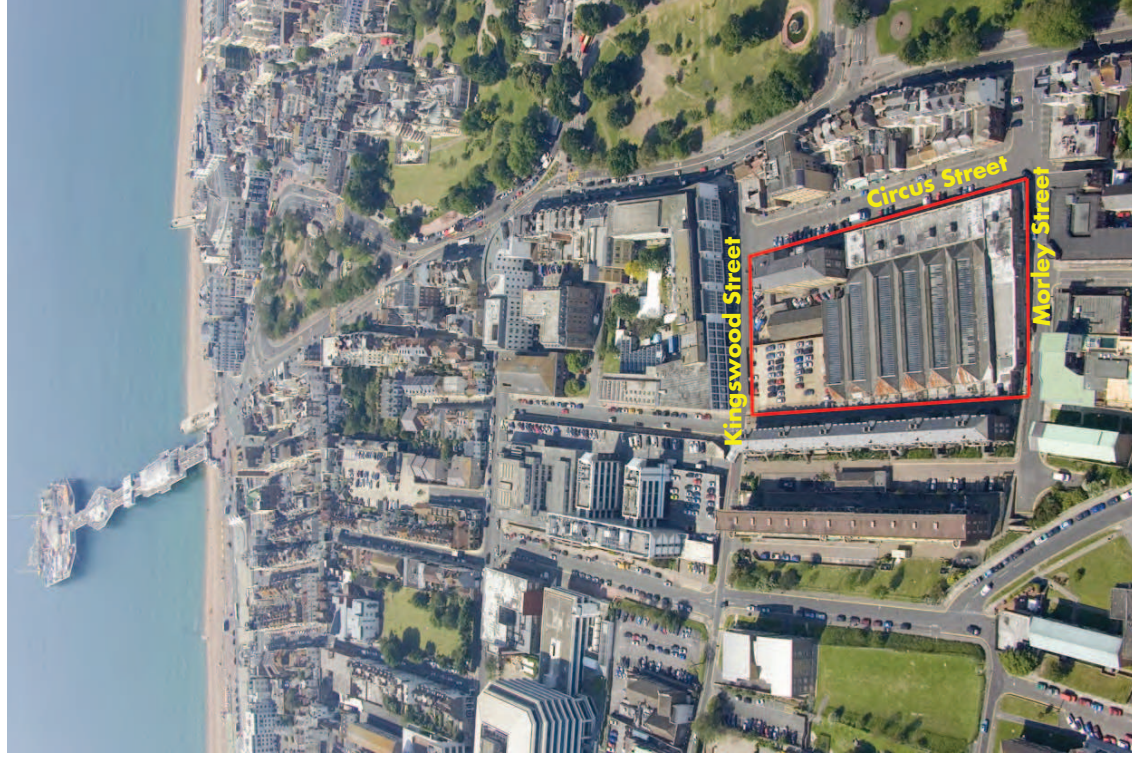


Circus Street Market • The Dance Space

Policy & Resources Committee

Part 1 • Masterplan & The Wider Scheme

The Circus Street project consists of a mixed-use development providing a dance studio, a University library and teaching building (with public access), offices, mixed tenure housing on student residences. The development site is located within the area bounded by Circus Street, Kingswood Street, Morley Street and Nelson Row.



Location Plan • Circus Street Market, Brighton



Our competition winning entry gave South East Dance a standalone building in the heart of the scheme. It was felt that a building which contains community and arts facilities would be a fantastic beacon for the development. It was positioned adjacent to the main public square, so that performances could take place outside as well as inside. To this end, it was envisaged early on that the community studio would open out onto this landscaped area.

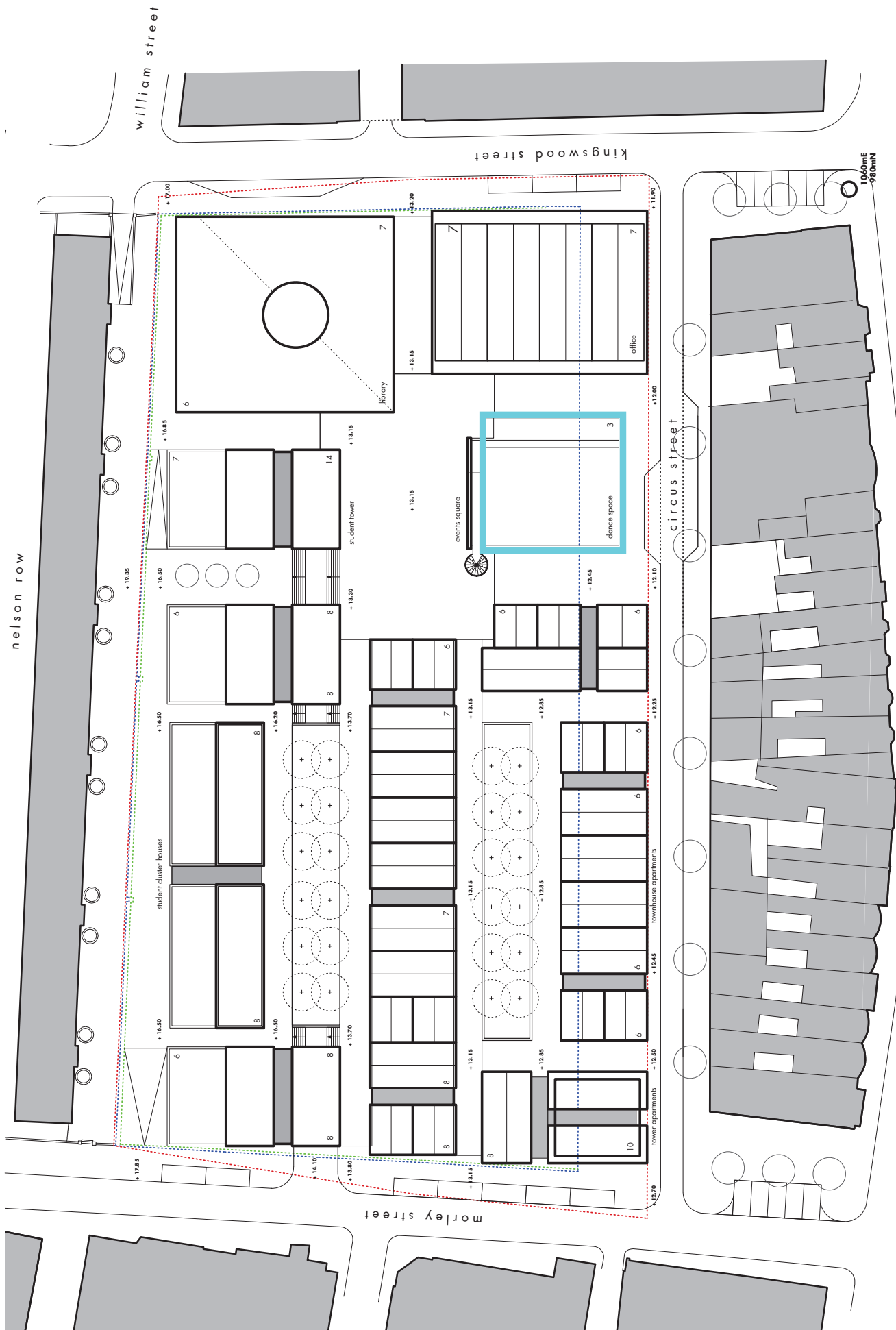
The Dance Space is located at the Kingswood Street end, with the offices block at the corner with Circus Street. The various blocks of flats run parallel with Circus Street, with a taller block adjacent to the Library, being located over the North end of a two-storey car park. Road access is available on the three road sides, and a service vehicle access road is provided centrally connecting Morley Street to Kingswood Street.

Sustainability and longevity are the primary concern of the overall development - not just concerns of energy usage but also health, wellbeing and creativity - therefore The Dance Space was always considered to be the centerpiece of the scheme, ever since competition stage.

G r o w B r i g h t o n C o m p e t i t i o n



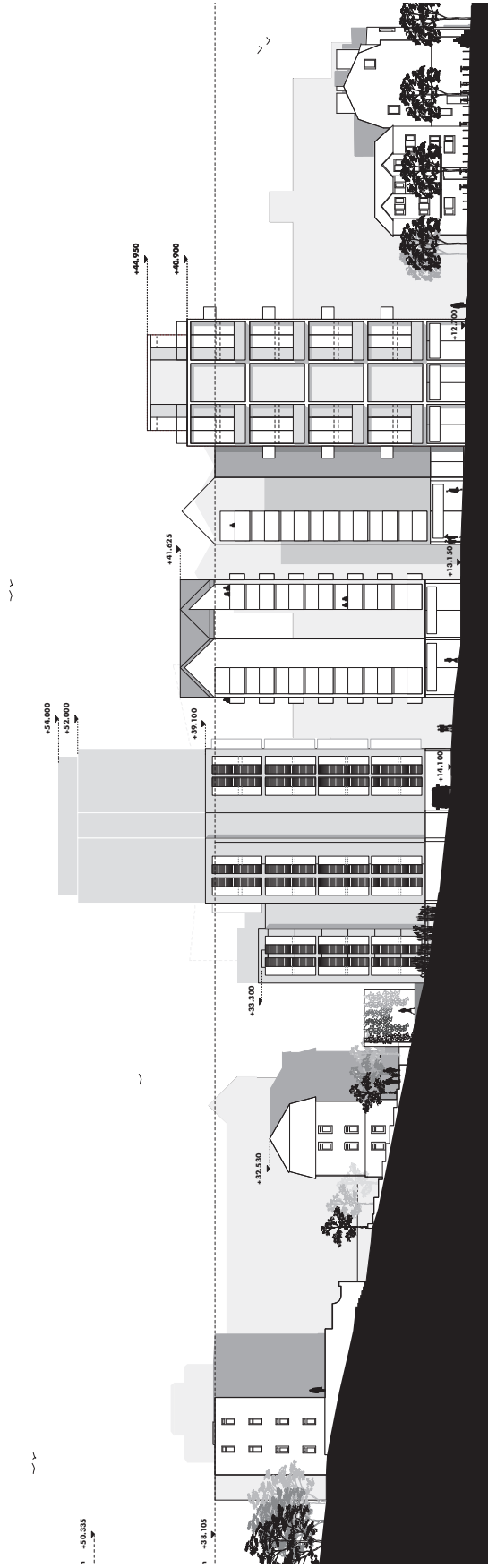
Site Panorama • View from the corner of Morley & Circus Street



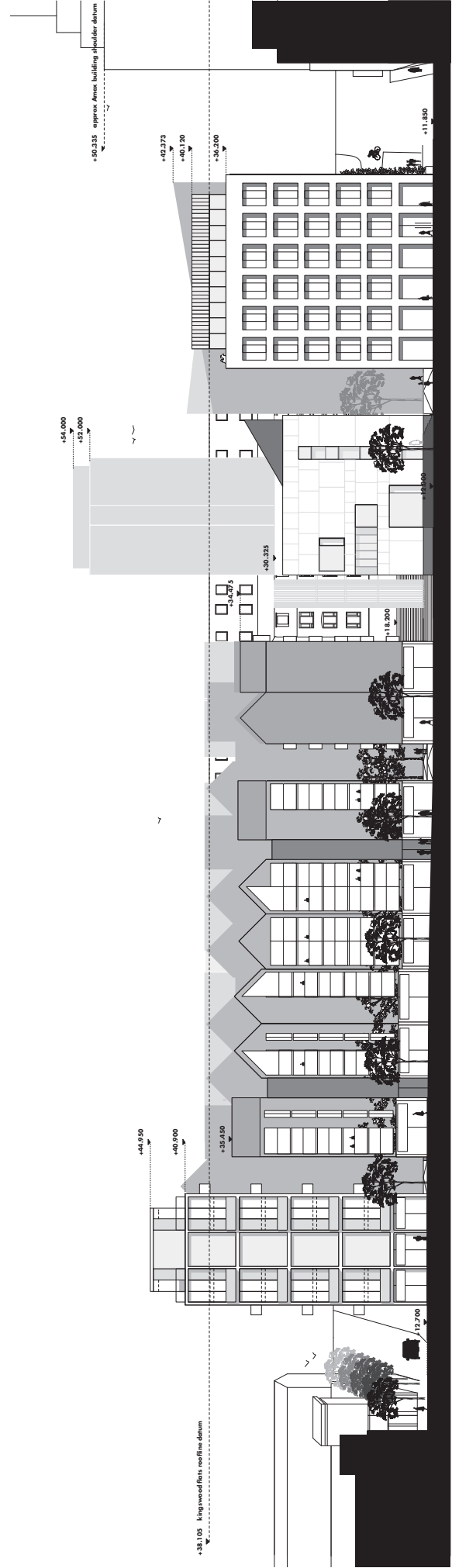
Masterplan • Roof Plan • 1:500



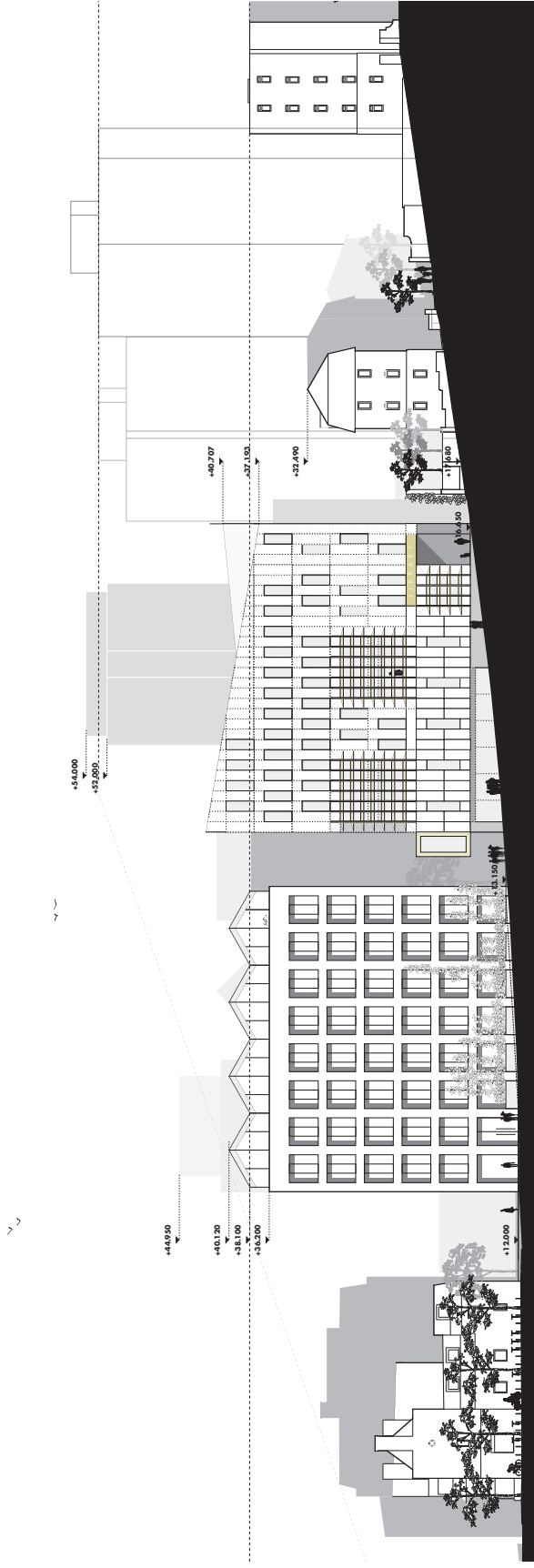
Masterplan • Mid Level • 1:500



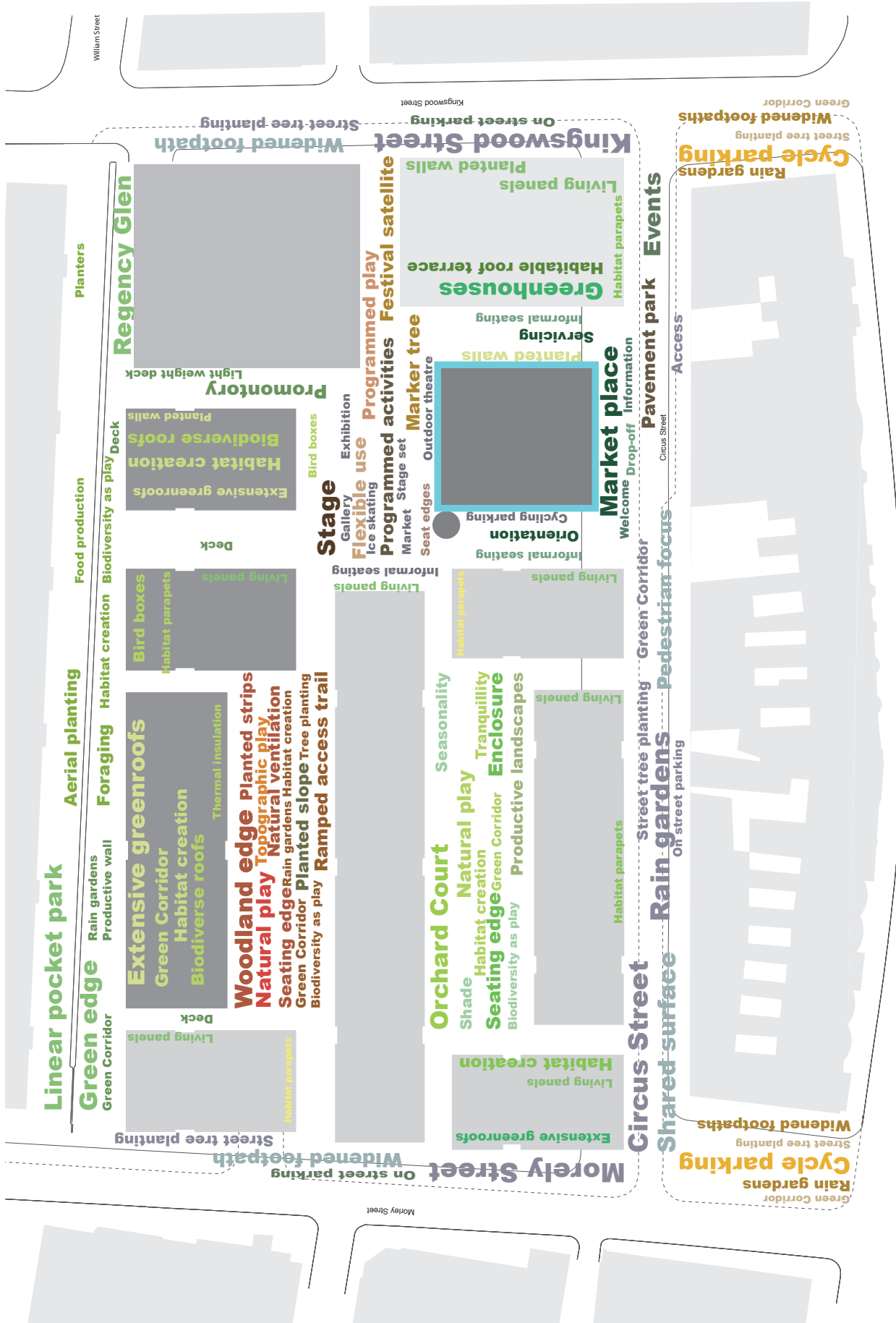
Street Elevation • Morley Street • 1:500



Street Elevation • Circus Street • 1:500



Masterplan • Elevation • Kingswood Street • 1:500



Notes:

Do not scale off this drawing. Use figured dimensions only.

All levels are nominal. Detailed site survey to be carried out to establish tolerances.

Figured dimensions are in millimetres.

Spot heights are in metres

Valley Gardens

J & L GIBBONS LLP
LANDSCAPE ARCHITECTURE
URBAN DESIGN

STUDIO A
100A, 100B, 100C
CIRCUS STREET
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This information is for guidance only and is not intended to be used for any other purpose. It is the responsibility of the client to ensure that the information is used for the intended purpose.

Project: Circus Street Market - Brighton

Client: Cathedral Group

Date: 20_06_2013

Scale: 1:250 @ A1
1:500 @ A3

Status: Information

Drawn: ND

Checked: ND

Approved: ND

Drawing title: Landscape strategy
Character Concepts

Drawing Number: 545_SK_12

Rev: -



Drawing title:

Landscape plan
Illustrative

Project:
Circus Street Market - Brighton

Client: Cathedral Group

Status:
Information

Date:
27_06_2013

Scale:
1:250 @ A1
1:500 @ A3

Drawn:
LB

Checklist:
ND

Approved:
ND

STUDIO A
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The drawings in this drawing are prepared by J & L Gibbons LLP
The drawings are the property of J & L Gibbons LLP
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Notes:

Do not scale off this drawing. Use figured dimensions only.

All levels are nominal. Detailed site survey to be carried out to establish tolerances.

Figured dimensions are in millimetres.
Spot heights are in metres



DRAFT

P a r t 2 • T h e D a n c e S p a c e

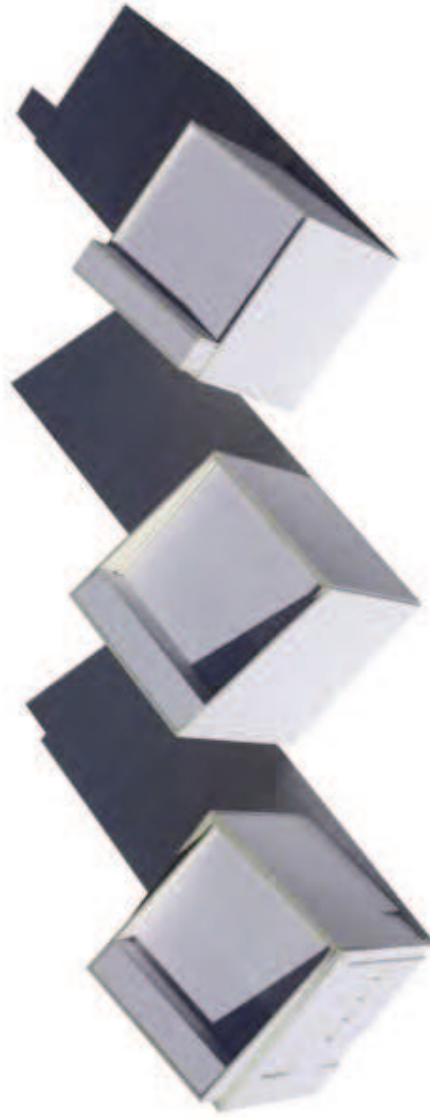
The client body (being South East Dance and Brighton and Hove Council) has been very closely involved throughout the design process. Furthermore, specialist theatre consultants CharcoalBlue have been engaged throughout the process and have been advising the design team on acoustic and functional requirements of the building as well as the technical requirements to create a fantastic, modern dance space.

The brief for the project was set out in Schedule 12 of the Development Agreement between Cathedral Group and Brighton and Hove Council. The primary spaces that are required are a main studio space, incorporating bleacher seating for performances, a Research Studio and a Community Studio. In addition, there is office space, in part used by South East Dance (SED), with additional space for rent to generate an income. These spaces are supported by changing and washroom facilities, and fully accessible wetrooms.

We have considered the public space between buildings as of equal importance to the structures themselves. The building must have a strong presence at the heart of these public spaces - It allows views of the activity within, which will create intrigue.

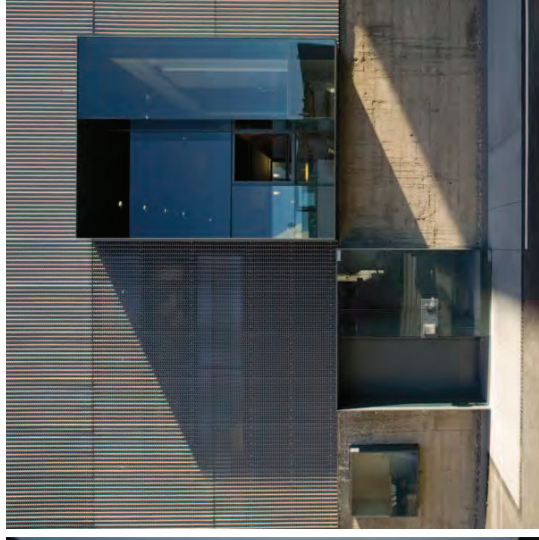
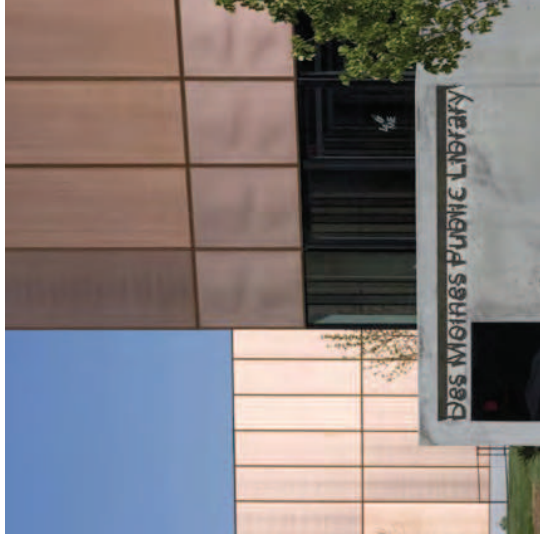
The building from the outside relates to its neighbours in the scheme – primarily the new Library building for the University of Brighton, as the two 'civic' buildings within the scheme. There is a desire here to closely relate these two buildings across the square. It may well be that there are joint or reciprocating events, which will act to energise the landscaped public space between. Therefore, there are large sliding folding doors to the Community Studio at Ground Floor level, and the facade above, facing the square, could have a mesh screen overlaying the windows and external cladding. This would be suitable for projections or large scale graphics. The University have also expressed interest in creating digital signage on the corner of their building overlooking Events Square, so it may well be that there is digital as well as visual and physical relationship across this public domain.











These precedents have resonance with the design of our building for South East Dance. Its cubic form has a geometric purity. Windows are positioned to optimise light to the internal layouts and the cladding is panelised so as to rationalise the facades and create a rigorous, controlled approach. Metal rainscreen cladding is favoured for its reflectivity, which will create visual variety over the course of the day as it reflects the daylight. It is also reminiscent of shed-like, functional warehouse buildings - as the activity within is the primary focus of this architecture. In addition, the simple, honest expression of steel structure, metal ductwork services and rigging internally will be reflected on the outside of the building, as it is cloaked in a metallic, functional, external skin.

Design Precedents

The various spaces in the Dance building are carefully laid out, where function is the primary concern. For instance, the office is sandwiched in section between the two ground floor studios and the main studio - creating a natural acoustic buffer, and the main studio space (suitable for 150 visitors) is situated on the top floor, so as to capture the best natural light. Furthermore, the Community Studio is located at ground floor level and opens out onto Events Square, which becomes an extension of this studio on a nice day. Internally, the steel structure and concrete floors are carefully integrated - its a building of functional, robust elegance.

Simplistically, the building provides spaces that satisfy this development agreement. However, the functionality and spatial proximities of the building was developed closely with the client body. The strategy that was adopted was to:

- Position the Community and Research studios at Ground Floor Level, adjacent the main entrance.
- Locate the main office spaces above, which would create a natural acoustic buffer to -
- The main studio space, which would benefit from fantastic daylight (with black out option)
- Provide an occasional performance space which satisfies Health & Safety & Licensing Requirements

The building has been considered from the 'inside out' - creating the most functionally satisfying building in use, within the scope of the available budget. Window positions have been generated primarily by functional requirements (using computer generated daylighting studies by Atelier 10) - providing as much daylight as possible without compromising the environmental efficiency of the external facades (as the building is required to meet BREEAM excellent) or creating unacceptable amounts of solar gain. Therefore the window sizes and positions have been considered as a balance between:

- Daylighting requirements to the various spaces with consideration of orientation and the needs for blank walls on the inside;
- Incorporation of ventilation panels in order to allow for 'purge ventilation' ;
- Creating architecturally coherent facades;
- And a building set within the context of the surrounding development, which must create coherency with the adjacent facades.

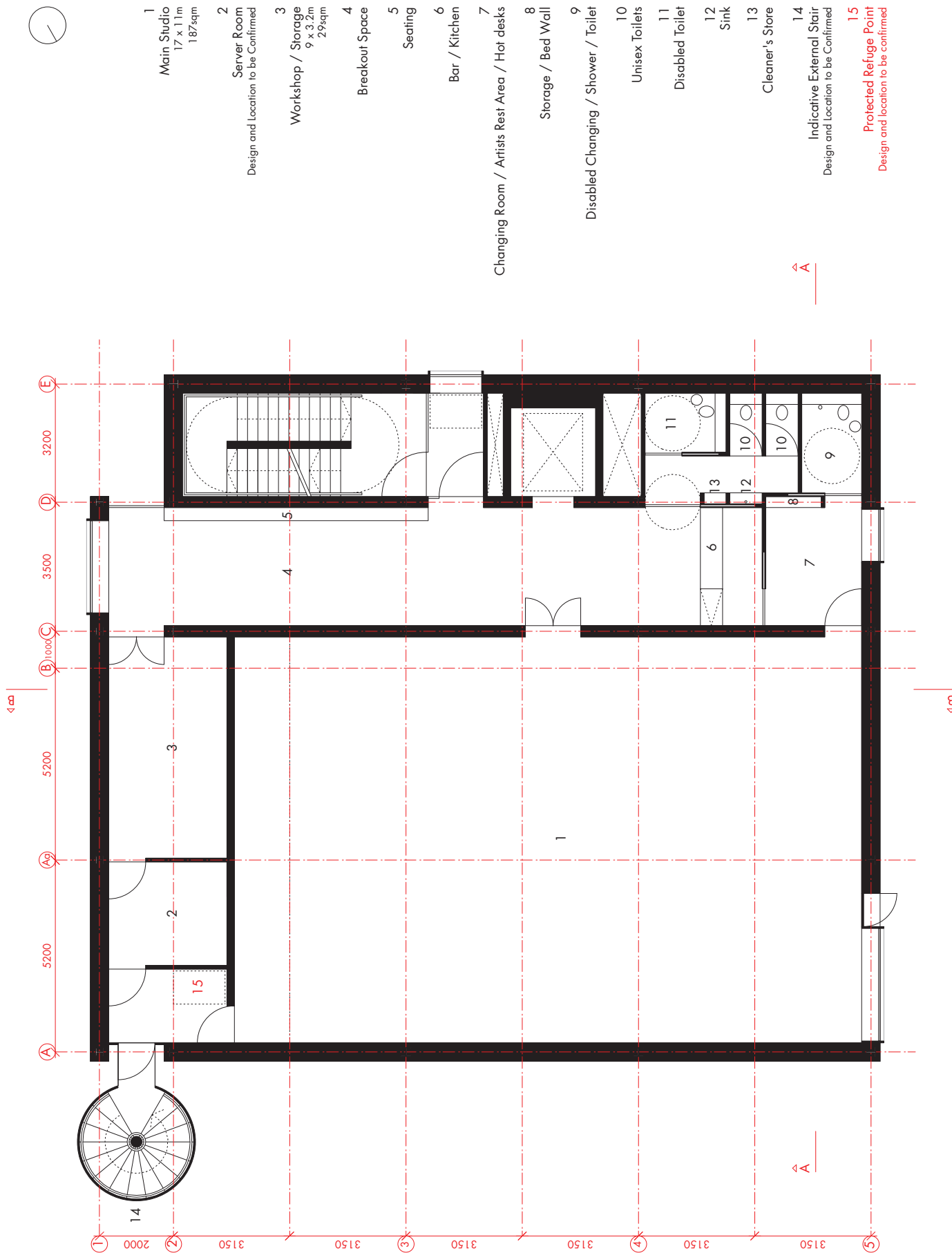
The building's external form reflects these functional requirements - it also has a strong, cube-like geometry, which gives the building a bold presence in the surrounding public space. The size and placement of windows is derived from internal daylight analysis, but also the requirement for purge ventilation to the studios. Each window has a ventilation panel adjacent which allows a cool breeze to cool the space when required. These are recessed to allow protection from rain, but also creates shadow across the facade - this will create variety in the elevations over the course of the day as the sun moves. Due to the site constraints and density of development, the building could not be a long, low structure, but instead the programme would have to be 'stacked'. This would create a building of architectural significance. Coincidentally, the spaces required created a cube-like form.

Adjacent to these windows, the external cladding has a similar, panel-like format to create cohesive elevations. It is subtly reflective which will create variation of light and shade across the facades. The elevations won't be static, which reflects and complements the activity within. The building is designed to achieve with BREEAM excellent. It also has a green roof, which will be a fundamental part of the site-wide landscape and biodiversity strategy.

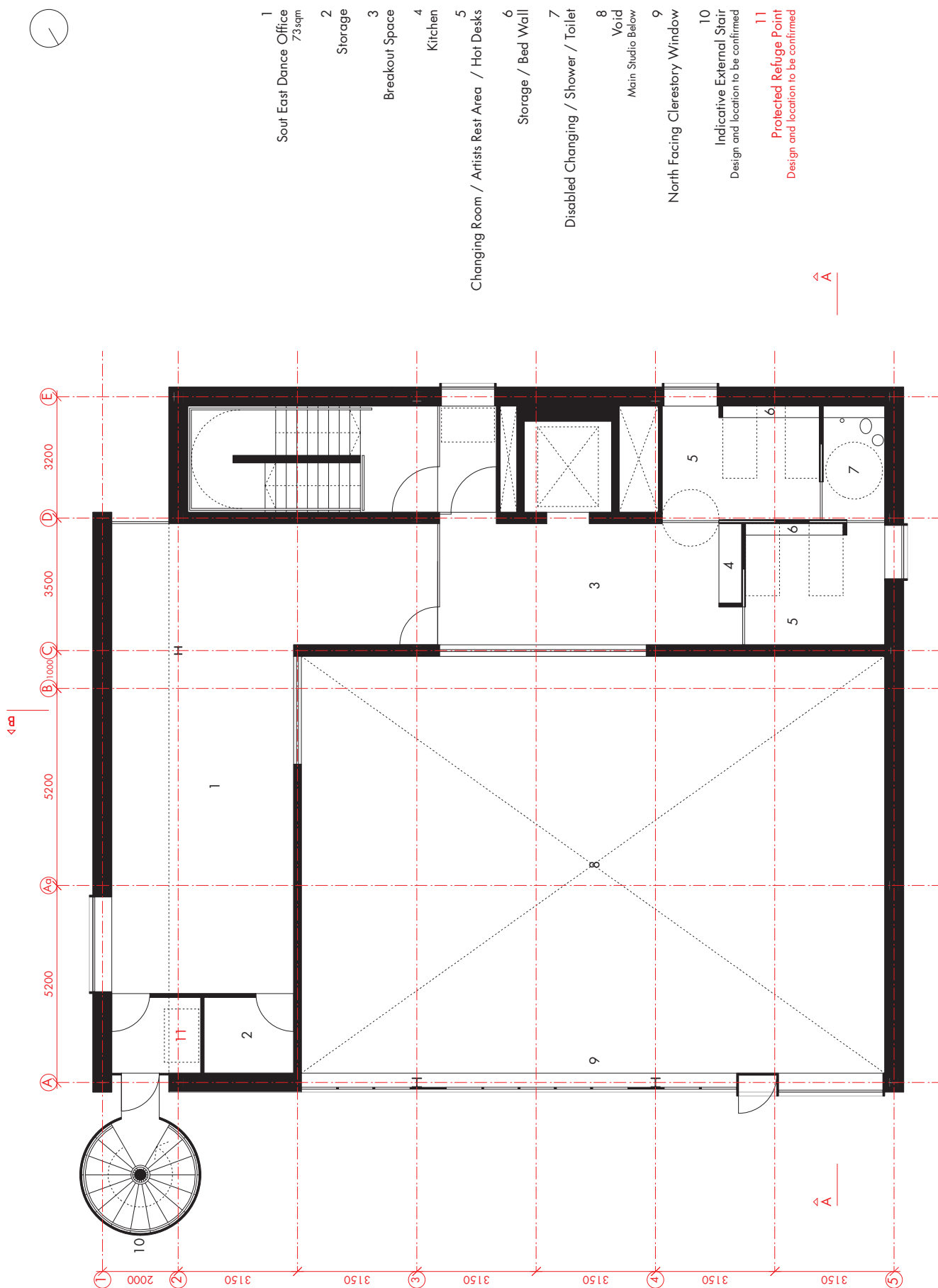
The building is fully accessible. A flush threshold leads into the main reception/ circulation space, with a 21 person passenger lift at the centre of the plan. In addition, Accessible toilets and changing facilities are provided at each level of the building (in wetroom format) and each threshold into the various dance and office spaces have flush thresholds as well.

Approved Document Part B is satisfied as a disabled refuge with all associated facilities (including a disabled evacuation chair) is provided adjacent the emergency egress staircase.

The design of the building has been presented to the Local Authority Building Control and no issues with this strategy have been raised.

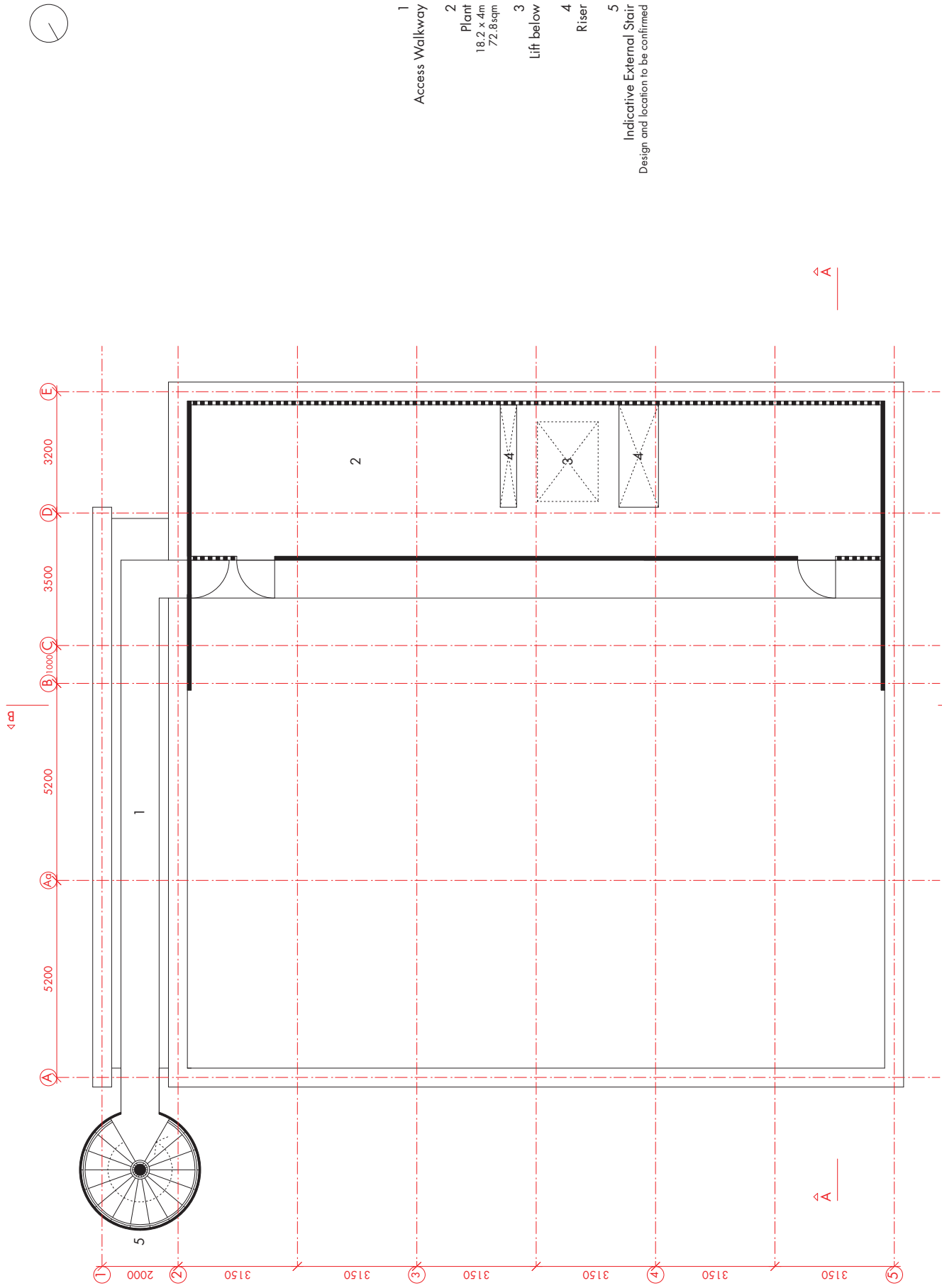


The Dance Space • Second Floor • 1:100

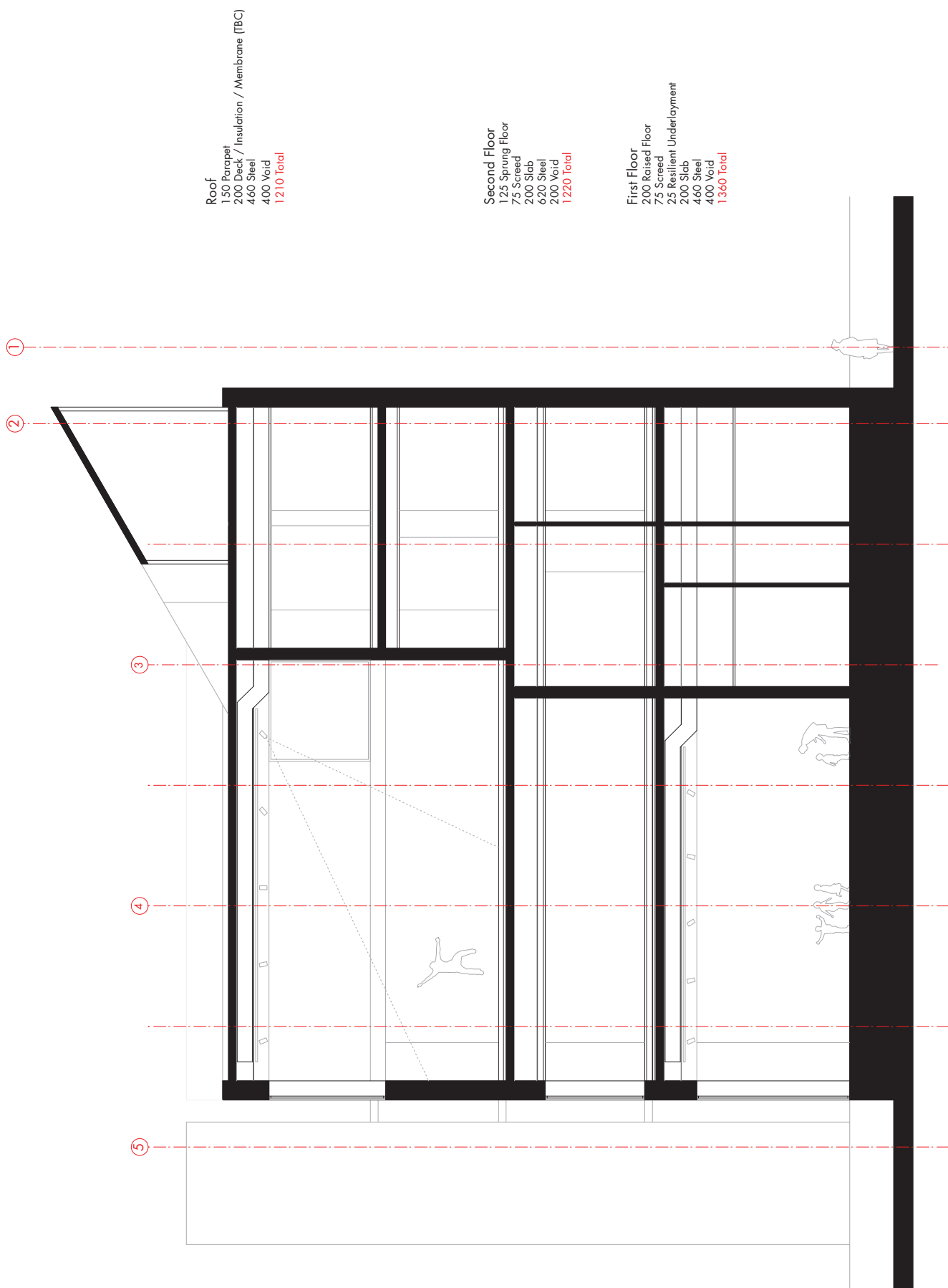


- 1 Sout East Dance Office
73sqm
- 2 Storage
- 3 Breakout Space
- 4 Kitchen
- 5 Changing Room / Artists Rest Area / Hot Desks
- 6 Storage / Bed Wall
- 7 Disabled Changing / Shower / Toilet
- 8 Void
Main Studio Below
- 9 North Facing Clerestory Window
- 10 Indicative External Stair
Design and location to be confirmed
- 11 Protected Refuge Point
Design and location to be confirmed

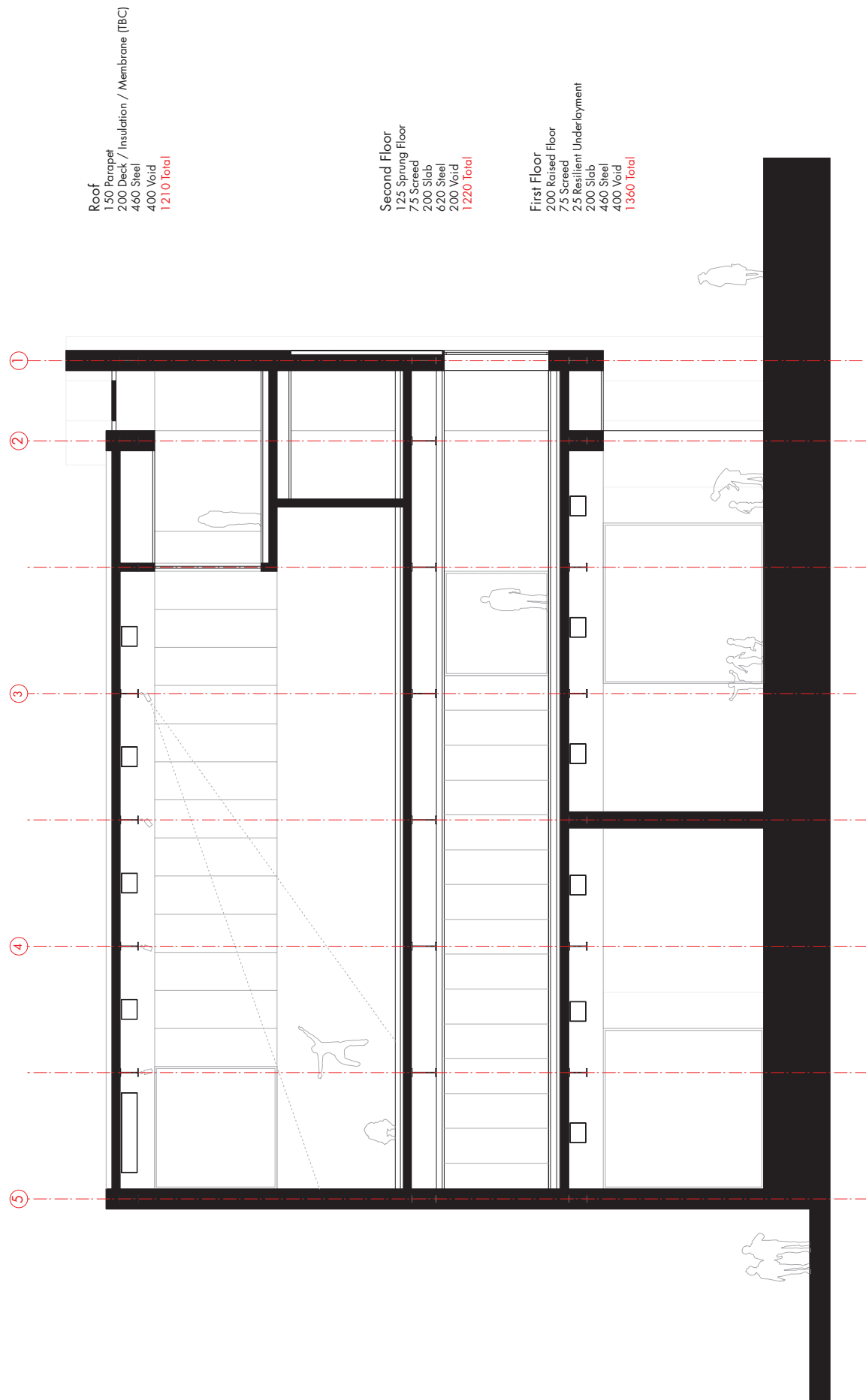
The Dance Space • Mezzanine • 1:100



The Dance Space • Roof Plan • 1:100

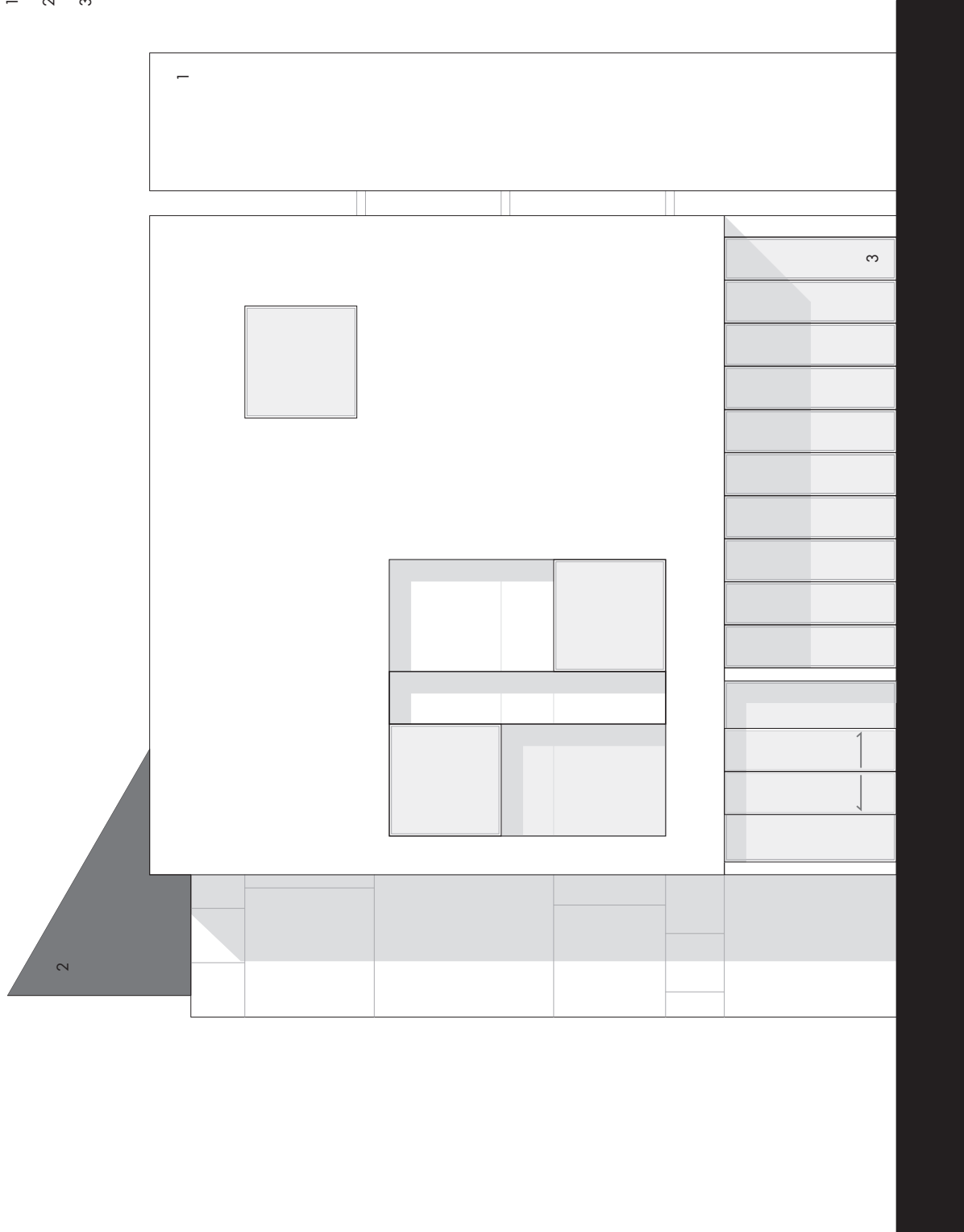


The Dance Space • Section AA • 1:100



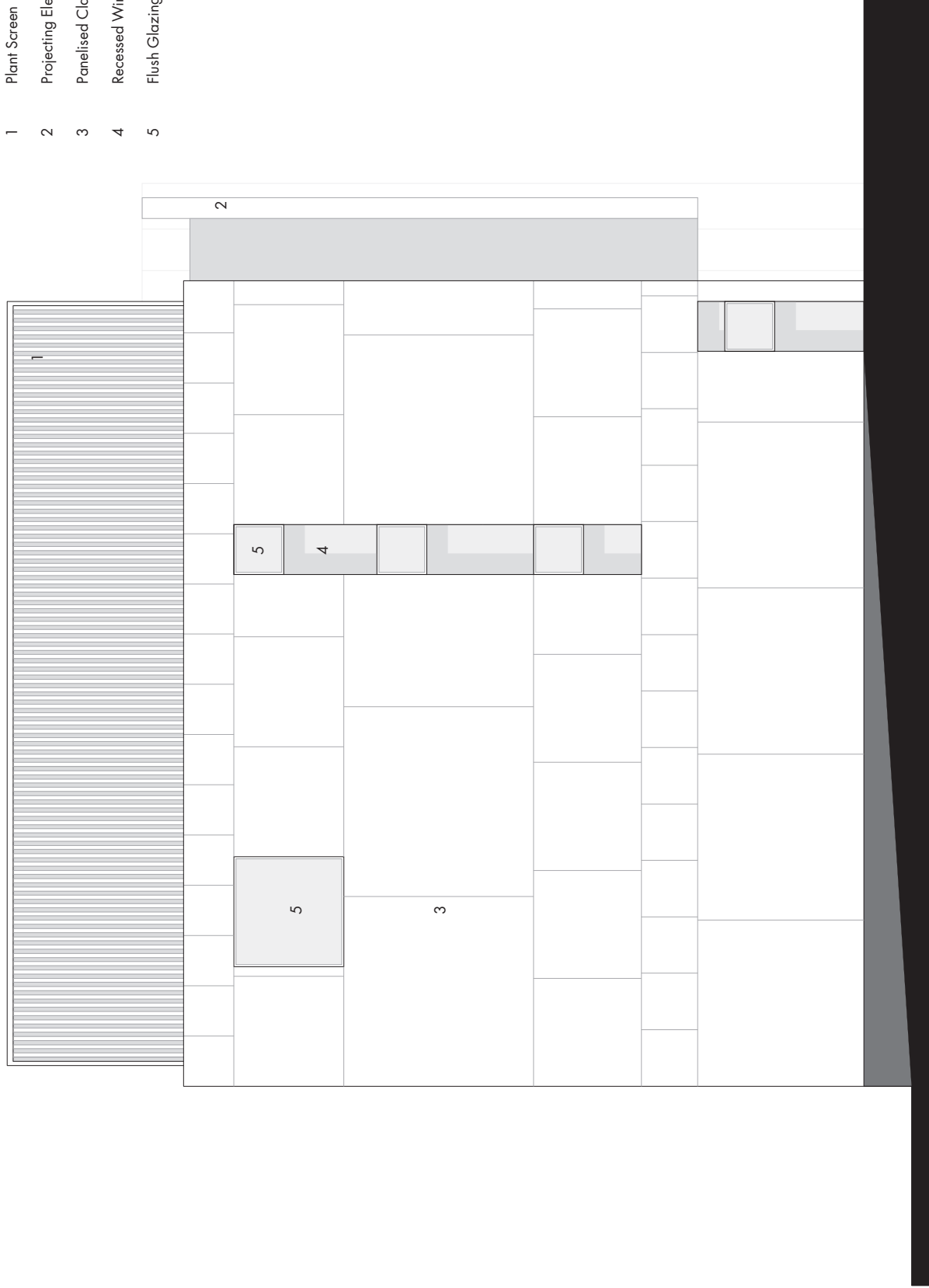
The Dance Space • Section BB • 1:100

- 1 Indicative External Stair
- 2 Plant Screen Beyond
- 3 Full Height Sliding Folding Glazed Doors



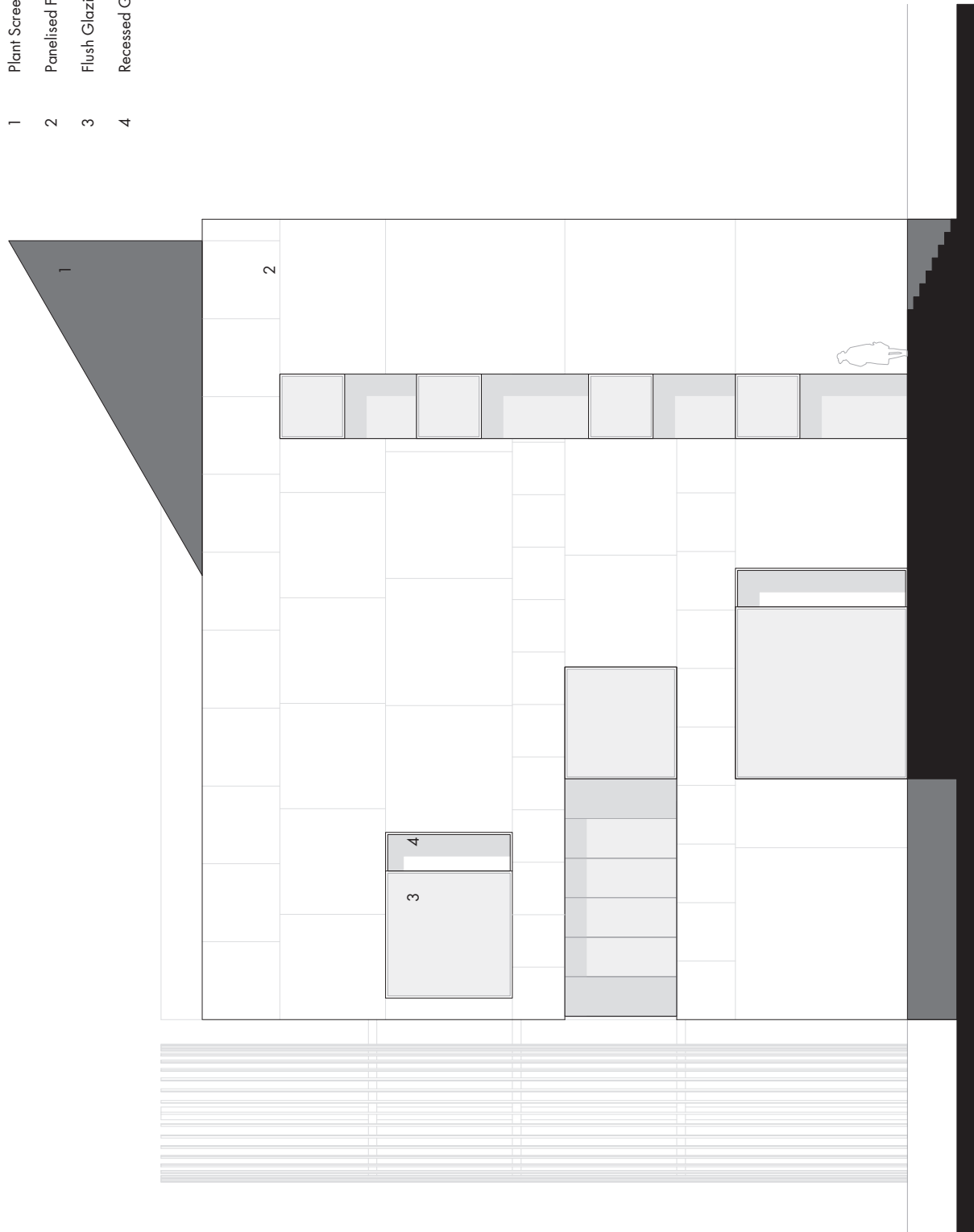
East Elevation • 1:100

- 1 Plant Screen
- 2 Projecting Elevation
- 3 Panelised Cladding
- 4 Recessed Window
- 5 Flush Glazing



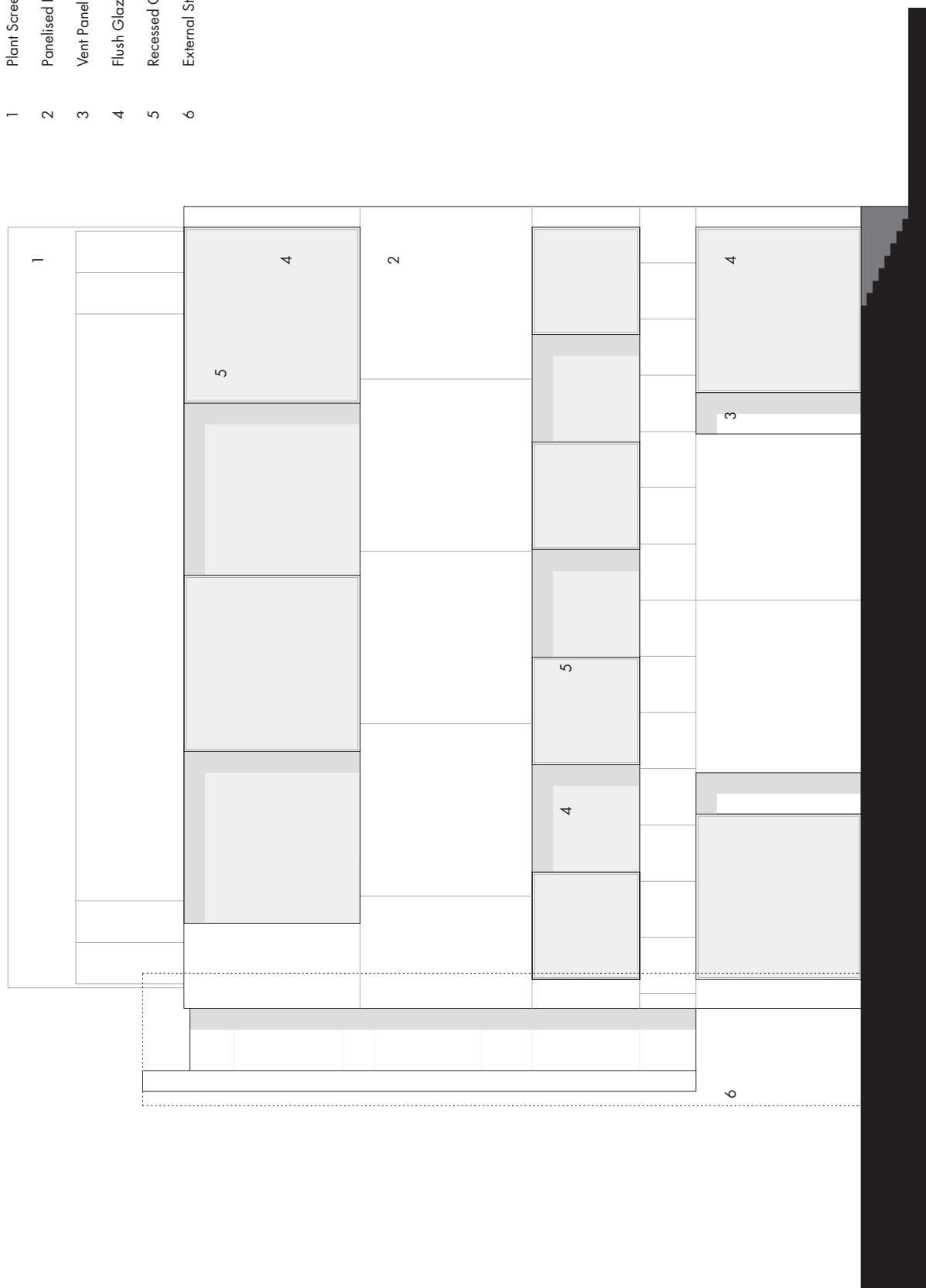
South Elevation • 1:100

- 1 Plant Screen
- 2 Panelised Facade
- 3 Flush Glazing
- 4 Recessed Glazing & Vent Panel



West Elevation • 1:100

- 1 Plant Screen Beyond
- 2 Panelised Facade
- 3 Vent Panels
- 4 Flush Glazing
- 5 Recessed Glazing
- 6 External Stair Behind



North Elevation • 1:100

Area	Space
Ground	
43	Reception
90	Community Studio
90	Research Studio
37	Toilets/Changing
First	
101	Leasehold Office 1
98	Leasehold Office 2
36	Meeting Room
21	SED Office
13	Toilets
Second	
187	Main Studio
29	Workshop/Storage
49	Breakout Space
6	Bar/Kitchen
10	Changing Room/Artists Accommodation/Hot Desks
20	Toilets
Mezzanine	
81	SED Office
23	Breakout Space
27	Changing Rooms/Artists Accommodation/Hot Desks
7	Toilet
1211	GIA

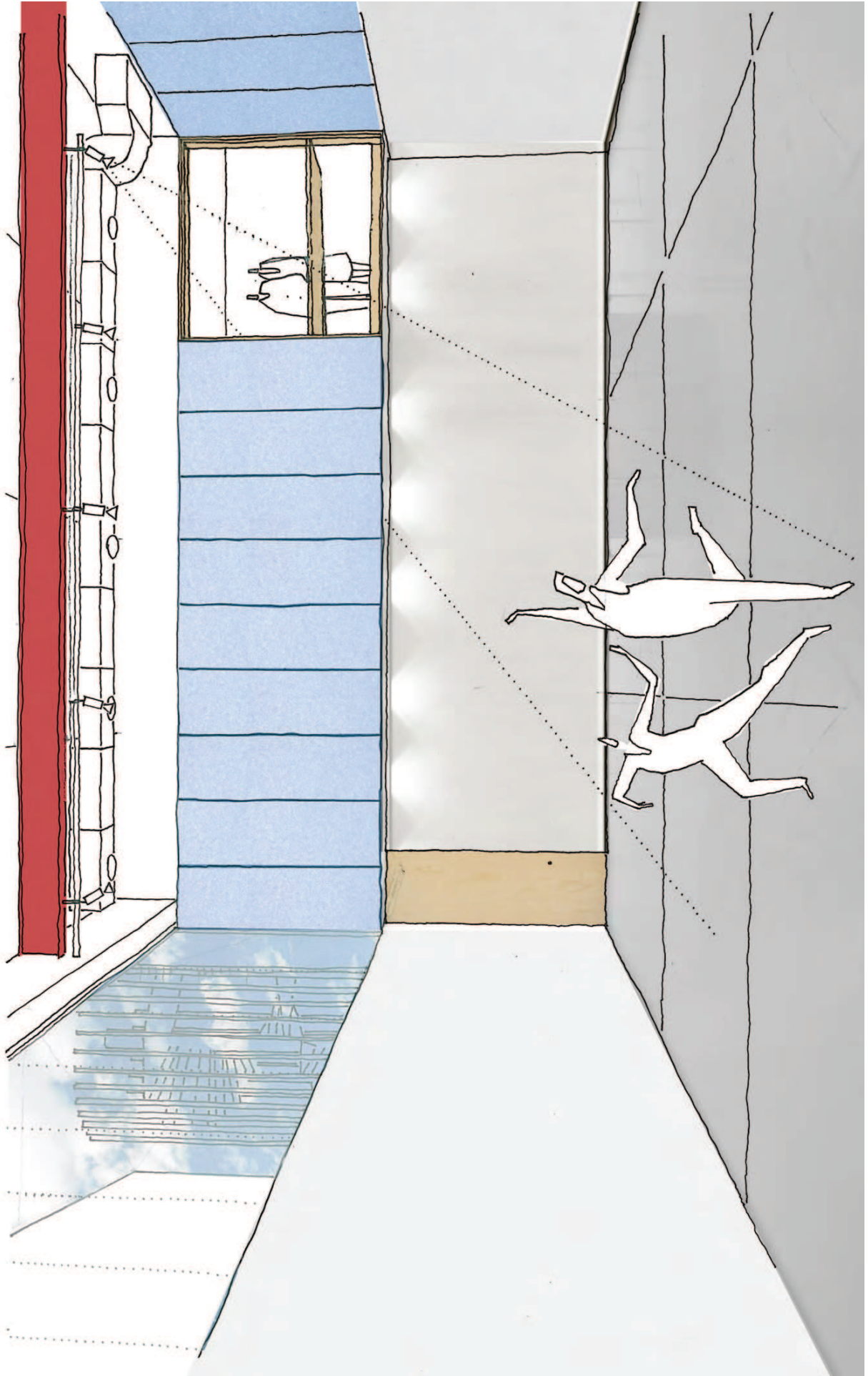
Schedule of Areas



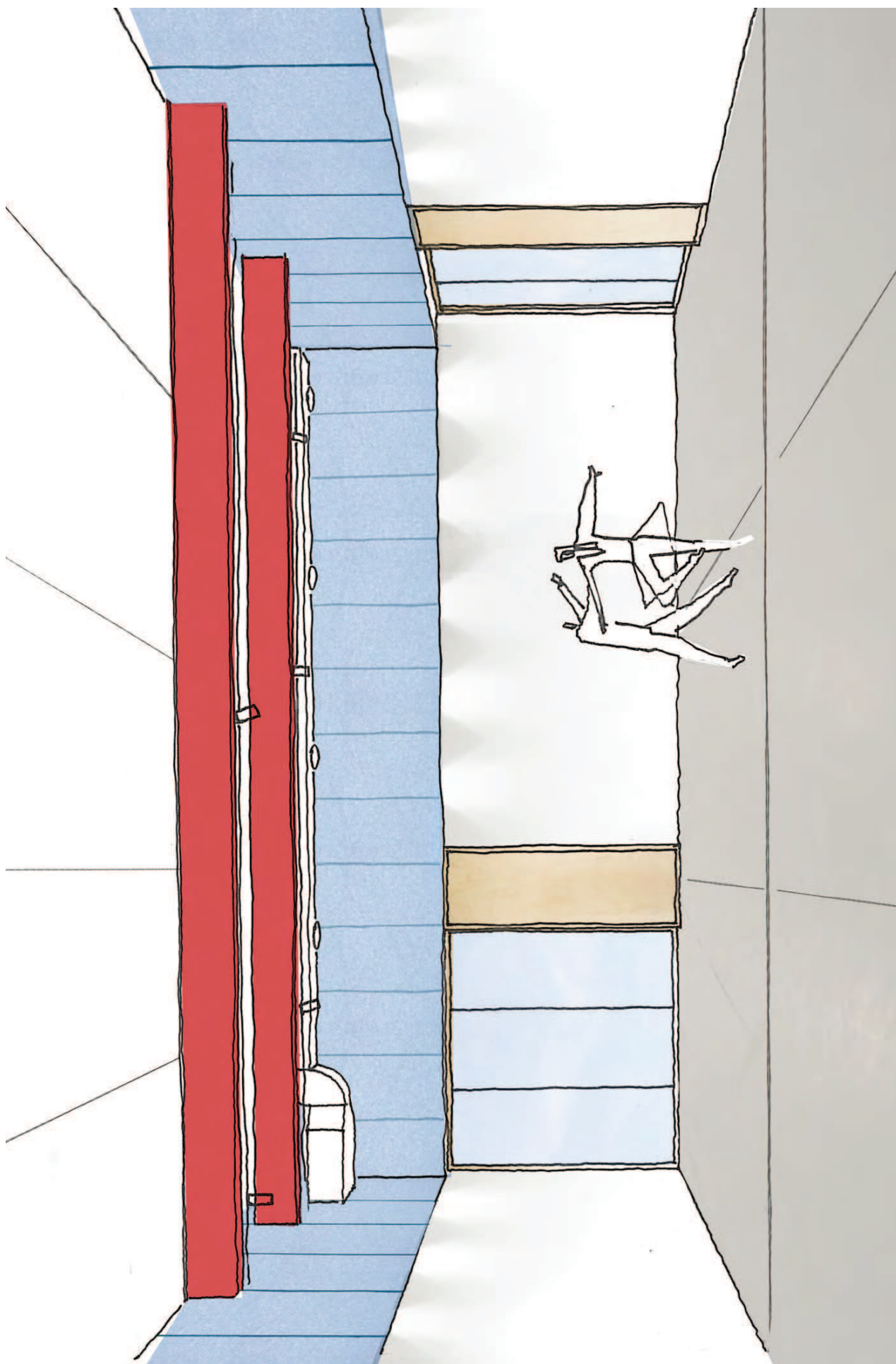
Approach to the Dance Space



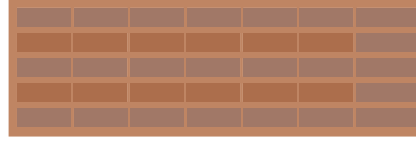
Building Visual



The Dance Space • Main Studio

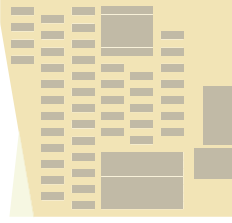


Student



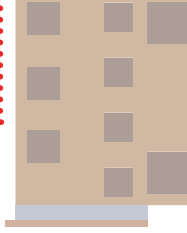
Red Brick

Library



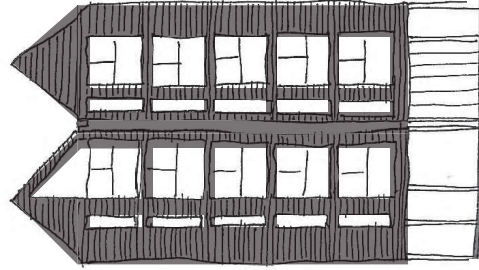
Blonde Stone

Warm materials
define
Events
Square



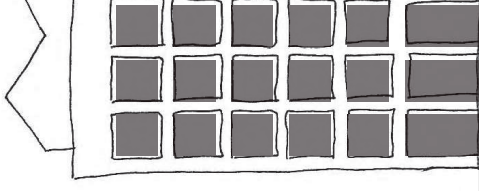
Dance

Panelised Metal
Cladding reflecting
warm materials



Black Timber

Townhouses



White Brick

Office

Materiality Concept Diagram

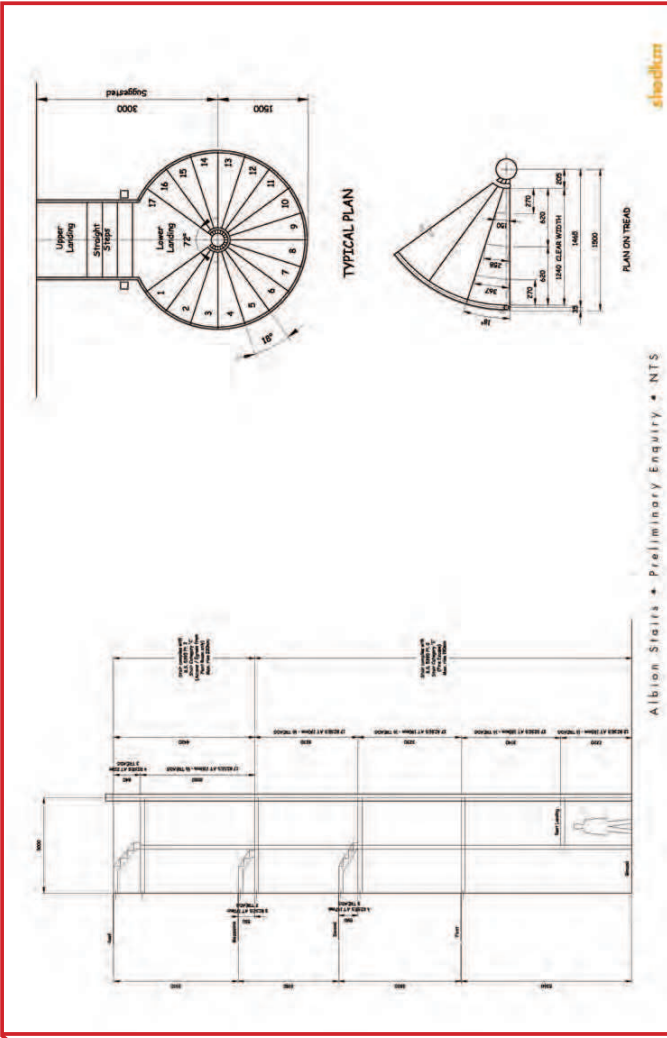
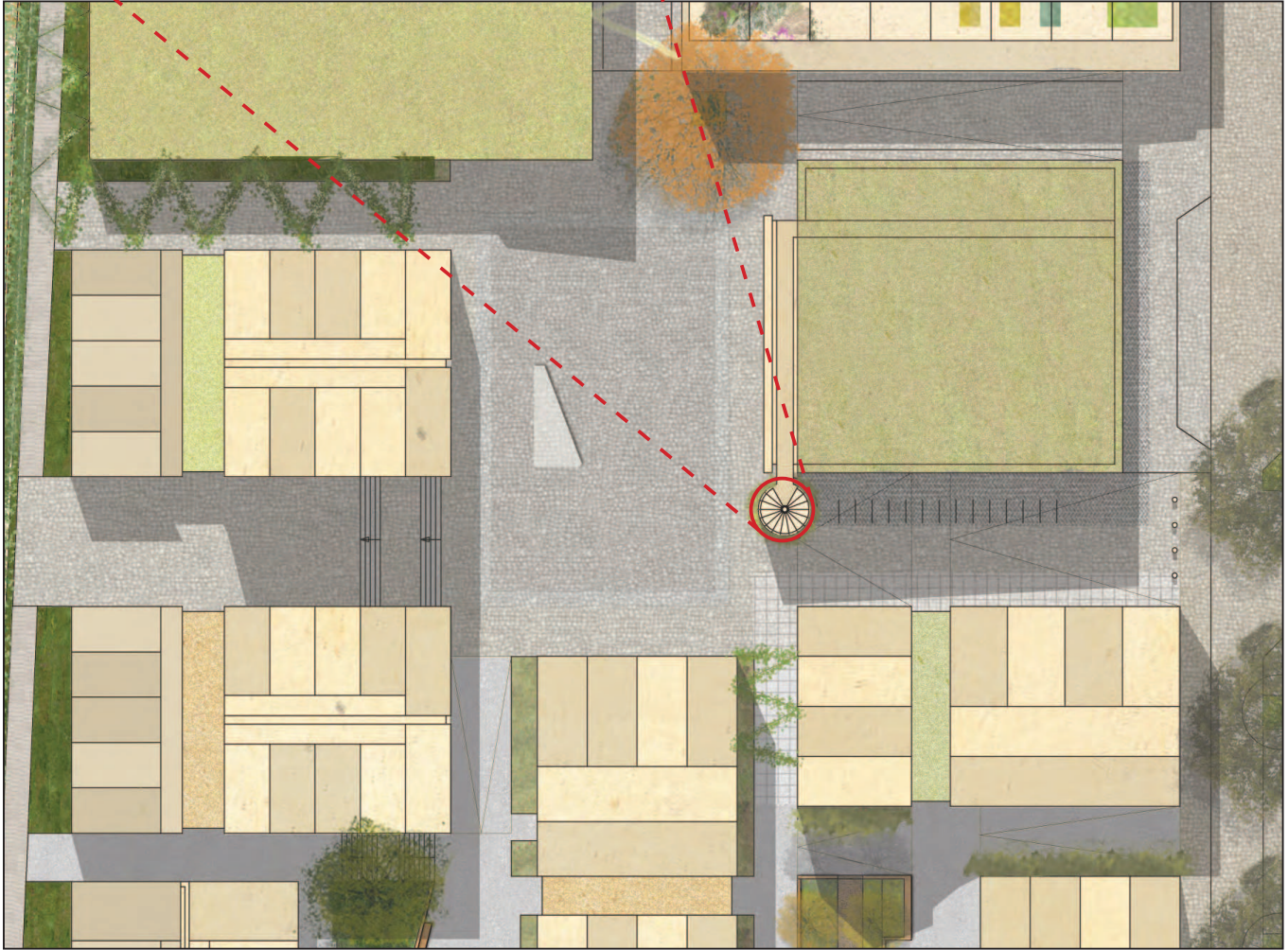


42nd Street, Manchester
Shapero Architects

Careful consideration has been given to the choice of facade materials for the building. The underlying wall buildup is static – insulation infill between the steel structural frame. With a ventilated cavity to the outside of this, the final finish of the building is a rainscreen system. Various options have been tabled. It has been agreed that a ‘panelised’ approach will be adopted, which will relate closely to the Library building - reconstituted stone cladding is likely to be used here. With consideration to the adjacent buildings in close proximity, the facades have been considered holistically. The new office building to the south is clad in white brick, reminiscent of the white brick and tiled buildings found in Brighton, and the residential units to the north in black weatherboard, which relate to the historic black tarred timber buildings of the Old Town. At the centre of the scheme, and as a backdrop to the Dance Space, the student residential will be in red pressed brick with the desaturated blonde colour of the Library Building adjacent. The desire is for the Dance Space to be take the ‘middle point’ in the gradient from white, to red, to black. A coppery colour is appropriate here, as its rusty, golden, metallic reflectivity will complement both red and white buildings. In addition, the reflected sky and light will create a changing quality in the buildings skin, which will create interest throughout the day and night.

Aluminum Panelised Metal Cladding





Draft

J & L GIBBONS

545
Circus Street_Brighton
Stair Study
Living wall options

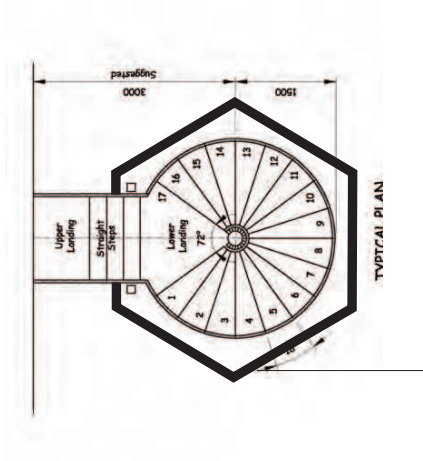
Scale - NTS
20_06_2013



This study is based on the conventional living wall system of pre-planted modular panels. These panels could either be hydroponic or otherwise. This system requires maintenance and will need an area in the building to store services such as irrigation pump and electronics.



CaixaForum
Green Side Wall by Patrick Blanc
Madrid- Spain



Modular pre-formed panels could be shaped in a hexagonal formation around the stair well.

Draft

J & L GIBBONS

545

Circus Street Brighton

Stair Study

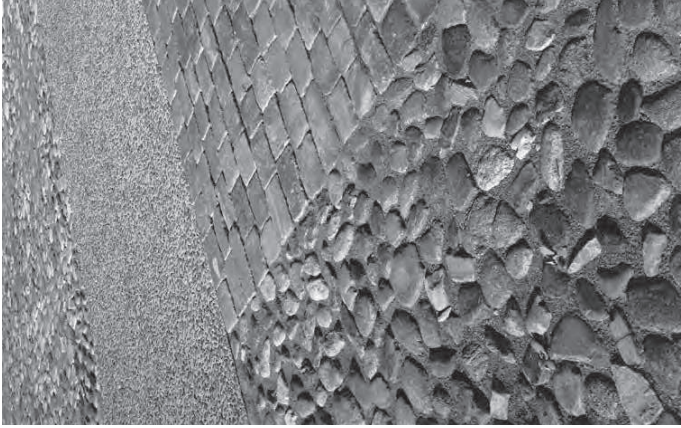
Living wall options

Scale - NTS

20_06_2013



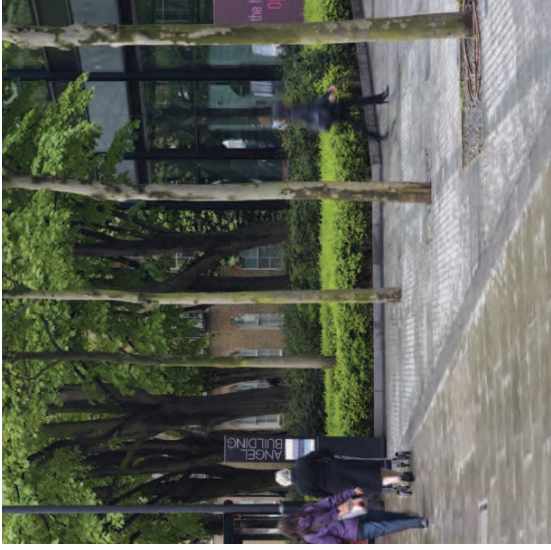
Rain gardens



Texture paving



Texture paving



Tree planting



Threshold



Elm



Shared surface

Circus Street references

Scale - NTS
20_06_2013

Draft

J & L GIBBONS

545

Circus Street_Brighton

Circus Street references



Gillett square



Angel building



Texture paving - Thresholds



Thresholds



Stage/seating



Parthenocissus tricuspidata Autumn
colour variation

Draft

J & L GIBBONS

545

Circus Street Brighton

Stage references

Scale - NTS
20_06_2013

Stage references

Dance Studio Circus Street Market, Brighton

STAGE C+ FUNDERS REPORT

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PROJECT INFORMATION		PREPARED	CHECKED	APPROVED	REVISIONS			
JOB TITLE: CIRCUS STREET MARKET, BRIGHTON		PREPARED BY: MM/BR/NS	CHECKED BY: MICHELA MANGIAROTTI	APPROVED BY: GORDON DUNLOP	NO:	DATE	CHECKED	APPROVED
JOB NUMBER: 3370								
DOCUMENT TITLE: DANCE - FUNDERS REPORT		SIGNED: NA	SIGNED: MM	SIGNED: GD				
VERSION: 00								
FILE NAME: STAGE C+ DANCE FUNDERS REPORT -		DATED: 21.06.2013	DATED: 10.06.2013	DATED: 10.06.2013				

INTRODUCTION

Construction 2011. This is illustrated in section 2 BREEAM Benchmarking.

Atelier Ten have compiled this Environmental Engineering Outline report for the purpose of inputting to the Design Team's Funder's Report. The purpose of this report is to provide a high level description illustrating the concept design proposals for the new Dance Studio within the proposed Circus Street Market mixed-use development in Brighton.

The Dance Studio building consists of a four-storey building and will accommodate three dance studios and offices. The proposed development has been designed by Shed KM Architects.

The concepts for the outline design have been developed over a series of Client and design team meetings and using standard documents such as the Building Regulations and CIBSE Guides.

Sustainability lies at the core of the Circus Street Market proposal as a whole. By adopting a sustainable approach in design, construction and operation, the proposed Circus Street Market development aims to establish itself as an exemplar of sustainable development, satisfy the requirements of the local planning policy and exceed the Building Regulations standards, wherever it is technically, functionally and economically feasible. These requirements and aspirations are summarised under section 1 Key Drivers.

The report outlines both the sustainable design and construction measures and energy and CO₂ emissions saving measures of the proposed Dance Studio with reference to low and zero carbon technologies. These are illustrated in sections 3 Sustainability Strategies and 4 Energy Strategy.

The proposals for the new Dance Studio tackle the following key environmental issues: management, health and wellbeing, energy, transport, water, materials, waste, land use and ecology, and pollution. These are illustrated in section 3 Sustainability Strategies.

To demonstrate the environmental awareness of the proposed Circus Street Market development, Atelier Ten has undertaken a pre-assessment of the Dance Studio building under BREEAM New

SUSTAINABILITY

This section of the report illustrates the environmental sustainability and energy strategy proposals for the new Dance Studio within the proposed Circus Street Market mixed-use development in Brighton in response to the client's brief and Brighton & Hove Council's planning requirements.

By adopting a sustainable approach in design, construction and operation, the proposed Dance Studio building aims to establish itself as an exemplar of sustainable building, meet the client's sustainability brief, satisfy the requirements of the current national and local planning policy and exceed the Building Regulations standards, wherever it is technically, functionally and economically feasible.

The Dance Studio will be designed and built to the highest standards and it will target a BREEAM New Construction (NC) Excellent rating, as shown in the BREEAM pre-assessment carried out by Atelier Ten, thus aiming to meet the client's aspirations and satisfying the local planning policy.

The proposals for the new Dance Studio tackle the following key environmental issues: management, health and wellbeing, transport, water, materials, waste, land use and ecology, pollution and last but not least energy.

Sustainable building management during design, construction and operation

Through a consultation process, the relevant stakeholders have been involved in the design process in order to deliver a functional, accessible and inclusive building. The implementation of effective measures will reduce the opportunity for and fear of crime. The final design will embody the recommendations of the local police Architectural Liaison Officer (ALO) or Crime Prevention Design Advisor (CPDA) on designing out opportunity for crime, in accordance with the principles and guidance of "Secured by Design" (SbD). The building contractor will be contractually required to comply with and go significantly beyond best practice principles under the Considerate Constructors Scheme (CCS) or equivalent. An appropriate level of building services commissioning will be carried out during construction and operation to ensure optimum

performance under occupancy conditions. A building user guide will be provided to the occupants to enable them to operate the building efficiently and make the best use of local facilities.

Promotion of health and wellbeing

The health and well-being of the building occupants will be promoted by ensuring a good access to daylight and view out, adequate glare and solar overheating control, internal and external lighting compliant with best practice for visual performance and comfort, adequate indoor ambient noise levels and sound insulation levels, internal finishes and fittings with low emissions of volatile organic compounds (VOCs), good indoor air quality, appropriate thermal comfort levels, drinking water supply and water systems that reduce the risk of legionellosis.

Green transport

The use of private vehicles to move building users to and from the site will be minimised through the location in proximity to an excellent public transport network and local amenities, the provision of adequate dedicated cycle storage spaces, changing facilities and the development of a green travel plan. A well-planned site layout will provide safe and secure pedestrian and cycle access routes and delivery and manoeuvring operations. No car parking spaces will be provided for building users.

Sustainable water management

The consumption of potable water in sanitary applications and landscape irrigation will be minimised through the adoption of low water use fixtures and fittings, a low-water irrigation strategy and water sub-meters. The risk of leaks on the mains water supply and in toilet facilities will also be reduced through appropriate systems.

Use of sustainable sources of materials

The use of construction materials with a low environmental impact over the full life cycle of the building will be ensured by specifying materials with a minimum 'Green Guide to Specification' rating of A, wherever feasible. These materials aspire to be responsibly sourced (i.e. EMS certified). Any timber will be legally sourced (e.g. FSC certified). The frequency of material replacement will be minimised by protecting vulnerable parts of the building and landscape.

Sustainable waste management

Waste sent to landfill will be minimised during the building's construction and operation through the development and implementation of a Site Waste Management Plan (SWMP), the use of recycled and/or secondary aggregates and the provision of adequate dedicated storage space for recyclable waste.

Biodiversity protection and enhancement

The proposed building will be developed on a brown-field site of low ecological value (i.e. the existing Circus Street Market) and its impact will enhance the ecological value of the site during both construction and operation. The recommendations included in the ecological assessment for enhancement of the site ecology will be implemented. A landscape and habitat management plan will be produced to protect and enhance the local biodiversity.

Prevention of pollution risk

The proposed building will be situated in a low flood risk area as described in the Flood Risk Assessment. Surface water run-off storage and attenuation measures and sustainable drainage systems (SUDS), including swales, green roof and potentially rainwater harvesting, will be adopted, as appropriate, to reduce and delay the discharge of rainfall run-off to public sewers. Night time light pollution will also be minimised. Potential noise from the new building affecting nearby noise-sensitive buildings will be reduced by adopting noise attenuation measures, if required.

Energy efficiency and CO₂ emissions saving

An energy hierarchy has been applied to the design strategy of the Dance Studio building to minimise CO₂ emissions.

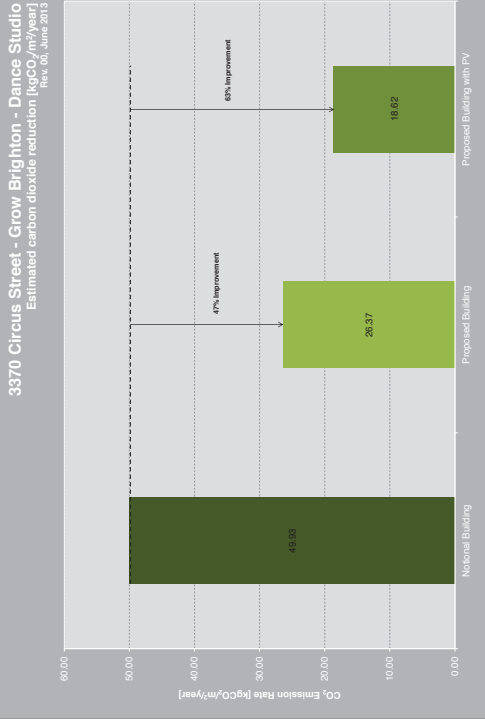
Passive design measures have been adopted, such as efficient built form, daylight enhancement, solar overheating control optimization, and high levels of insulation and airtightness. In particular, the proposed U-values and air permeability will be better than Part L of the Building Regulations 2010 standards and will aim to comply with the proposed Part L of the Building Regulations 2013 standards for future proofing.

Active energy efficient systems have been integrated. These include mixed mode ventilation, including heat recovery, perimeter heating, adiabatic indirect evaporative cooling, energy efficient internal and external lighting, lifts, office equipment and appliances, a building energy

management system (BMS) and energy sub-meters.

As result of a feasibility study, the following low and zero carbon (LZC) technologies are proposed for this project: the connection to the proposed site-wide district energy system including a combined heat and power (CHP) system and the potential integration of photovoltaic (PV) panels on the Dance Studio roof. From initial sizing, it has been estimated that either the CHP system will be able to provide the majority of the space heating and domestic hot water (DHW) and part of the electricity, while the photovoltaics will be able to supply some electricity for cooling, fans, pumps and lighting.

The results of the initial energy assessment, illustrated in the table below, show that the Building CO₂ Emission Rate (BER) of the Dance Studio is lower than the Target CO₂ Emission Rate (TER), thus achieving compliance with Part L criteria 1 and 2 of the Building Regulations 2010. In particular, the incorporation of passive design measures, energy efficient measures and CHP into the building produces an estimated 47% improvement over ADL2A 2010. With the addition of PVs, the estimated improvement increased to 63%. Note that further calculations to verify the building compliance with Part of the Building Regulations 2013 will be required once the new edition of the National Calculation Methodology (NCM) and guidance documents will be published.



ENVIRONMENTAL ENGINEERING (MEP) SERVICES

The main features of the MEP systems are summarised below. The MEP services are designed to provide occupant comfort and minimise energy consumption, while being robust, easy to use and maintain.

Design criteria

U values: 20% better than current Part L 2010
Building Fabric Infiltration: - 3.0m³/h/m² façade.

External design temperatures - Designing for the future – In order to ensure the project and its services are able to adapt to any predicted changes in climate, an additional factor has been added to external design conditions for the design of systems (when compared to standard industry figures) - For Brighton this would typically be in the region of +/-1°C for winter and summer design conditions respectively.

Air systems - The induct velocities have been minimised to avoid unwanted induct generated noise. The restricting velocities are as agreed with the Acoustician.

In-line ductwork attenuators are provided to control noise transmission.

Fans and pumps will be provided with inverter variable speed control to achieve energy and running cost savings and smooth operation

Heating system - Differential pressure control valves (DPCVs) will be provided on heating systems to achieve energy savings and provide ease of commissioning and ease of future commissioning amendments.

Thermal Zoning and Sub metering will be provided to meet BREEAM requirements.

Heating - Site Wide CHP

A District Heating main serves the building providing heat from an on-site Combined Heat and Power system.

The heating in the building feeds hot water storage, perimeter heating system (radiators) and ventilation plant. Radiators are provided with local thermostatic control.

Low Carbon Evaporative Cooling

Low carbon cooling will be provided via mechanical ventilation air handling plant.

Free cooling using outside air will be maximised but when further cooling is required then this will be provided via an adiabatic evaporative cooling module within the air handling plant, allowing the air to be 'free' cooled by up to 6 degC.

Local cooling (using DX units) will be provided to IT areas and occupied areas of high heat gain (only where required).

A space allowance is provided for tenant/user cooling condenser units.

Low Carbon Ventilation systems

Roof located air handling plant serve the whole building using low velocity variable air volume (VAV) system that minimises energy consumption by reacting to levels of occupancy (CO2 sensors) and temperature control.

Offices incorporate low energy displacement ventilation techniques to avoid the use of local cooling units thus minimising access for maintenance.

Occupancy sensors minimise fan energy for systems serving workshop/changing and WCs.

Natural ventilation

Opening windows are provided for user operation to all main spaces.

Building Management System (BMS)

A Building Management System (BMS) will be provided to provide automatic control of the environmental conditions within the building and provide full metering and monitoring of all energy consuming systems.

LV intake and distribution

Incoming HV via on site substation will connect to LV Switchboards at ground floor.

The switch board will serve locally metered distribution boards on each floor at each riser.

Photovoltaic panels

Photovoltaic panels will be provided to offset some of the carbon emissions for the building. See the Energy section of the report.

Stand-by Generation

Stand-by Generation will be provided to the landlord life safety systems only, via the site wide generator.
Uninterruptible Power Supplies – To be provided by tenants.

Lighting Levels

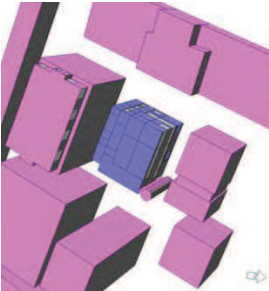
Proposed illumination levels by the artificial lighting will fall within the ranges that are deemed suitable for that anticipated activity of the room in accordance with CIBSE recommendations (Code for Interior Lighting) and BS requirements, as shown below.

Area	Illumination Level
Office	300-500lux
Meeting Room	500lux
Circulation	100lux
Reception	200-300lux
Dance Studio	500lux
Plant Room	200lux
WC's	100lux
Stairs	150lux
Store	100lux
Changing Rooms	200lux

Energy saving lighting control will be provided via automatic dimming for daylight, presence detection (PIRs) and for landlord areas – automatic on/off presence detection

Emergency Lighting

Emergency lighting will be provided throughout the building to the current European Standards. This will consist of a central battery inverter unit supplying dedicated emergency luminaires. It is envisaged that the emergency lighting will be monitored and tested via the lighting control system.



3D view of the daylight model that will also be used for thermal simulation during the next stage of design. The model indicates adjacent buildings

Other systems

Public address system – assumed speaker system on all floors.

CCTV/Access Control and Security – to cover main entrance/exit points (intercom/camera to each unit) and CCTV to also cover building perimeters.

Fire Alarm and Detection System – to be provided. **Lightning protection system** will be designed in accordance with BS EN 62305 - 2006: 'Protection of Structures against Lightning'.

Earthing and Bonding -The earthing will be installed to meet the earthing requirements of the UKPN and BS 7671.

Passenger Lifts

The building will be provided with 1No. 21 person (1600Kg) passenger lift, serving all floors. This is larger than is required for normal staff and disabled use, but is requested by the client to transport scenery and equipment

Energy saving features of the lift is being considered although some possible features are not practical due to the low rise building.

Water services

A new metered main water connection will be incorporated for the dance building.

The incoming water will be metered as per BREEAM requirements. A break tank is located at ground floor which then pumps the mains water to the main cold water storage tank in the roof plant room.

The cold water tank will be sized to provide the building with 1.2 hour storage.
The incoming water supply to the building will incorporate a pre-filter and a UV sterilization unit.

The installation will be installed in copper tube and be fully insulated.

Hot water will be stored in a central calorifier for distribution throughout the building.
Hot and Cold water- all outlets will be provided with flow restrictors to minimise water wastage, and thermostatic mixing valves to prevent scalding.
WCs will be dual flush and toilet areas will be fitted with auto-shut off valves to minimise leaks.

Drainage and sanitation

A new connection to the combined public sewer network will be incorporated.

Foul Water

A separate internal system of foul and surface water drainage will be provided to convey all the waste by gravity to the external site drainage installation prior to the connection to the public sewage system located on the site boundary.

A fully ventilated internal soil and waste system will be provided to convey all waste discharge to the below ground drainage system.

The installation will be fully insulated to prevent noise transmission and condensation.

Surface Water

The whole surface water system will be designed to meet the requirements of the Environmental Agency and will incorporate SUD's drainage methods where appropriate. Currently this includes a green roof to the Dance Building.

An internal rainwater system shall be provided. The installation will be fully insulated to prevent noise transmission and condensation.

ENVIRONMENTAL ENGINEERING STRATEGY DIAGRAM

The following diagram summarises the main Environmental Engineering Strategies proposed for the Dance Building.

Wherever possible and within the cost plan the systems try to be efficient in terms of resources and carbon, while being robust and easy to use and maintain.

A 'Green Roof' is provided to reduce rainwater run-off, while it has the added benefit of reducing solar gain to the roof and can enhance biodiversity.

Main performance space

Air supply at high level to maintain flexibility. Lighting is automatically controlled based on occupancy detection and daylight levels (override provided)

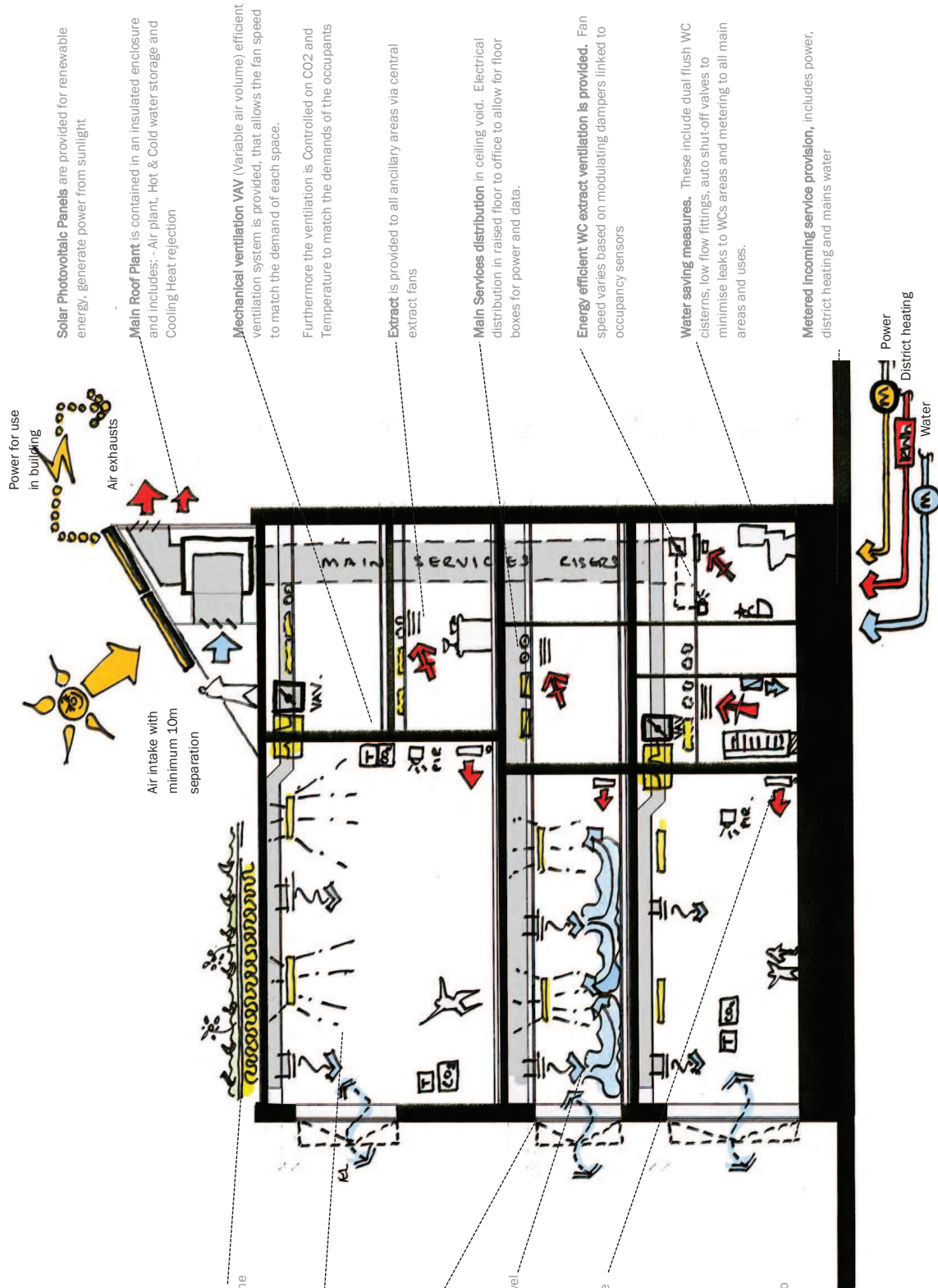
Natural ventilation is provided via opening windows provided to all main spaces for occupant control.

Offices are served via high induction diffusers at high level to provide low energy **displacement air system**. Power and data in raised floor

Heating is provided via wall mounted radiators which are controlled via local thermostatic control

Local Cooling to IT Server room, is provided via a local cooling unit with local on/off control and temperature settings. Heat rejection condensers are located in the main roof plant room

Workshop ventilation is provided via a local fan extract to outside. Local occupant controls are provided



BREEAM 2011 New Construction Assessment Report: Rating & Key Performance Indicators

This assessment and indicative BREEAM rating is not a formal certified BREEAM assessment or rating and must not be communicated as such. This score presented is indicative of a buildings potential performance and is based on a simplified pre-formal BREEAM assessment and unverified commitments given at an early stage in the design process.

Overall Indicative Building Performance

Building name		Circus Street, Grow Brighton - Dance Studio
Indicative building score (%)		72.32%
Indicative BREEAM rating		Pre-Assessment result indicates potential for BREEAM Excellent rating
Indicative minimum standards level achieved		Pre-Assessment result indicates the minimum standards for Excellent level

Summary of Indicative Building Performance by Environmental Section and Assessment Issue

Management	Indicative no. credits available	Indicative no. credits Achieved	Indicative score	Minimum standards level achieved	Pre-Assessment result indicates the minimum standards for Outstanding level
Management	Man001 Sustainable Procurement	8.0	6.0	3.27%	Pre-Assessment result indicates the minimum standards for Outstanding level
	Man002 Responsible Construction Practices	2.0	2.0	1.09%	Pre-Assessment result indicates the minimum standards for Outstanding level
	Man003 Construction Site Impacts	5.0	5.0	2.73%	N/A
	Man004 Stakeholder Participation	4.0	3.0	1.66%	Pre-Assessment result indicates the minimum standards for Outstanding level
	Man005 Life cycle cost and service life planning	3.0	2.0	1.09%	N/A
	Total indicative environmental section performance	22.0	18.0	9.82%	
Health & Wellbeing	Head01 Visual Comfort	3.0	2.0	2.16%	Pre-Assessment result indicates the minimum standards for Outstanding level
	Head02 Indoor Air Quality	4.0	3.0	3.21%	N/A
	Head03 Thermal Comfort	2.0	2.0	2.16%	Pre-Assessment result indicates the minimum standards for Outstanding level
	Head04 Water Quality	1.0	1.0	1.07%	Pre-Assessment result indicates the minimum standards for Outstanding level
	Head05 Acoustic Performance	2.0	2.0	2.16%	N/A
	Head06 Safety and Security	2.0	2.0	2.16%	N/A
Energy	Total indicative environmental section performance	14.0	12.0	12.86%	
	En001 Reduction of CO2 Emissions	15.0	8.0	5.63%	Pre-Assessment result indicates the minimum standards for Excellent level
	En002 Energy Monitoring	2.0	2.0	1.41%	Pre-Assessment result indicates the minimum standards for Outstanding level
	En003 External Lighting	1.0	1.0	0.70%	N/A
	En004 Low and Zero Carbon Technology	5.0	1.0	0.70%	N/A
	En005 Energy Efficient Cold Storage	N/A	N/A	N/A	Pre-Assessment result indicates the minimum standards for Outstanding level
Transport	En006 Energy Efficient Transportation Systems	2.0	2.0	1.41%	N/A
	En007 Energy Efficient Laboratory Systems	N/A	N/A	N/A	N/A
	En008 Energy Efficient Equipment	2.0	2.0	1.41%	N/A
	En009 Driving Space	N/A	N/A	N/A	N/A
	Total indicative environmental section performance	27.0	16.00	11.86%	
	Tr001 Public Transport Accessibility	5.0	5.0	3.66%	N/A
Water	Tr002 Proximity to Amenities	1.0	1.0	0.73%	N/A
	Tr003 Cyclist Facilities	2.0	1.0	0.73%	N/A
	Tr004 Maximum Car Parking Capacity	2.0	2.0	1.45%	N/A
	Tr005 Travel Plan	1.0	1.0	0.73%	N/A
	Total indicative environmental section performance	11.0	10.0	7.27%	
	Wat01 Water Consumption	5.0	3.0	2.00%	Pre-Assessment result indicates the minimum standards for Outstanding level
Materials	Wat02 Water Monitoring	1.0	1.0	0.67%	Pre-Assessment result indicates the minimum standards for Outstanding level
	Wat03 Water Leak Detection and Prevention	2.0	2.0	1.33%	N/A
	Wat04 Water Efficient Equipment	1.0	1.0	0.67%	N/A
	Total indicative environmental section performance	9.0	7.0	4.67%	
	Mat001 Life Cycle Impacts	6.0	3.0	2.88%	N/A
	Mat002 Hard Landscaping and Boundary Protection	1.0	0.0	0.00%	N/A
Waste	Mat003 Responsible Sourcing	3.0	1.0	0.96%	Pre-Assessment result indicates the minimum standards for Outstanding level
	Mat004 Insulation	2.0	1.0	0.96%	N/A
	Mat005 Designing for Robustness	1.0	1.0	0.96%	N/A
	Total indicative environmental section performance	13.0	6.00	5.77%	
	Wat01 Construction Waste Management	4.0	2.0	2.50%	Pre-Assessment result indicates the minimum standards for Outstanding level
	Wat02 Recycled Aggregates	1.0	0.0	0.00%	N/A
Land Use and Ecology	Wat03 Operational Waste	1.0	1.0	1.25%	Pre-Assessment result indicates the minimum standards for Outstanding level
	Wat04 Speculative Floor and Ceiling Finishes	N/A	N/A	N/A	N/A
	Total indicative environmental section performance	6.0	3.00	3.75%	
	LE01 Site Selection	2.0	2.0	2.00%	N/A
	LE02 Ecological Value of Site and Protection of Ecological Features	1.0	1.0	1.00%	N/A
	LE03 Managing Ecological Impact	2.0	2.0	2.00%	Pre-Assessment result indicates the minimum standards for Outstanding level
Pollution	LE04 Enhancing Site Ecology	3.0	3.0	3.00%	N/A
	LE05 Long Term Impact on Biodiversity	2.0	2.0	2.00%	N/A
	Total indicative environmental section performance	10.0	10.00	10.00%	
	Pol001 Impact of Refrigerants	3.0	0.0	0.00%	N/A
	Pol002 NOx Emissions	3.0	2.0	1.54%	N/A
	Pol003 Surface Water Runoff	5.0	5.0	3.85%	N/A
Innovation	Pol004 Reduction of Night Time Light Pollution	1.0	1.0	0.77%	N/A
	Pol005 Noise Attenuation	1.0	1.0	0.77%	N/A
	Total indicative environmental section performance	13.0	9.00	6.92%	
	Inn001 Innovation	10.0	0.0	0.00%	N/A
	Total indicative environmental section performance	10.0	0.00	0.00%	

Dance Studio Structural Framing Strategy

A steel structural frame is adopted for the proposed 3/4 storey dance studio building. The structural frame has a regular grid (where possible) with a 2m overhang at first floor level to one elevation.

The steel columns are located within internal and external walls of the dance studios and the workshop, thus offering column free spaces for total flexibility.

The lateral stability of the steel structure is achieved by the plate action of concrete floors, transferring horizontal forces due to wind and sway, to strategically located vertical steel cross bracings.

The steel structure is supported on reinforced concrete pile caps and ground beams on piled foundations.

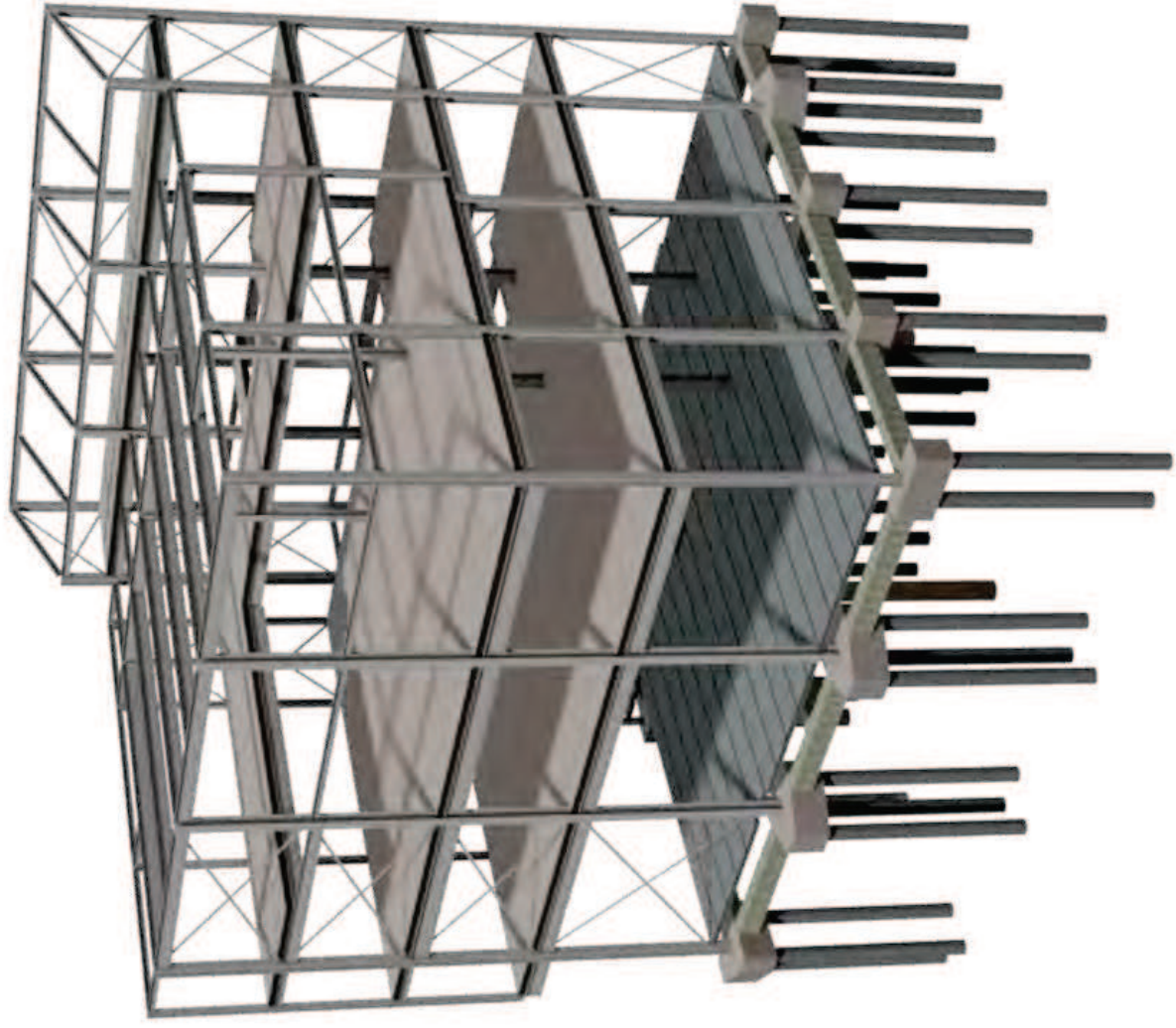
The ground floor is a proprietary 200mm thick wide-span precast concrete flooring system, with screed finish and ventilated void under.

Upper floors comprise 200mm thick reinforced in-situ concrete composite decking supported on steel beams. To avoid vibration, the main dance studio floor and supporting steel beams have been designed for a natural frequency of 10Hz.

The green roof is supported on a proprietary steel structural decking system spanning directly onto steel rafters.

Design Imposed Loads:

Ground Floor Studio	5.0 kN/m ²
1 st Floor Offices	3.5 kN/m ² (including partitions)
2 nd Floor Studio	7.5 kN/m ²
Corridors/Stairs	5.0 kN/m ²
Plant Room	7.5 kN/m ²
Roof	0.75 kN/m ²



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4. DO NOT SCALE FROM THIS DRAWING. WORK TO GIVEN DIMENSIONS ONLY.
5. FOR GROUND FLOOR SLAB AND FOUNDATION LAYOUTS, REFER TO DRAWING DS-01.

21.06.13

19.06.13

DATE

AMENDMENTS

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Cathedral
(Brighton) Ltd.

CONTRACT
Circus Street Market, Brighton

TITLE
Dance Studio
Ground Floor Steelwork Layout

DRAWN
JG

CHKD
SA

APRD
SA

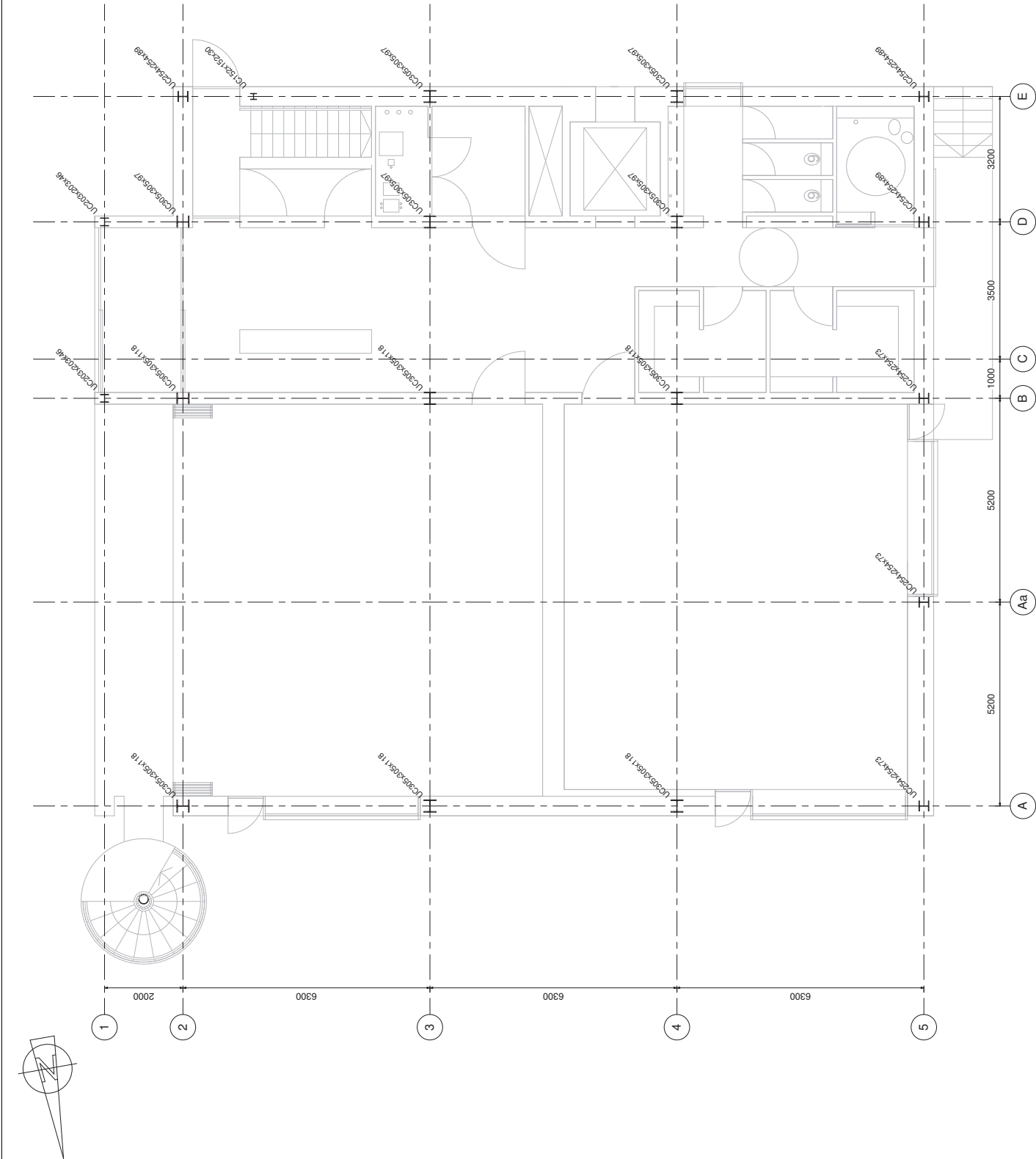
SCALE
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JOB No
417812

DES No
DS-02

REV
B



Structural Scheme Plan • Ground Floor • 1:200

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REV	BY	CHKD	DATE
1	SV		19/06/13
Foundations added			
AMENDMENTS			
DATE			

PRELIMINARY

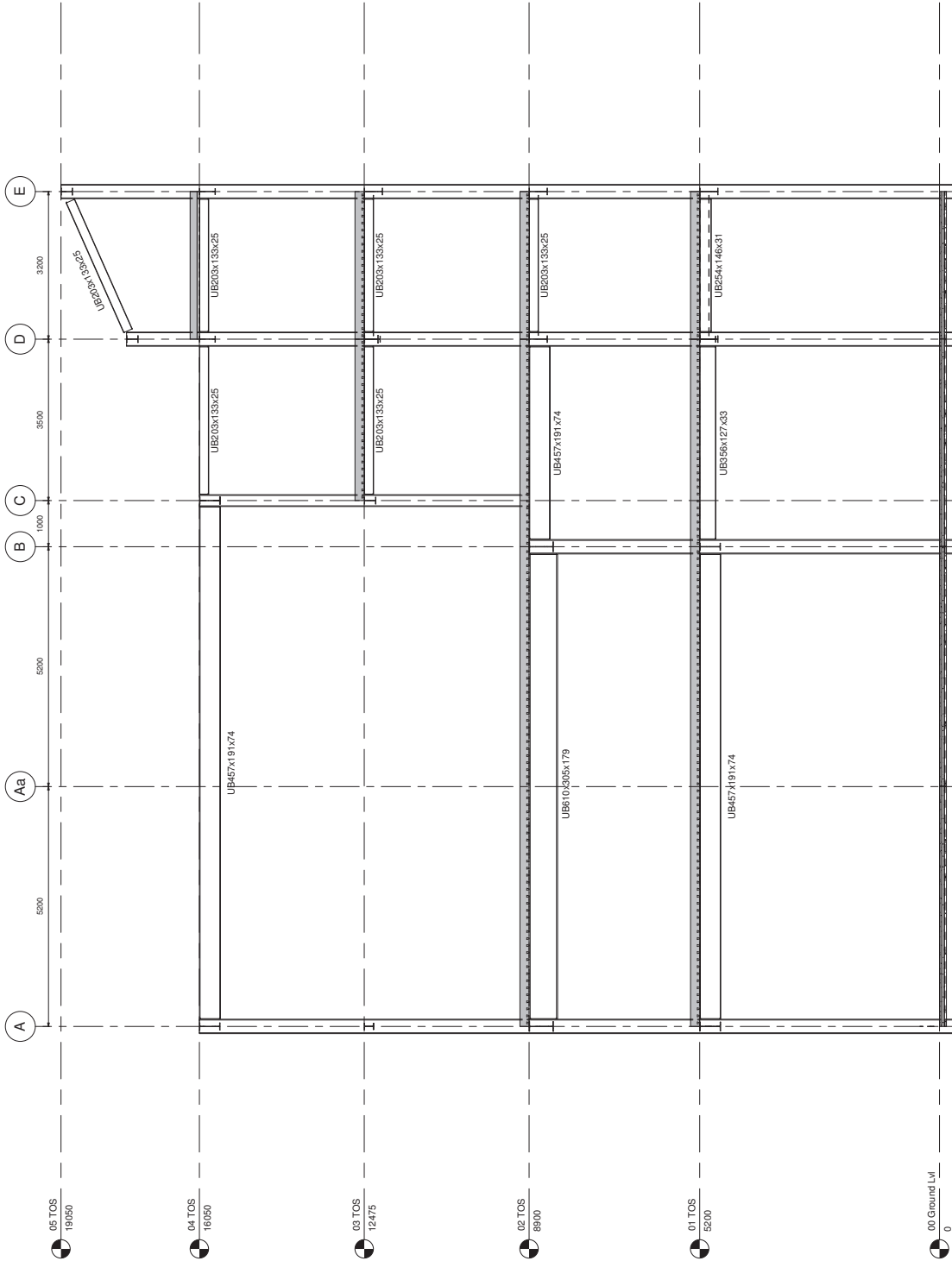


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CONTRACT
Circus Street Market, Brighton

Page 6



Structural Scheme Section • 1:200

DANCE STUDIO SUMMARY

GlFA	1,209 m ²	13,013 ft ²
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Ref	Description	Totals (£)	£/m ²	£/ft ²	%
0	Demolition and Site Clearance	0	0.00	0.00	0.00%
1	Substructures	53,600	44.33	4.12	3.07%
2A	Frame	170,850	141.32	13.13	9.79%
2B	Upper Floors	65,550	54.22	5.04	3.76%
2C	Roofs	67,420	55.77	5.18	3.86%
2D	Stairs	70,000	57.90	5.38	4.01%
2E	External Walls	452,840	374.56	34.80	25.95%
2F	Windows and External Doors	89,400	73.95	6.87	5.12%
2G	Internal Walls and Partitions	94,340	78.03	7.25	5.41%
2H	Internal Doors and Ironmongery	87,600	72.46	6.73	5.02%
3A	Wall Finishes	73,960	61.17	5.68	4.24%
3B	Floor Finishes	91,750	75.89	7.05	5.26%
3C	Ceiling Finishes	5,310	4.39	0.41	0.30%
3D	Fixtures and Fittings	6,420	5.31	0.49	0.37%
4	Sanitary Appliances and Services Equipment	15,600	12.90	1.20	0.89%
5A/B	Disposal Installations	18,140	15.00	1.39	1.04%
5C	Water Installations	24,180	20.00	1.86	1.39%
5D	Heat Source	30,230	25.00	2.32	1.73%
5E	Space Heating, Air Treatment and Extract	106,670	88.23	8.20	6.11%
5F/G	Electrical Installations	89,630	74.14	6.89	5.14%
5H	Gas Installation	0	0.00	0.00	0.00%
5I	Lifts and Escalators	35,000	28.95	2.69	2.01%
5J	Protective Installation	2,420	2.00	0.19	0.14%
5K	Fire Alarm, Communications and Security	15,020	12.42	1.15	0.86%
5L	Special Installations	15,000	12.41	1.15	0.86%
5M	Builders Work in Connection	14,220	11.76	1.09	0.81%
5N	BREEAM	40,000	33.09	3.07	2.29%
6A	External Works	10,000	8.27	0.77	0.57%
6B	Drainage	0	0.00	0.00	0.00%
6C	External Services	0	0.00	0.00	0.00%

Total Construction Costs	£1,745,150	£1,443	£134	100.00%
7 On Costs				
7A Preliminaries	209,418	173.22	16.09	12.00%
7B Main Contractor's Overheads and Profit	97,728	80.83	7.51	5.60%
7C Construction Contingency	102,615	84.88	7.89	5.88%

Total Construction Costs (2nd Quarter 2013)	£2,154,911	£1,782	£166	123.48%
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8 Inflation (4.78%)	£103,005			
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Overall Outturn Cost	£2,257,916			
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C o s t P l a n