CASE STUDY

dyson institute of engineering + technology

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CRP 202

>> *General Information*

Location/Climate

Dyson Institute of Engineering and Technology,
Malmesbury, Wiltshire, UK (about 100 miles west of London)
Temperate climate, moderate-to-heavy rainfall

Relevant Information

Client: Dyson | Architects: WilkinsonEyre
Year: January 2018 - May 2019
Project Size: 67 Units measuring 344 ft²

Users

Students attending the institution

>> *Project Development Data*

Uses for Project and Adjacent Buildings

The Dyson Institute's "New Village" includes the 67 housing pods, the Roundhouse, a community clubhouse created in this project, The Hangar, a recreation center for students, is located adjacent to the site.

Specific Program and Sizes

Three cafes exist on the Dyson Institute campus.
Each cluster contains 6 pods, stacked on top of each other.
Each pod is equipped for one student, and are fitted with a bedroom, bathroom, study area and personal storage space.

Photo: "New Village" in relation to Dyson Institute of Engineering and Technology

>> *Public Space*

Relationship Among Buildings on and Surrounding the Site

Pretty spaced out from other buildings around the site

Pedestrian Circulation

- Access points: B4014
- Circulation patterns: Through traffic on B4014, traffic from Tetbury Hill turning onto B4014

Use of Public Transportation

- Coachstyle provides transportation throughout the town of Malmesbury
- Two bus stops located near the site
- Tetbury Hill SE Station (Routes 30, 31, 93)

Tetbury Hill NW Station (Routes 31, 31A, 41, 93)

Walkability

- Gym, lawn, community space all nearby

No Bicycle Access

>> *Sustainability*

Energy Efficiency of the Project

- Pods are prefabricated and built offsite with interiors included in them too and they were transported and put into place by usage of cranes
- Harnessing community land trust's thermal massing benefits and natural ventilation
- Large, triple-glazed windows are used to maximize sunlight and aluminum rainscreen panels help keep out rain

Orientation (sun/wind) Shading and Orientation

- Pods fit into two rows facing each other, inner row facing southeast and outer row facing northwest towards the common area

Green space and Sustainable Landscaping

- Green space in between common area and pods

Flexibility and Adaptability of Design

- Mobility, easily transportable

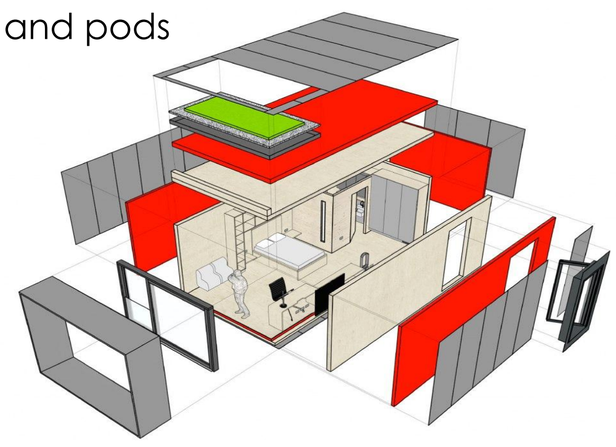


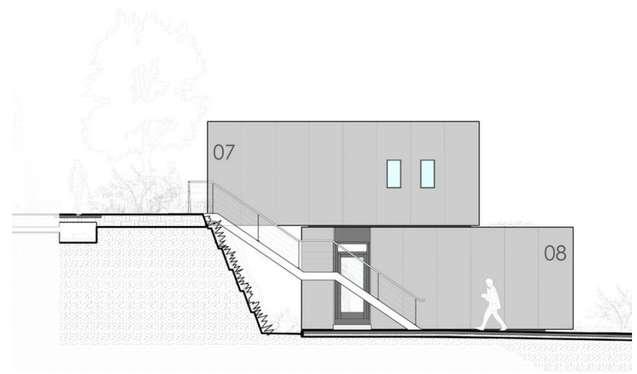
Photo: Floor Plan of Dyson Institute "New Village", Pod Housing

>> *Architecture*

Human Scale

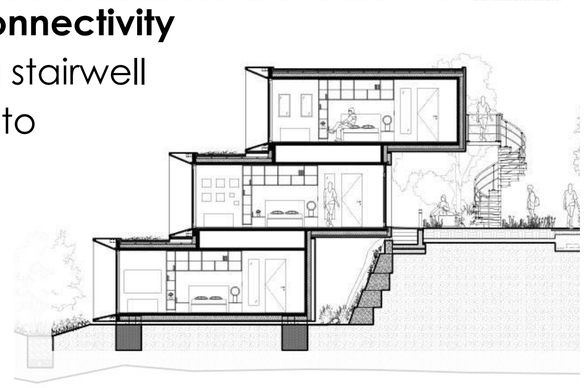
Pod Dimensions

- Length: 26ft
- Height: 10ft
- Width: 13ft



First Floor Transparency/Connectivity

In the image to the right, a stairwell connects the ground floor to a raised walkway built to fit the rise in topography. At the right, a spiraling staircase allows for entry to pods on the third level.



Landscape Elements and Urban Furniture

The pods are positioned in a crescent-shape, that complement the curved landscape embankment and separates the units from the opposing Roundhouse. Trees and planters weave are located throughout the site. Picnic tables are placed around the Roundhouse and along the raised walkway between the two waves of pod clusters. In addition, the image to the left demonstrates a unique urban furniture alternative to seating was found in a gabion wall of 1.5ft, placed along the front of the pods.

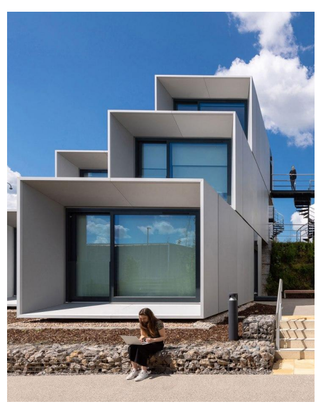


Photo:
Gabion wall seating

Photo:
Picnic tables surrounding the Roundhouse

LESSONS LEARNED

- Easy assembly of pods means high density
- Units positioned in curve promotes Roundhouse as an activity node and establishes view from units.
- Public space and picnic tables between second and third floor encourages community and social interaction between residents.
- Maintain space for individual and community