Robin Hood Gardens

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In October 2010 SWA came forward to offer the 20th Century Society our help in raising awareness of the potential for the reuse and refurbishment of Robin Hood Gardens. In contrast to the two schemes submitted by the current preferred bidders which propose complete demolition and rebuilding, this exercise aimed to propose an alternative way of considering its future, based on the retention and remodelling of the existing structures.

Once on the margins of London, since its completion in 1970, RHG has been surrounded by Docklands’ development and its site, despite all its obvious drawbacks, is valuable and subject to predatory development pressure. With Canary Wharf within striking distance and sitting opposite the offices of Tower Hamlets Council, RHG is gradually being encroached upon by high density development so that it now seems low in density compared to other housing in the area. Ironically, the scheme’s landscaped setting and tranquil, open interior was not only a fundamental aspect of the designers’ vision and a defining feature of the design concept, but has become a valuable asset that sets it apart from its increasingly crowded and anonymous surroundings.

RHG is currently out of favour with politicians, being aesthetically challenging and redolent of welfare-state paternalism. Currently suffering from under-investment, unsympathetic alterations and lack of maintenance, RHG is occupied by people with little economic power, some of whom do not speak English well or even at all. In this context it is easy to see how a local authority might regard the current estate as a drain on resources and an impediment to progressive capitalism. Regardless of the findings of the contested survey of residents’ views, it is a fact that it takes a generation to build a community, especially one that is struggling to survive under the difficult economic, cultural and spatial circumstances of Poplar Ward. Communities are regularly the casualty of political interference, which uses spatial tactics as a manipulative tool. Although we should have learned the lessons from the slum clearances of the 1960’s and 70’s, buildings perceived as failing continue to be the subject of predatory powers that overlook the importance of social cohesion in the rush to please voters and developers alike. The tenants in RHG are now a vulnerable community that would lose controlled rents and secure tenancies were they to be evicted. Furthermore, this would disperse the community and destroy the careful relations painfully established over a long period of time.

SWA’s interest in addressing this project was threefold, and is based on our commitment to exploring sustainable urbanism and architecture in all its forms. The first aspect of this is our concern for the waste of resources embodied in the current buildings comprising RHG if the buildings were to be demolished. Only forty years old, the buildings and their technologies are typical of the era in which they were conceived and constructed, and this poses specific problems when attempting to raise the fabric towards current Building Regulations standards, especially in thermal performance and air tightness. Considering how these buildings could be improved offers insights into techniques that could be applied to many buildings of this era. As architects with a commitment to exploring sustainable resources we think we need to
work hard to find solutions to inefficient buildings that do not always result in the waste associated with large scale demolition.

Second, the dwellings are currently overcrowded. The family structure of many occupants differs from that anticipated by the designers. Accordingly there is a need to consider how the dwellings could more adequately provide for the needs of its current and indeed future occupants, offering a wider range if unit sizes which in turn permits a more diverse set of social structures.

Finally, in response to the sense that the site is valuable and could be optimised further, the third aspect of our work considered how additional dwelling units could potentially be added to the site in order the increase densities. While these do not attempt to come anywhere near the densities of the proposals put forward by the schemes prepared by the two preferred bidders, our aim was to illustrate the possibility of reuse and identify sites for future expansion while remaining true to the vision proposed by the Smithsons.

In summary, then, what we present tonight are three exercises as follows:

1. an exercise in exploring a wider range of dwelling sizes within the parameters of the existing structural logic of RHG [social sustainability]
2. an exercise in densification, by the provision of additional dwelling units on the site [economic sustainability]
3. an exercise seeing what improvements in energy consumption are achievable by simple adaptations to the thermal envelope. [resource sustainability]

This work has been provided pro bono by Sarah Wigglesworth Architects and is therefore limited in its extent. However our findings clearly support a more sustainable alternative development of the site, one which works with rather than against current conditions. Our findings also offer important pointers to further work that would be useful in establishing the principles of how to deal with the issues relating to modernist buildings of this kind.

New dwelling sizes
RHG is made up of a ground floor consisting of a row of one-bedroom flats originally intended for elderly people, above which sits a repetitive arrangement of ‘base’ units. These base units consist of 6 maisonettes occupying a block three storeys high. Every flat is entered through the central storey and staircases within the flats go up and down to the rest of the accommodation. The base units consist of 2no. 3-bed flats and 4no. 4-bed flats. This is repeated across both blocks, with additional rooms allocated to adjacent flats in the knuckles as each major block snakes across the site.

The basis of our study was to see how wide a range of units is possible with minimal conversion of the base unit. The ground floor units did not form part of this study. Within the base unit there are a set of structural cross walls, some of which have small openings into the adjacent module, and some of which are non-structural and therefore removable. In carrying out this exercise we set the following ground rules:

i. the only removable walls were to be the non-structural ones
ii. no additional openings in the party walls than already existed would be permissible
iii. existing staircase arrangements were to be retained
iv. access to the flats would remain, as now, along the external feeder corridor in the middle storey.

Within these parameters we developed the logic of the plans to show how wide a range the flat sizes is available. Possible sizes range from 2-bed to 7-bed in a range of combinations. The image illustrates some possible combinations which can be developed further.

**Densification**

We identified the roof of both blocks and the perimeter areas as sites that could potentially accommodate new dwellings. In our study we have attempted to respect the notion of the Smithson’s “landcastles” – the term they used to describe the defensive outer block (hard outer skin) with a pastoral green interior (soft centre). We took the view that the garden space between the blocks was not to be violated as it represents such an important feature of the original concept – “a calm island in a restless corner” - and still provides a valued amenity.

The existing staircase gives access to the roof so our study assumed this would remain the principal access to this area. In adding to the roof we have respected the rhythm and changing façade treatment, while also using the depth of the façade in the manner of the Smithsons’ original. We have suggested the use of lightweight duplexes made of timber, with winter gardens and sliding screens for solar control.

The perimeter blocks are located over the garages in the no-man’s land between the moat and the surrounding road system. These houses are organised around courtyards which avert the rooms from the busy roads around and helps avoid overlooking from RHG.

On the roofs of the blocks we have accommodated the following new units:
- 38no. 2-bed dwellings
- 4no. 3-bed dwellings

The perimeter blocks comprise 33 dwellings. This adds 75 new dwellings to an existing total of 210.

We are aware that the current development site includes a large area to the south-east of the RHG site. As we have no information about the extent of this site we have not attempted to suggest a scheme for it.

**Improvements in energy consumption**

We applied two forms of computation analysis to a typical existing maisonette to establish a hypothetical baseline for its current energy consumption. Since information about the building construction and its services was unavailable to us, many assumptions have had to be made in arriving at these calculations. However the TAS software and the SAP calculations gave figures that are consistent with our knowledge of buildings of that era.

In developing proposals for how to make the dwellings more energy efficient, we have applied new linings to selective areas of existing walls and new windows to existing openings as shown on the drawing.
The calculations demonstrate that, by making the changes suggested, the cost of heating the maisonette would reduce from approx. £350 per annum to just over £500 per annum, and that commensurately, energy consumption would fall from just over 300KWhrs/m2/ann to just under 200KWhrs/m2/ann. This represents a saving of nearly 30% by both analytical methods.

**Summary**
All in all our work shows that RHG is not a lost cause but one begging for more sustainable solutions. The approach we have taken addresses the three legs of the sustainable triangle – economic, social and resources – and shows what could be possible with a careful and low-interventionist approach. With its strong & clear conceptual basis and its existing community, RHG has much to commend it. As a society we need to be looking to retain the good things that we have, and find methods of enhancing them, rather than seek quick fixes that answer to immediate desires but which may, in the long term, prove a more detrimental option.