

15

materiality

Part 02 unpacks the material and technical explorations that manifest the conceptual strategy of the scale of permanence to reinforce the architectural language of the various levels related to the different spaces and programmes unpacked in Part 01.

[a]

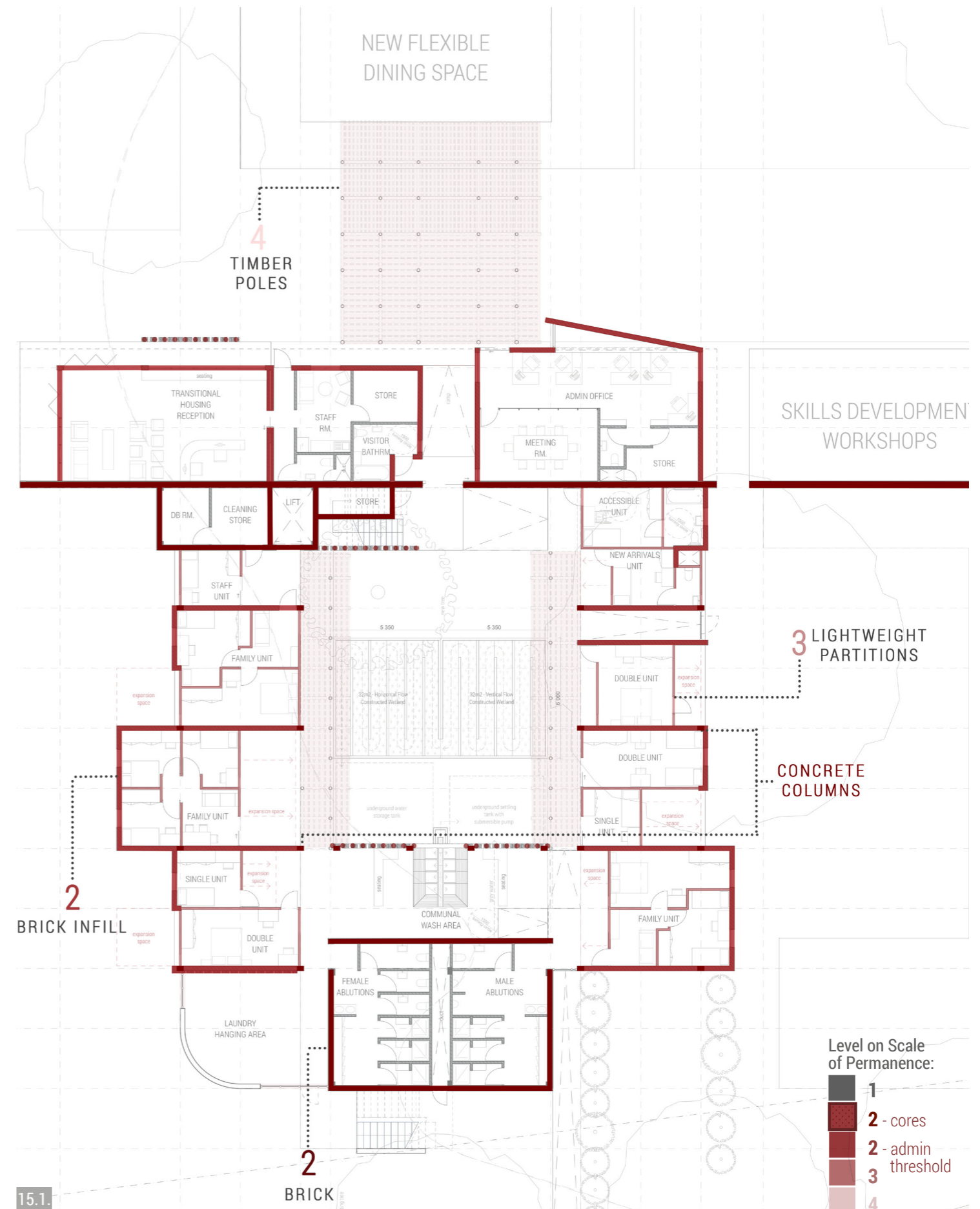
MATERIAL CHOICE & LAYERING

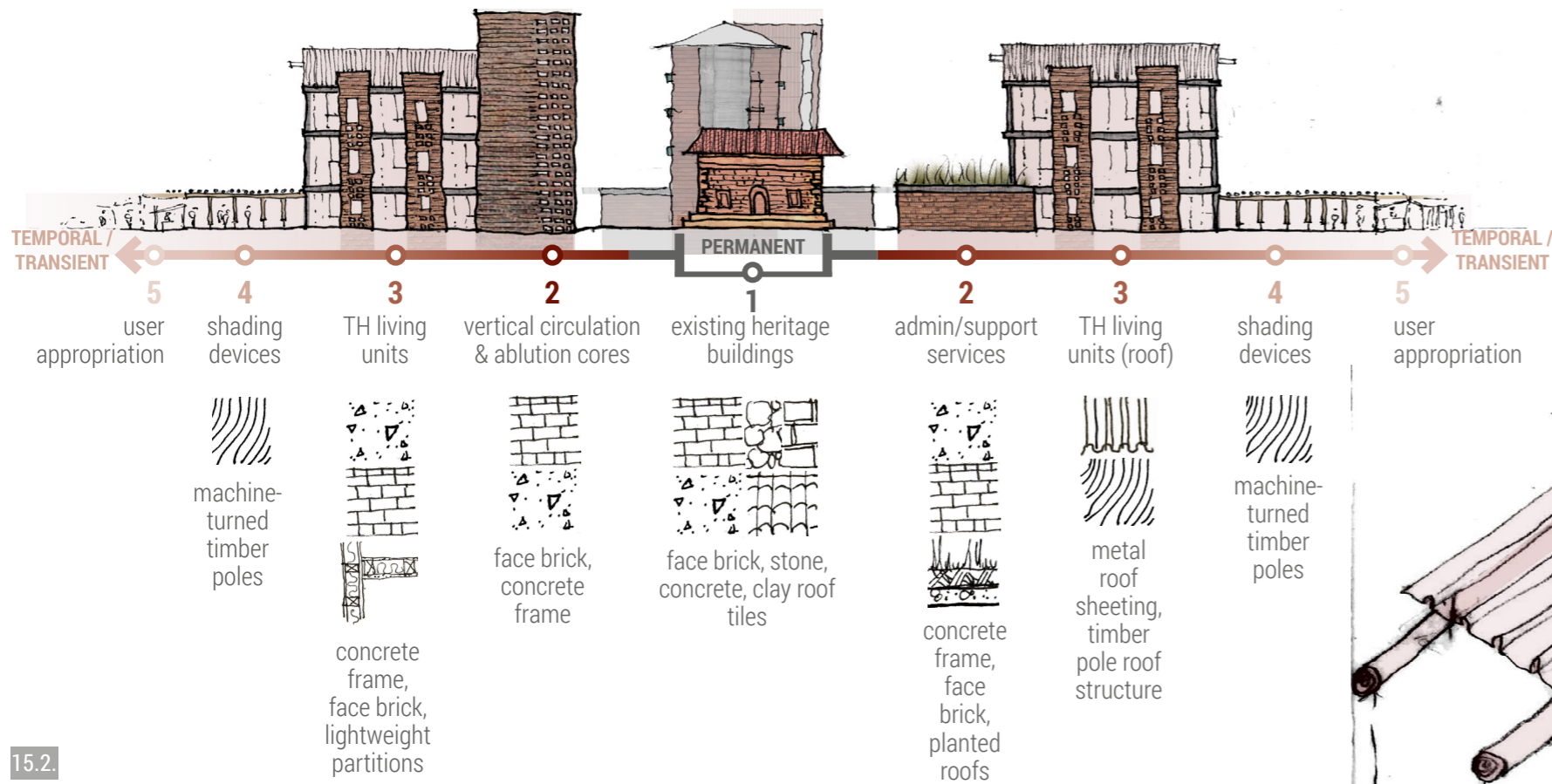
The material and technical intent stems from the aim to provide a platform for adaptability and future appropriation, while providing a sense of permanence and stability that negotiates the social conditions and changing needs of users on the one hand, while anchoring the existing heritage with their distinct red face brick aesthetic, to the proposed tectonic timber pole elements that define various transition and circulation spaces, unifying the project and reading as lighter, more temporal elements. The construction and materiality are not only intended to navigate these various levels of permanence/stability/stereotomics and temporality/transience/tectonics, but also to make use of local skills and available, affordable materials that are simple to construct without requiring specialist expertise, to allow current and future users to be involved in the construction process and future adaptation of the various spaces. Therefore, simple and humble materials such as face brick, timber-framed lightweight panels and machine-turned timber poles are used but elevated to achieve a dignified, sophisticated execution.

The layering of materials (Figure 15.3.) expresses the transition from fixed elements to lightweight, more flexible elements. It begins with the primary load-bearing concrete frame structure, which allows for long-term adaptability and provides a grid that accommodates the living unit modules. Then, the secondary structure of brick infill represents a heavy permanence in areas such as the vertical and abluion cores and demarcates bays within which flexibility occurs in the residential wings. The use of face brick textured panels, screens and envelopes that express the permanent and anchoring elements of the design (in level 2 and 3 on the scale of permanence) also build on the existing palimpsest of the heritage buildings' face brick aesthetics. Adaptable, lightweight internal partitions and external panels made of

timber frames, insulation and fibre cement cladding represent the tertiary wall structure that can be altered, removed and easily constructed to adapt and appropriate the living units. Lastly, the machine-turned timber pole pergolas and roof structure with steel sheeting read as a final tectonic and lighter addition to define transition and circulation spaces and to unify the various transitional housing spaces. These timber pole elements reference the tectonic timber pole construction of the informal structures on site, while also elevating the material through refined execution that gives dignity to the new living spaces. All of these materials are local and relatively low cost, which is an additional consideration when designing for this social context, programme and the intentions for future adaptation.

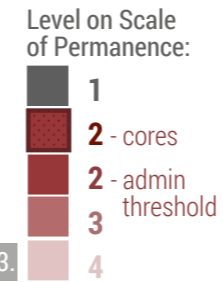
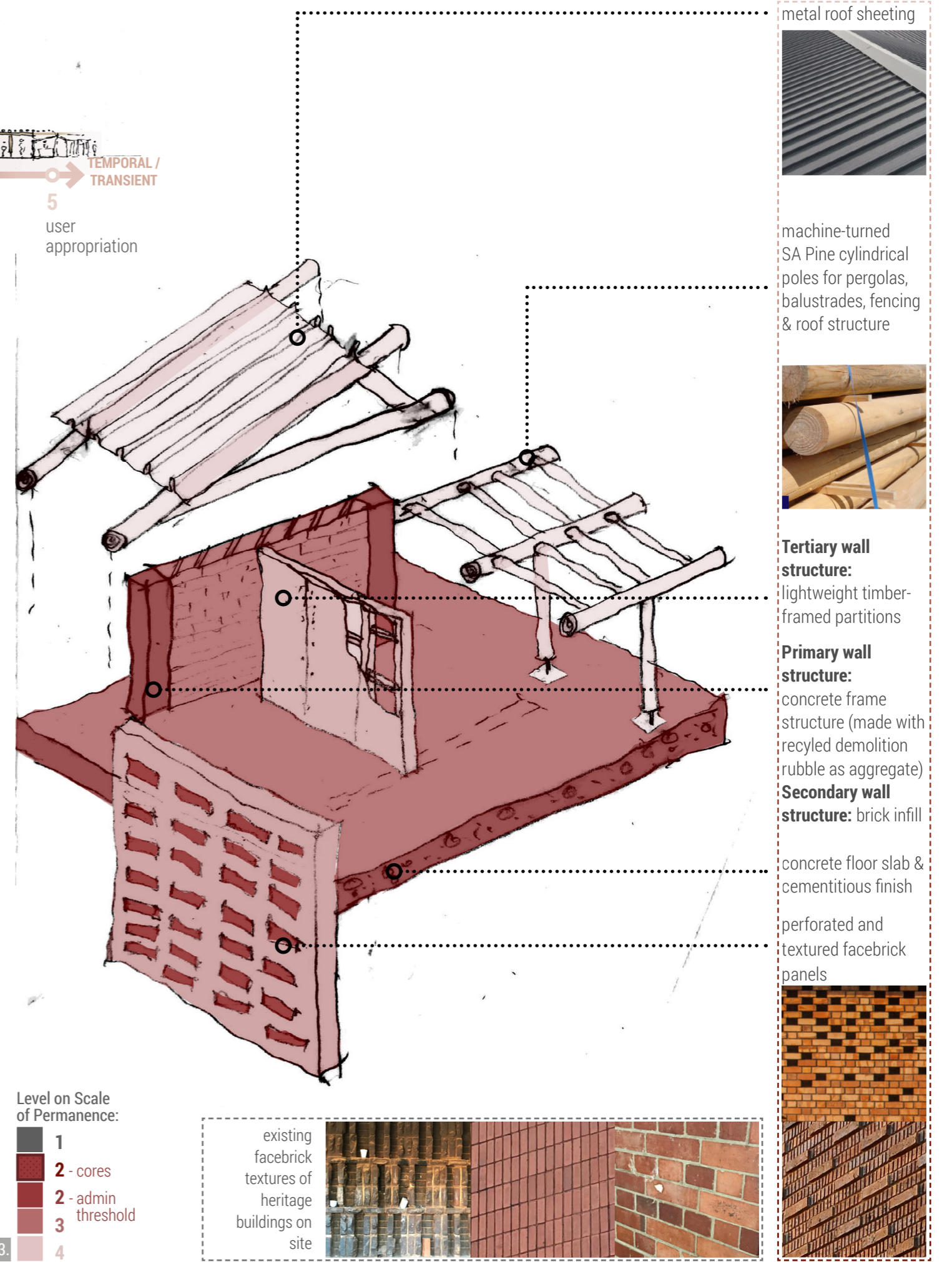
Fig.15.1. Right: Cluster A plan showing materials on different SOP levels (Author 2021).





15.2.

Fig. 15.2. Above: Scale of Permanence (SOP) material key (Author 2021).
Fig. 15.3. Far right: Material layering concept and palette (Author 2021).



15.3.

[b]

TECHNICAL & DETAIL EXPLORATION

The development of the section through the transitional housing and elements of the elevation start to express the architectural, material and technical intentions discussed previously. The various materials and their relation to the conceptual scale of permanence begin to define the programmes and spatial articulation of the design. For example, the more permanent textured brick panels on the sketch of the northern elevation (Figure 15.5.) alternate with more flexible lightweight panels (see Figure 15.6.), creating a distinct rhythm that expresses the transition between the more permanent, stereotomic vertical circulation core and admin threshold and the more flexible spaces of the transitional housing units.

Furthermore, as indicated in the previous section (Figure 15.4.), certain elements were chosen to be explored in more detail and resolved technically. Each of these were chosen to represent the layers of materiality that correspond to the levels on the scale of permanence, and as examples of simple, humble materials elevated to dignified, crafted construction and execution. These elements include:

1. The lightweight partition wall that is simple to construct by users, as a part of the adaptable/flexible level (3) on the scale of permanence.
2. The textured brick panels that give a distinct identity to these spaces and represent permanence (level 2) and continuation of the existing material language. These brick panels transition into perforated screens in certain areas.
3. The timber pole pergola as a tectonic element (level 4) that touches the ground lightly, demarcates transition and circulation spaces, and binds the various spaces together.

(see explorations of these elements on pages 114-115)

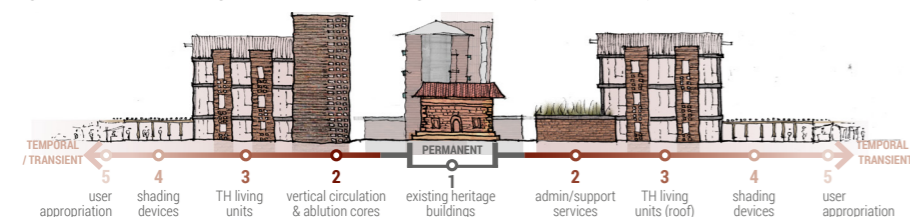
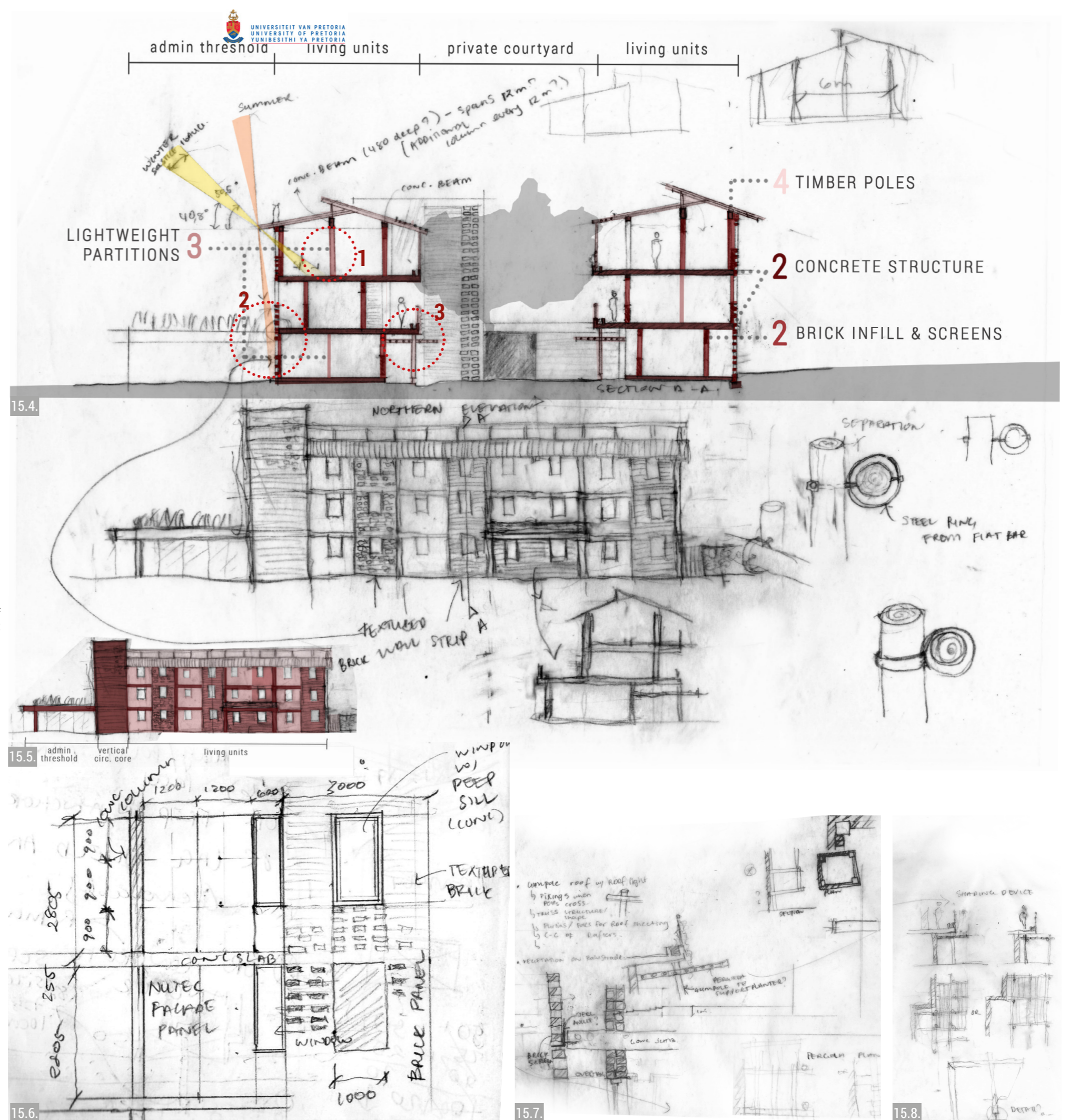
Fig. 15.4. Top: Section through Cluster A transitional housing units and courtyard (Author 2021).

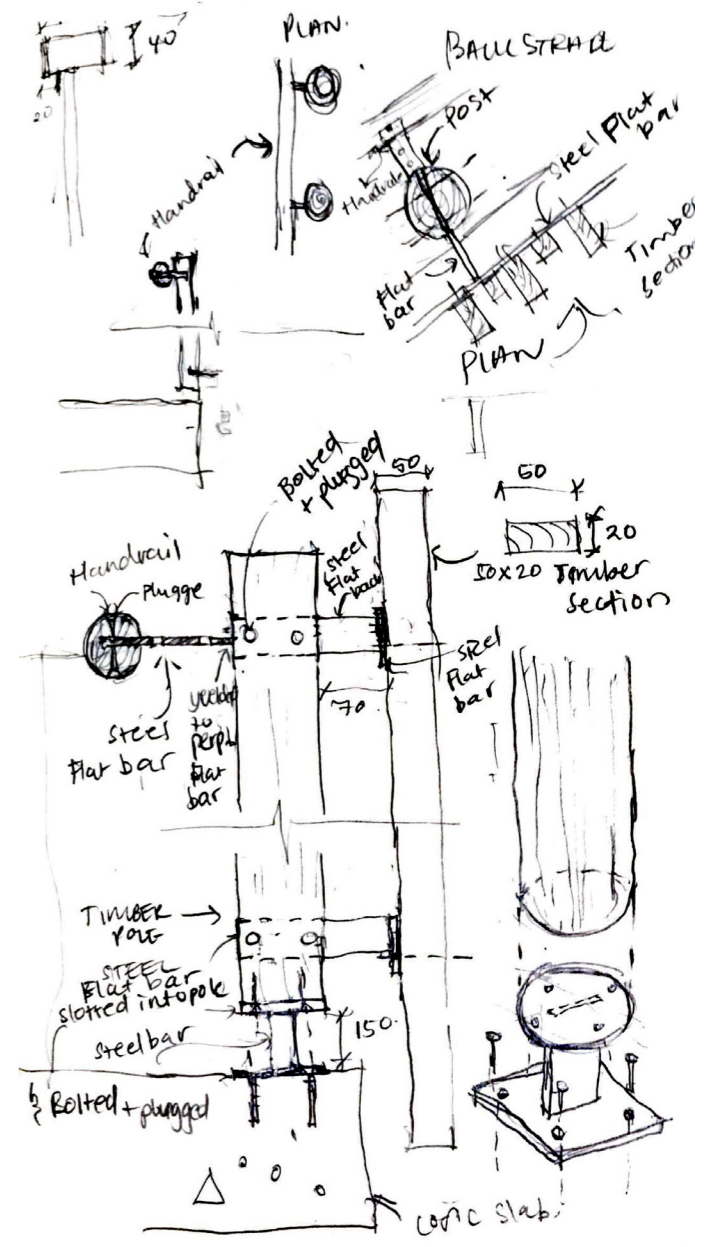
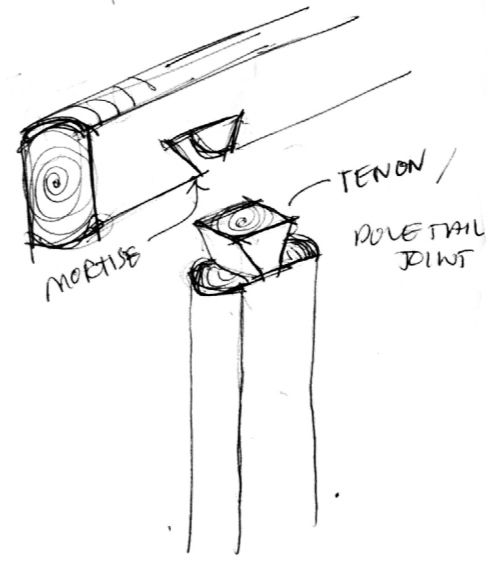
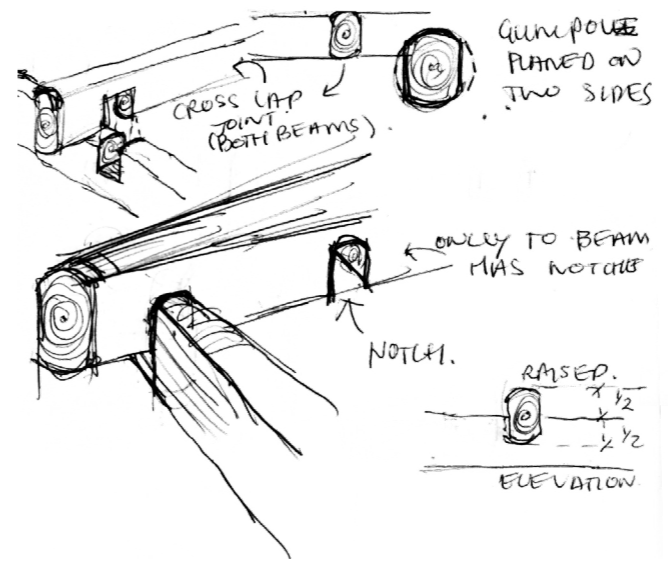
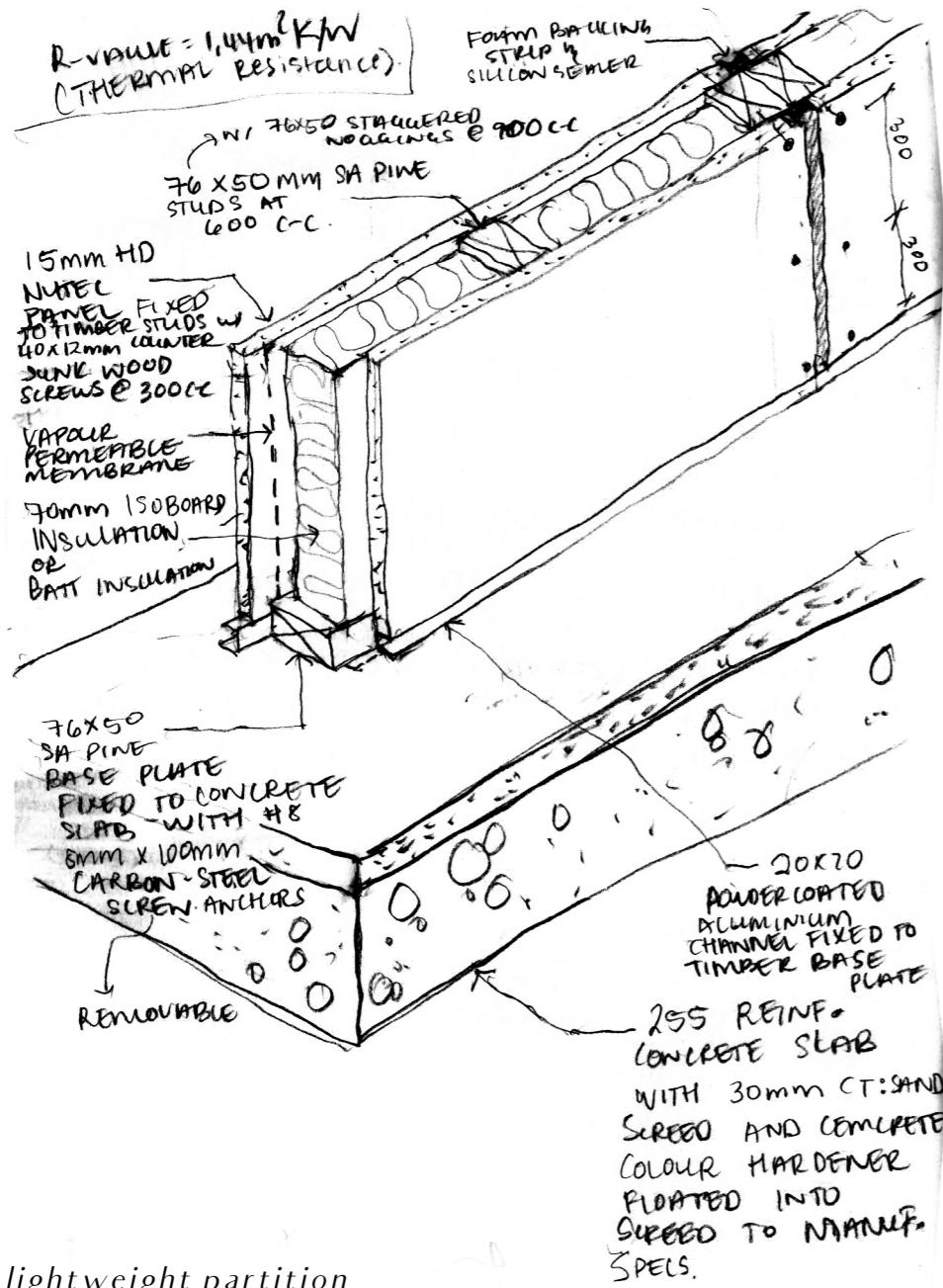
Fig. 15.5. Middle: Sketch of north elevation of transitional housing (Author 2021).

Fig. 15.6. Bottom, second to left: Sketch of part of northern elevation showing alternating brick and lightweight wall panels (Author 2021).

Fig. 15.7. Bottom, second to right: Exploration of brick facade panels that become screens where living units 'step back' (Author 2021).

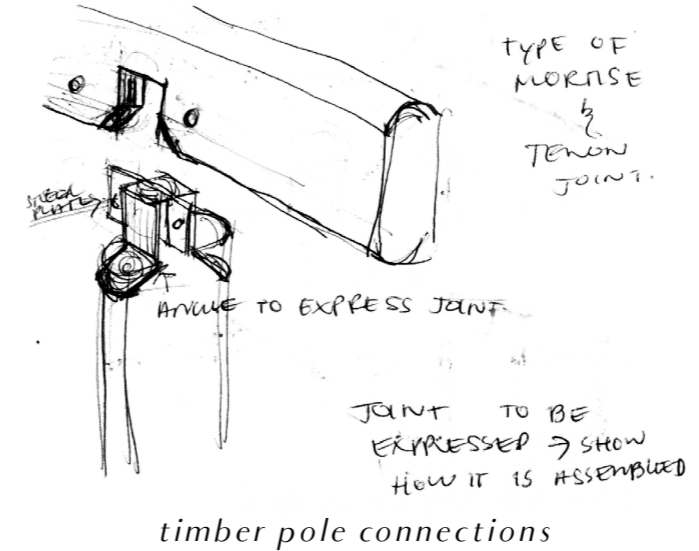
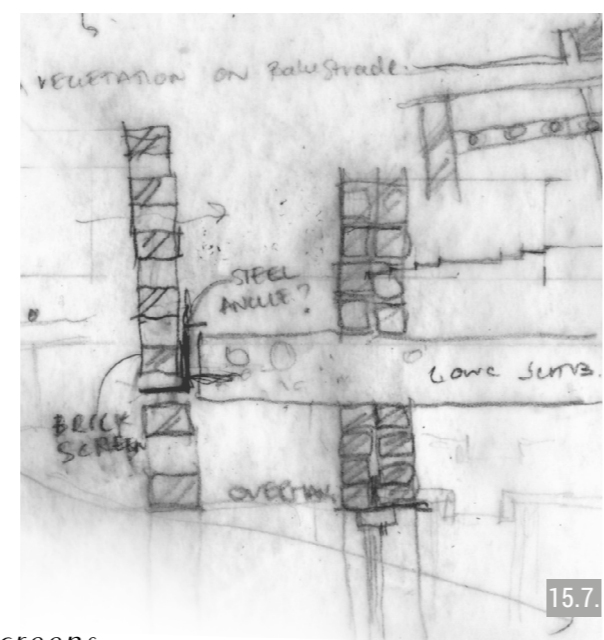
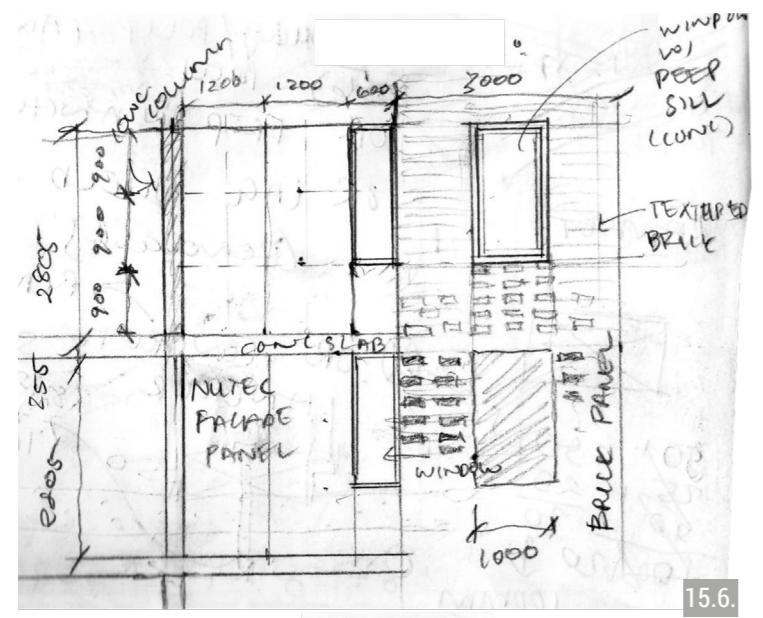
Fig. 15.8. Bottom, far right: Exploration of pergola on plan (Author 2021).





lightweight partition

15.9. 3D detail sketch of lightweight flexible wall panel (Author 2021).



timber pole connections

balustrade detail sketch

15.6. brick panels & screens

15.10. Explorations of timber pole connections for pergolas and balustrades (Author 2021).