



# Crystal Sands: Isle of Wight

Lena Holyoake – ARC605 Final Year Project



# Crystal Sands: Isle of Wight

## Introduction

The project sets out to expand upon Revitalise UK holiday break destinations

To regenerate the old site, Islands revenue and job opportunities.

Dedicated, propose build facility.

Classic, modern architectural design combining the old castle estate and Island Victorian history.

Introduce previously requested facilities into a new holiday centre.

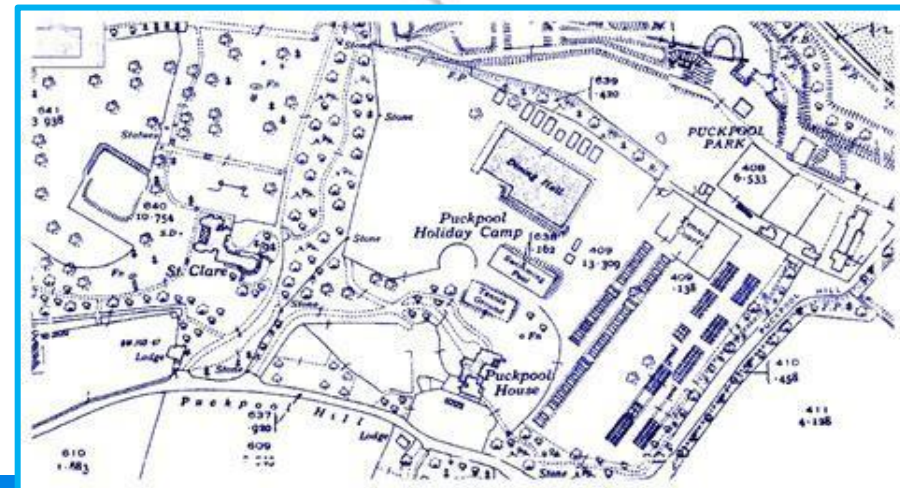


# Revitalise

We're the people who create revitalising holidays for disabled people and carers.



## Isle of Wight





# Crystal Sands: Isle of Wight

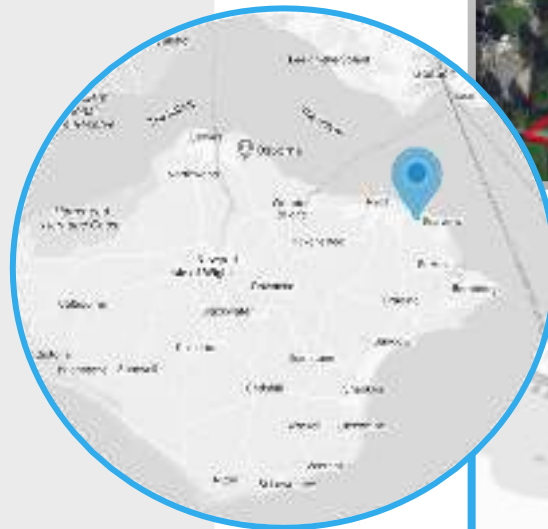
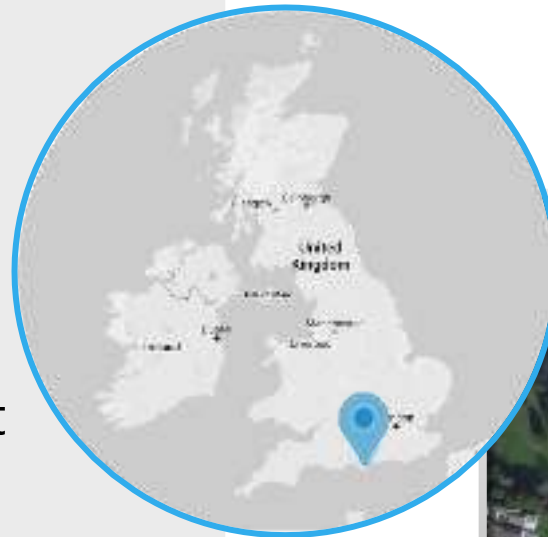
## Site Location

Crystal Sands site is located on the north coast of the Isle of Wight

It's close proximity to Apply Beach provides scenic views across The Solent and Portsmouth shore line.

There are many sites of interest and attractions near by.

As this regeneration plot occupies a large 11.6 ha area, the site has been broken down into phased developments





# Crystal Sands: Isle of Wight

## Site Analysis

Topography & Positioning.

Sun Path and Ordination

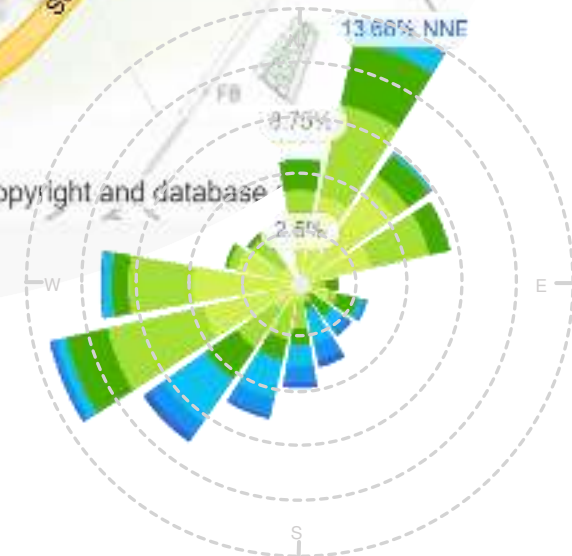
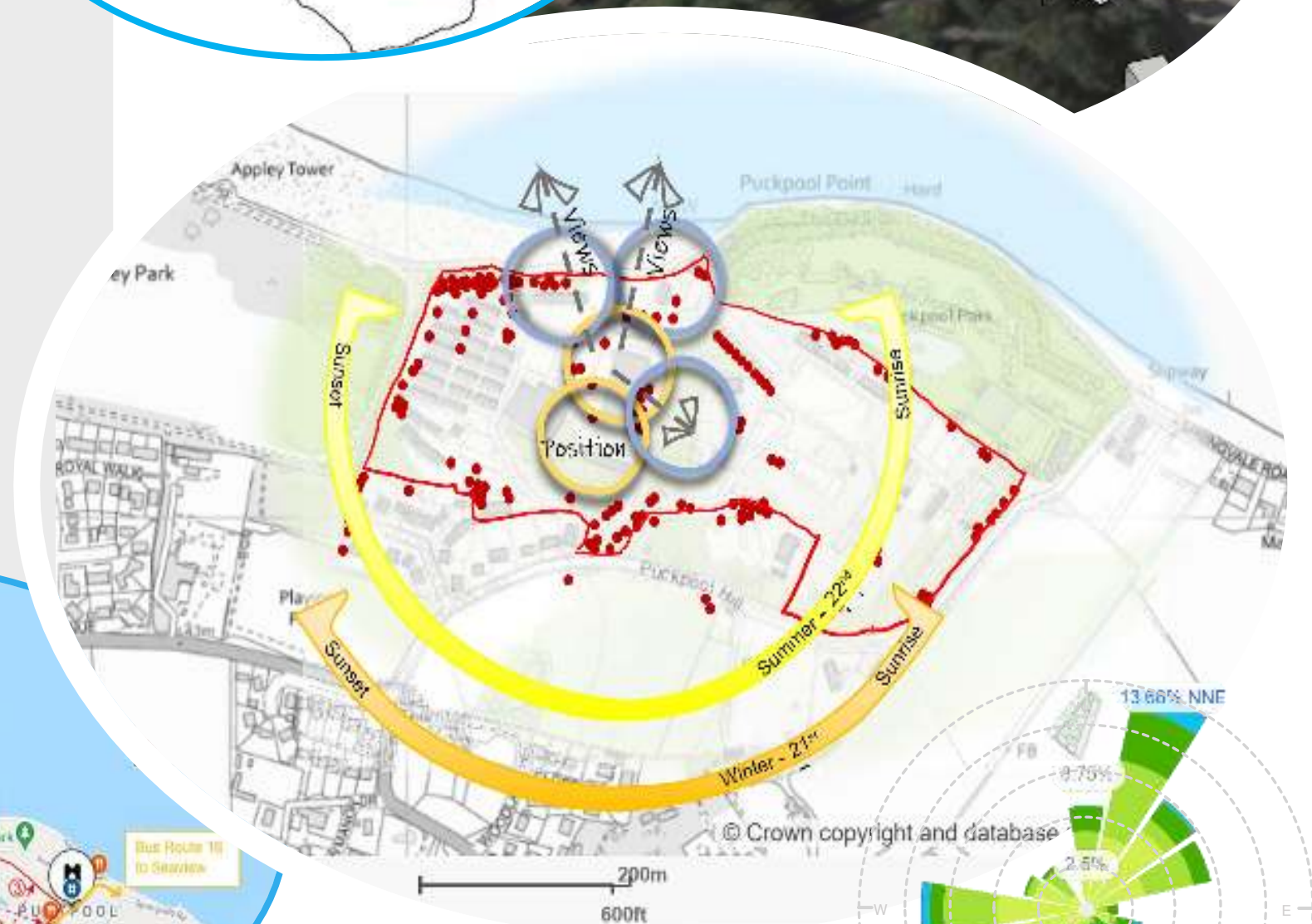
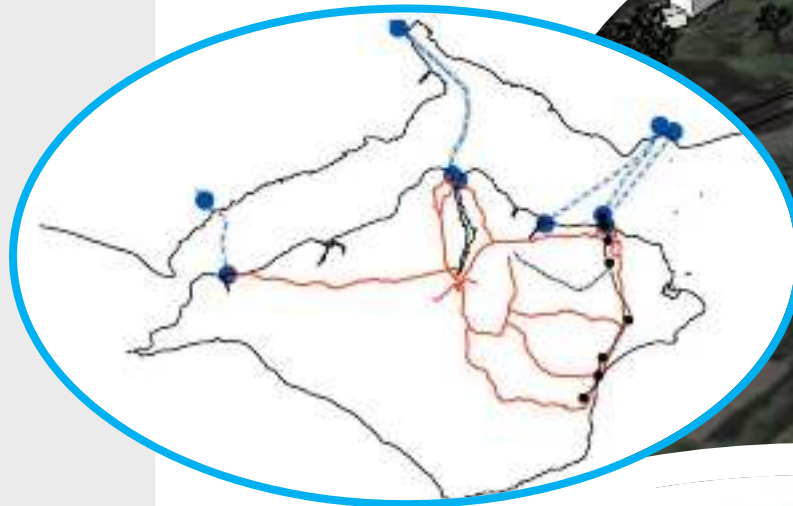
Security

Access & Flooding

Transport & Amenities

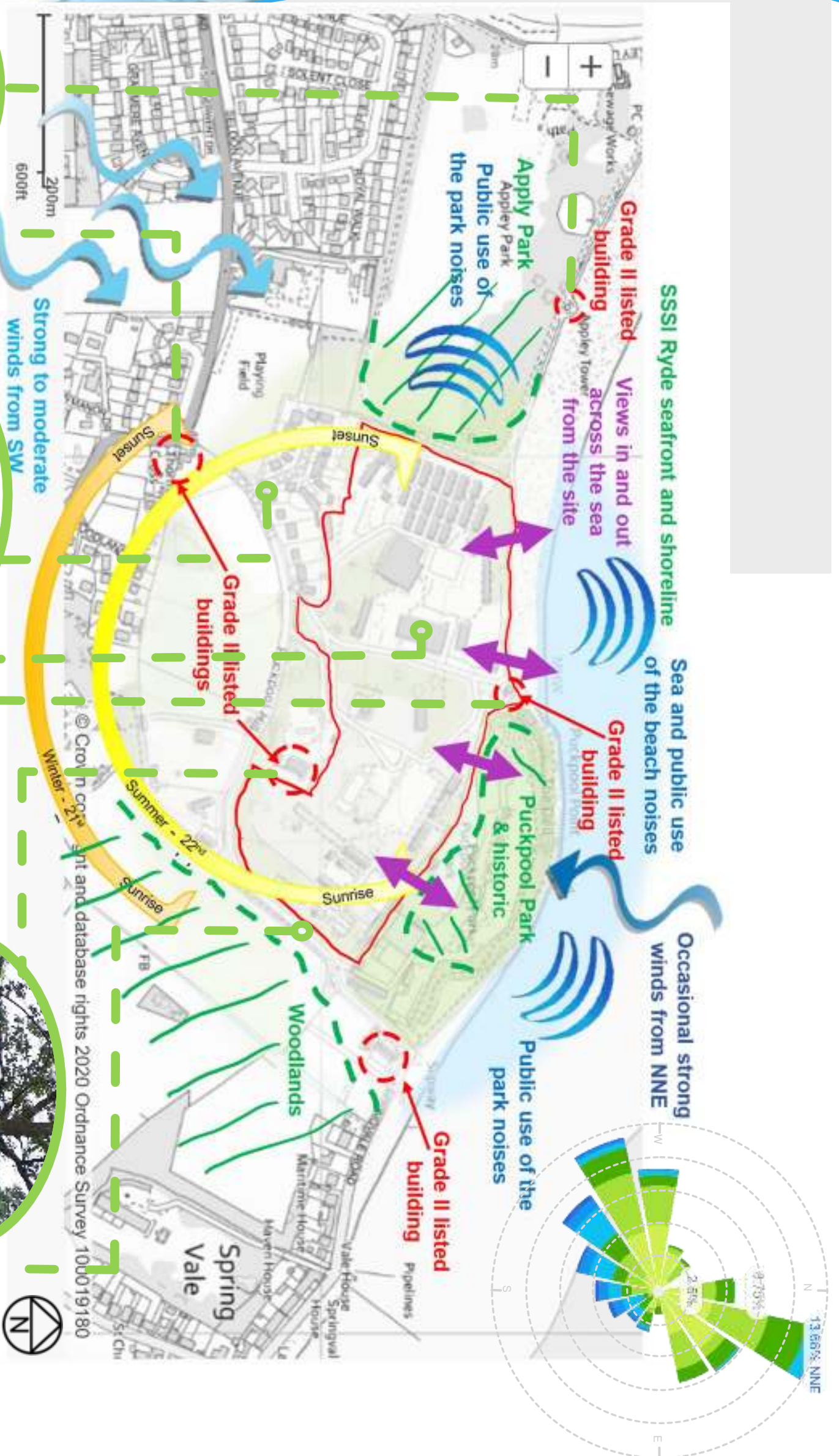
Existing Facilities

Wind and Noise





# Crystal Sands: Isle of Wight





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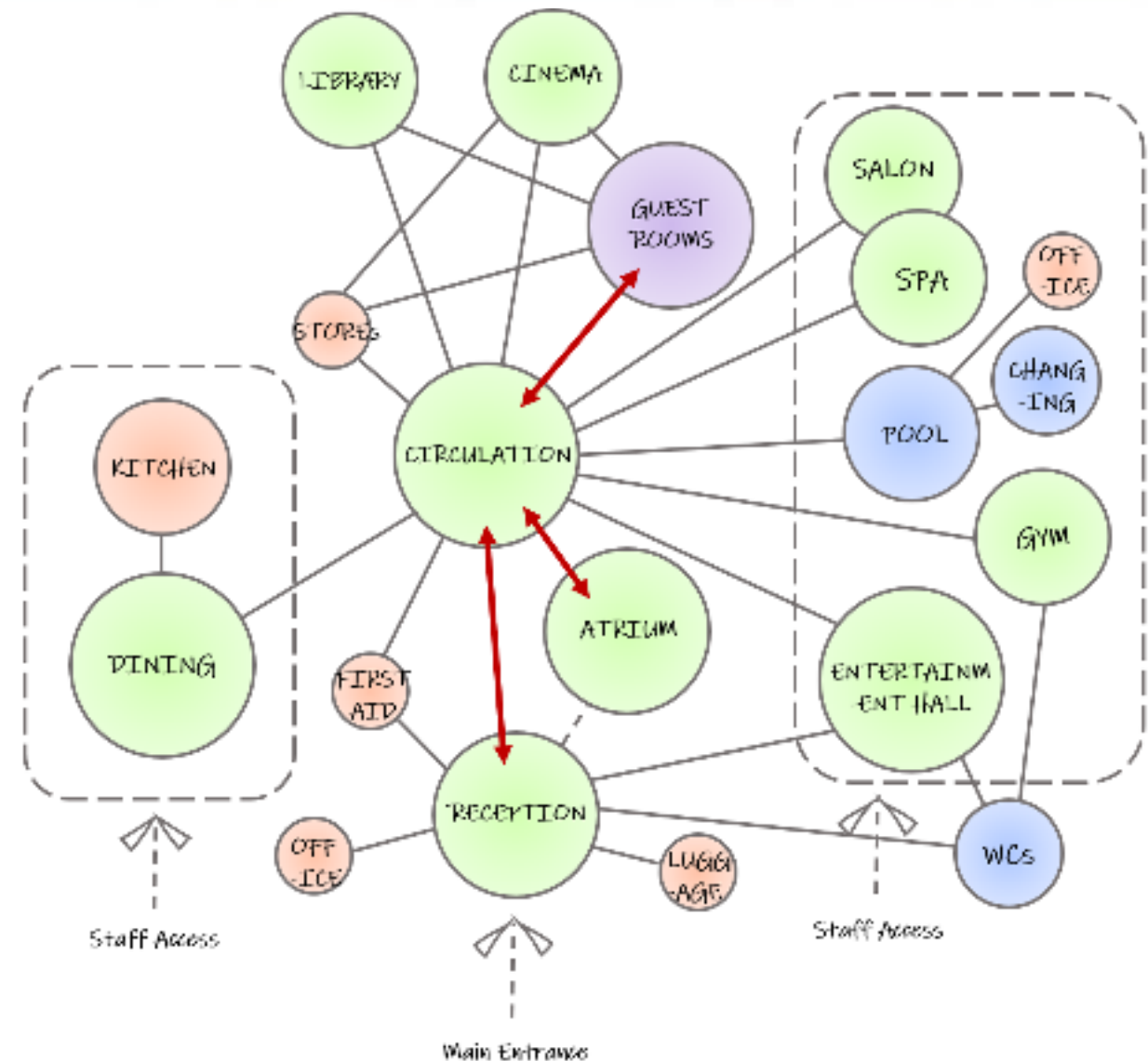
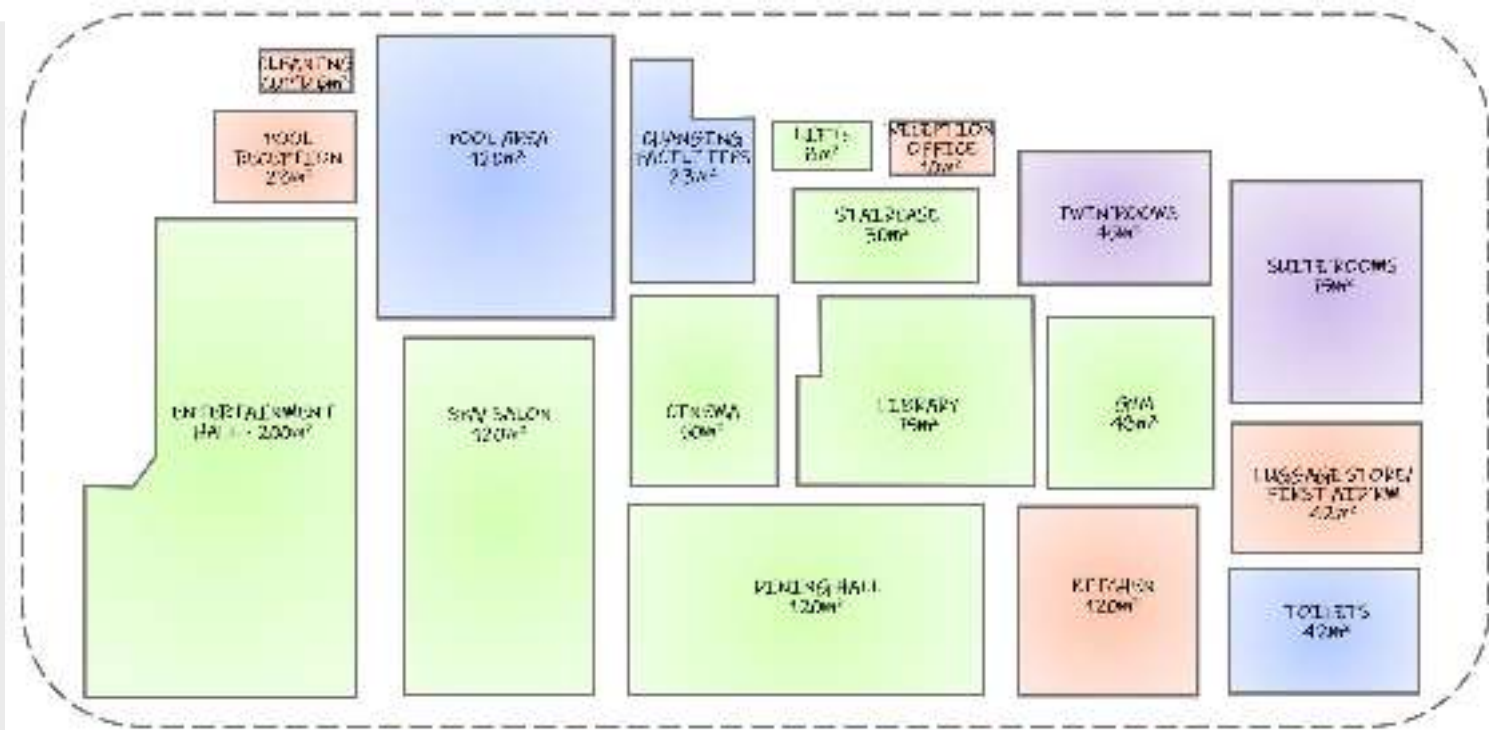
## Concept Design

The areas are directed from the written accommodation schedule contain within the Brief.

Gross Internal Areas (GIA)

Depicted circulation adjacencies and space relationships.

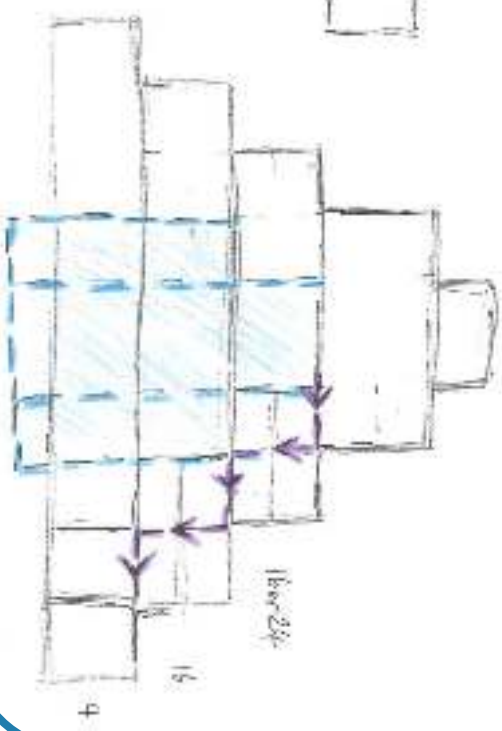
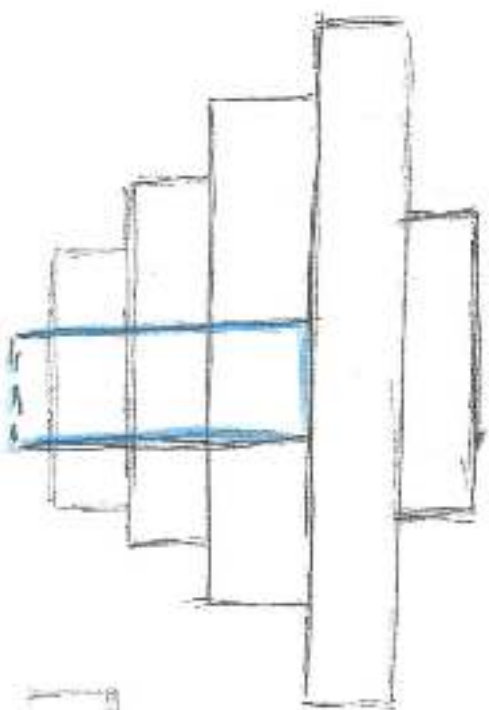
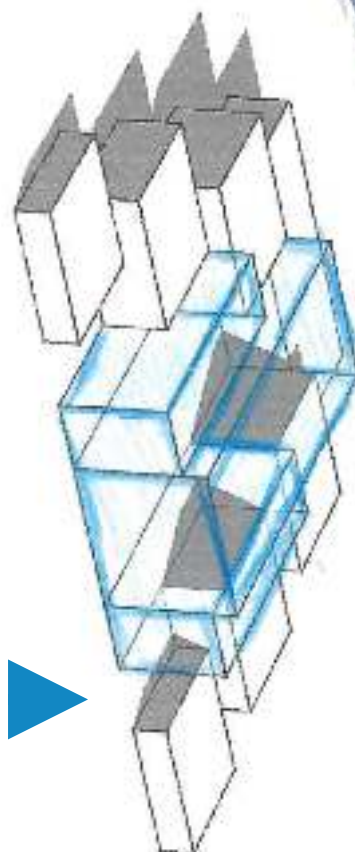
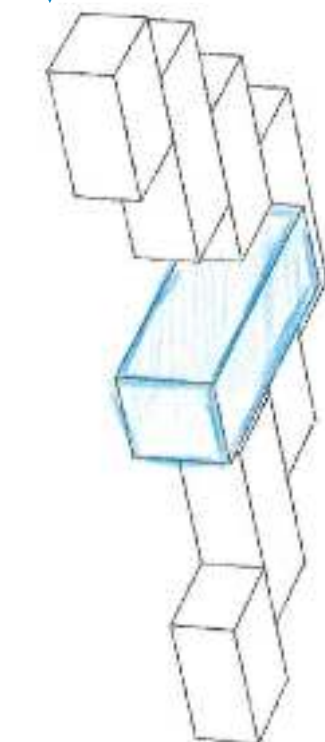
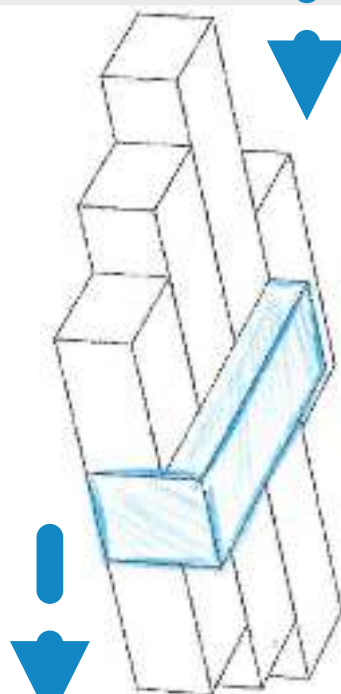
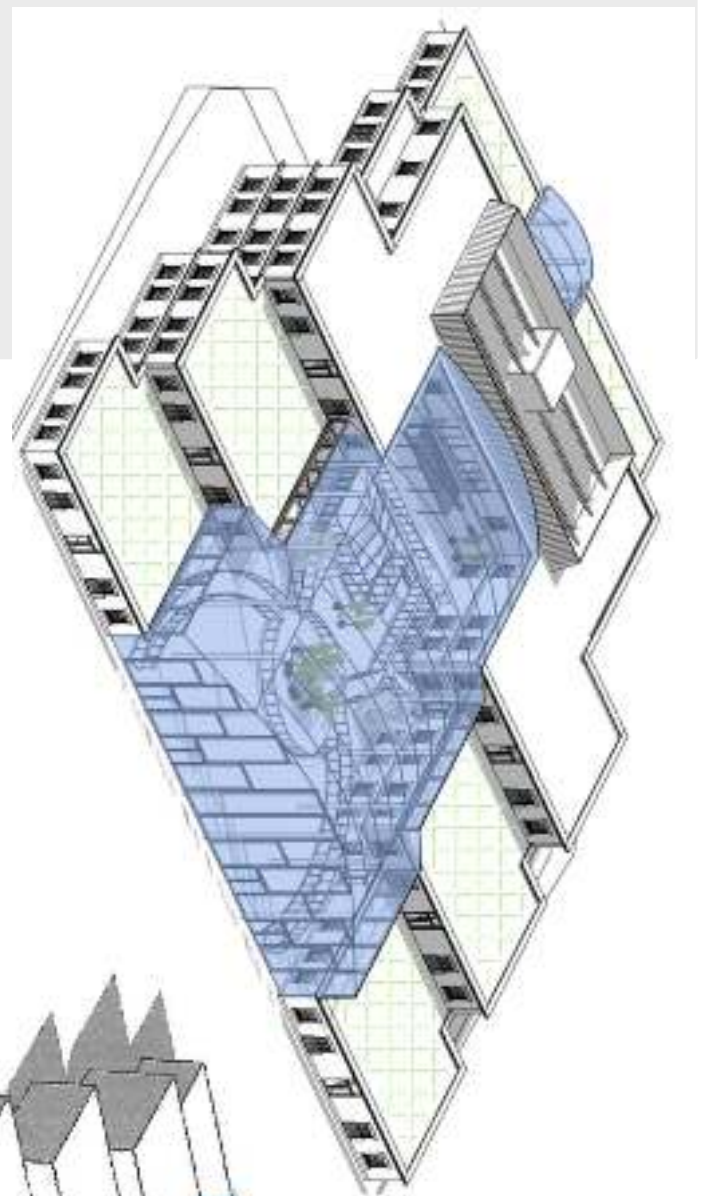
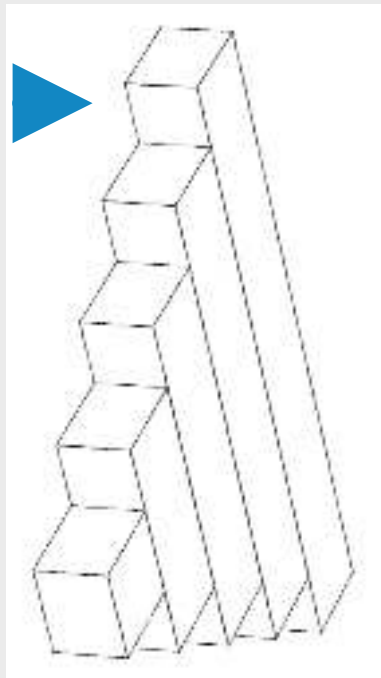
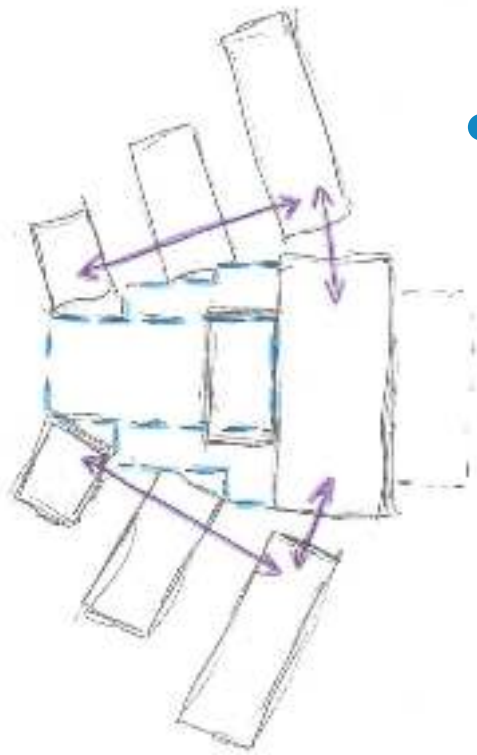
Accessible, functional design and consideration.



# Crystal Sands: Isle of Wight

## Concept Design

Shape  
Layout  
Functional  
Aesthetics





# Crystal Sands: Isle of Wight

## Concept Development



EAST ELEVATION



Warm flat green roof  
assimilating appearance



Decorative Accoya  
wooden stepped cornice  
defining elevations



Light off white  
rendered facades



Standing Seam roof  
enclosure providing an  
aesthetic screen



Glazed interconnecting  
atrium



Lightweight construction  
woodcrete ICF blocks

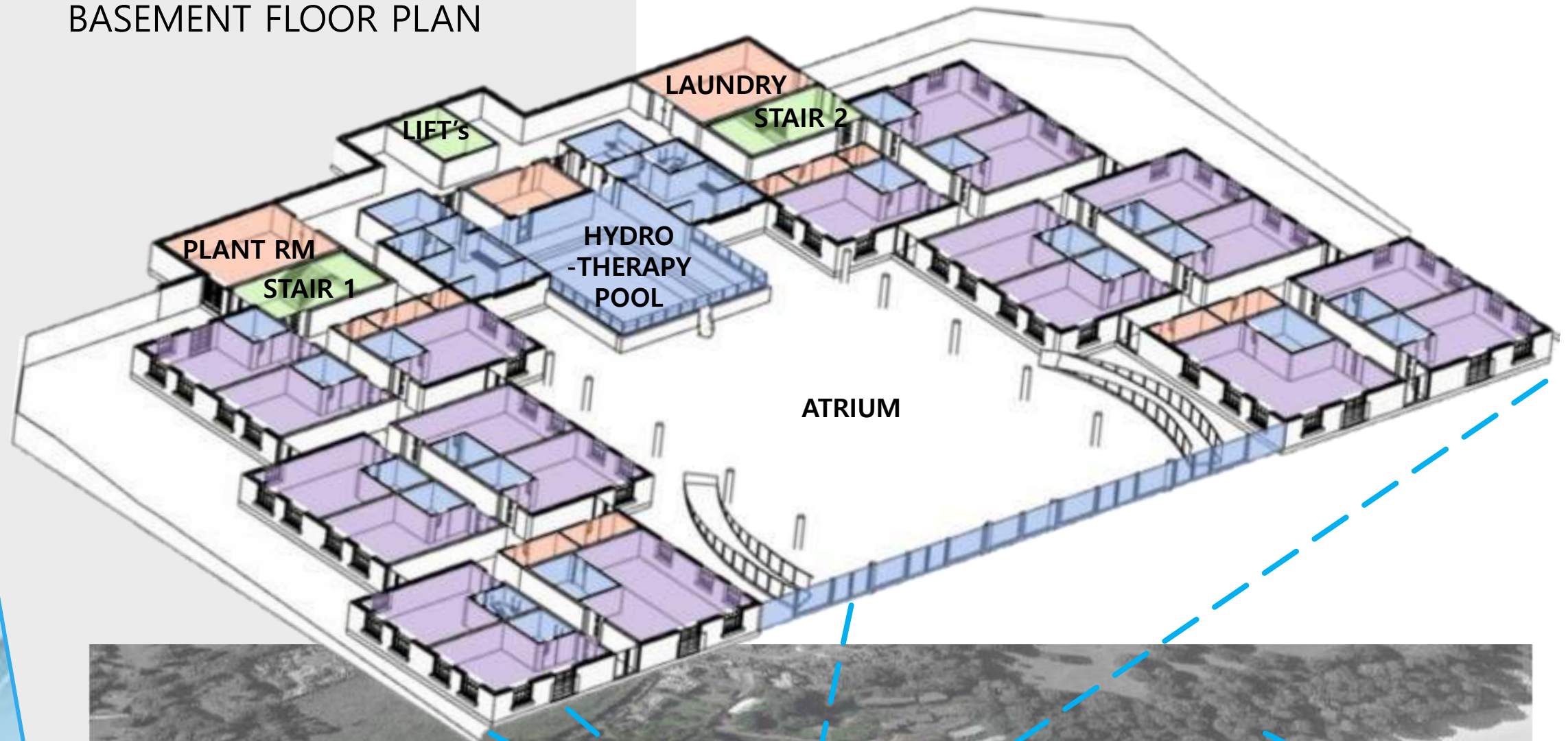




# Crystal Sands: Isle of Wight

Design Development

BASEMENT FLOOR PLAN



Key

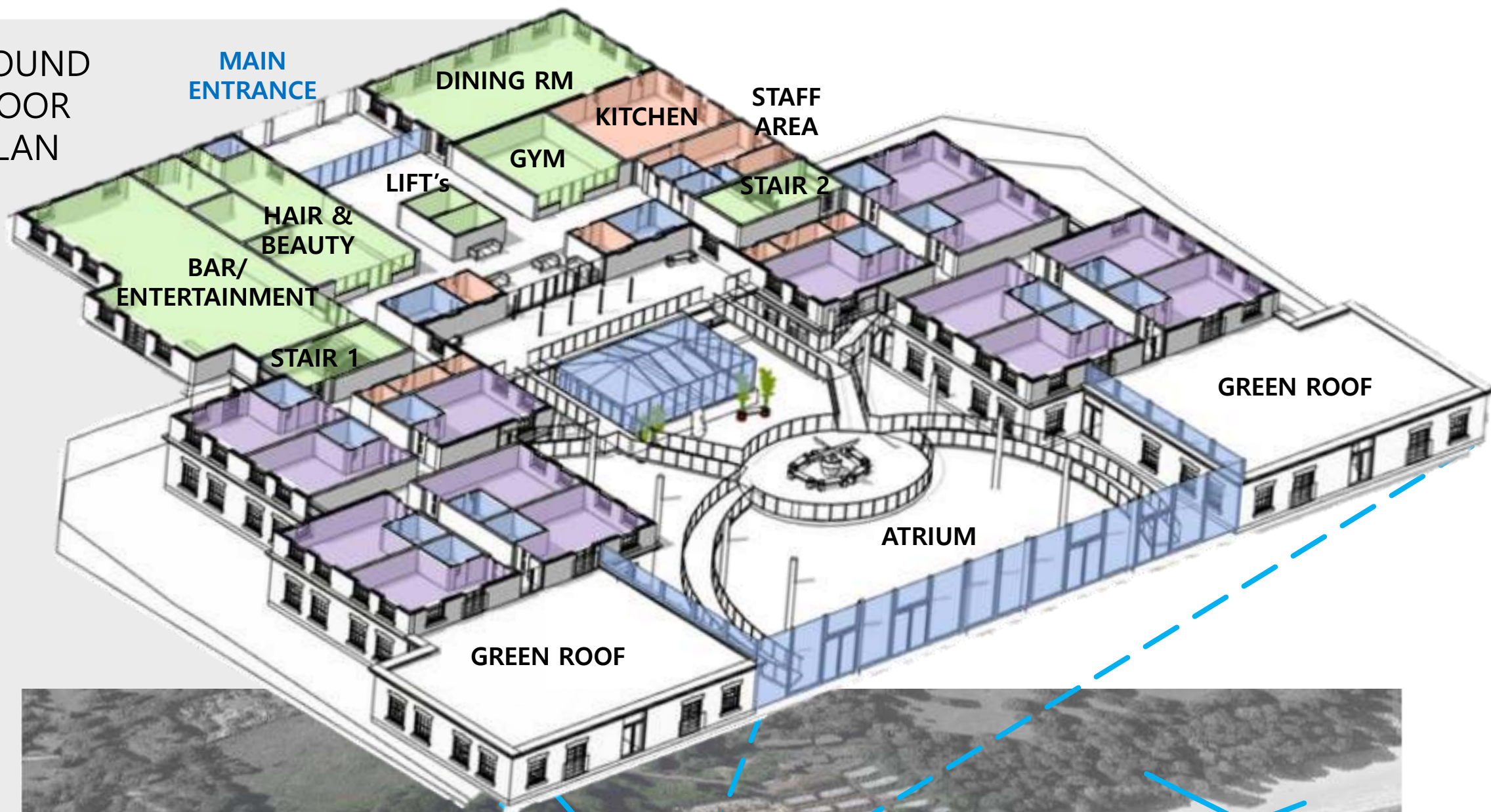
Communal Areas
Staff Areas
Changing/ Toilet Facilities
Guest Areas



# Crystal Sands: Isle of Wight

Design Development

GROUND  
FLOOR  
PLAN



Key

- Communal Areas
- Staff Areas
- Changing/ Toilet Facilities
- Guest Areas



# Crystal Sands: Isle of Wight

Design Development

FIRST FLOOR  
PLAN



Key	
	Communal Areas
	Staff Areas
	Changing/ Toilet Facilities
	Guest Areas

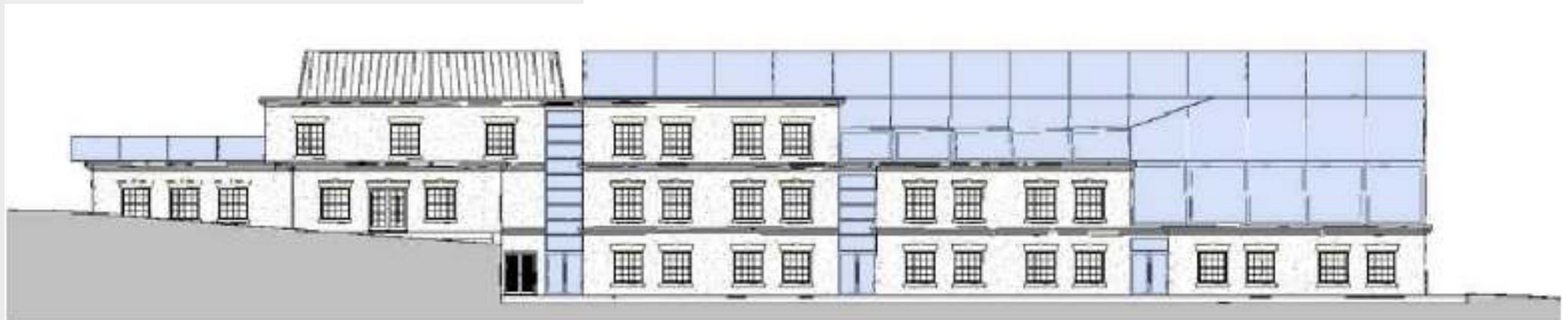


# Crystal Sands: Isle of Wight

Development Design



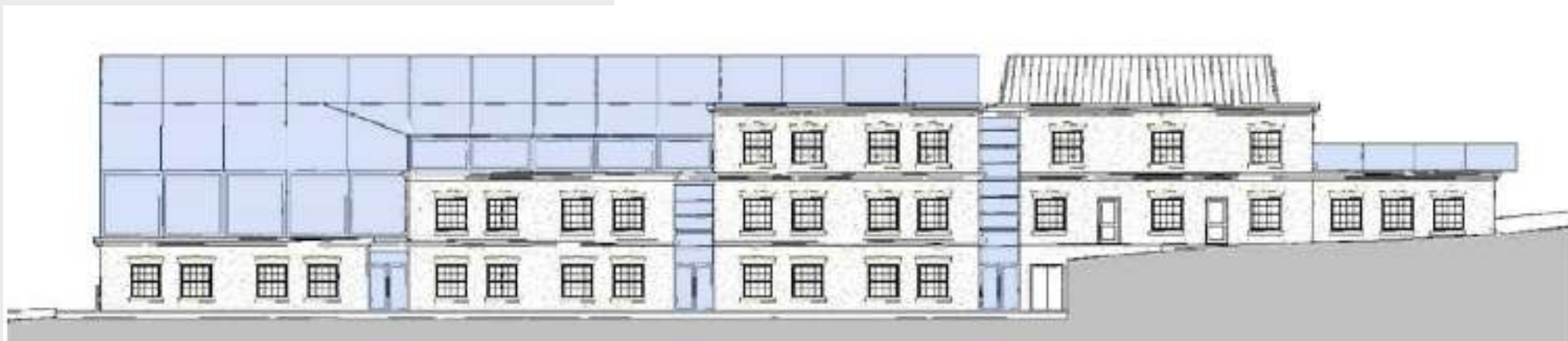
NORTH ELEVATION



EAST ELEVATION



SOUTH ELEVATION



WEST ELEVATION



# Crystal Sands: Isle of Wight

## Development Design

VISUALS





# Crystal Sands: Isle of Wight

## Sustainability



### BAUDER GREEN ROOF

British Wildflower mix  
Biodiverse &  
Ecological potential

### FABRIC FIRST APPROACH

With highly energy efficient SIP's and ICF woodcrete block systems.



### SOLAR PANELS

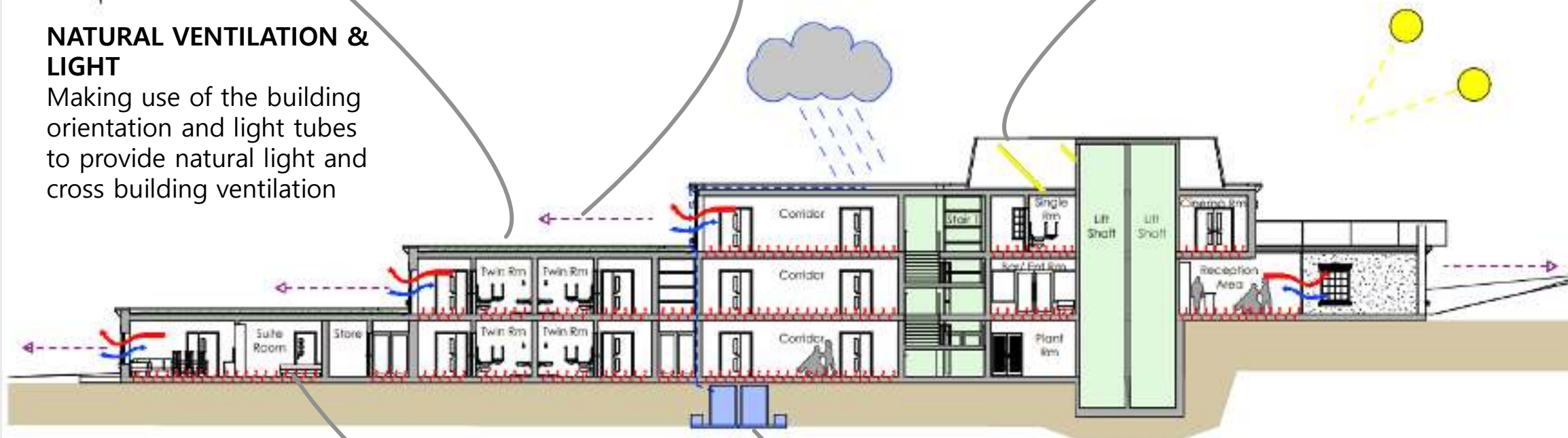
GB-SOL, Solar PV  
manufactured in UK  
Member of PV Cycle  
Lightweight & Slim

### VISAS/ OUTLOOK

Elevated views and  
outside useable space,  
maximising views across  
the sea.

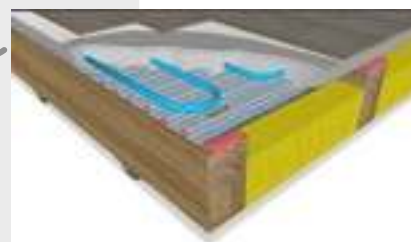
### NATURAL VENTILATION & LIGHT

Making use of the building  
orientation and light tubes  
to provide natural light and  
cross building ventilation



### UNDER FLOOR HEATING

Lewis Dovetailed metal deck.  
Sustainable, versatile, high  
acoustic & thermal performance,  
with under floor heating.



### DIRECT WATER TANKS

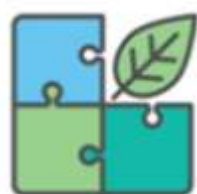


### RAINWATER HARVESTING

Below ground tanks allowing  
recycling of grey water for use  
within toilets etc. Water saving  
features to be installed such as  
push button taps & showers in  
communal areas..



'Fabric First'  
Approach



Sustainable  
Material Resources



Life Cycle of  
Products



Enhance &  
Increase Natural  
Environment



Promote  
Conservation

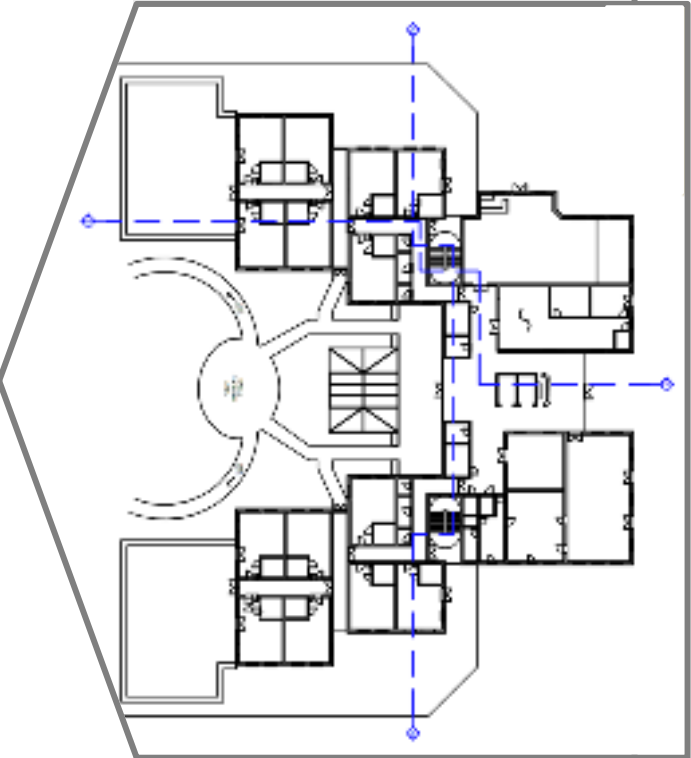
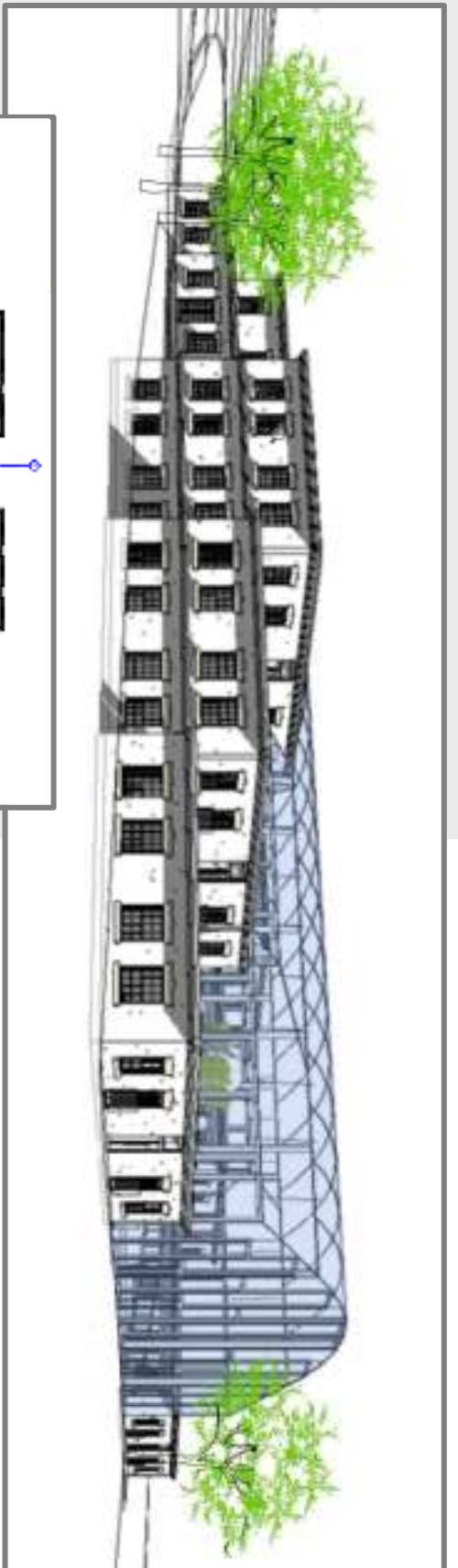


Protect  
Biodiversity

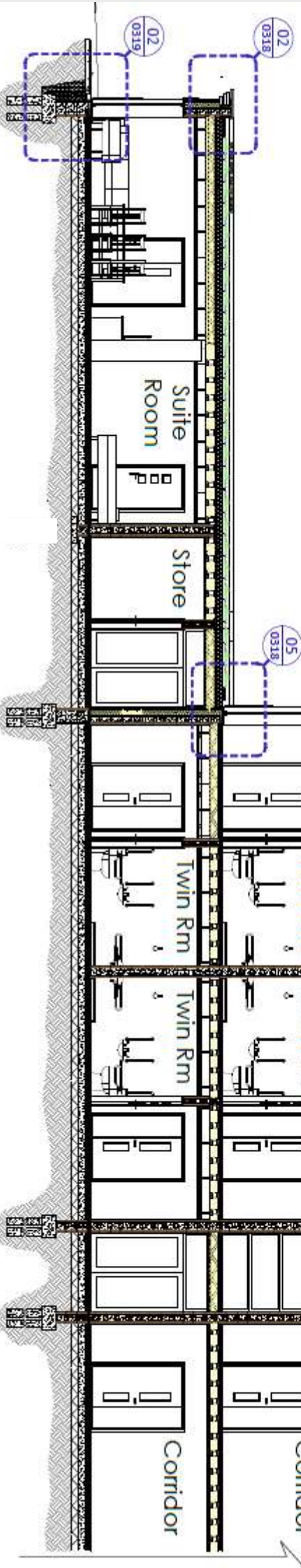


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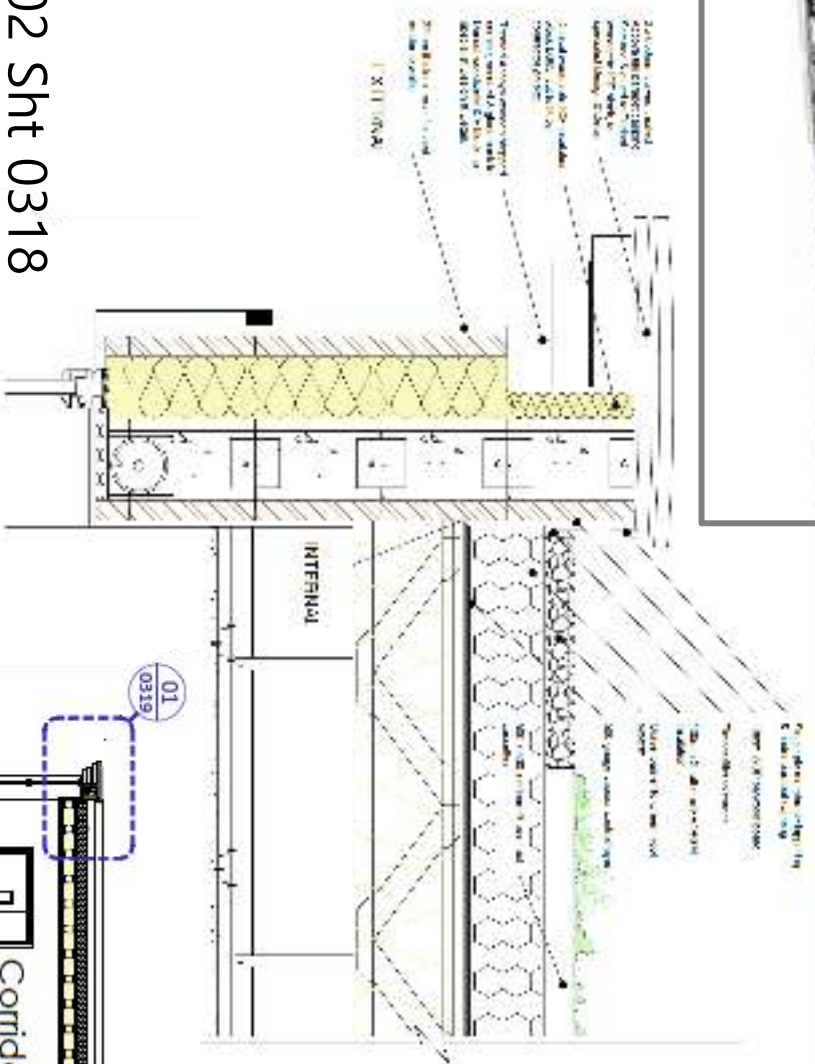
## Technical Design



Half Section BB

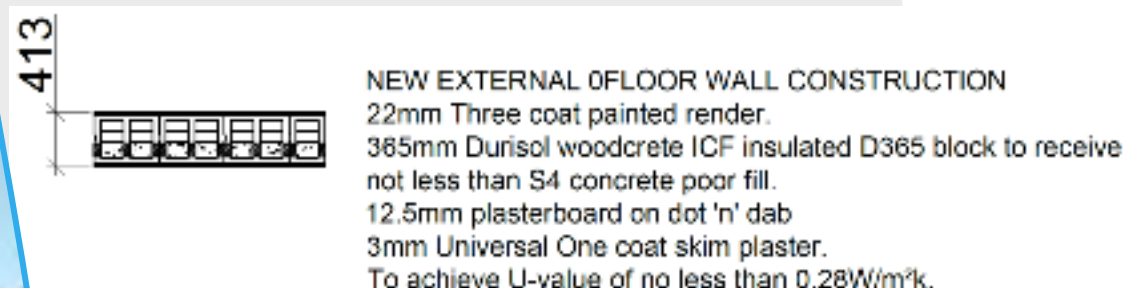
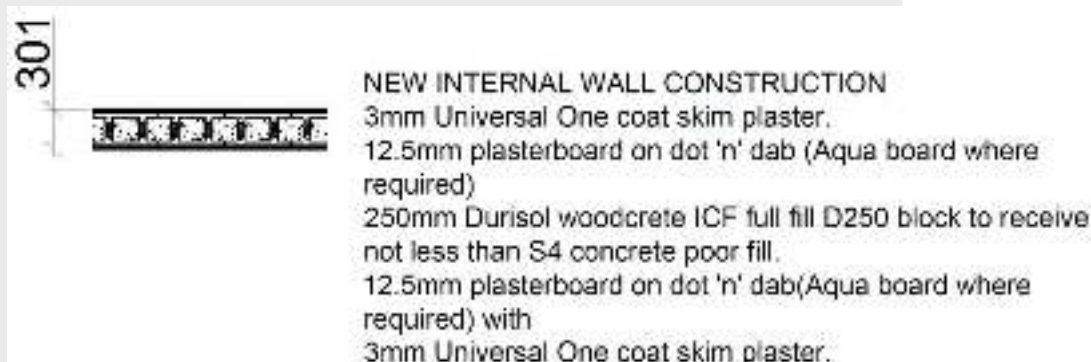
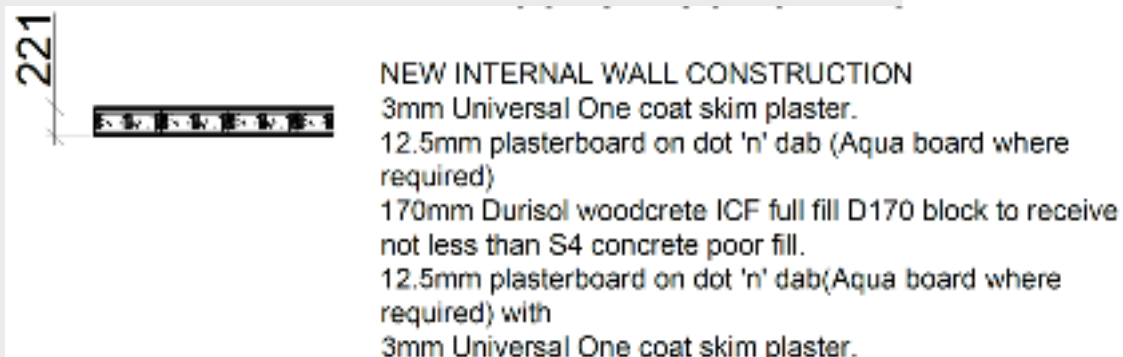


Detail 02 Sht 0318





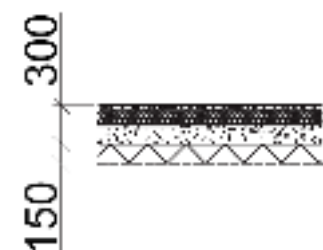
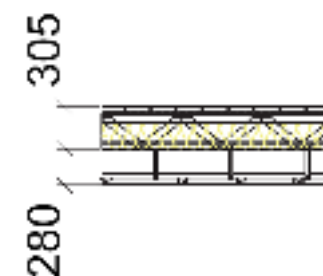
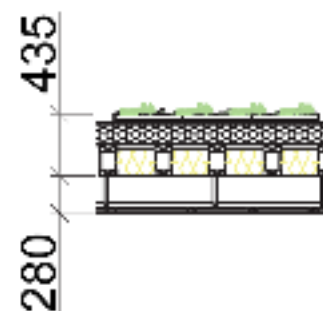
### WALL CONSTRUCTION PLAN DETAILS



From left to right the D365, D300, D250 and D170 Units

**U-value = 0.14W/m²K**  
 U-value, Combined Method  
 (dU=0.0000, dUrc=0.0000)

### KEY CONSTRUCTION SECTION DETAILS

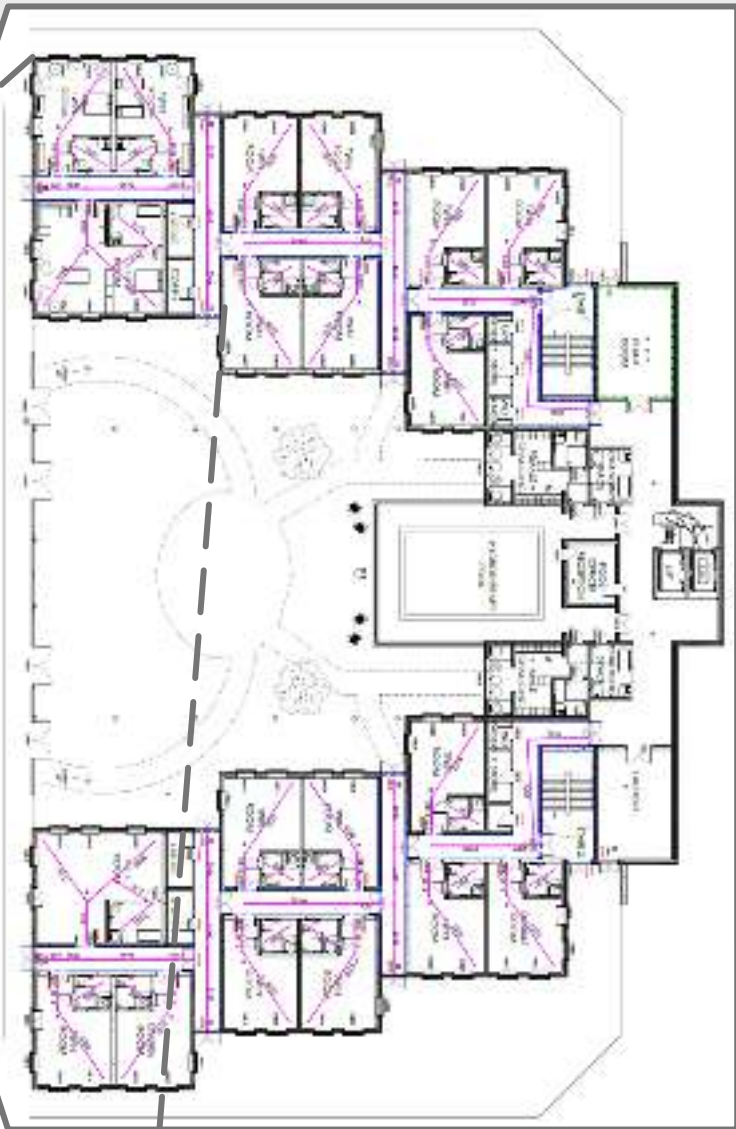




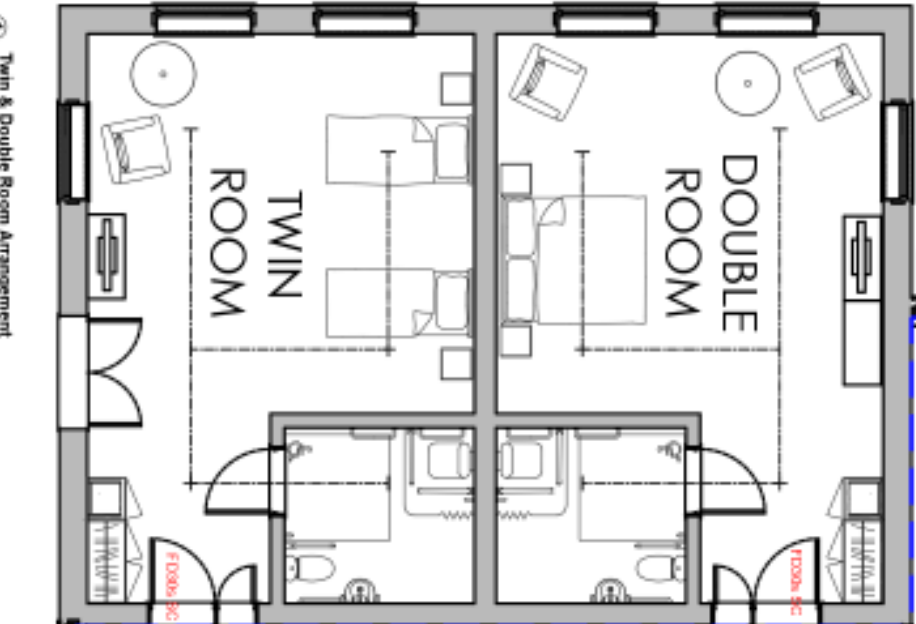
# Crystal Sands: Isle of Wight

## Technical Design

### LAYOUT & FIRE STRATEGY



① Twin & Double Room Arrangement  
Scale 1:50 @ A1 - 1:100 @ A3



② Suite Room Arrangement  
Scale 1:50 @ A1 - 1:100 @ A3

