techniques.



A LEARNING EXERCISE

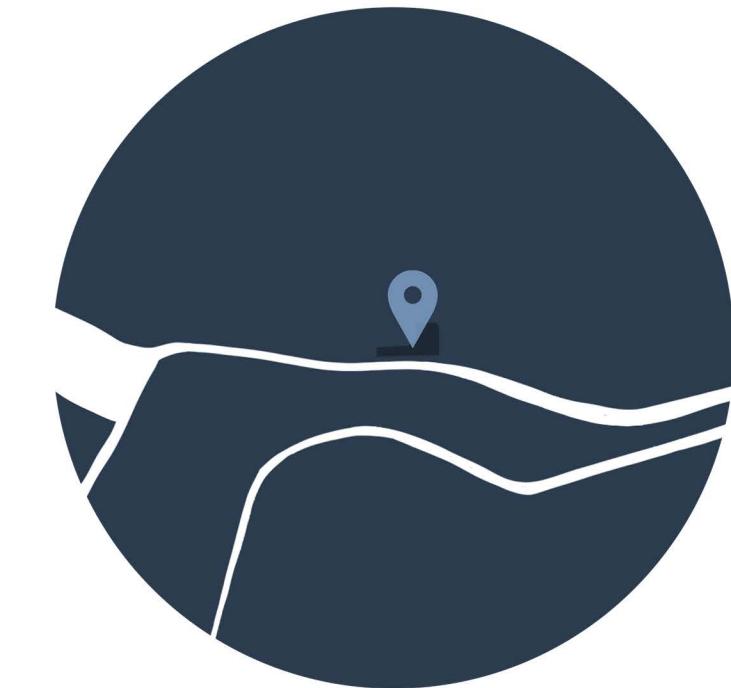
03 SITUATING THE DESIGN



United Kingdom



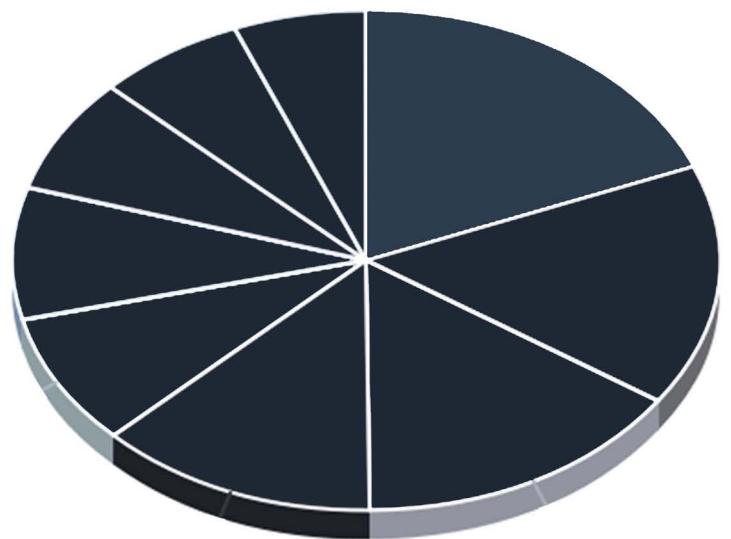
Lincolnshire



Lincoln, Waterside North

MOST POPULAR MUSIC IN THE UK

This information forms a priority table when designing the size of the stage or when selecting materials that reflect different sound frequencies. The focus will be on creating a stage of 100m² and eliminating mid to low frequency sounds to accommodate the majority of popular uk music genres.

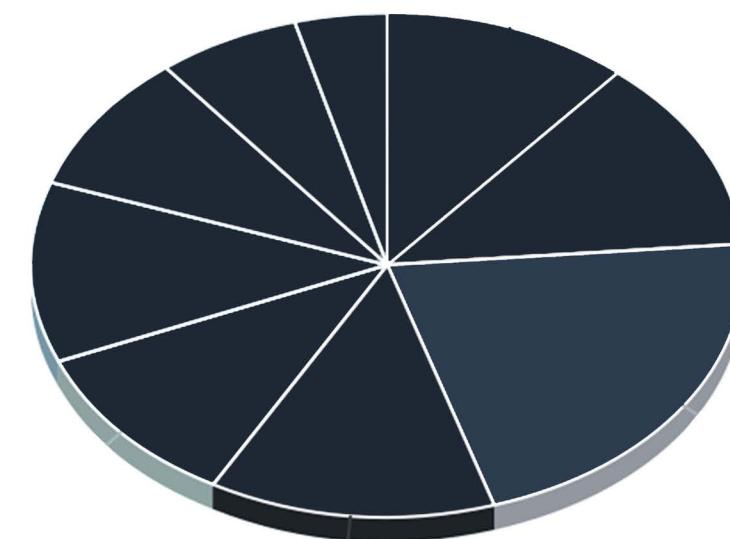


INFORMATION SOURCED FROM THE MUSIC BUSINESS ASSOCIATION

CLASSIC ROCK	- 19.1%
POP MUSIC	- 16.1%
ROCK MUSIC	- 15.7%
COUNTRY MUSIC	- 09.7%
INDIE/ALT ROCK	- 08.9%
HIP HOP/RAP	- 08.9%
RnB	- 07.9%
CLASSICAL	- 07.2%
HEAVY METAL	- 06.5%

POPULATION STATISTICS IN LINCOLN

This information guides the design towards something that will attract the younger to middle age population, creating something modern, sleek and eye catching but also neutral in colour to avoid voiding the ability to attract everyone.



INFORMATION SOURCED FROM LINCOLN.GOV.UK

AGED 00-09	- 11.2%
AGED 10-19	- 12.5%
AGED 20-29	- 21.5%
AGED 30-39	- 13.0%
AGED 40-49	- 10.6%
AGED 50-59	- 11.6%
AGED 60-69	- 09.0%
AGED 70-79	- 06.5%
AGED 80+	- 04.2%



06 WIDER CONTEXT

Analysing access, views,
greenspace and site orientation



03 IMMEDIATE VIEWS AND CONTEXT

River Witham (S of Site)
The river borders the south side of the site and is vital in providing mental and physical benefits to the school through nature.



NCP Car Park (W of Site)
With a city site, parking can be an issue but the music school is within a 2min walk to a public car park, perfect for large performances.



Lincoln Cathedral (NW of Site)
The music schools second story window focus could be orientated towards the cathedral, strengthening the context of the building.



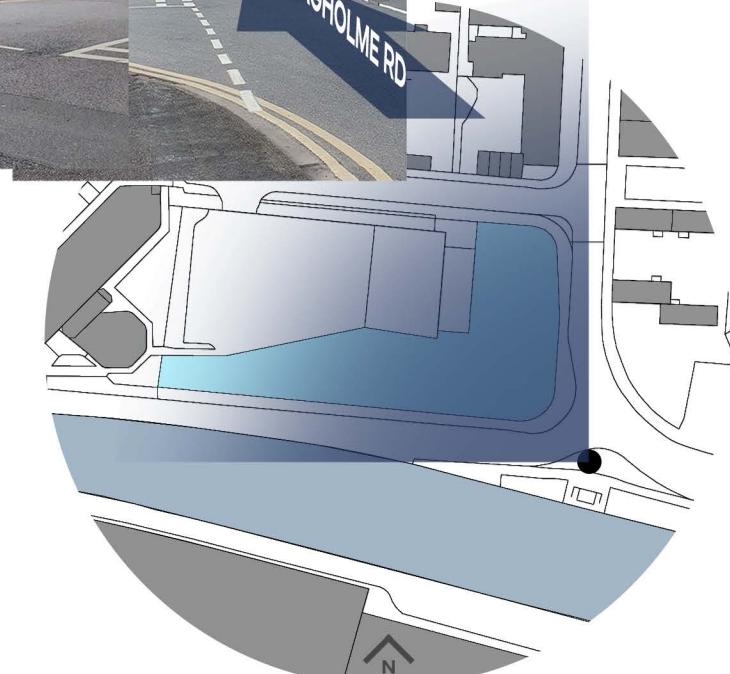
To Monks Road (NE of Site)
A residential zone is borders the NE of the site, this could create design issues with overpowering or socially disruptive designs.



RIVER WITHAM

WATERSIDE N

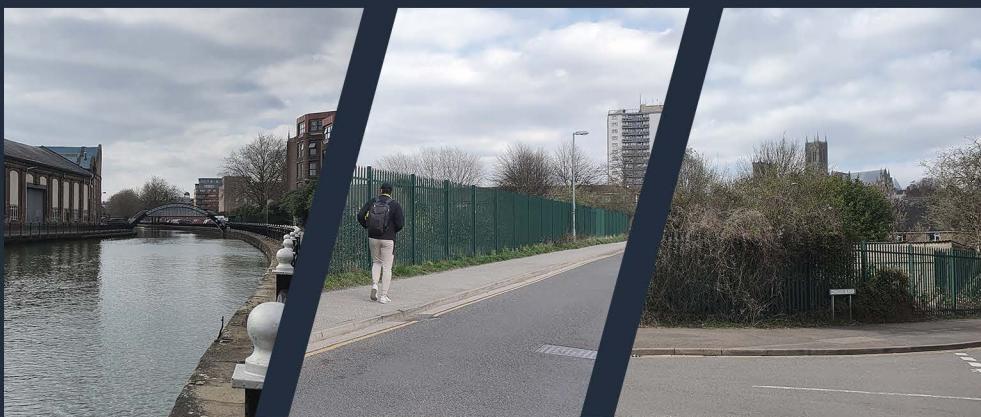
BAGHOLME RD



>>>

03 NOISE POLLUTION STUDY

ON SITE VIEWS



The site captures Lincolns key attraction which is the Cathedral and it also captures the river witham which flows into the Brayford pool, which is another key, historic landmark in Lincoln. These became the drivers in the project, focussing the music school on Lincolns context.

GREENSPACE

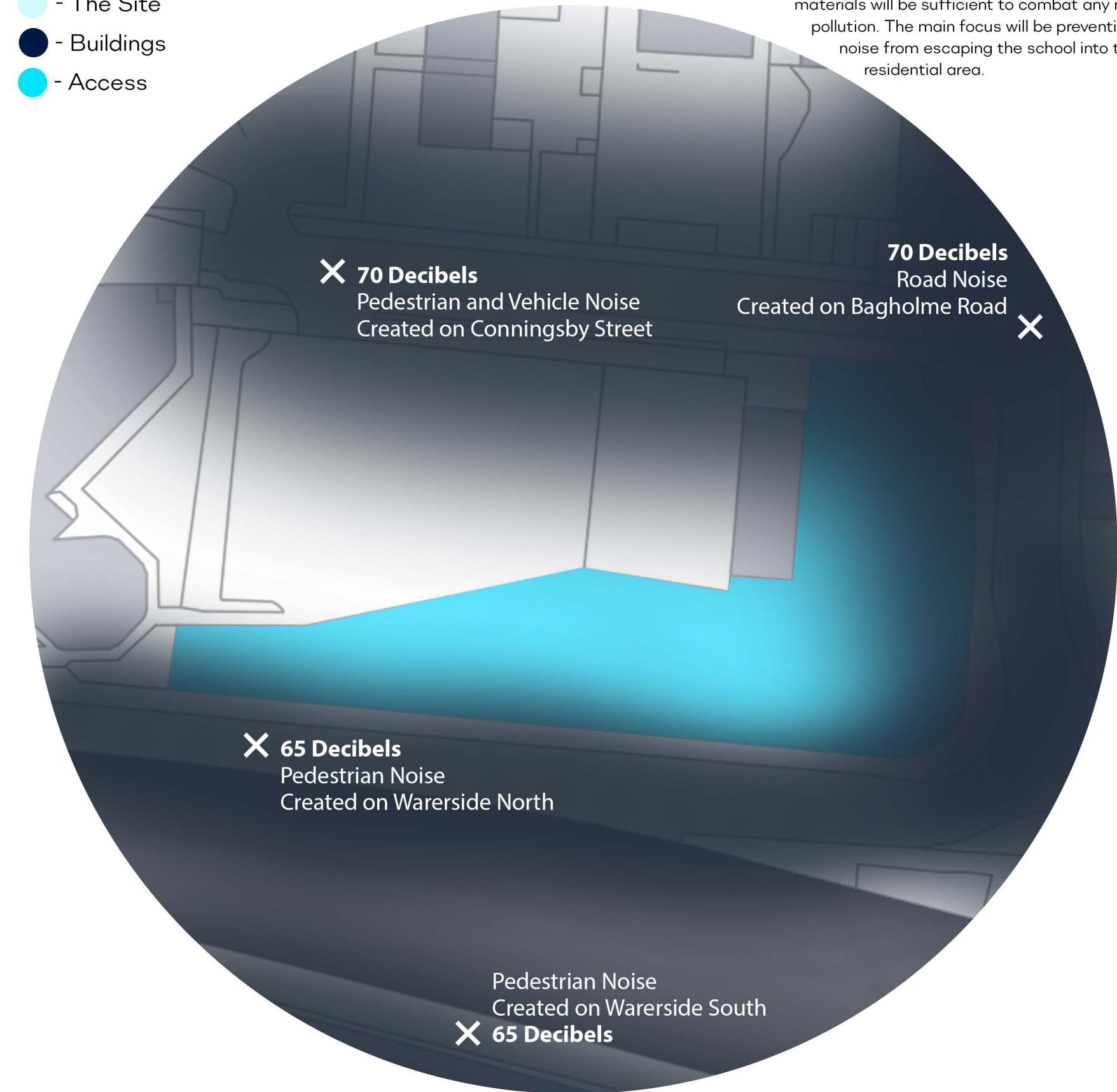


The east of Lincoln has a large amount of public space for a residential area, however the spaces are very open and flat with limited seating or care taken. Therefore, there is nothing bordering the rivers and outdoor seating/jams spaces would be extremely beneficial to the areas non functional greenspace.

Low Noise Pollution High

- The Site
- Buildings
- Access

The site doesn't have any consistent loud noises with only minor noise coming from passing cars or pedestrians. Therefore, traditional walls and materials will be sufficient to combat any noise pollution. The main focus will be preventing noise from escaping the school into the residential area.



Scale 1:1000

03 SUN RESPONSE

WIND MAP



Wind is an issue on site due to the river Witham. Wind approaches from the south west and is channelled downstream which will make contact with the south facade. Wind could create whistling or additional noise which would have a negative effect the function of the building. Therefore, a raised or staggered facade will be used to disrupt the flow.

LOCAL MATERIALITY



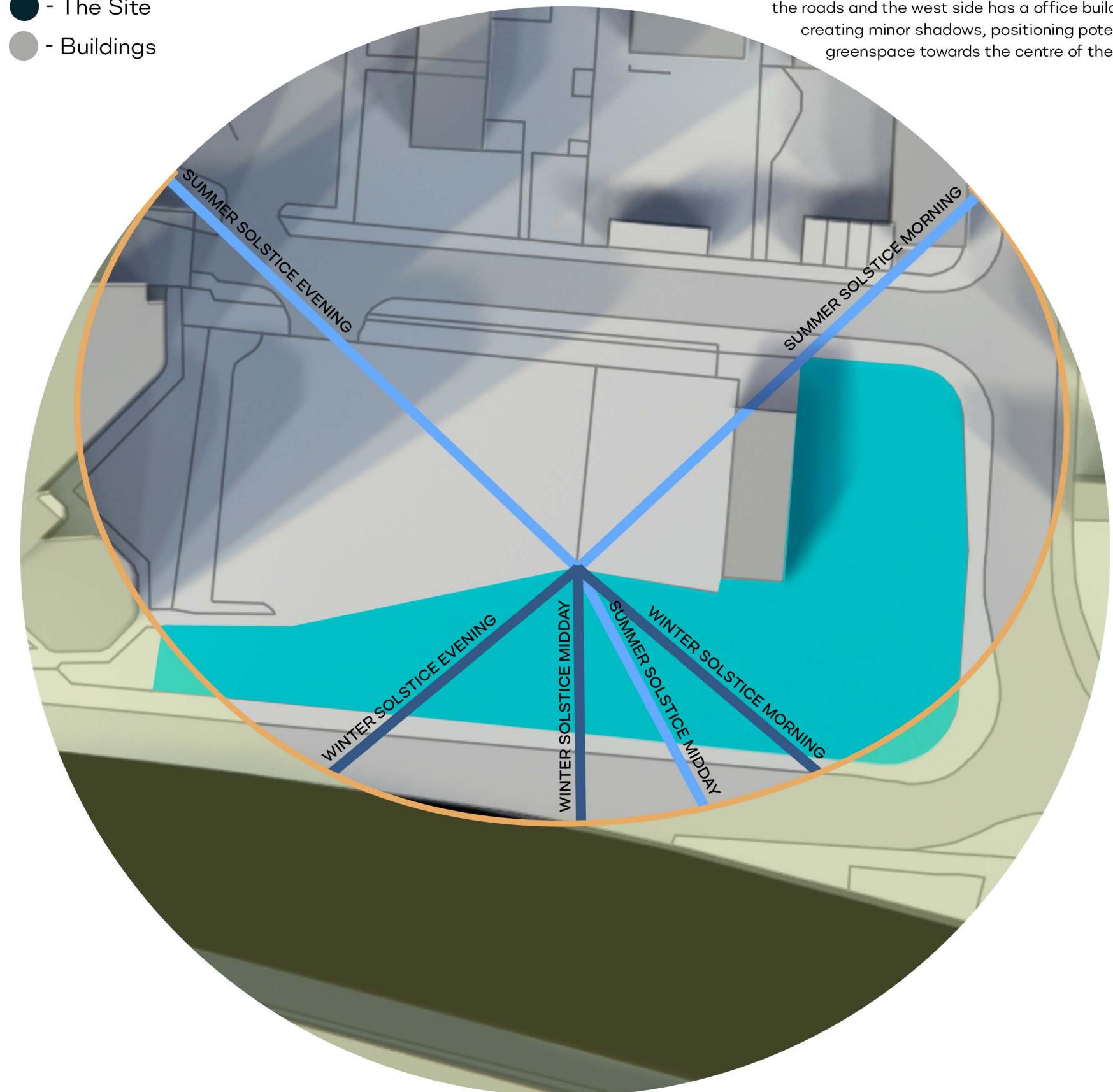
Red Brick Building - White Rendering - Industrial Metal

The area surrounding the site has three different functions, industrial warehouses, offices and residential homes. This creates a wide material palette, disallowing an 'identity' for the area and promoting the experimentation with materials.

Low Shadow Coverage High

● - The Site

● - Buildings

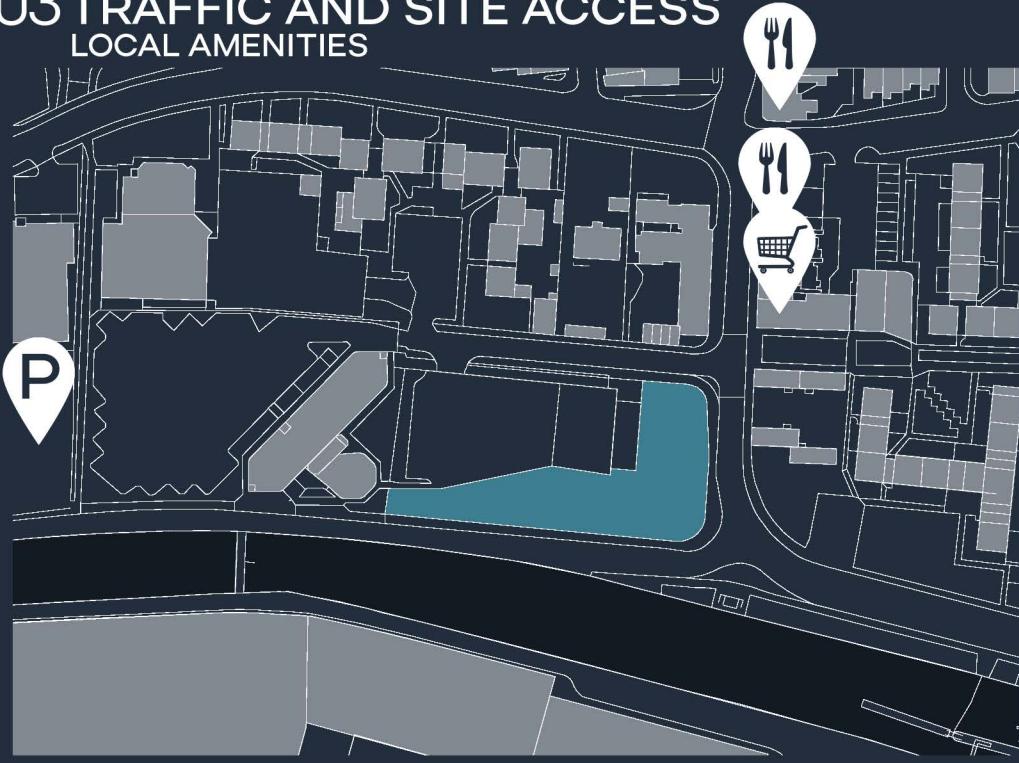


This site is extremely open to sunlight with an open south elevation that connects to the river. The north side and east side have large spaces due to the roads and the west side has an office building, creating minor shadows, positioning potential greenspace towards the centre of the site.

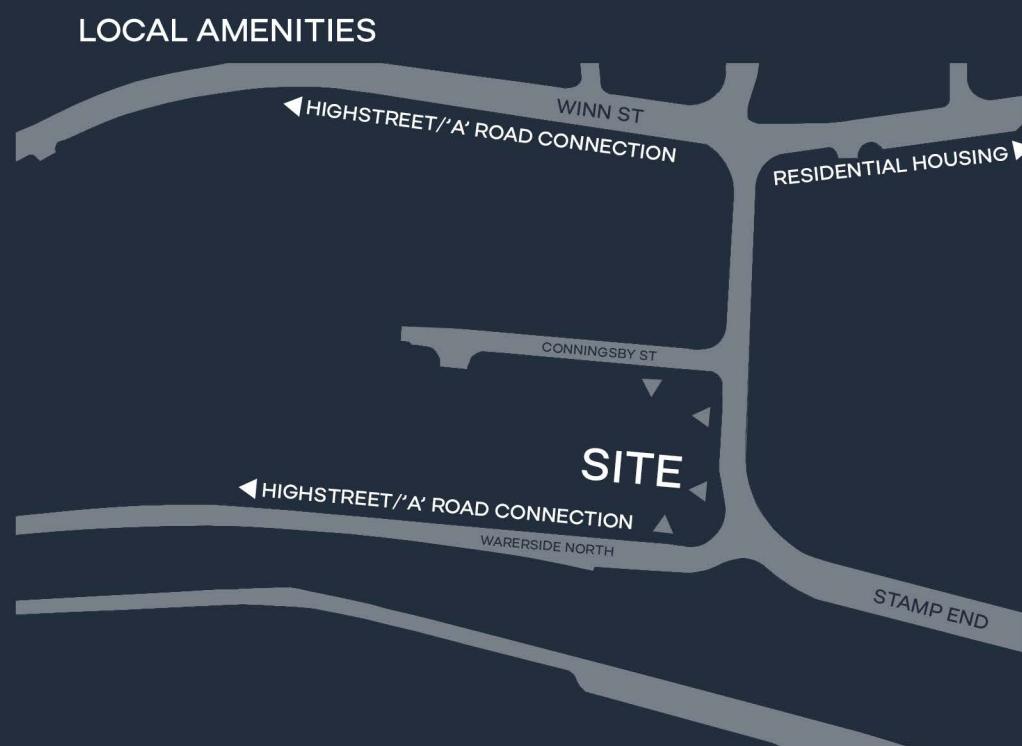
Scale 1:500

03 TRAFFIC AND SITE ACCESS

LOCAL AMENITIES



The site is closely surrounded by restaurants, a convenience store and parking. These amenities will positively impact the music school because the parking to the west can be used for the large performances and the restaurants/shop can be used before or after to meet with friends or family. This creates more pressure on the south entrance because that will have the most foot traffic from the car park.

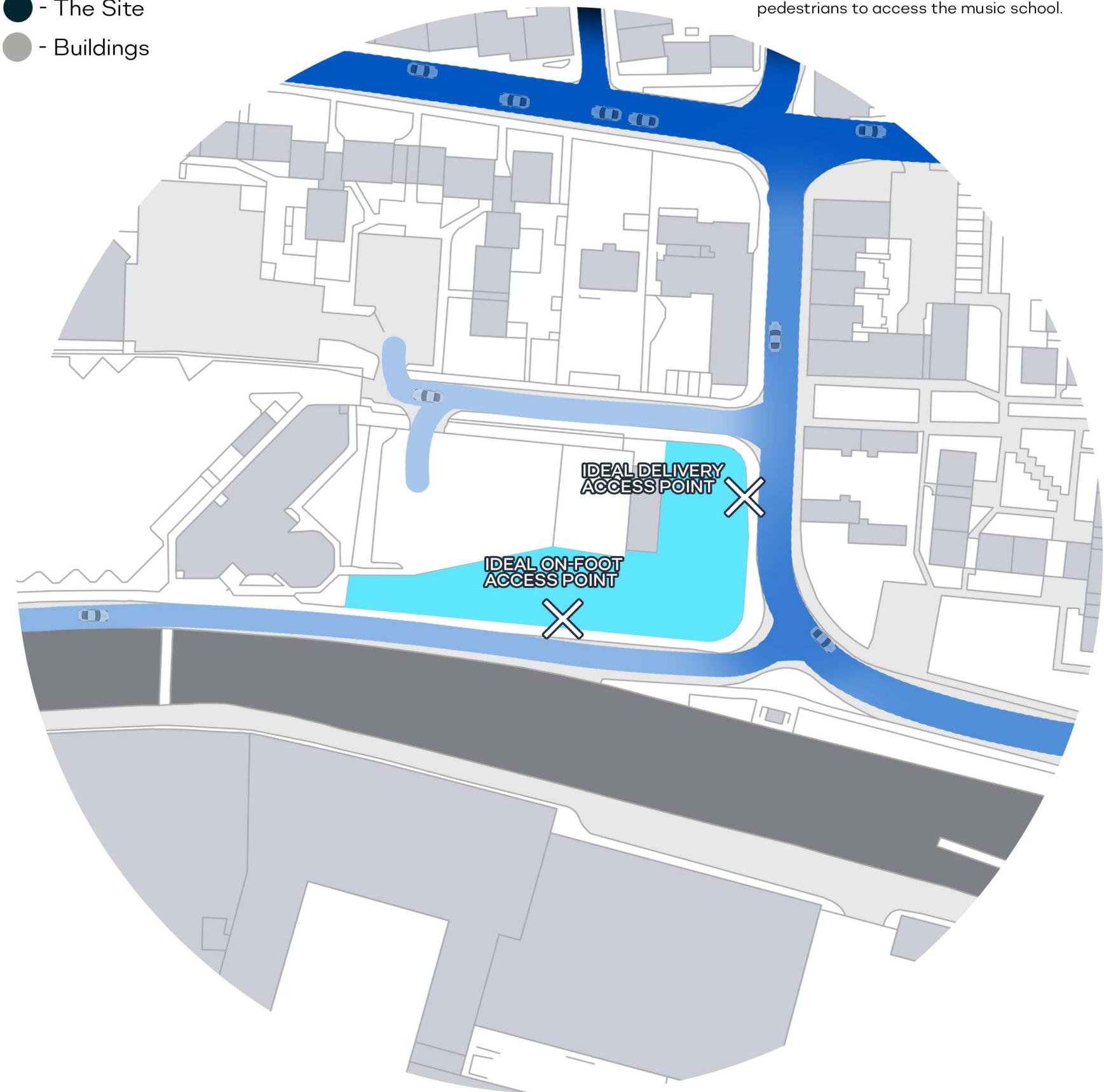


The site is sufficiently connected with direct access to Croft Street and Waterside North which link to Broadgate, a dual carriageway, A road. This strengthens the wider connection to Lincoln and surrounding areas, creating an easy to access site for the performances.

TRAFFIC FLOW

- - The Site
- - Buildings

The site is bordered by roads to the north, east and south. This provides easy access for deliveries or actors and also creates safe footpaths for pedestrians to access the music school.



Scale 1:1000

03 TECHNICAL SITE PROPERTIES



Not To Scale - Infomaton from data.gov.uk - 'Risk of Flooding from Rivers and Sea'

High Medium Low Very Low

Although close to the river witham, the flood isn't at risk to a flood and has been recorded as 'Low Risk'. This prevents large issues such as stilts being needed but hard floorings and precise roof drainage will be used as a response to the low chance of floods.

SOIL TYPE ON SITE



Soilscape:
Fen Peat Soils

Texture:
Peaty

Drainage:
Naturally Wet

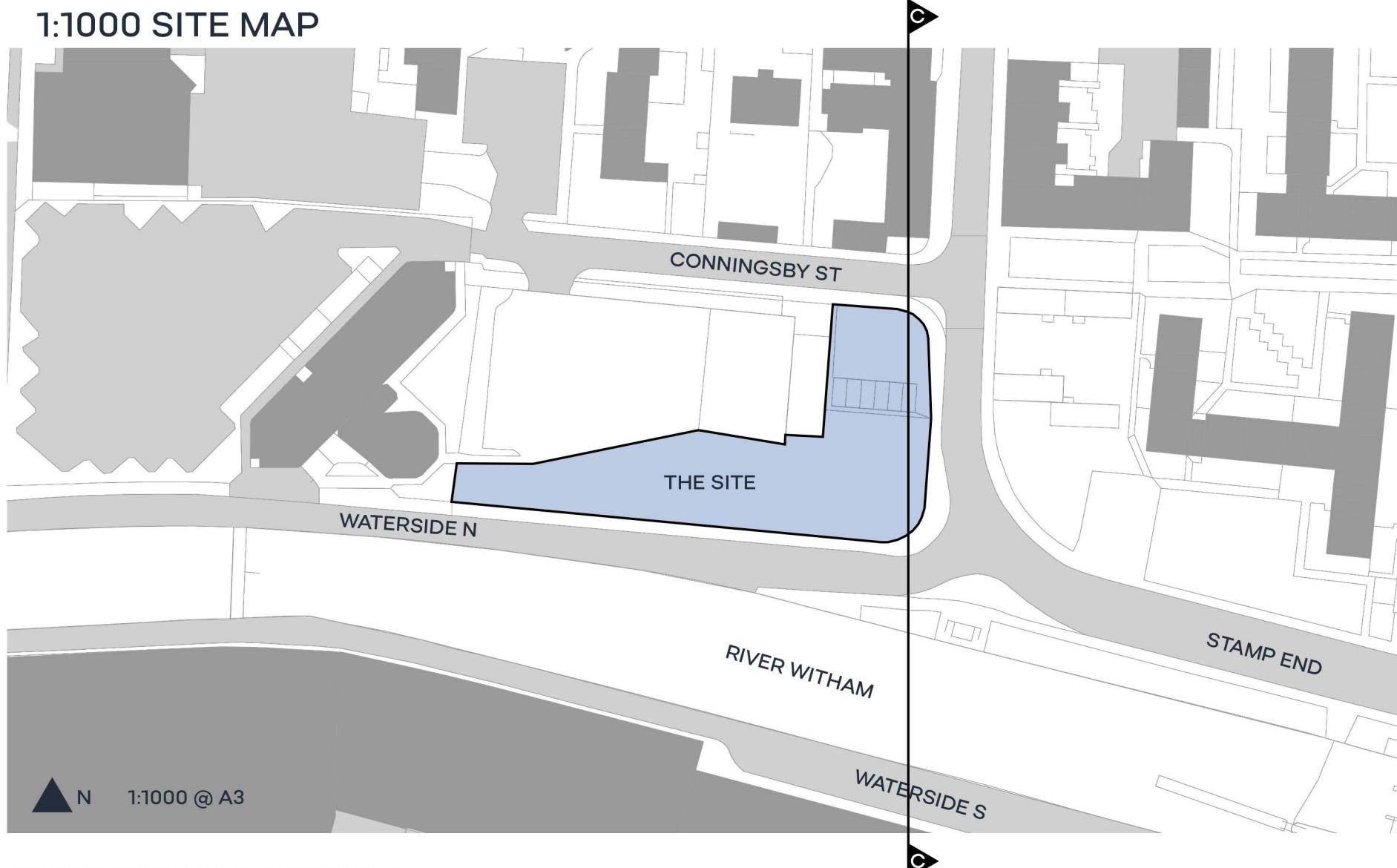
Fertility:
Mixed

Foundations:
Pile Foundations

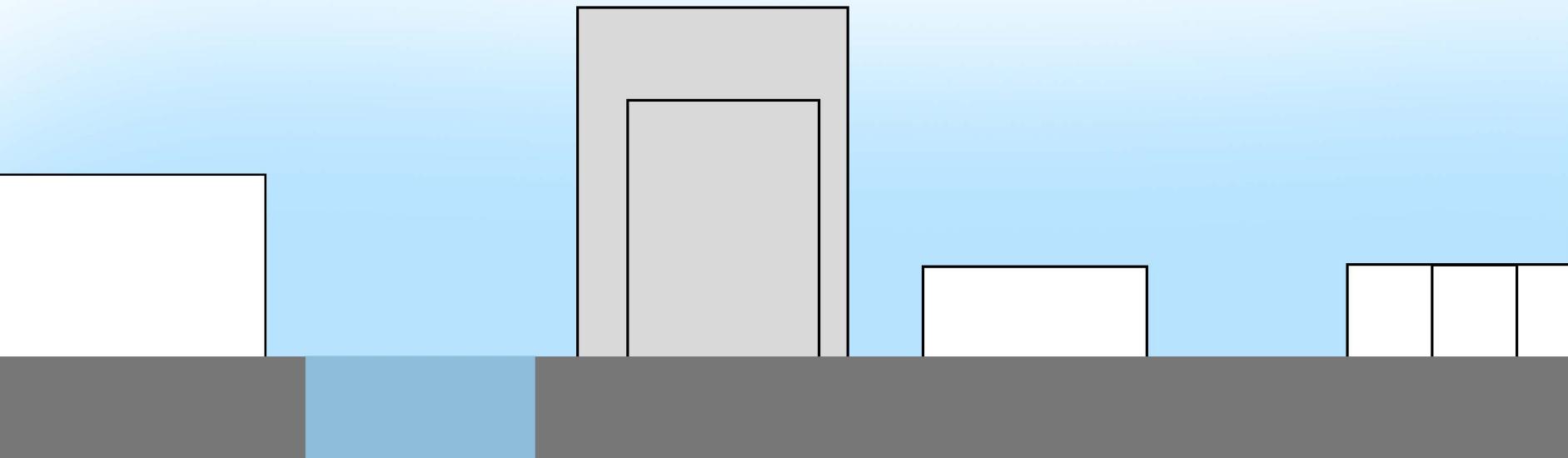
Image from sustainablesoils.org

The earth beneath the site is 'Fen Peat Soil' which decides the foundations for the structure. Due to the wetness in the soil a deep pile foundation will be required to find solid earth to support the building. Peat land is extremely rare in the UK and environmentally friendly because of the high carbon storage. Therefore, the building will have a large greenspace on the ground floor to limit the destruction of the land.

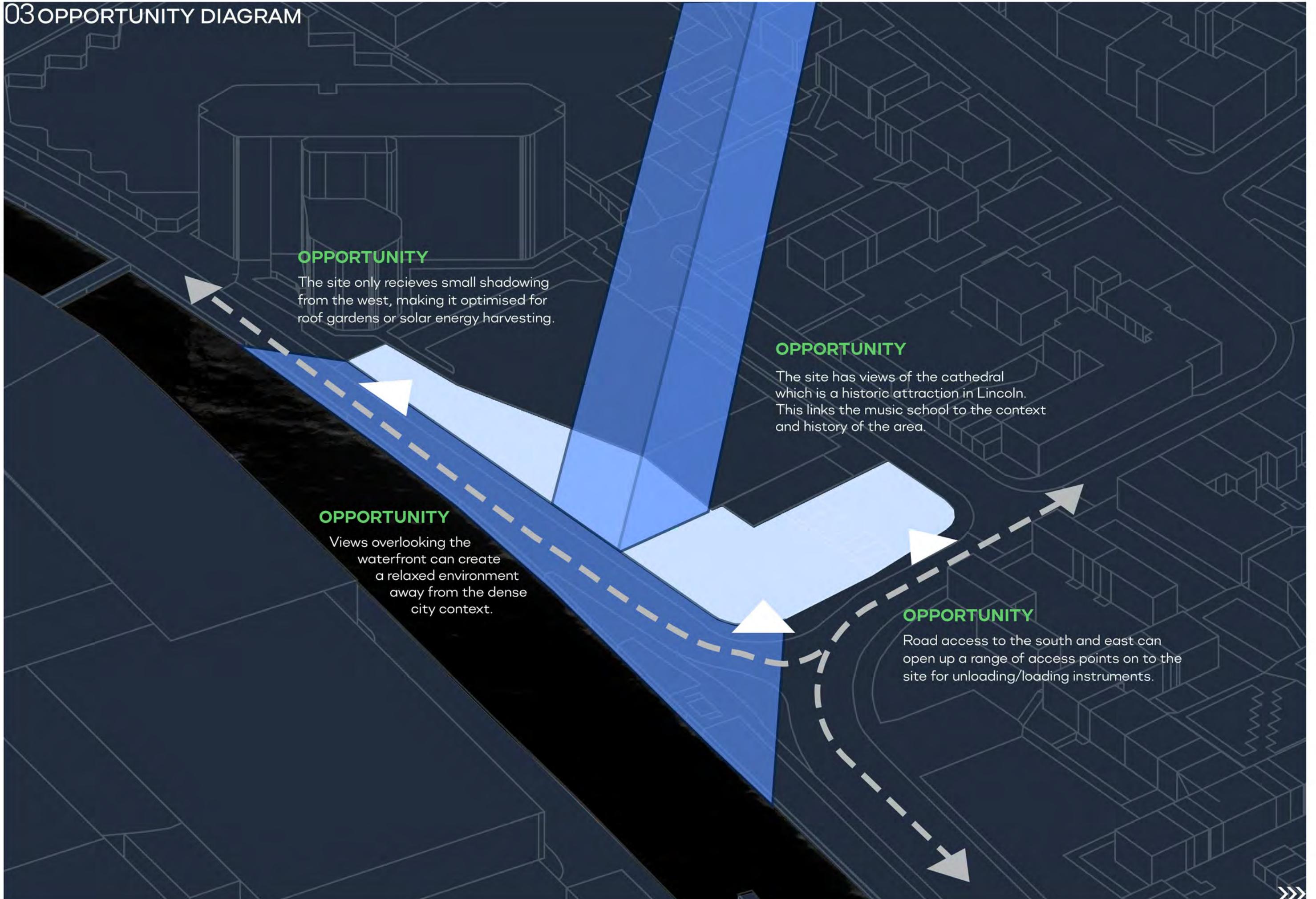
1:1000 SITE MAP



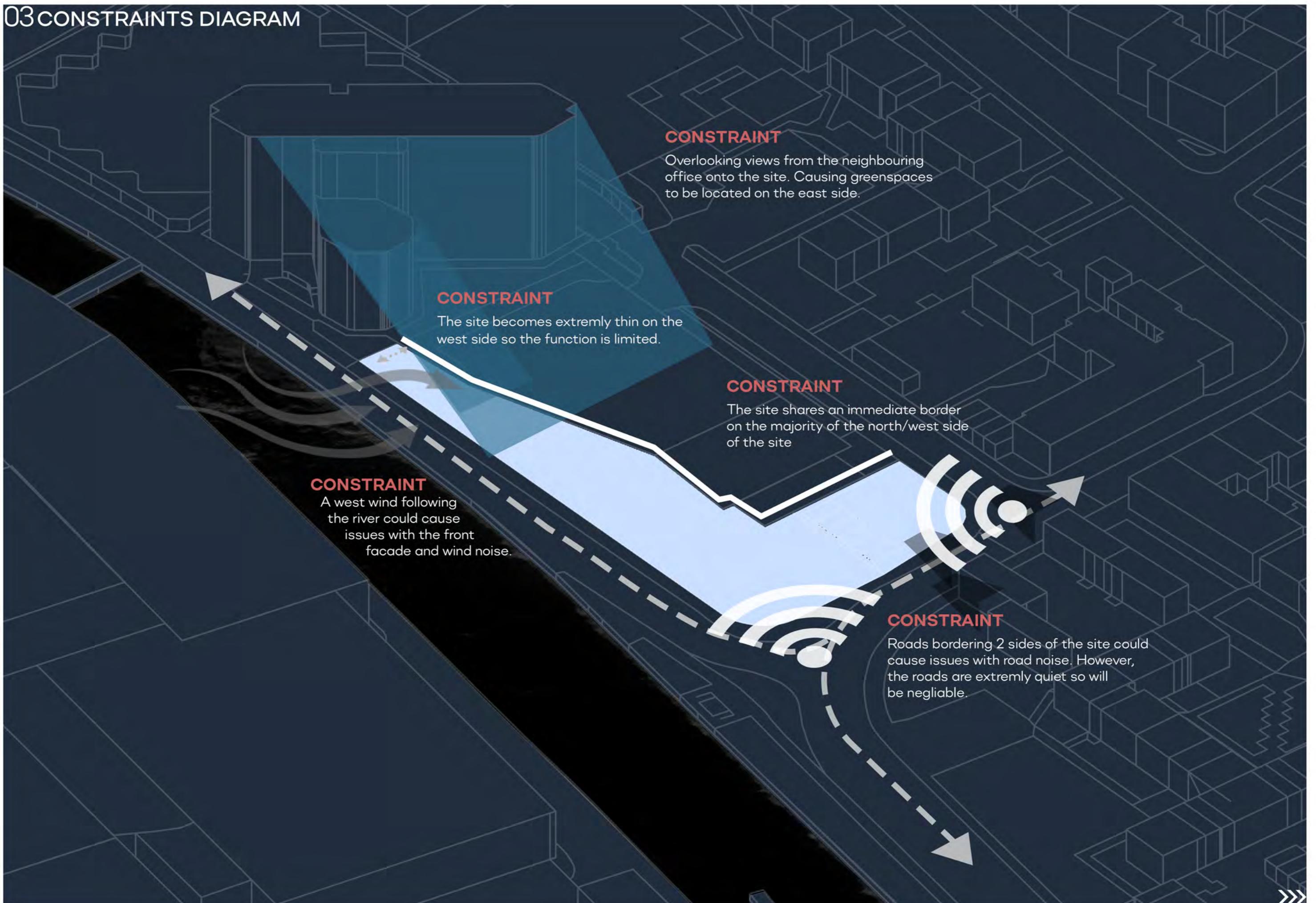
1:1000 SITE FORM ONLY - SECTION C-C
THE MAJORITY OF BUILDINGS IN THE AREA, EXCLUDING OFFICES, ARE 1-3 STORIES HIGH. THEREFORE, TO PREVENT DISTURBING THE RESIDENTIAL AREA THE MUSIC SCHOOL WILL BE LIMITED TO 3 STORIES



03 OPPORTUNITY DIAGRAM



03 CONSTRAINTS DIAGRAM

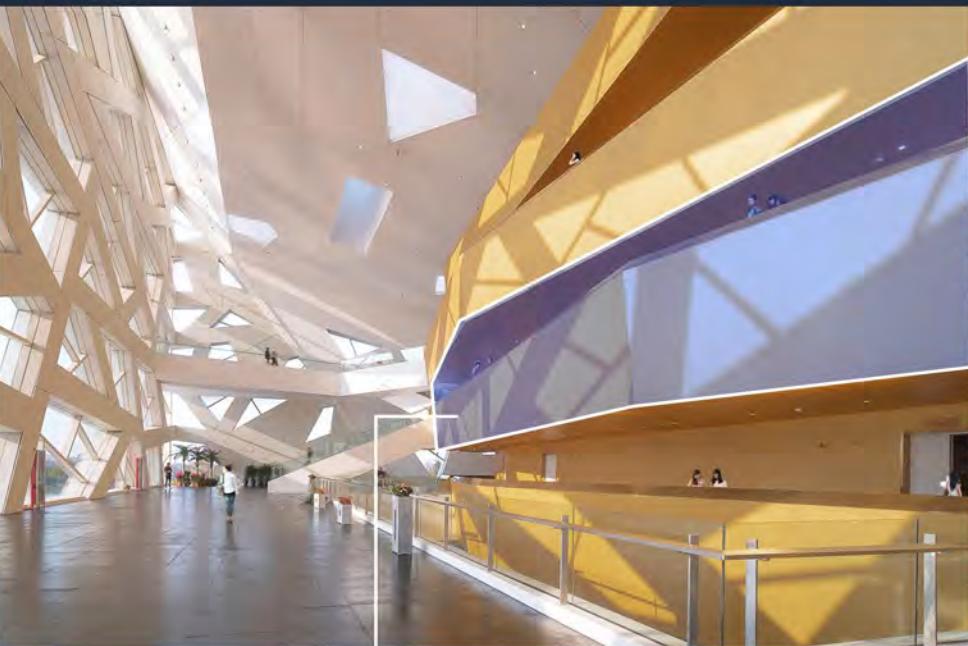


02 CASE STUDIES

Hangzhou Yuhang Opera
Henning Larsen



BUILDING ORIENTED TO HAVE OPEN GREENSPACE AND INTERIOR VIEWS OVER THE WATER. THIS COULD BE USED FOR THE MUSIC SCHOOL TO OVERLOOK THE RIVER WHITAM



SMALL CORRIDORS ARE USED TO ACCESS LEVELS OF THE CONCERT HALL RATHER THAN COMPLETELY DIFFERENT FLOORS



TO REDUCE THE LOWER FOOTPRINT AND DECREASE THE DIUSTANCE TO THE STAGE, LAYERD SEATING HAS BEEN USED. THIS COULD BE USED FOR THE MUSIC SCHOOL BECAUSE THE SITE IS COMPACT.

Chetham's School of Music
Stephenson ISA Studio

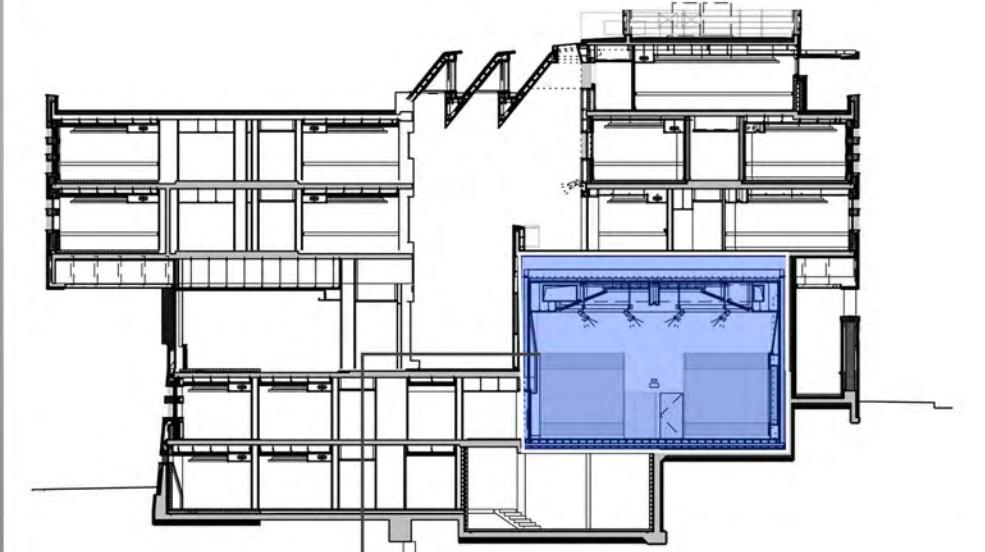


WWW.ARCHDAILY.COM

SHELTERED SPACE PRODUCED BY THE BUILDING FOR OURDOOR ACTIVITES. THIS COULD BE USED IN THE SMUC SCHOOL TO CREATE OUTDOR JAM SPACES.



SLANTED CEILING PANELS ARE USED TO ALLOW IN NATURAL LIGHT WITHOUT THE GLARE OF DIRECT SUNLIGHT. THIS COULD BE USED IN COMMON SPACES TO CREATE A WARM, NATURAL FEELING, OPEN SPACE.



THE SECTION USES 2.5 STOREYS FOR THE CONCERT HALL TO ALLOW FOR TIERED SEATING AND AN ACCESS RAFTER.

04 CONJECTURAL PLAN



SUSTAINABLE DEVELOPMENT GOALS

Ensure healthy lives and promote well-being for all at all ages.



The building will promote both sides of mental health with interaction between people in jam spaces and outdoor seating as well as quiet spaces surrounding the library.



Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.



One of the core drivers for the school is to promote community interaction in music. Therefore, the education will be promoted for all with no bias or exclusion through materiality or layout.



Promote sustained, inclusive and sustainable economic growth, full employment and decent work for all.



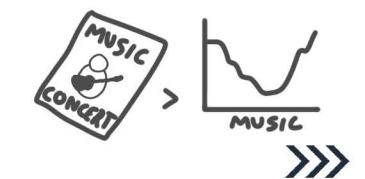
The creative work industry is declining, especially in Music. Therefore, it is an important feature that this school will open up employment for teachers, performers and promote young musicians to enter the industry.



Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

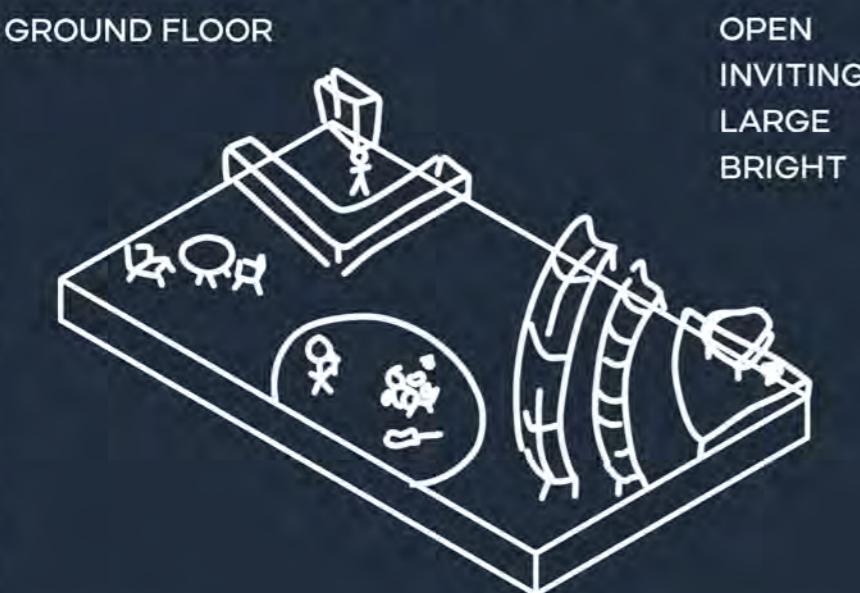


During the pandemic the performing industry has suffered more than most so the creation of the music school will be important to promote the industry after the pandemic and within Lincoln where it is not represented.

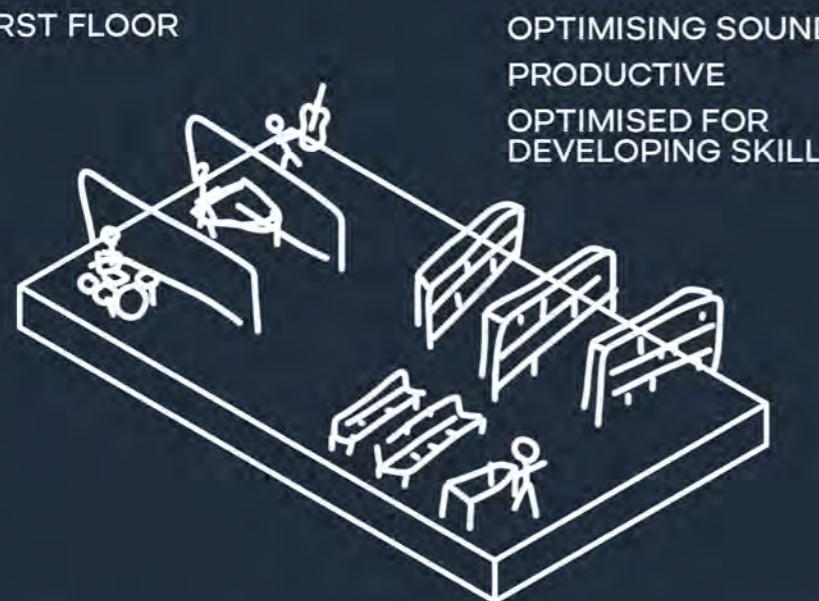


03 MUSIC SCHOOL FUNCTION

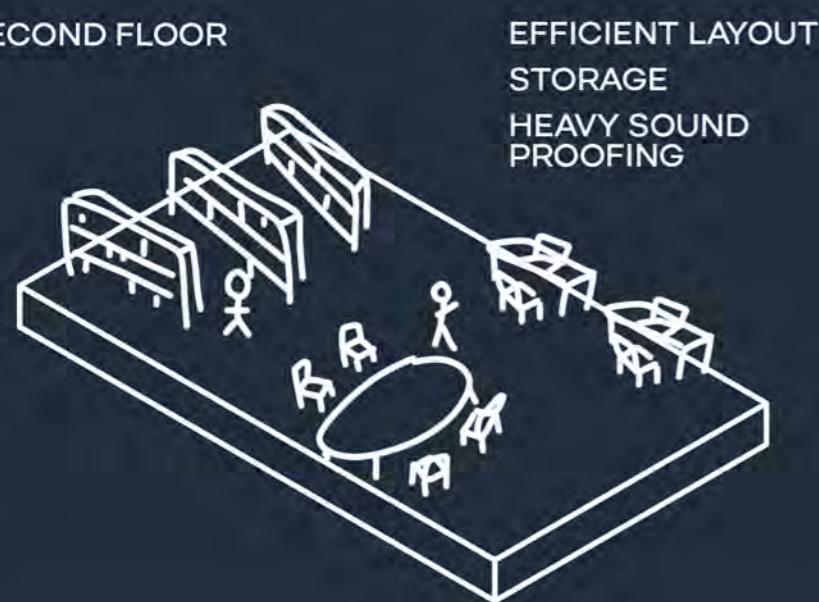
THE MUSIC FLOOR



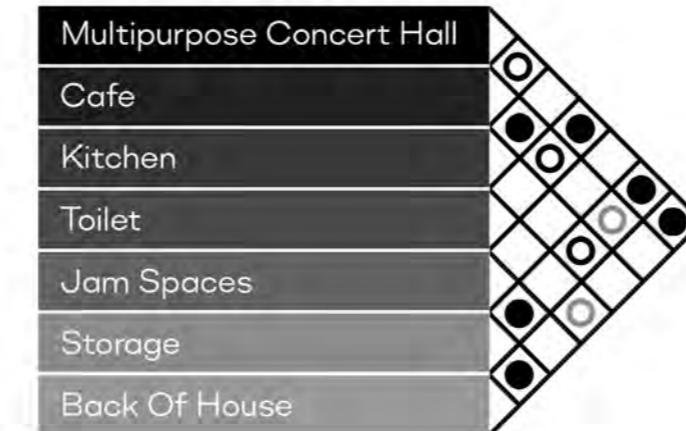
THE LEARNING FLOOR



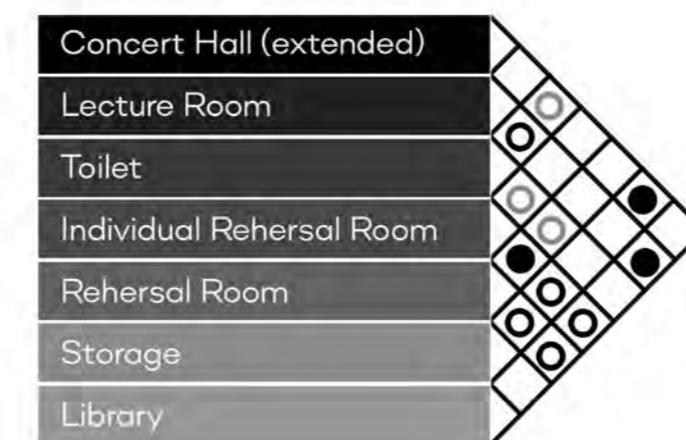
THE OFFICE FLOOR



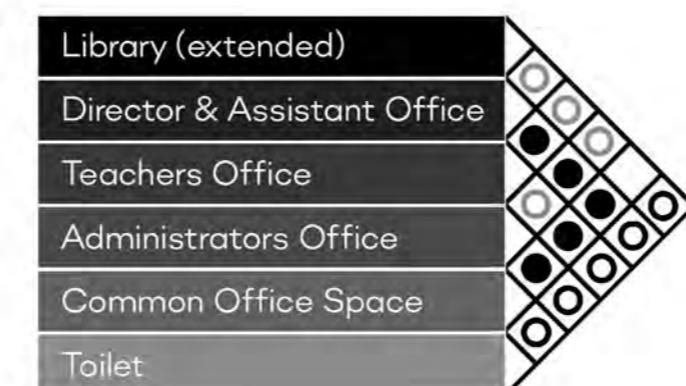
THE MUSIC FLOOR



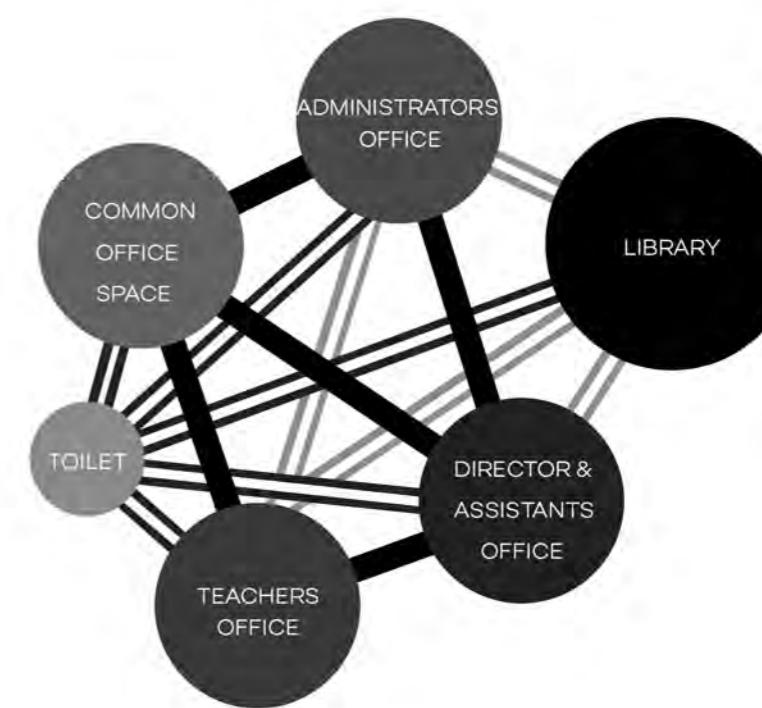
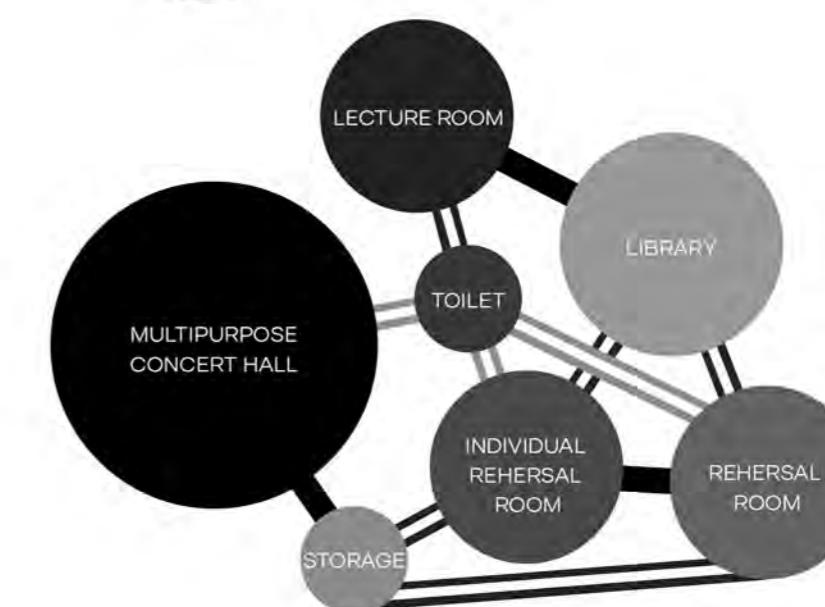
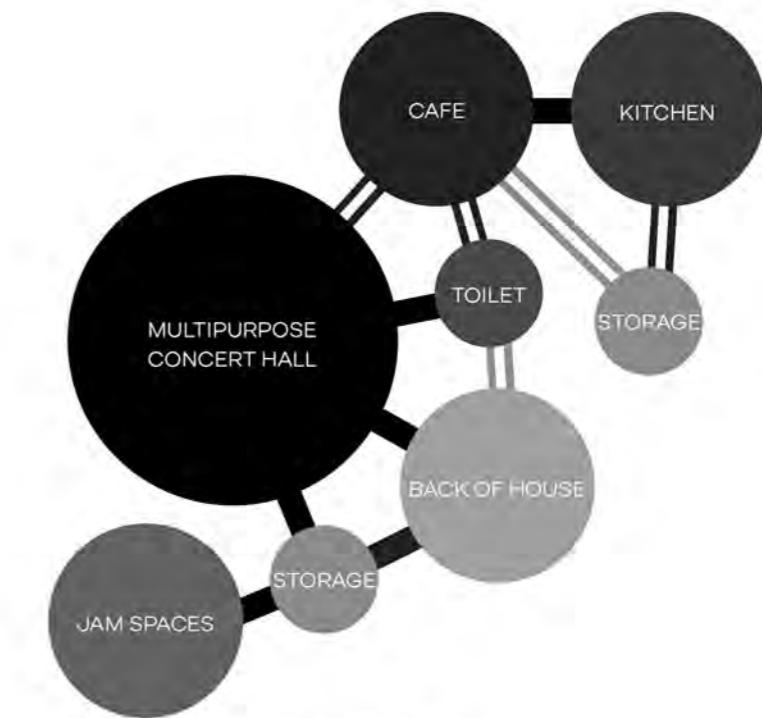
THE LEARNING FLOOR



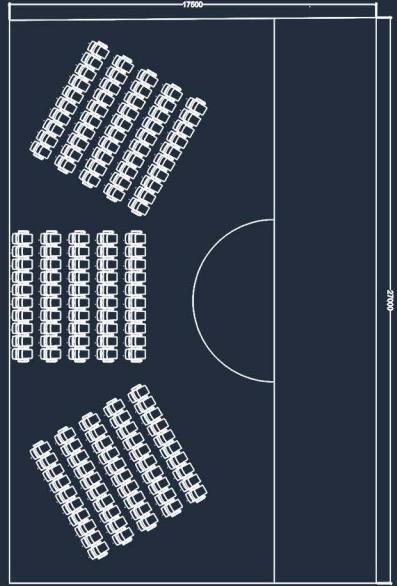
THE OFFICE FLOOR



● MUST
○ SHOULD
○ COULD



03 FLOOR BREAKDOWN



CONCERT HALL

FLOOR: G&1
TRAITS: LARGE, NO VIEWS
NEEDED, DIRECT
ACCESS NEEDED.

QUANTITY: 1

OFFICE SPACES

FLOOR: 2
TRAITS: QUIETNESS
NEEDED, SMALL, VIEWS
PREFERRED

QUANTITY: 8

PRACTICE SPACES

FLOOR: 1
TRAITS: GOOD ACCESS,
VIEWS, LITTLE NOISE
POLUTION

QUANTITY: 10

LIBRARY/LECTURE HALL

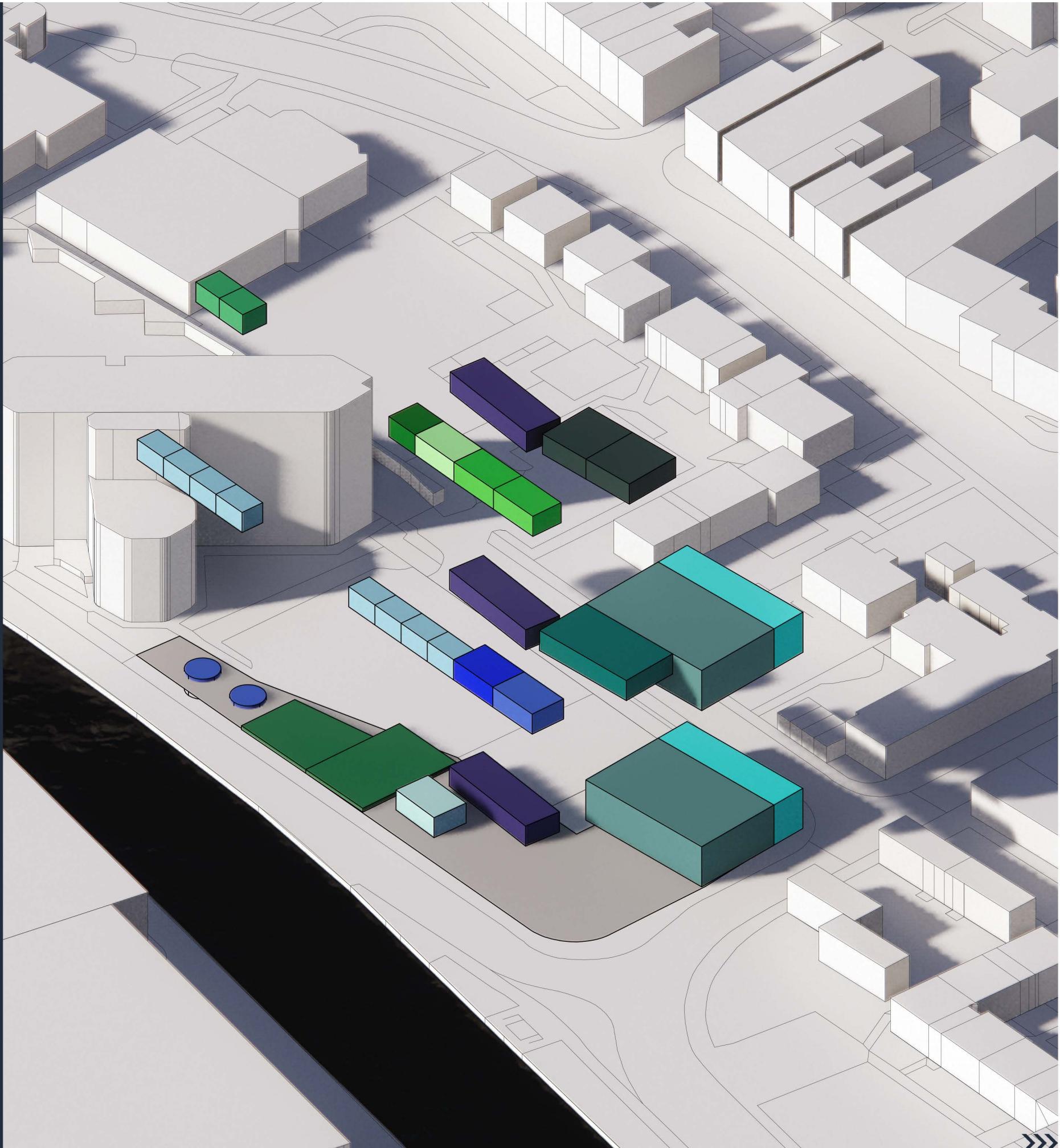
FLOOR: 1&2
TRAITS: LARGE, GOOD
ACCESS, VUNERABLE
TO NOISE

QUANTITY: 3

JAM SPACE/CAFE

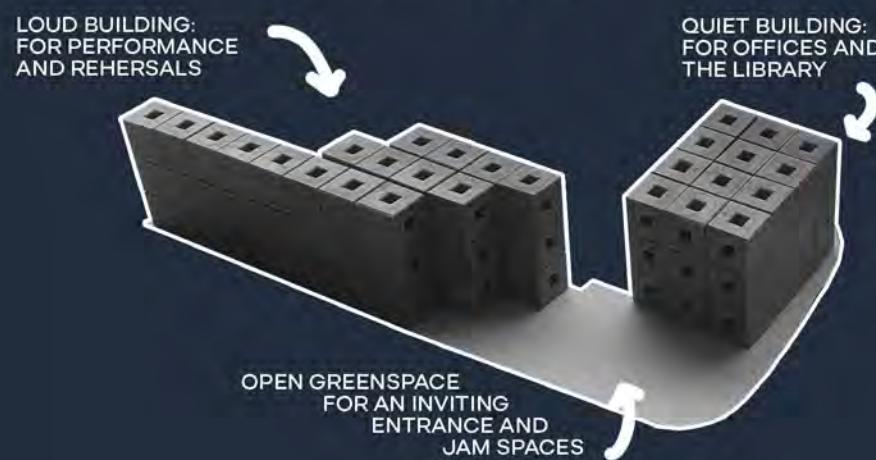
FLOOR: G
TRAITS: GOOD VIEWS,
GOOD ACCESS, DESIGN
FEATURE

QUANTITY: 2

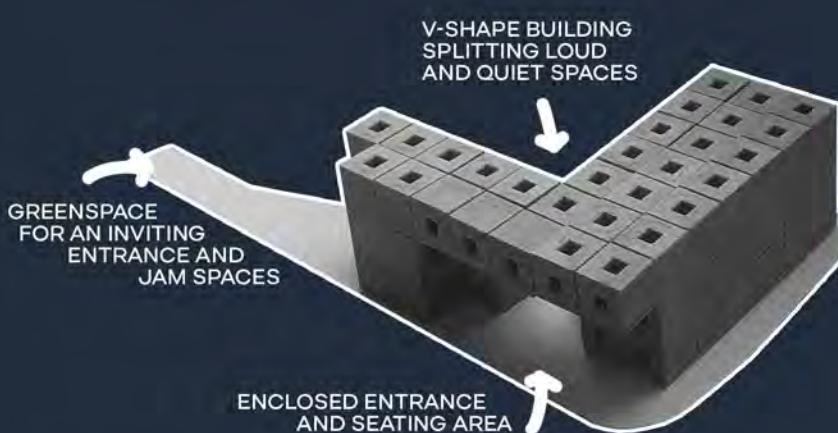


07 CRAFTING CONCEPTS

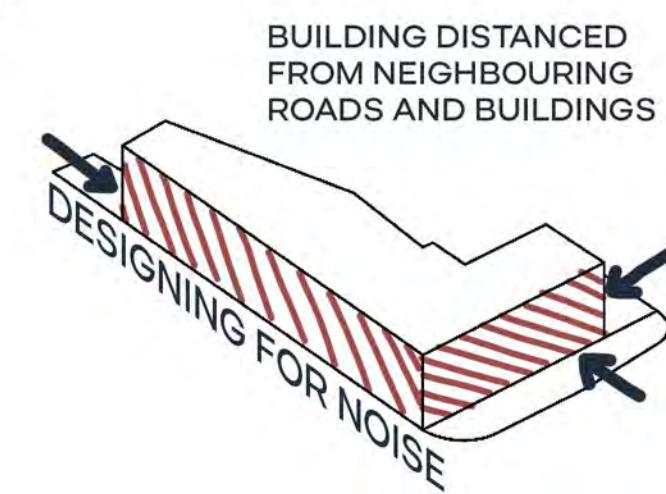
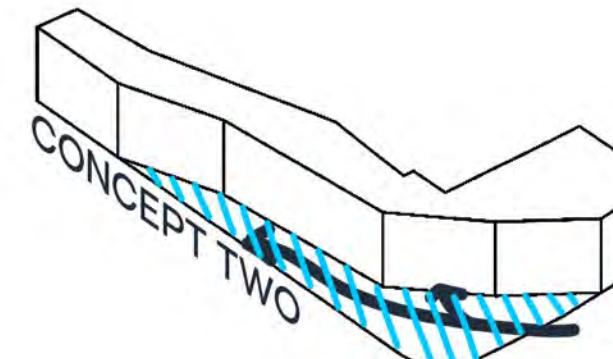
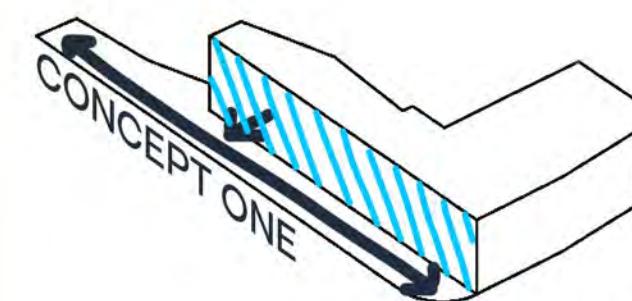
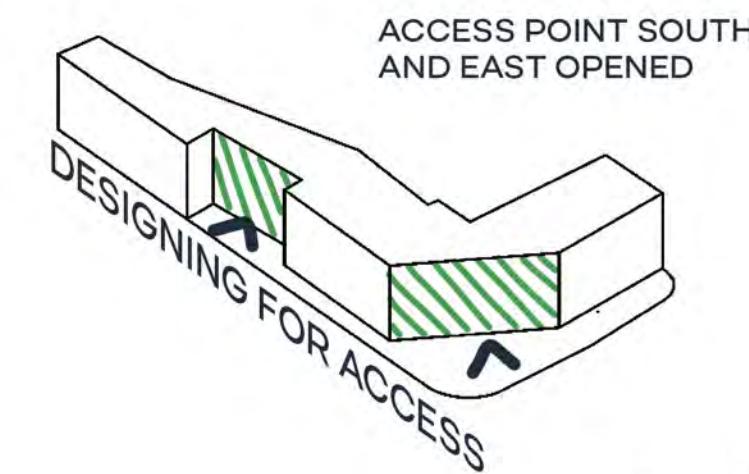
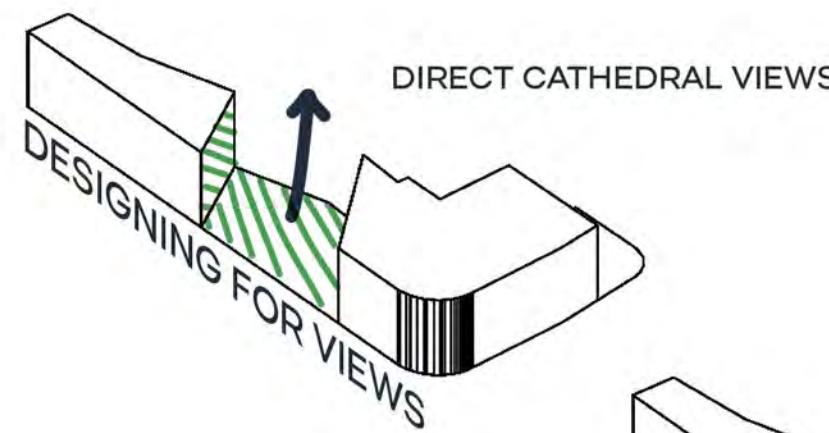
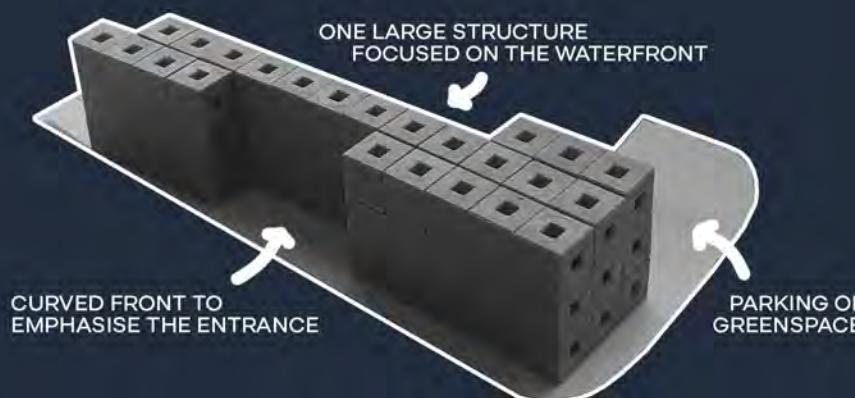
PHYSICAL MODEL EXPERIMENT #1



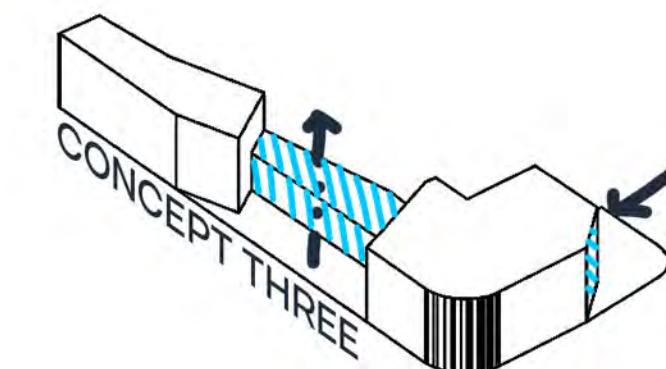
PHYSICAL MODEL EXPERIMENT #2



PHYSICAL MODEL EXPERIMENT #3



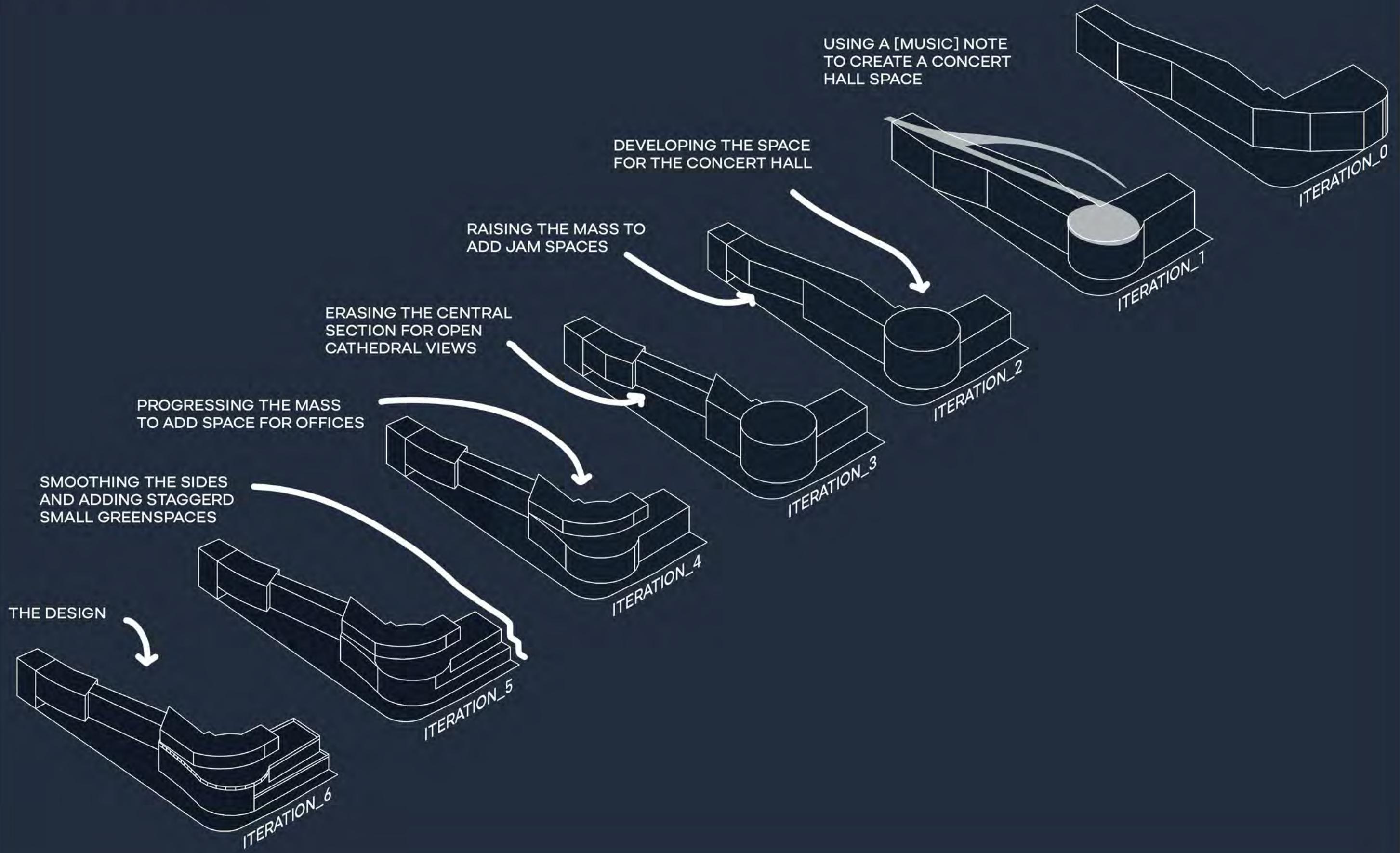
LARGE OPEN GREENSPACE
FULLY ORIENTATED
TOWARDS THE WATER



A FORWARD DESIGN WITH
A GLASS WALKWAY TO
CAPTURE CATHEDRAL VIEWS

08 DEVELOPING DESIGNS

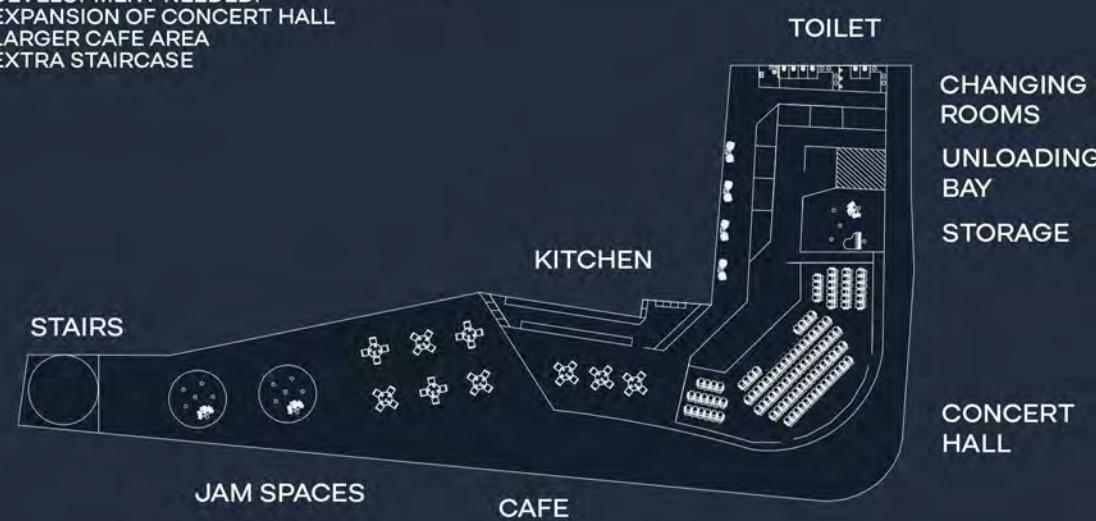
BREATHING [MUSIC] INTO THE BONES OF THE SCHOOL



09 TESTING THE DEVELOPMENT IDEA

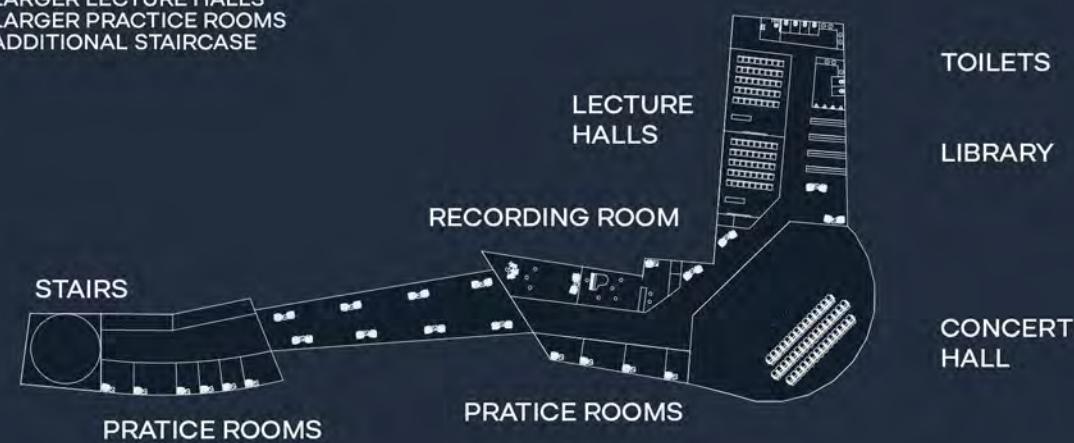
GROUND FLOOR - PERFORM

DEVELOPMENT NEEDED:
EXPANSION OF CONCERT HALL
LARGER CAFE AREA
EXTRA STAIRCASE



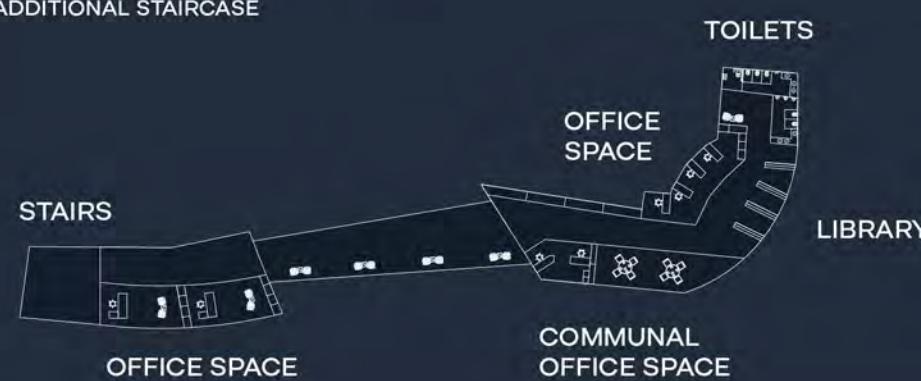
FIRST FLOOR - PRACTICE

DEVELOPMENT NEEDED:
EXPANSION OF CONCERT HALL
LARGER LECTURE HALLS
LARGER PRACTICE ROOMS
ADDITIONAL STAIRCASE



SECOND FLOOR - STUDY

DEVELOPMENT NEEDED:
EXPANSION OF OFFICES
ADDITIONAL STAIRCASE



WHAT WENT WELL



EVEN BETTER IF

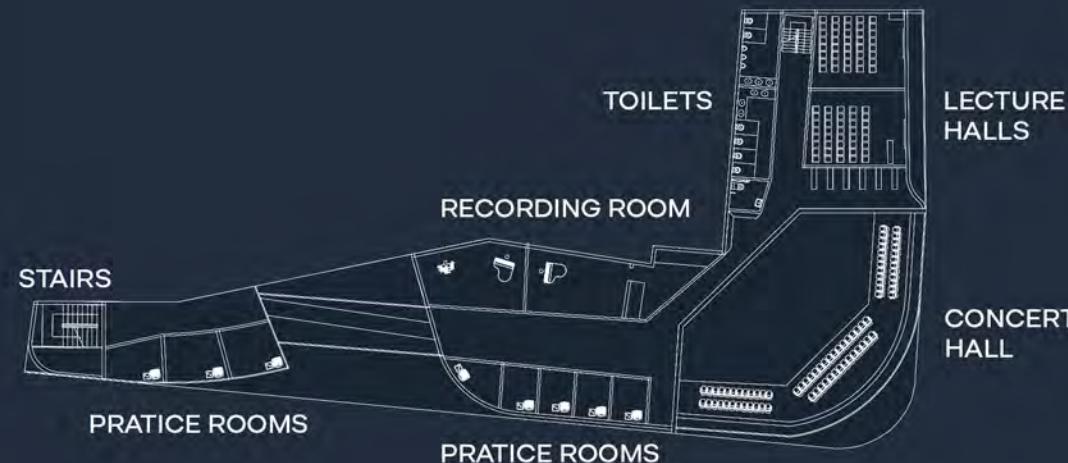


10 ADVANCING THE MUSIC SCHOOL DESIGN

GROUND FLOOR - PERFORM



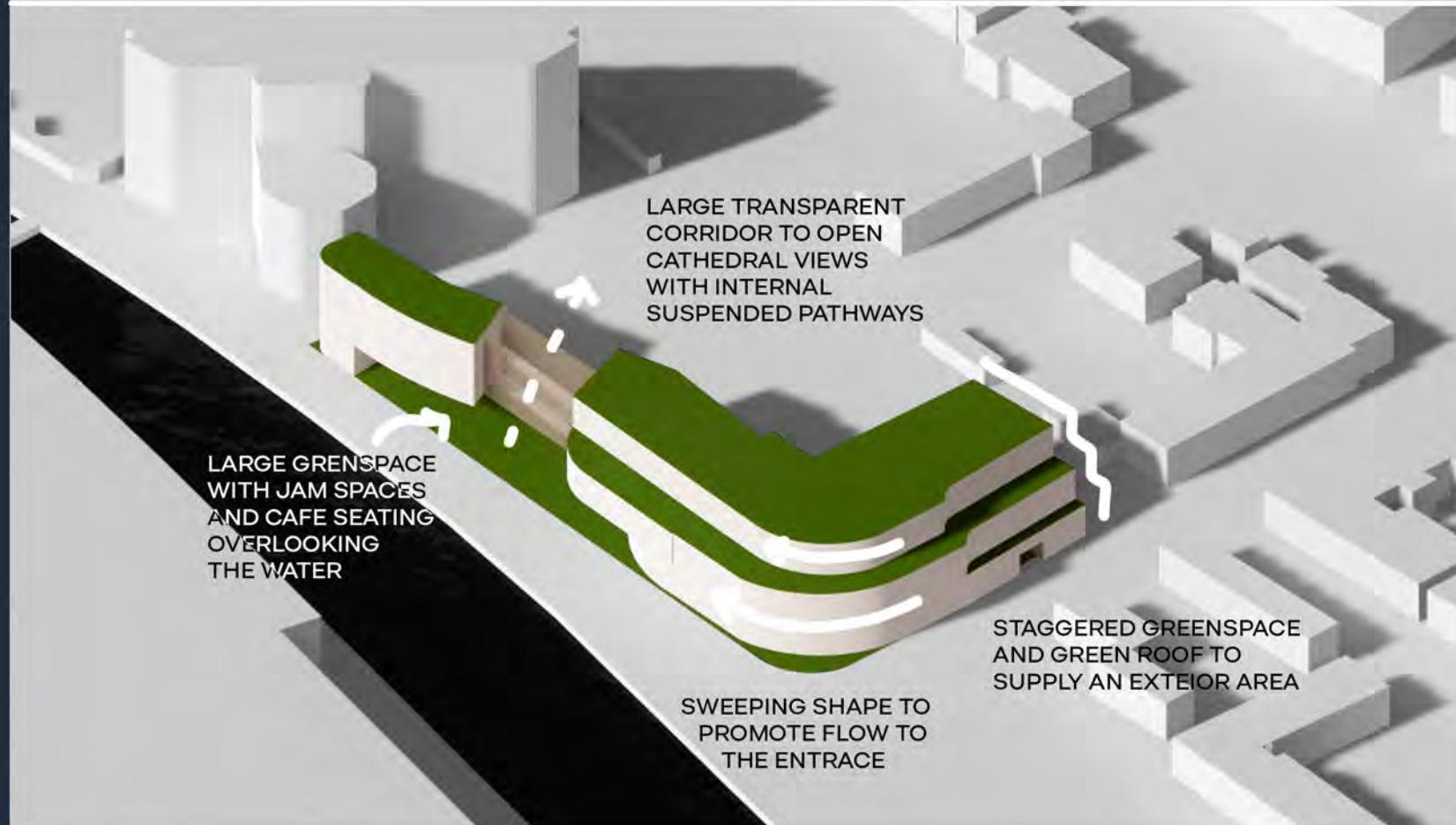
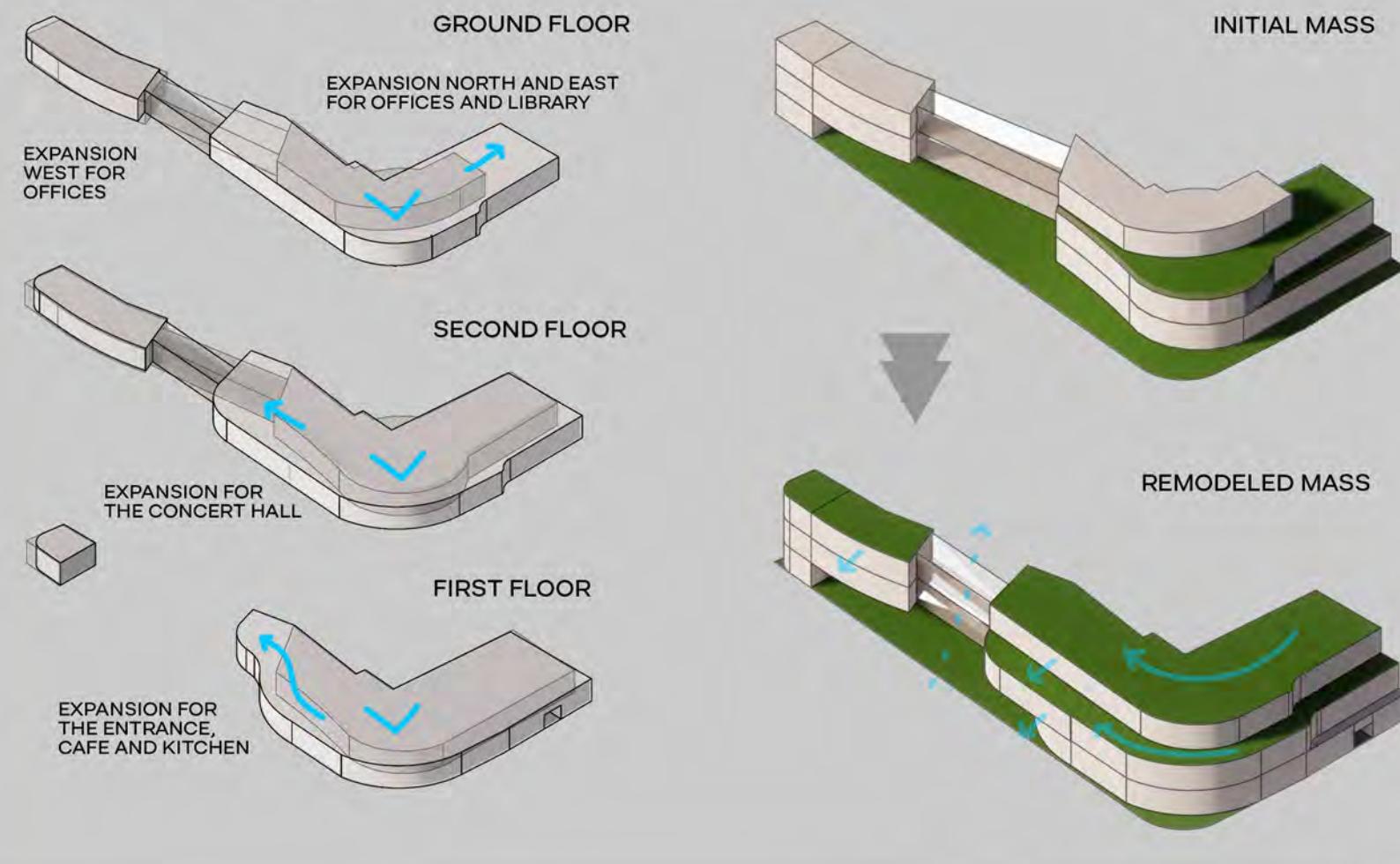
FIRST FLOOR - PRACTICE



SECOND FLOOR - STUDY

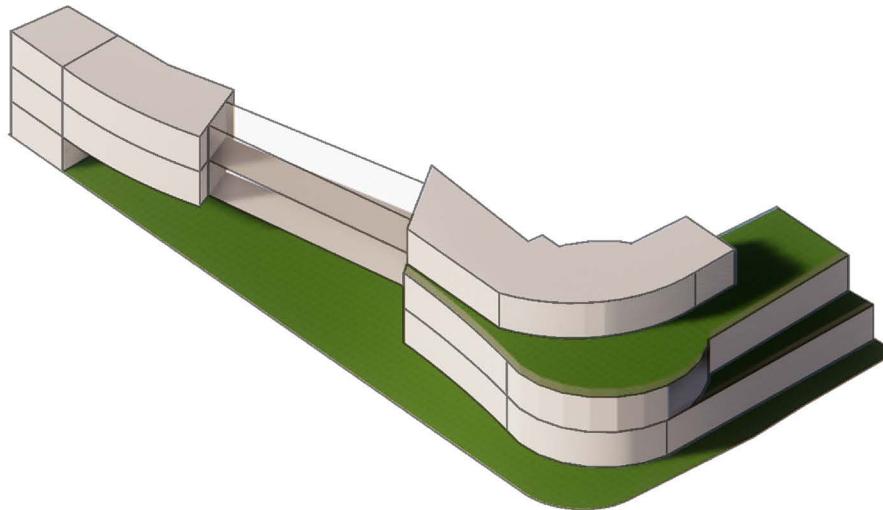


MASING PROGRESSION

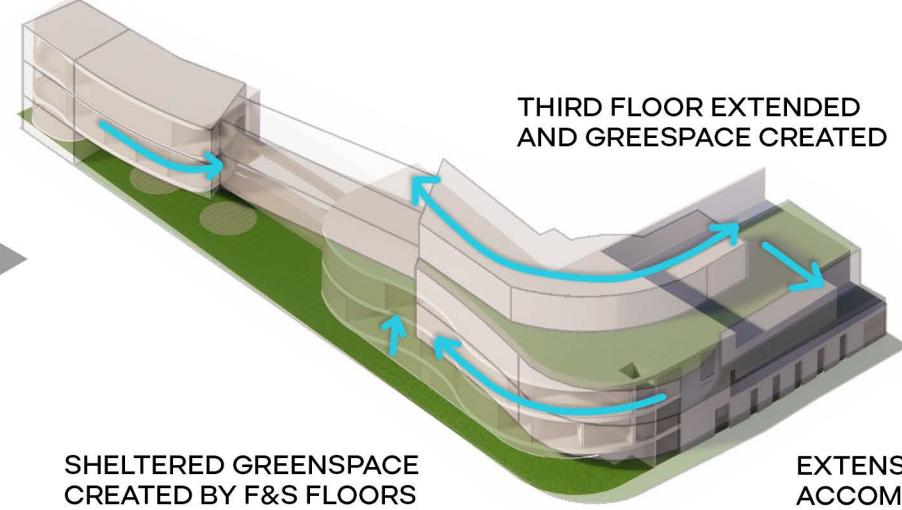


10 ADVANCING THE MUSIC SCHOOL DESIGN

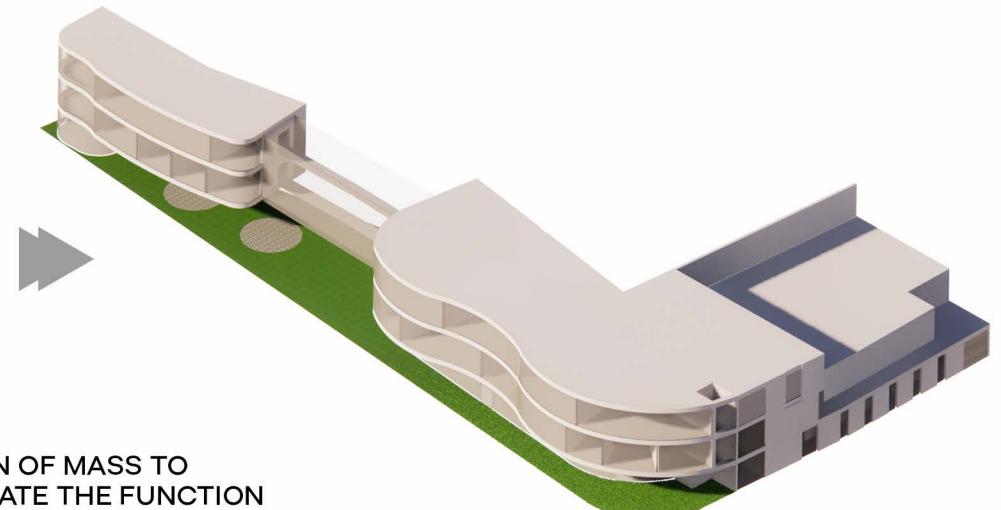
INITIAL MASS



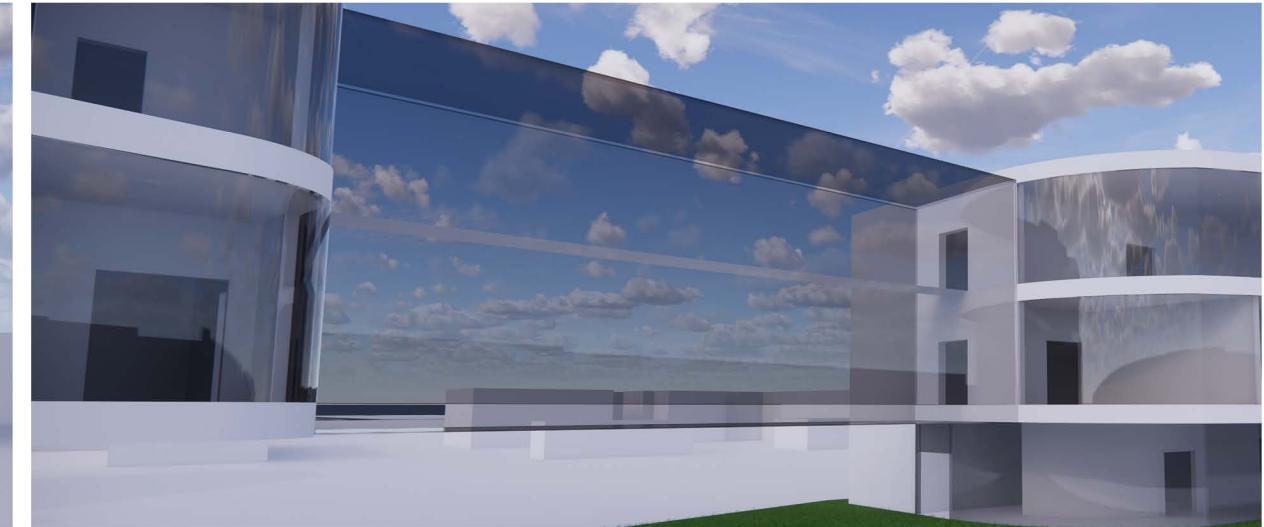
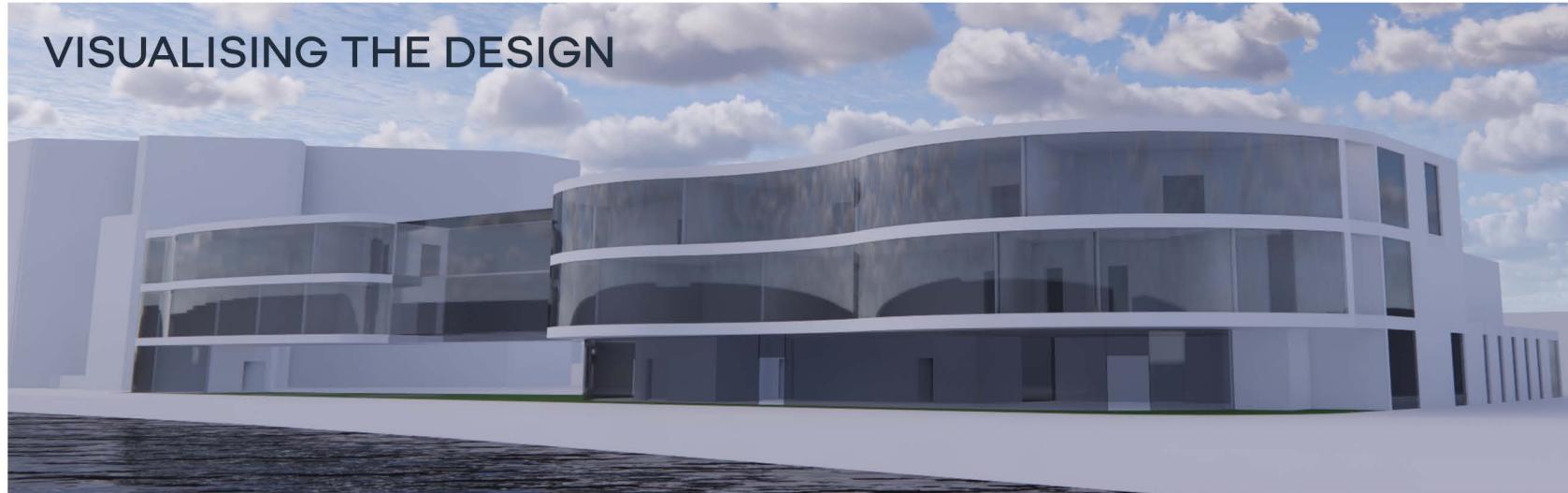
DEVELOPMENT STEPS



REFORMED MASS



VISUALISING THE DESIGN



INITIAL RESPONSE IDEA

- USING THE INDUSTRIAL THEME TO BREAKDOWN THE FACADE, SIMILAR TO THE WAREHOUSES



PROS

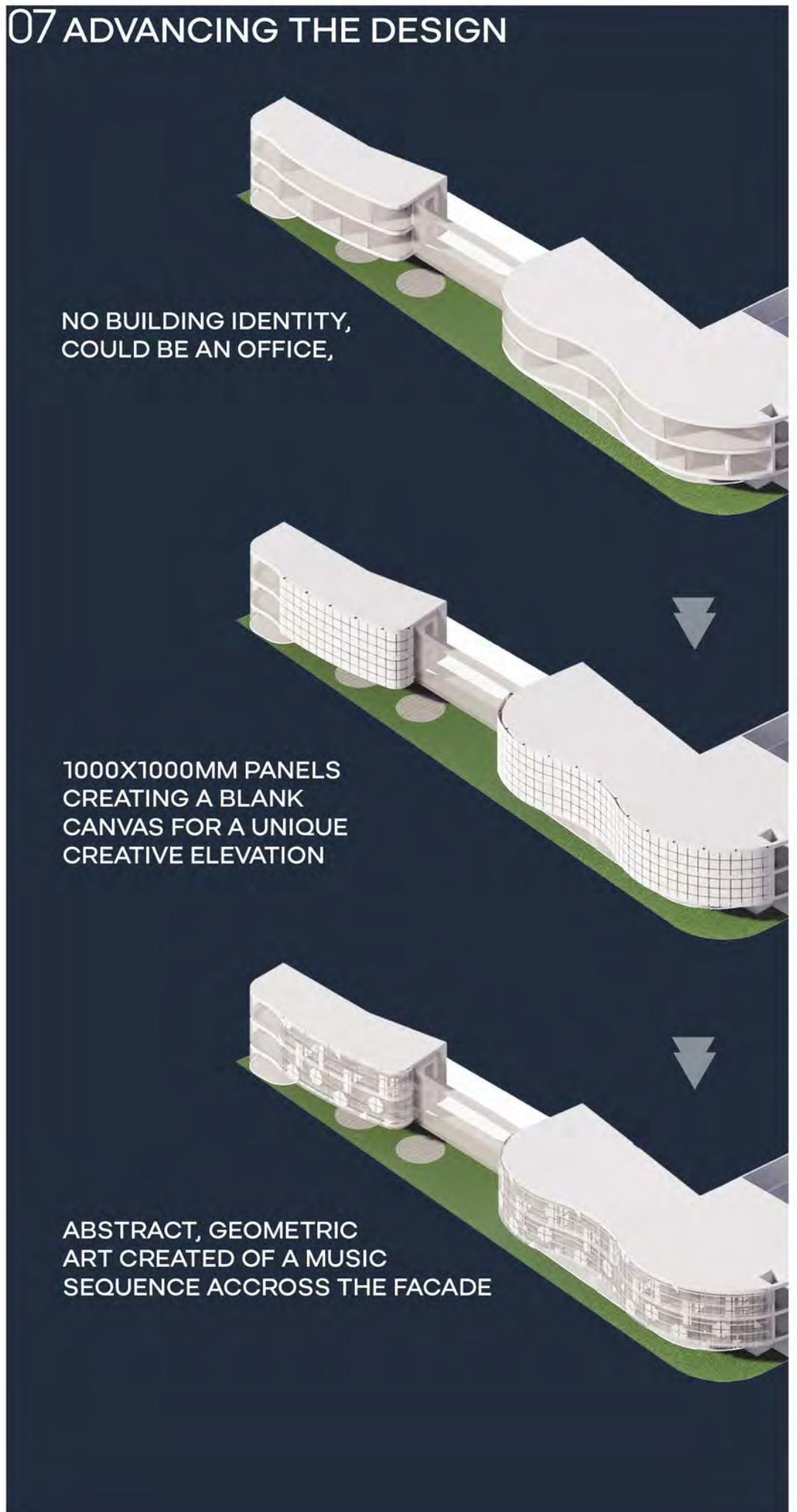
- RELATED TO THE AREA
- REMOVES OFFICE AESTHETIC
- RELATED TO SITE CONTEXT



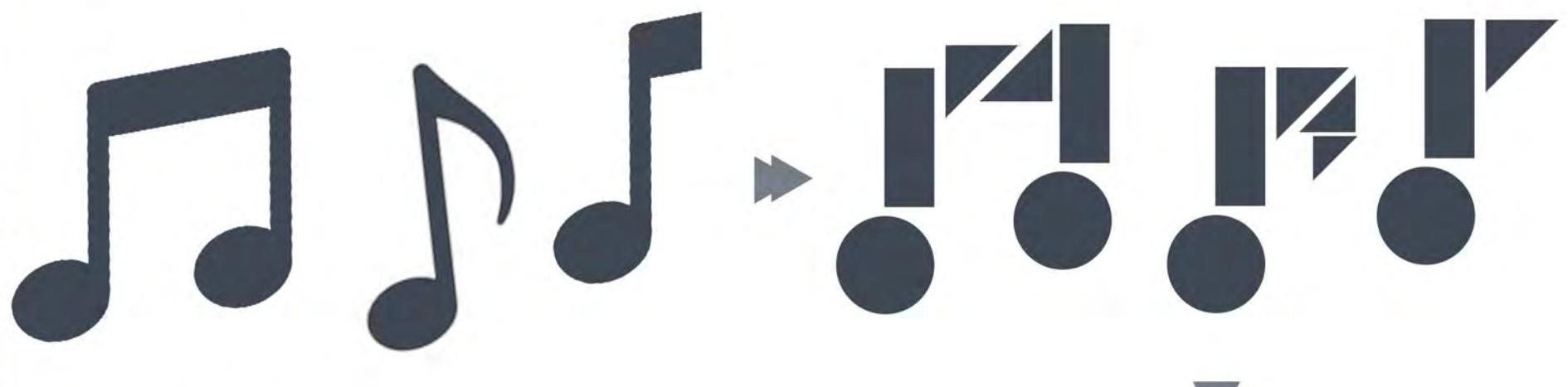
CONS

- DOESN'T REPRESENT A MUSIC SCHOOL
- UNWELCOMING

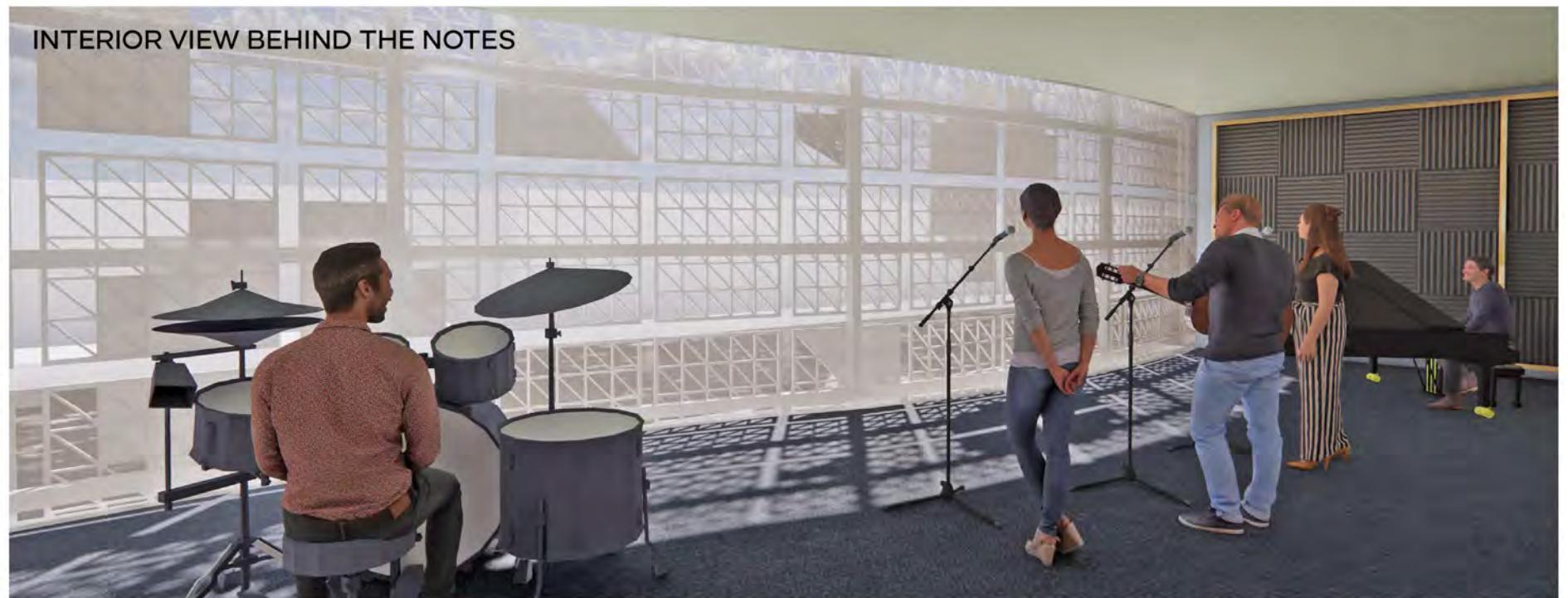
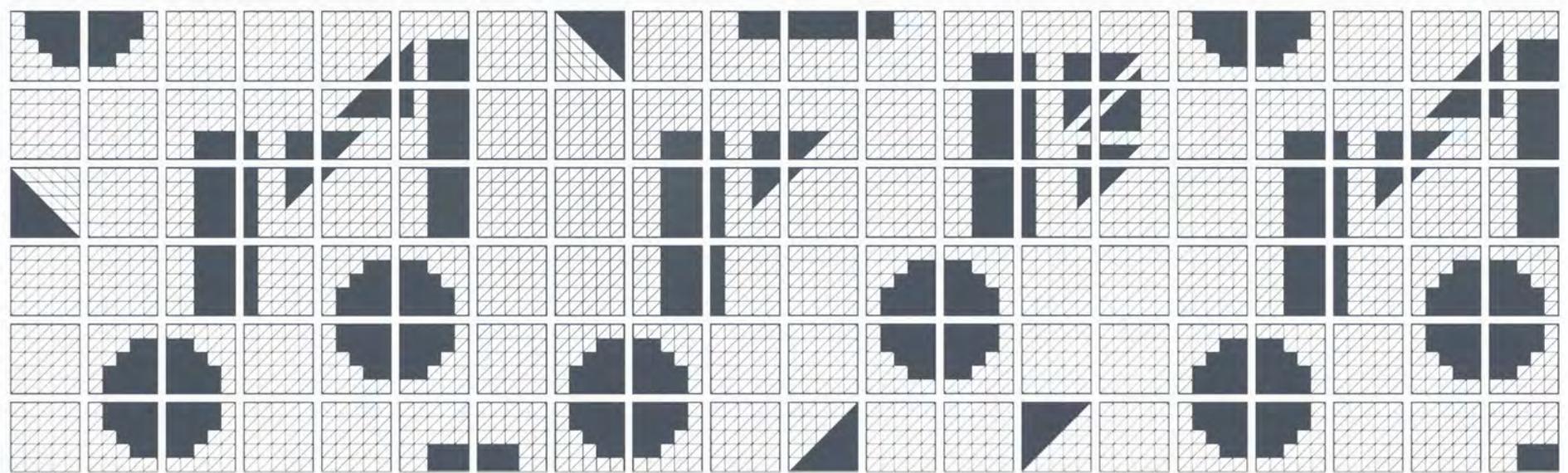
07 ADVANCING THE DESIGN



DEVELOPING THE FAÇADE ABSTRACT INTERPRETATION

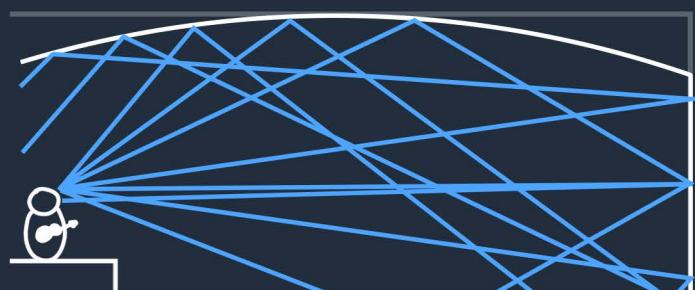
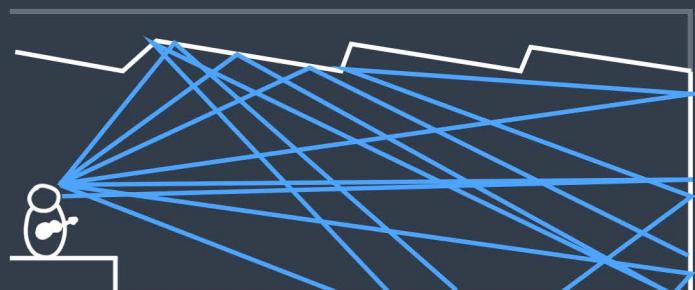
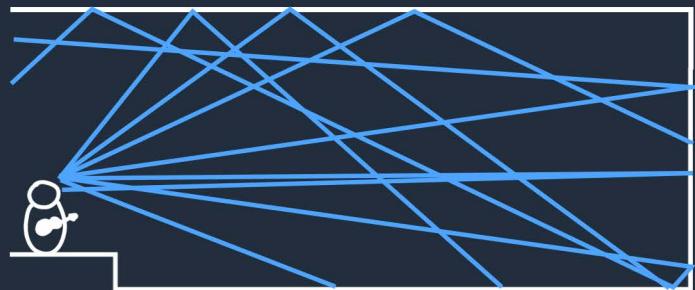


SEMI PERMABLE GRILLE



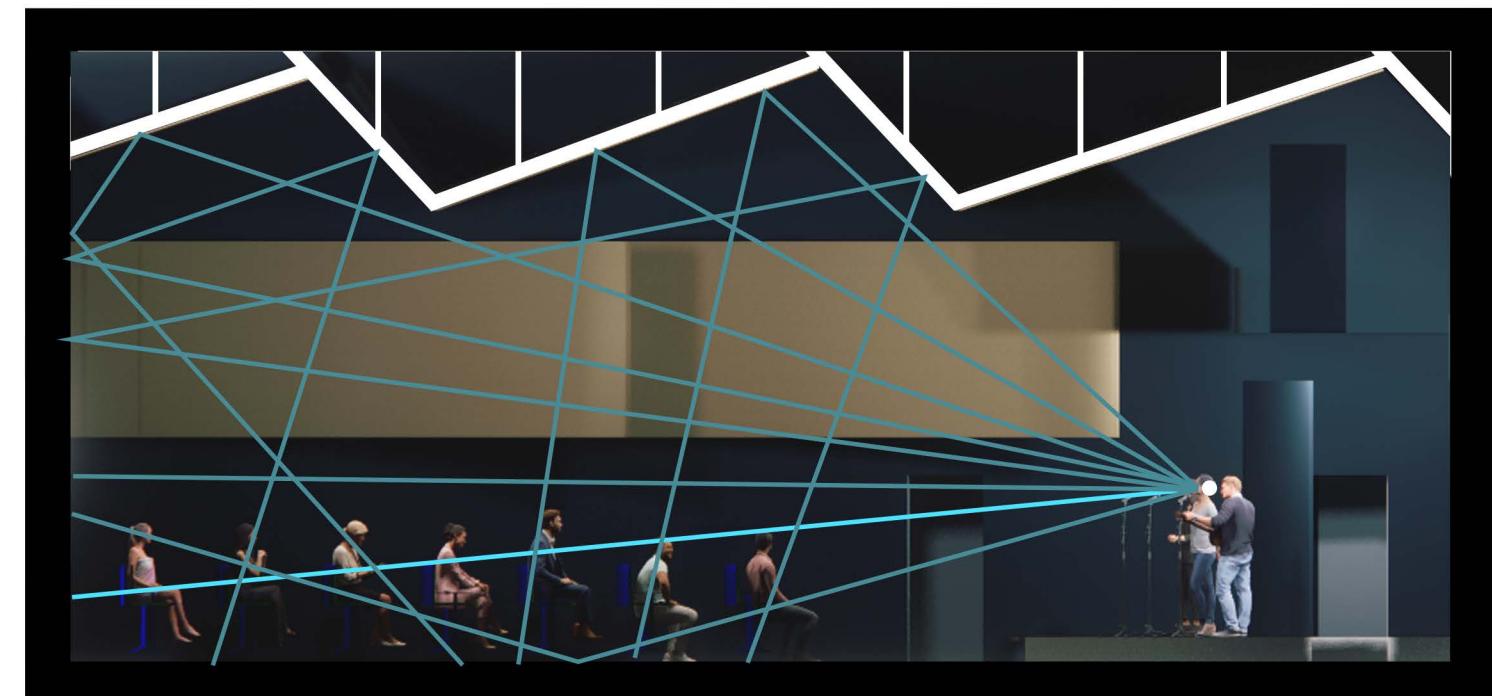
14 SOUND PROPERTIES

TESTING PROPERTIES OF SOUND
■ PROJECTED REVERBERATION



CONCERT HALL EXPERIMENTS

REVERBERATION TEST



■ DIRECT SOUND PATH
■ REFLECTIVE SOUND PATH

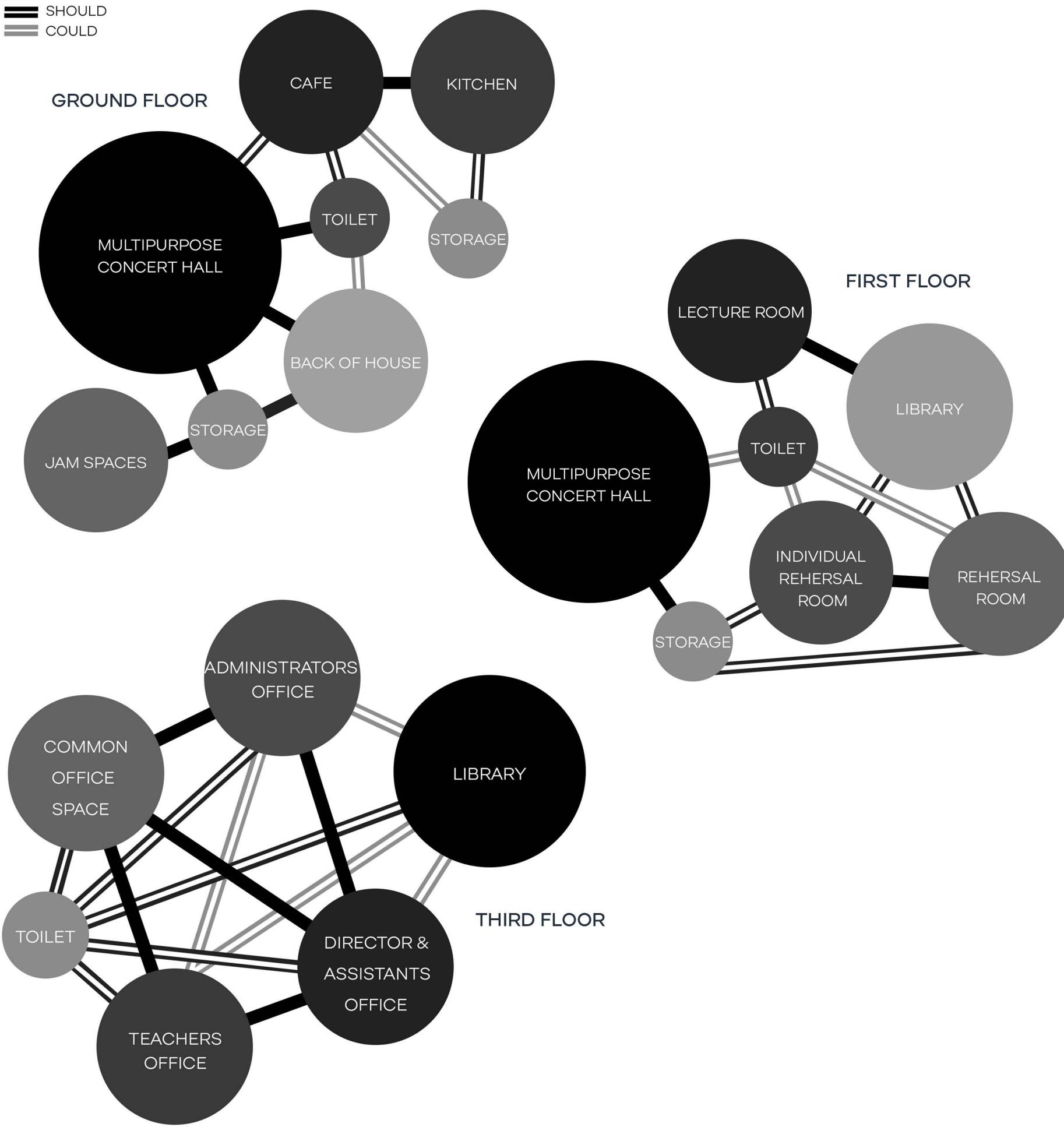
THE CONCERT HALL CEILING HAS BEEN
OPTIMISED FOR THE ACOUSTICS TO BE
DIRECTED TO THE AUDIENCE



>>>

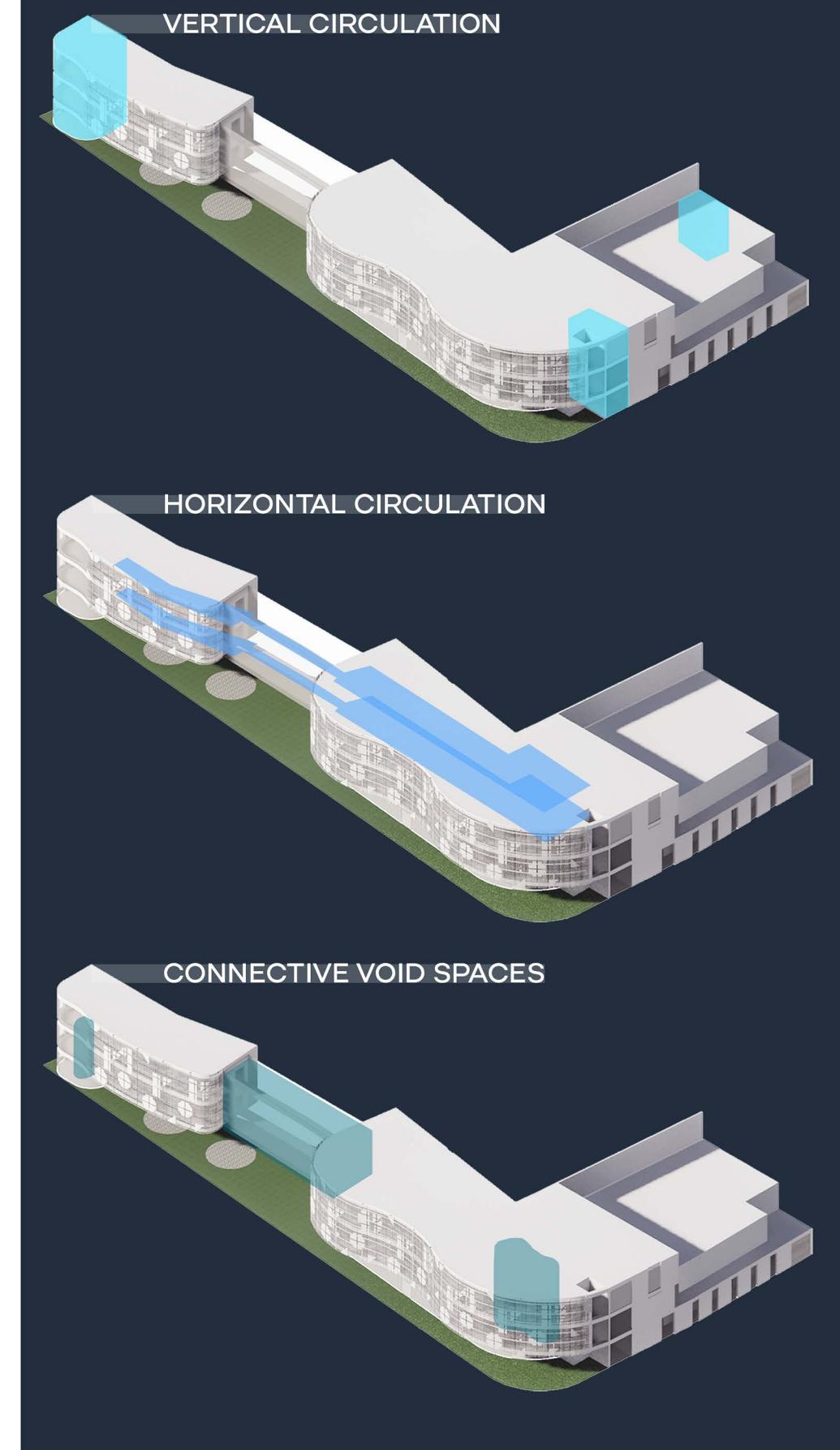
03 MANIFESTING SPACES

MUST
SHOULD
COULD



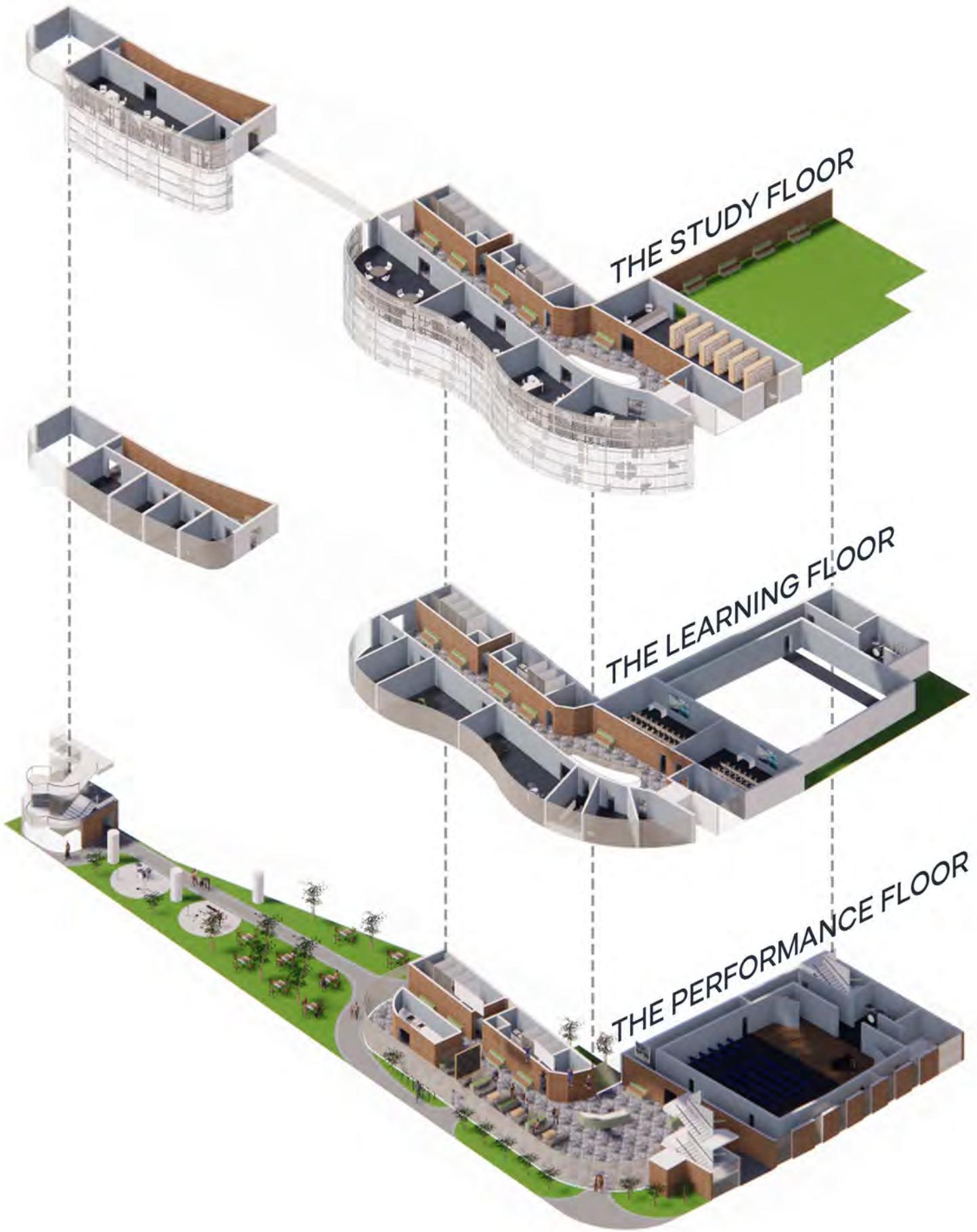
BUILDING CIRCULATION

THE FLOORS ARE SEPERATED DUE TO SOUND TRAVEL AND TO AVOID COMPLETE SEPARATION, GOOD CIRCULITON AND VOIDS WERE NEEDED TO MAKE THE BUILDING FUNCTION AS ONE STRUCTURE.



06 THE BUILDING LAYOUT

● MUST
○ SHOULD
○ COULD



OFFICES

- DIRECTORS OFFICE
- ASSISTANT OFFICE
- TEACHERS OFFICE
- ADMINISTRATORS OFFICE
- COMMON OFFICE SPACE

TOILETS

LIBRARY

STAIRS

MULTI PURPOSE CONCERT HALL

LECTURE ROOM

- LECTURE ROOM #1
- LECTURE ROOM #2

TOILETS

STORAGE

INDIVIDUAL REHERSAL ROOMS

- ROOMS #1 TO #9

GROUP REHERSAL ROOMS

- ROOMS #1 TO #2
- RECORDING STUDIO

STAIRS

MULTI PURPOSE CONCERT HALL

TOILETS

STORAGE

CAFE

CAFE KITCHEN

LOADING BAY

STAIRS

Library (extended)

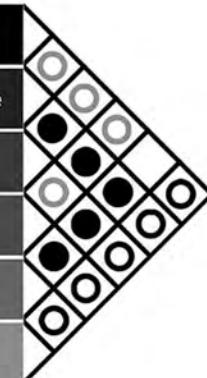
Director & Assistant Office

Teachers Office

Administrators Office

Common Office Space

Toilet



Concert Hall (extended)

Lecture Room

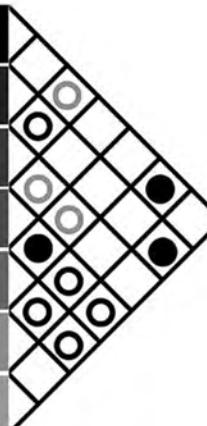
Toilet

Individual Rehersal Room

Rehersal Room

Storage

Library



Multipurpose Concert Hall

Cafe

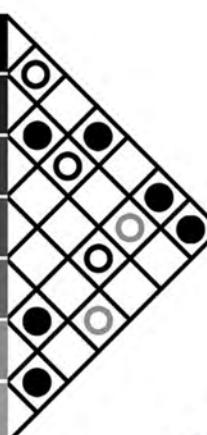
Kitchen

Toilet

Jam Spaces

Storage

Back Of House



»»»

03 INTERIOR RENDERS

3 FLOOR INTERACTION



>>>

03 EXTERIOR DAY RENDER



>>>

03 EXTERIOR DAY RENDER



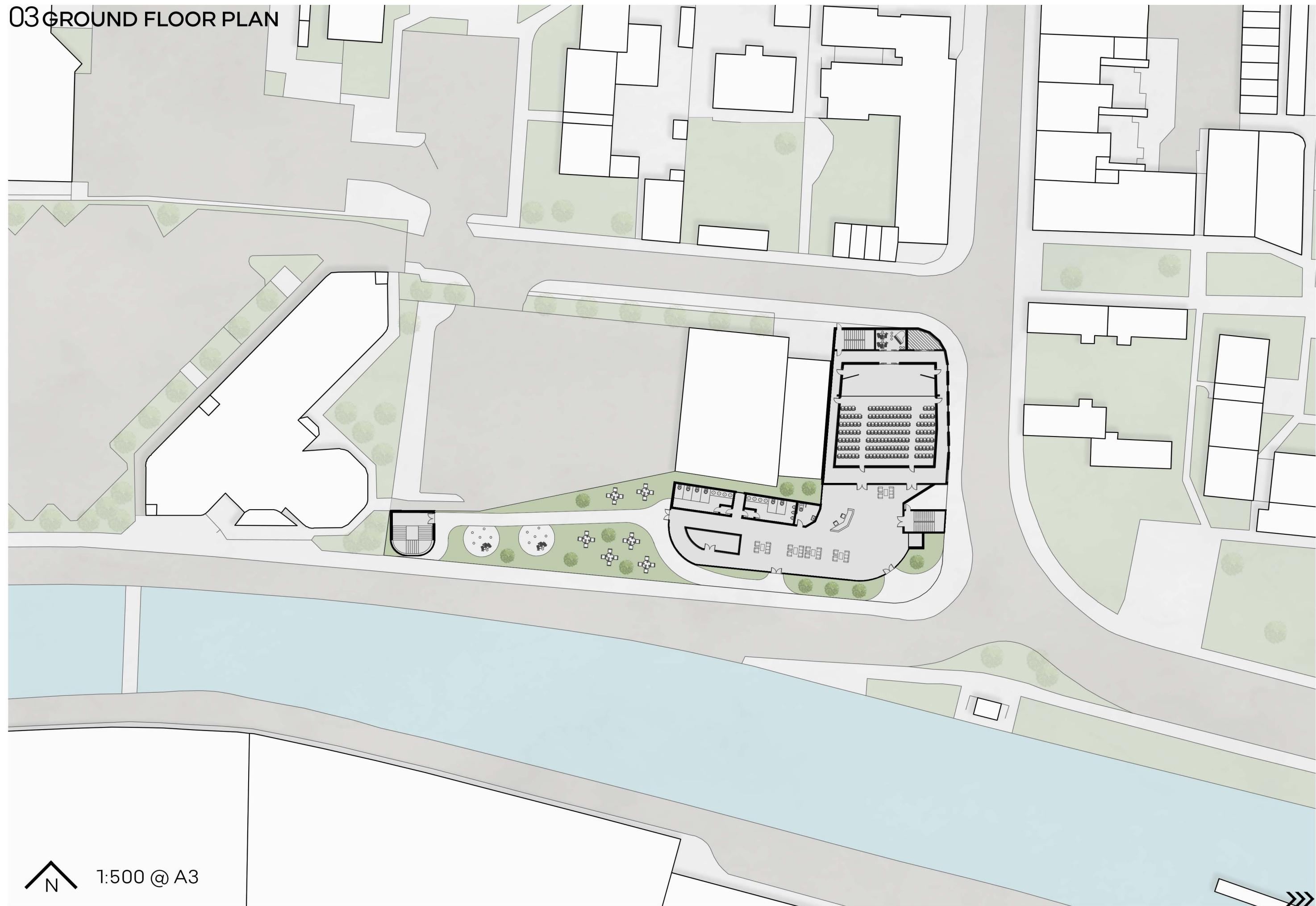
>>>

03 EXTERIOR NIGHT RENDER



>>>

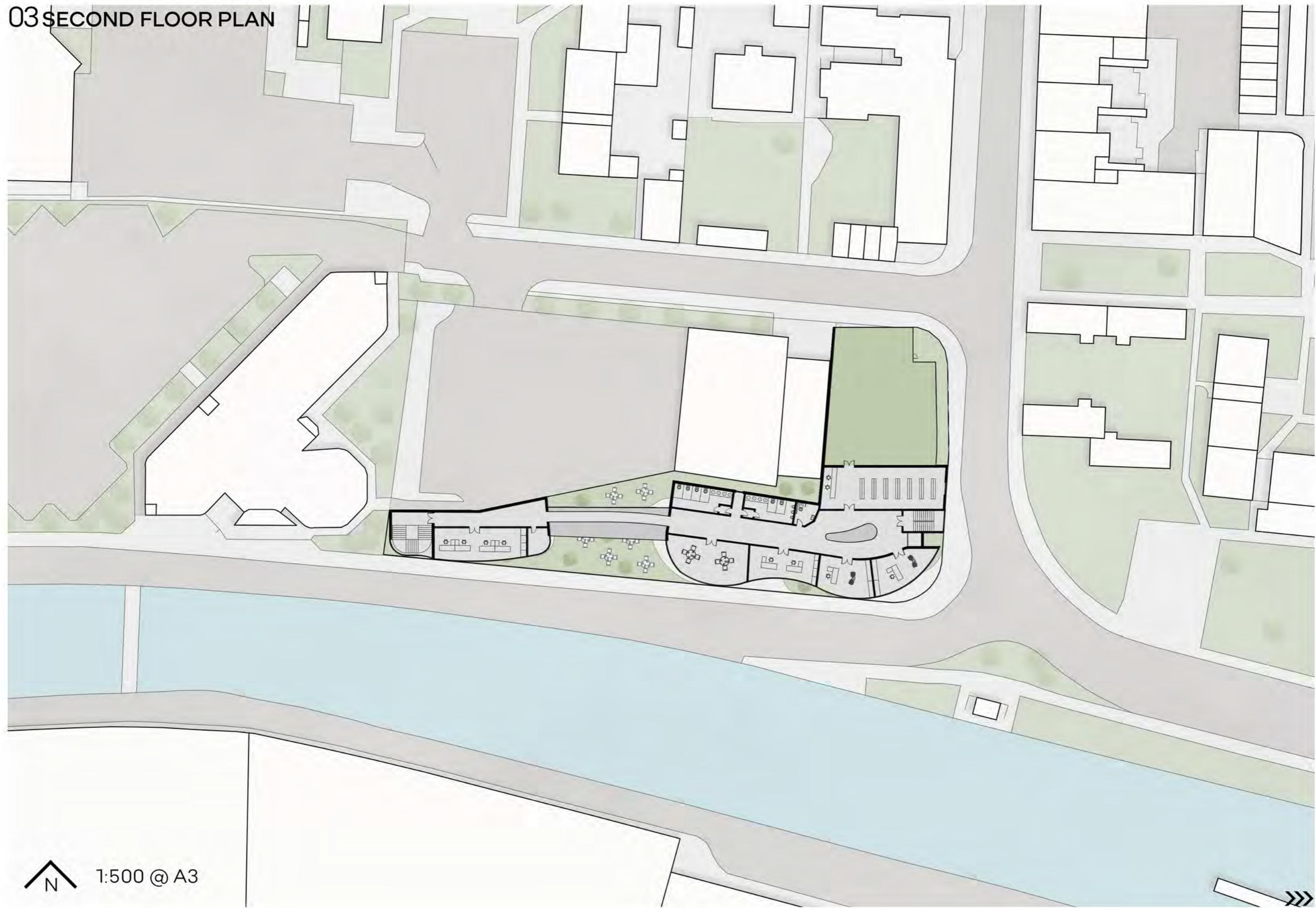
03 GROUND FLOOR PLAN



03 FIRST FLOOR PLAN



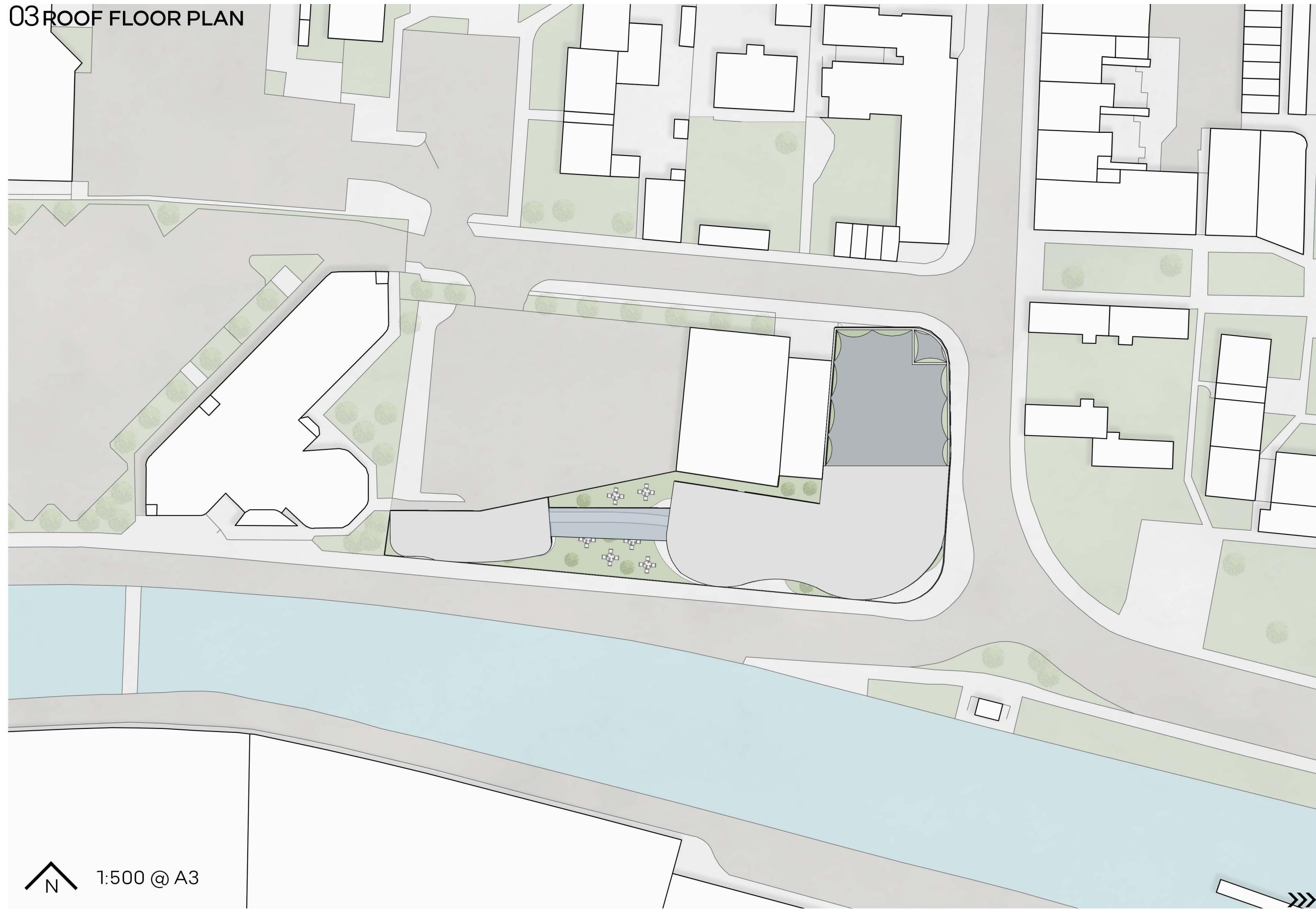
03 SECOND FLOOR PLAN



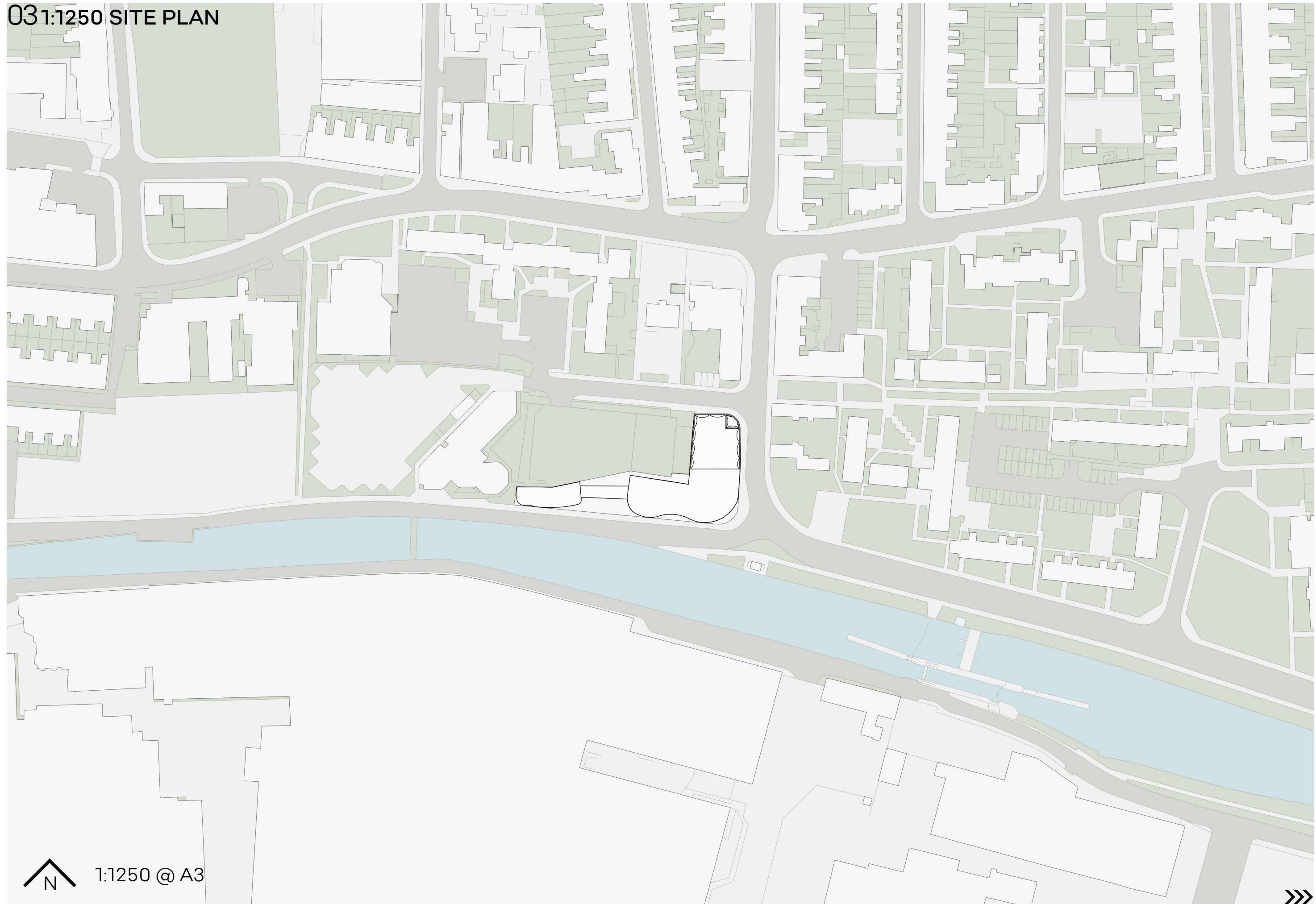
1:500 @ A3



03 ROOF FLOOR PLAN



03 1:1250 SITE PLAN



1:1250 @ A3



03 ELEVATIONS 1



SOUTH ELEVATION



EAST ELEVATION

03 ELEVATIONS 2



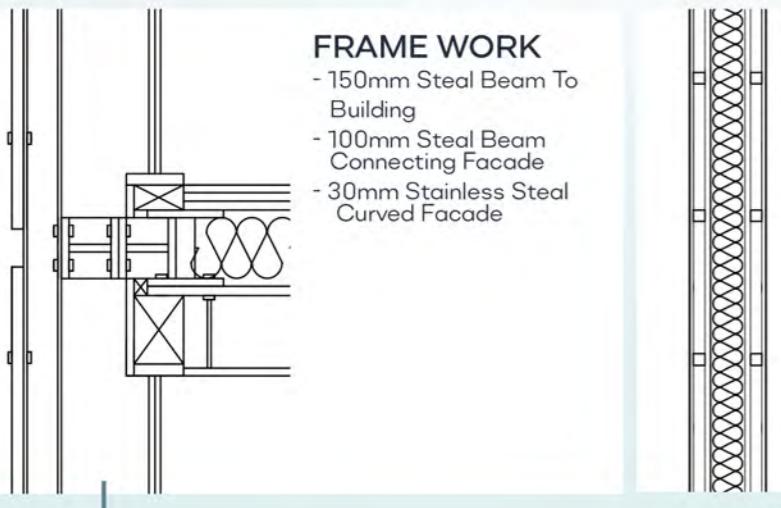
NORTH ELEVATION



WEST ELEVATION

03 ELEVATIONS 1

ALL DETAILS SCALE 1:20

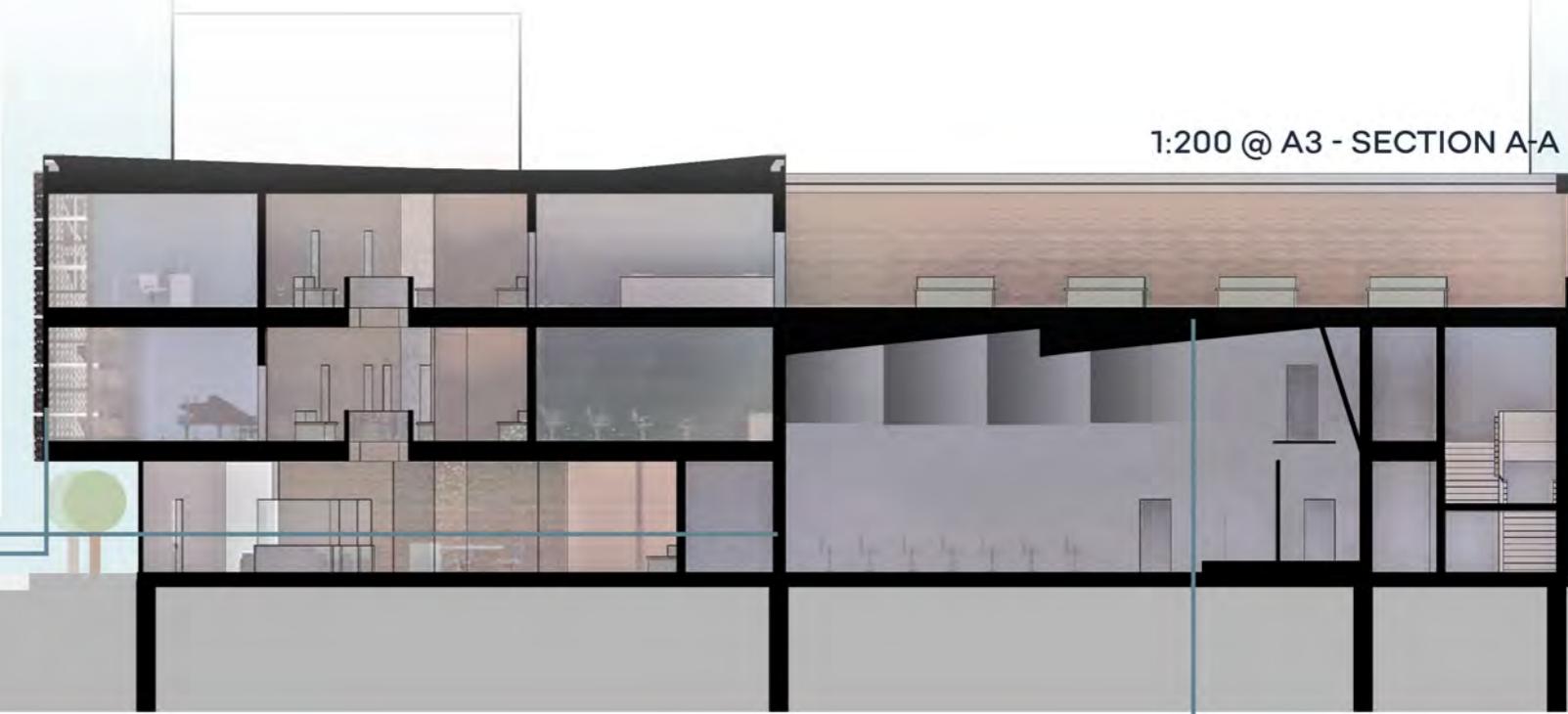


FRAME WORK

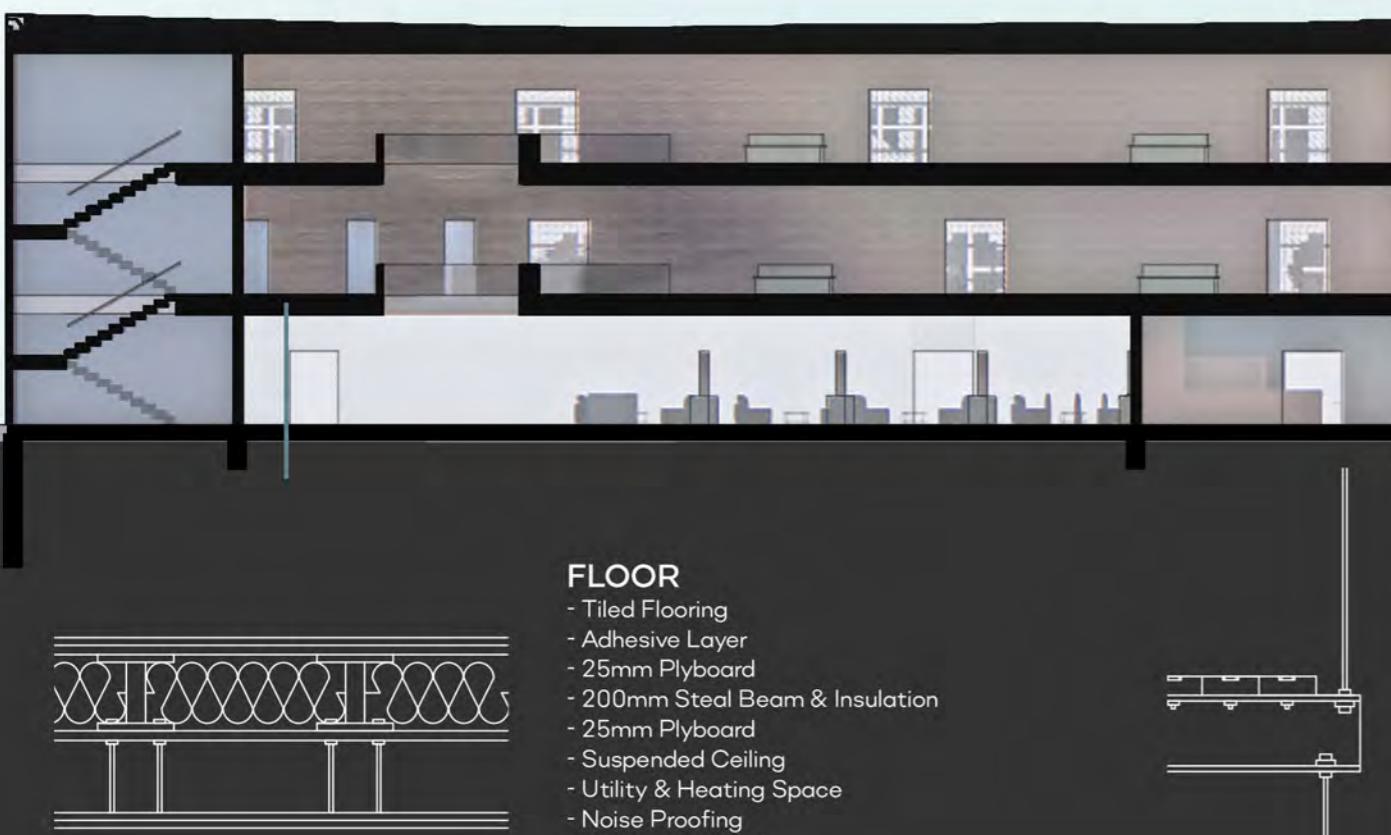
- 150mm Steel Beam To Building
- 100mm Steel Beam Connecting Façade
- 30mm Stainless Steel Curved Façade

CONCERT HALL WALL

- 300mm 6PCF Fiberglass
- 10mm Gypsum Board
- 30mm Utilities
- 15mm Interior Sheathing
- 90mm Metal Frame & Insulation
- 15mm Interior Sheathing
- 30mm Utilities
- 10mm Gypsum Board



1:200 @ A3 - SECTION A-A

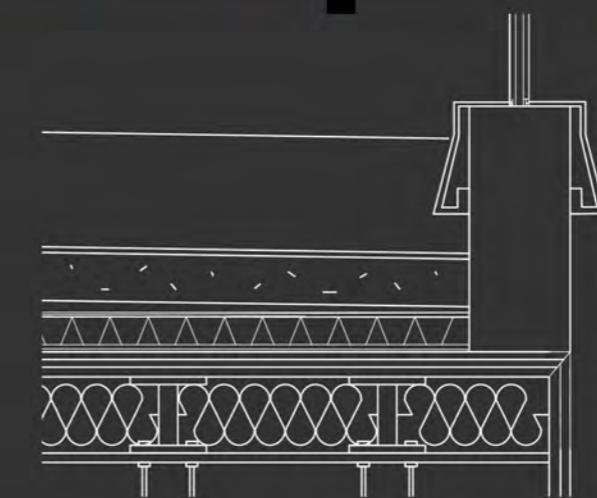


FLOOR

- Tiled Flooring
- Adhesive Layer
- 25mm Plyboard
- 200mm Steel Beam & Insulation
- 25mm Plyboard
- Suspended Ceiling
- Utility & Heating Space
- Noise Proofing
- Layers of Drywall

SUSPENDED WALKWAY

- 200mm Steel Beam
- Flooring Bolted Directly On
- 20mm Rods Connected to Roof



ROOF GARDEN

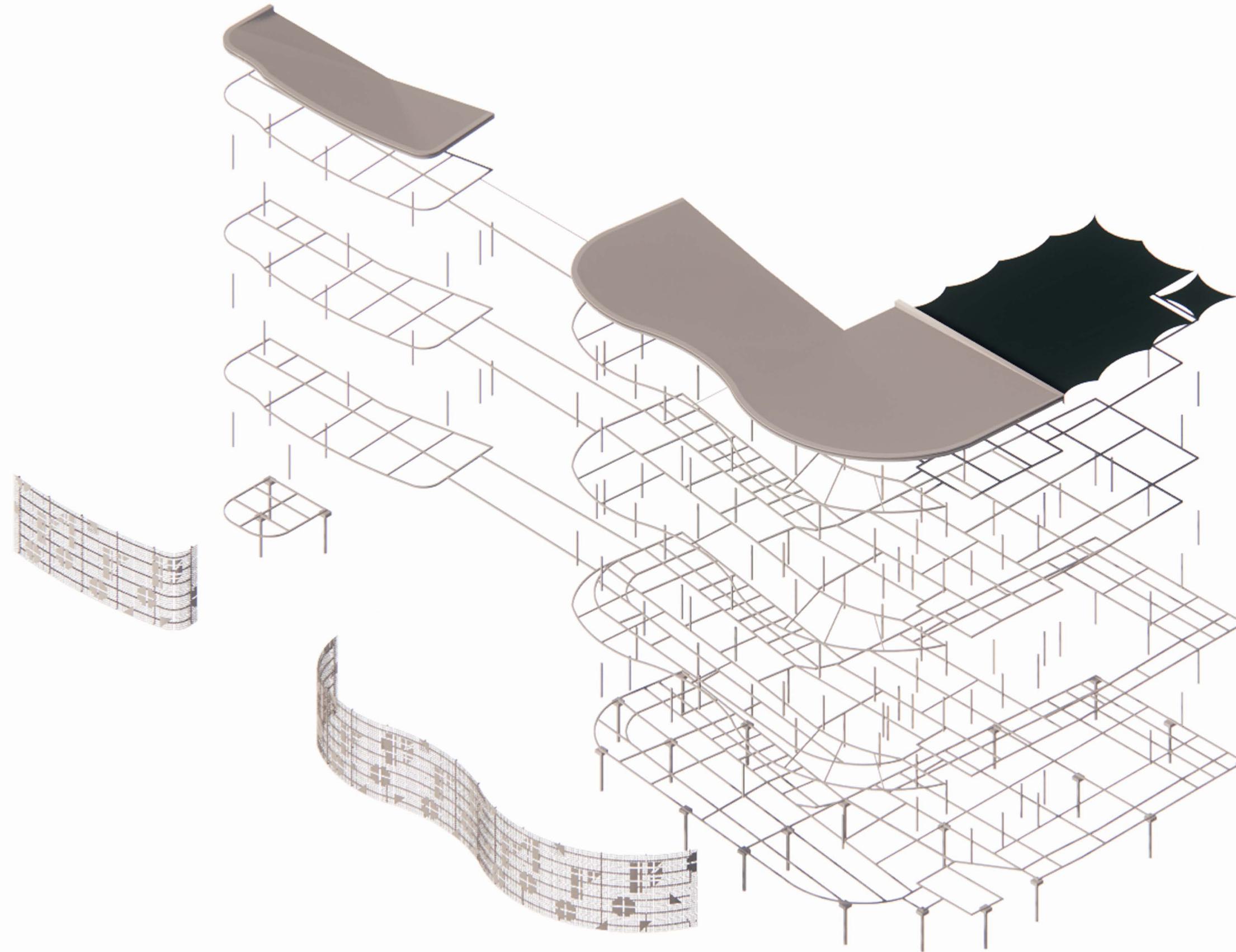
- Roof Flashing
- Dirt
- Separation Fabric
- Drainage Fabric
- Capillary Fabric
- Geosynthetic Sheet Drain
- Waterproof Sheet
- 25mm Plyboard
- Suspended Ceiling
- Utility & Heating Space
- Drywall

1:200 @ A3 - SECTION B-B



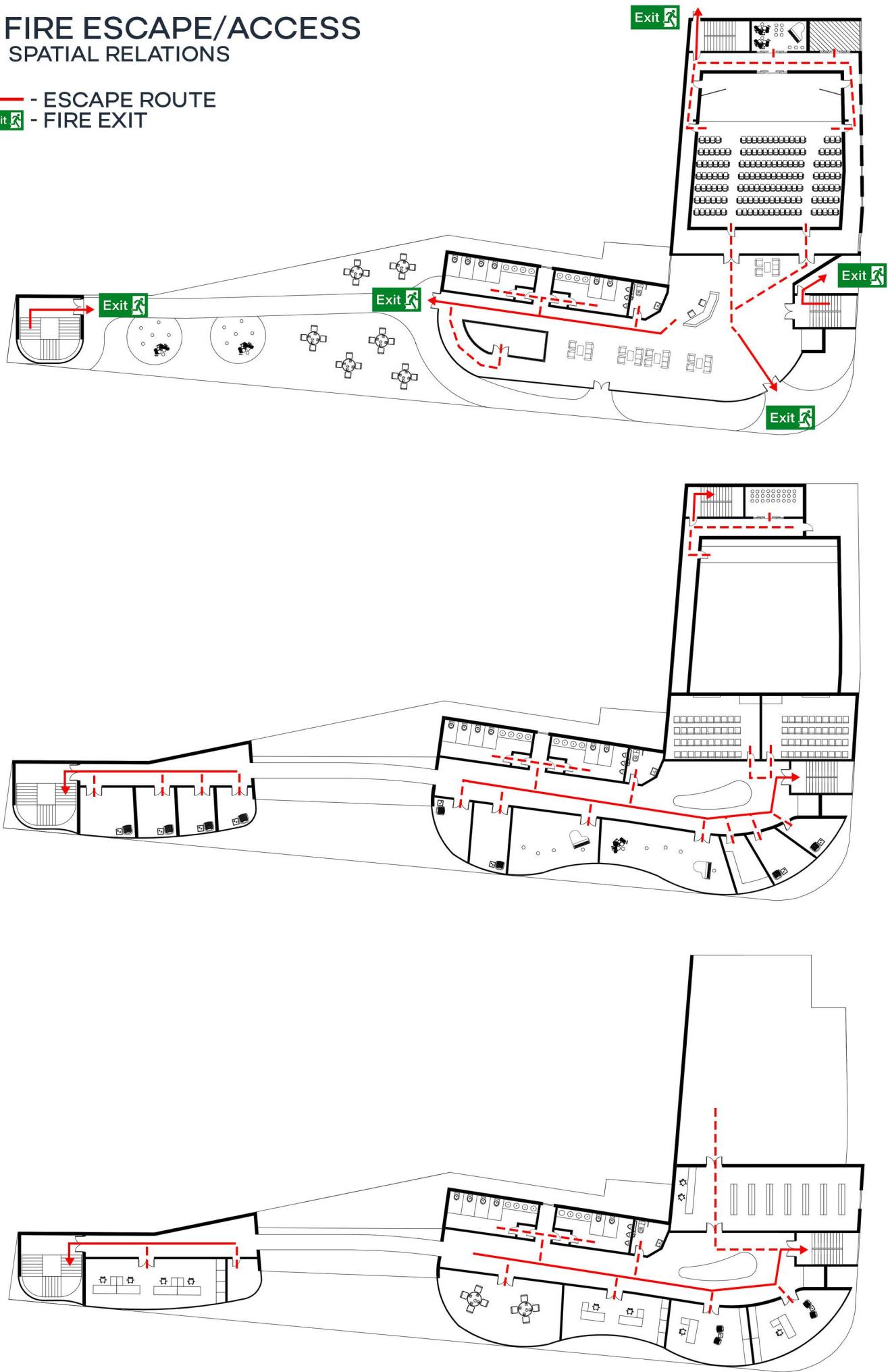
03 STRUCTURE AND CONSTRUCTION

THE BUILDINGS 'SKELETON'



03 FIRE ESCAPE/ACCESS SPATIAL RELATIONS

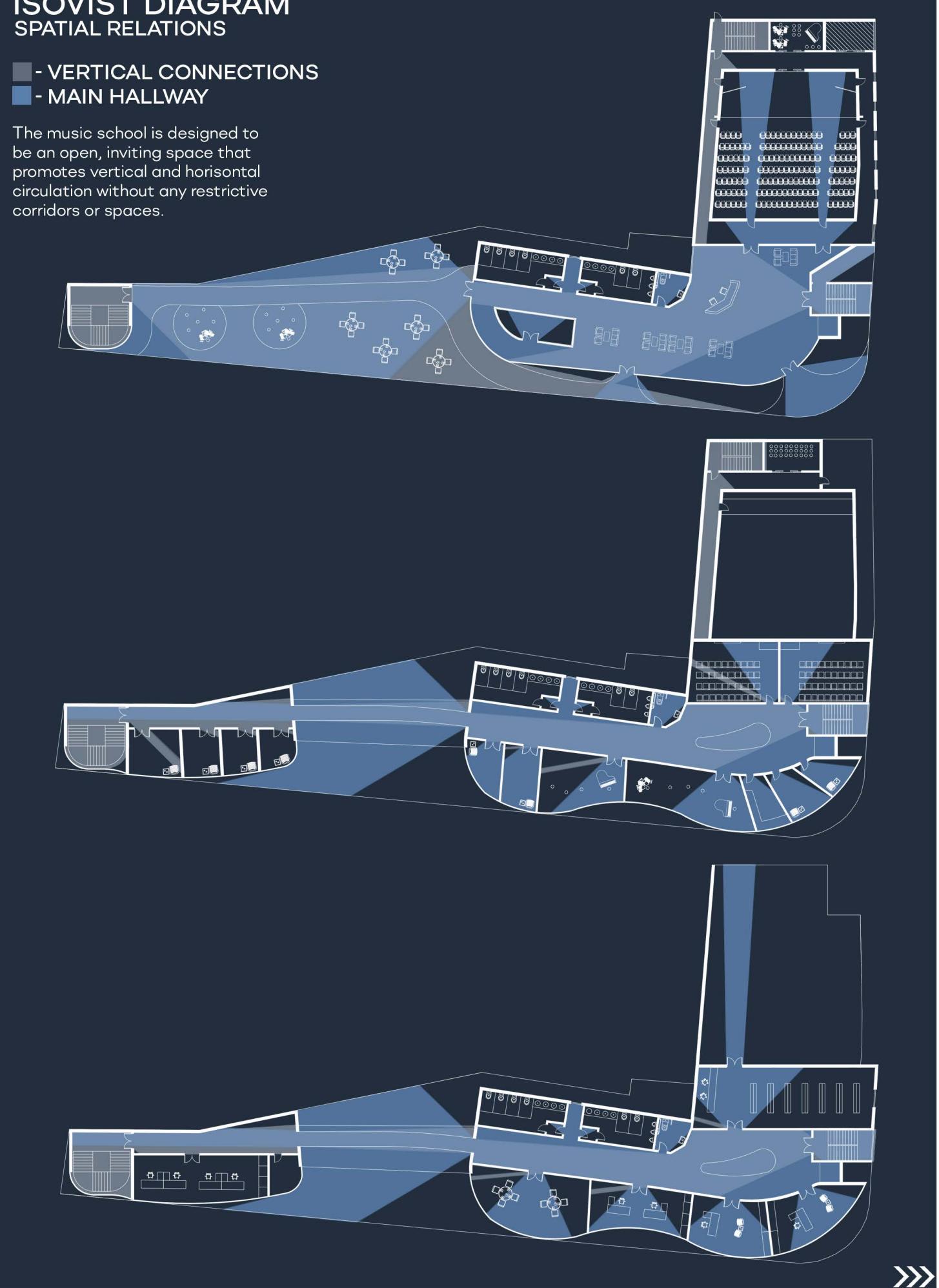
- ESCAPE ROUTE
 - FIRE EXIT



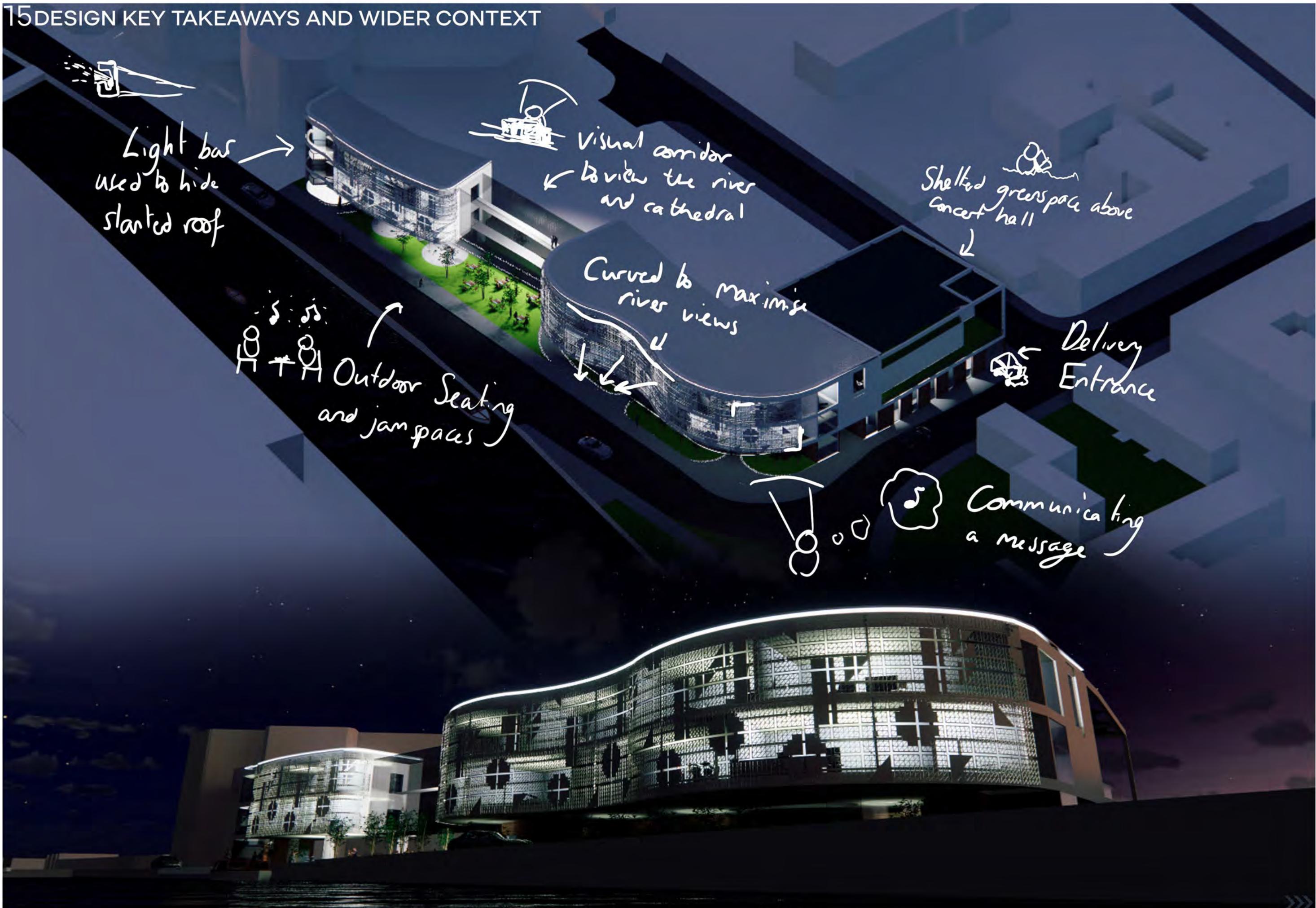
ISOVIST DIAGRAM SPATIAL RELATIONS

- VERTICAL CONNECTIONS
 - MAIN HALLWAY

The music school is designed to be an open, inviting space that promotes vertical and horizontal circulation without any restrictive corridors or spaces.



15 DESIGN KEY TAKEAWAYS AND WIDER CONTEXT

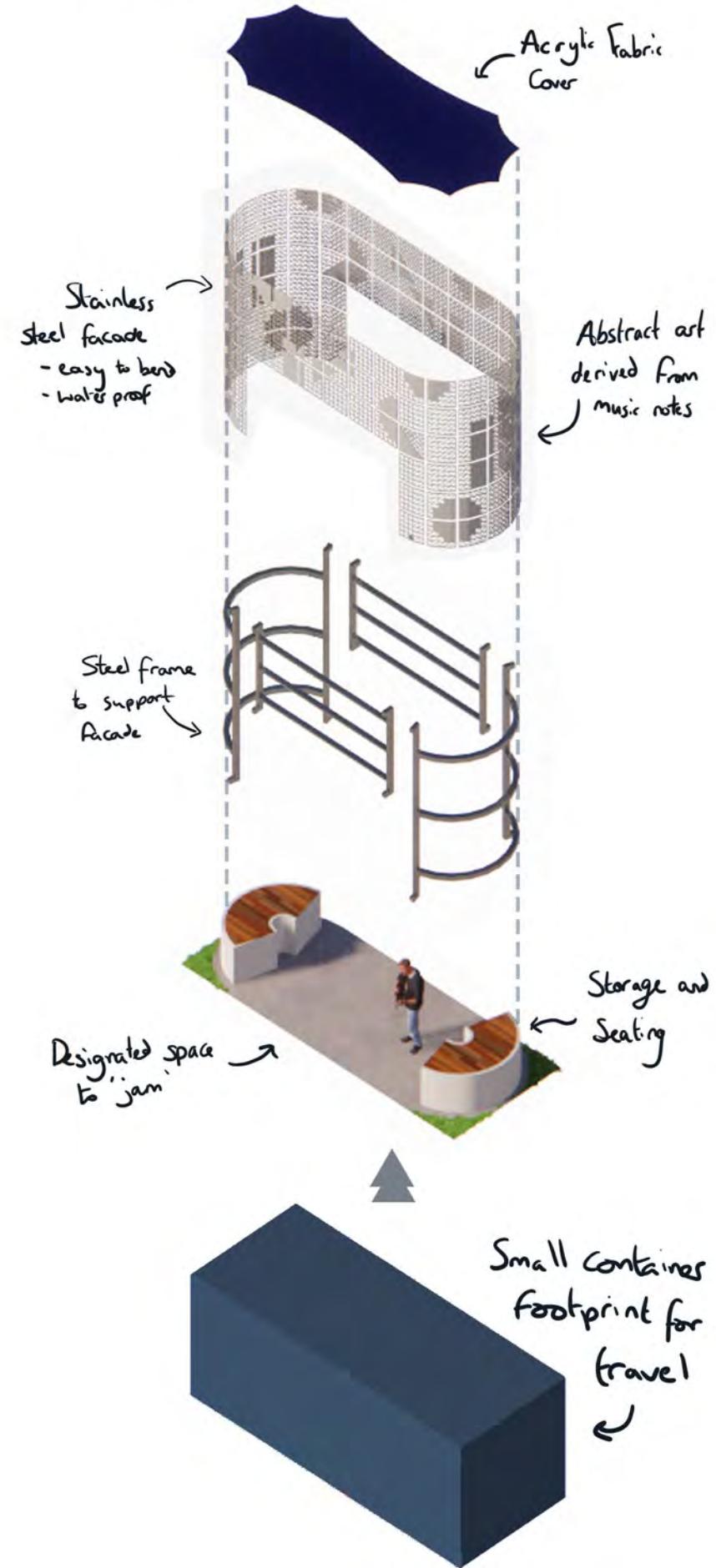


14 ADVANCING THE CONCEPTUAL DESIGN

SKETCHING THE IDEAS



SEMI PERMANENT STRUCTURE



PLACEMENT ON LAND



TRANSPORTATION



ON THE BRAYFORD



03 SEMI PERMANENT STRUCTURE RENDER

BRAYFORD POOL RENDER



LINCOLN CATHEDRAL RENDER

