CASE STUDY: TRAINING BUILDING FOR THRIVE, BATTERSEA PARK



The completed building, garden still in progress

This new training building in Battersea Park replaced a ramshackle collection of huts used by Thrive, a charity that teaches gardening and life skills (horticultural therapy) to those with learning, physical, sensory impairment and mental health disabilities. The project required careful attention to its location (in a listed park) and to the varied needs of the user group. The building was constructed to a very tight budget on a design and build contract.



The site with its original huts

BRIEF

The brief required a strong visual identity for Thrive in the park, enhanced facilities that are economic and efficient to run, and excellent sustainability credentials.

Before starting to design, we spent time talking to the Users (Gardeners), their carers, volunteers, horticultural therapists and the office staff. We observed daily routines, what worked and didn't work in the current accommodation and asked about people's preferences and aspirations for the new building. This gave us an understanding of the wide range of needs that Thrive's clients and the Therapists have as well as an idea of the way they were likely to use their new spaces.



The Gardeners in their portacabin



Thrive were keen to involve the Gardeners in looking after the building which needed to be easy to use, robust and welcoming. For instance the Gardeners would have routines to help tidy up and close the building at the end of the day. It was also clear that the Gardeners look upon their time with Thrive as work and are proud of this – the building needed to be businesslike rather than domestic. Our brief from Thrive asked us to consider the following key user needs: Choice – many of the Gardeners live in supported accommodation and have little choice in their day to day lives; Awareness of the seasons, weather etc – important for those with dementia; Memory reinforcement – an orderly arrangement where everything has its place is very positive; Cooling off space – sometimes the Gardeners need private time and space.

DESIGN

We worked with Price and Myers Sustainability to carry out a site assessment that looked at optimum positions and orientations on the site for a new building and developed a distinctive design that establishes a two part building that curves to a radius centred on the large plane tree that dominates the site. This creates attractive, practical spaces that meet the user requirements and the client's budget.



Solar Studies summer

Solar Studies winter

The first part is a glazed 'orangery' that forms a sociable entrance space and circulation zone as well as a working area for 'dirty' activities. This space is designed to be left open to the garden all day throughout the year, accessed through 'up and over' doors. Unheated, this robust space is lined with plywood and benches, and can accommodate large numbers of muddy boots.



Working model used for consultation with users



Unheated orangery with up and over doors to gardens

The second part consists of an office, training rooms, kitchen, shower and WC. These heated spaces are accessed from the orangery and arranged under a taller mono-pitched barn-like roof. All rooms look out over the garden and have clerestorey windows over the orangery.





Plan - heated inner rooms open off orangery

Training rooms - with acoustic dividing wall

Aspects of the design that respond to the particular needs of the Gardeners include the view up into the tree canopy from the clerestorey windows– this encourages users to look up and out rather than down at the floor, connects them users with the outside world and improves awareness of the weather and the seasons; and shallow wide tool sheds built into the external walls of the building – these allow each tool to have a dedicated space which helps with memory reinforcement and encourages users to help get things out and put them away at the beginning and end of the day.

SUSTAINABILITY

A sustainable building was a key requirement of Thrive's brief. A BREEAM standard for the building type and size did not exist and costs precluded writing one especially for the project. However a standard similar to a BREEAM excellent rating was retained as an aspiration in the brief. Price and Myers were appointed at the outset of the project and Pedder & Scampton worked closely with them at all stages, from resolving the location of the building on the site to choice of materials, detailing the facades to provide the appropriate natural ventilation strategy and selecting appropriate sustainable technologies. A detailed sustainability report was prepared at planning stage to guide the production information decisions.



Louvres for solar shading, vent flaps above glass







Natural slate cladding to rear

phone 020 7607 4156

bedder & scampton Archite

JNITED HOUSE NORTH ROAD LONDON N7 9DP

A priority was to design a building that is robust, simple and straightforward to operate by a non specialist user group and it took much debate to select appropriate technologies that would be easy to use and economic to run.

Daylight and thermal modelling was undertaken at early design stages with the aim of reducing the carbon footprint of the scheme by incorporating passive design strategies, energy efficiency enhancements and low carbon energy technologies. The analyses carried out include an energy demand assessment of the proposed scheme, CO2 emissions calculations, TAS thermal modelling, a solar study, natural ventilation and building aerodynamic studies, and low and zero carbon energy system studies.

Initial assessments of the site, including sunlight modelling, indicated that solar panels would not be effective because of the large plane tree in the southern corner of the site and similarly the site is not suitable for a wind turbine.

The resulting building incorporated the following features:

Extensive use of natural daylight to minimise use of electric lighting High efficiency, low energy lighting Presence and daylight detector light switching throughout The use of a high performance façade and external shading to control heat loss and solar gain Heat recovery on ventilation systems to the kitchen, shower room and outside WC Variable speed drives on major pumps and fans Thermal Mass – through the exposed slab throughout the building Natural ventilation via timber flaps at high level into both the orangery and the inner rooms. High specification double glazing to reduce glare and solar gain Air source heat pump for heating Rainwater collection, used for watering the garden to reduce mains water use Sustainable materials, notably timber.

Technologies such as a log gasification boiler and biomass were carefully considered in the design stage but the more elaborate running and maintenance processes and the storage requirements for the logs/biomass meant that these were rejected.

ENVIRONMENT AND CONSTRUCTION

Care has been taken to ensure that all spaces are well lit without too much glare – many of the clients do not like very bright lights but on the other hand some have visual impairments and enough light is critical. Downlights over the working benches can give additional light when needed and blinds in the orangery will reduce the light levels to the working spaces if that is required. Acoustics was a big concern for some of the users who are very uncomfortable with high noise levels. Rooms are reasonably small and the timber linings and exposed timber joists provide acoustic absorption. There is direct access from all the main spaces out into the garden if Gardeners need to get away from the noise in the building. The moveable wall between the two training rooms is acoustically insulated.







Orangery working space

Small training room

Garden

The building is constructed from a simple steel frame (recyclable) with timber infill structure and high performance insulation. The south elevation and the two ends of the building are clad in Siberian Larch, and the structure of the orangery is also in larch. The timber has been chosen for its sustainable credentials and low maintenance as well as its appearance. The majority of the timber is left unsealed to weather naturally –the liners to key doors only are highlighted with a coloured stain for the visually impaired. The north elevation wall and roof are clad in natural slate, chosen for its low carbon footprint, low embodied energy, durability and potential for future re-use. The flat roof is finished in an epdm membrane. Green and brown roofs were considered but rejected largely because of the maintenance issues caused by the numerous seed heads falling from the overhanging tree each year. The insitu concrete floor has exposed screed throughout the building providing thermal mass as well as being easily cleaned of the garden mud brought in on boots. High performance double glazing gives a low U value.



Elevation to Orangery, clerestorey windows above End elevation - tool store and rainwater storage Slate cladding to outer elevation

ACCESS AND THE GARDENS

The whole building is wheelchair friendly and incorporates a wheelchair accessible WC and shower and kitchen. The building has no on-site parking. The majority of visitors and users arrive on foot/ public transport or bicycle although drop off is permitted for the disabled.

The gardens have been created by the Gardeners and are designed so they can be used to teach a wide range of gardening skills. They provide quiet 'cooling off' space for the Gardeners when this is needed.

As a second stage of the project we designed a small kiosk which is used as a shop to sell plants raised in the garden and hanging baskets, christmas wreaths etc. made by the Gardeners. This social enterprise raises income for the Thrive and gives the Gardeners social opportunities and a chance to learn new skills.



Plant sales kiosk

Sales training

Gardening activities

Thrive's brief to P&S was to create a fully accessible building as part of its flagship garden project in Battersea Park. We wanted a building with a wow factor and which said something about Thrive and its ethos but the budget was tight and the site sensitive and difficult. From the outset, Gill and Helen understood what we wanted. They took time to talk to our clients and volunteers and although they did all the hard work and had the inspiration, it felt like a real partnership! It was a pleasure to work with them.

Susan Stuart, Interim Chief Executive, Thrive