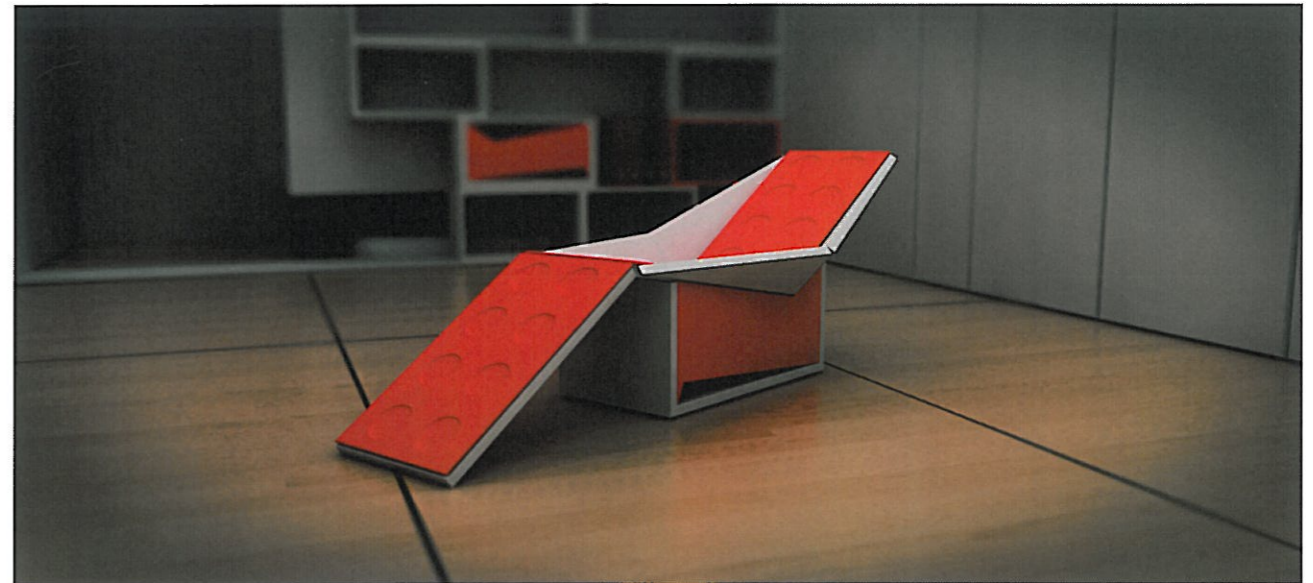
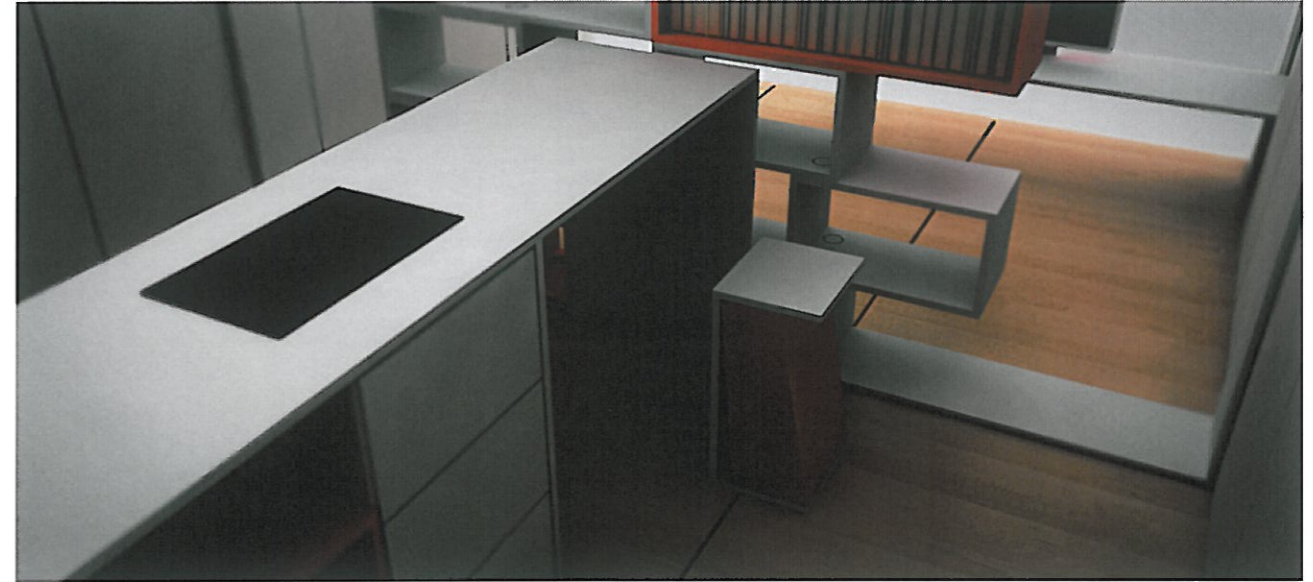
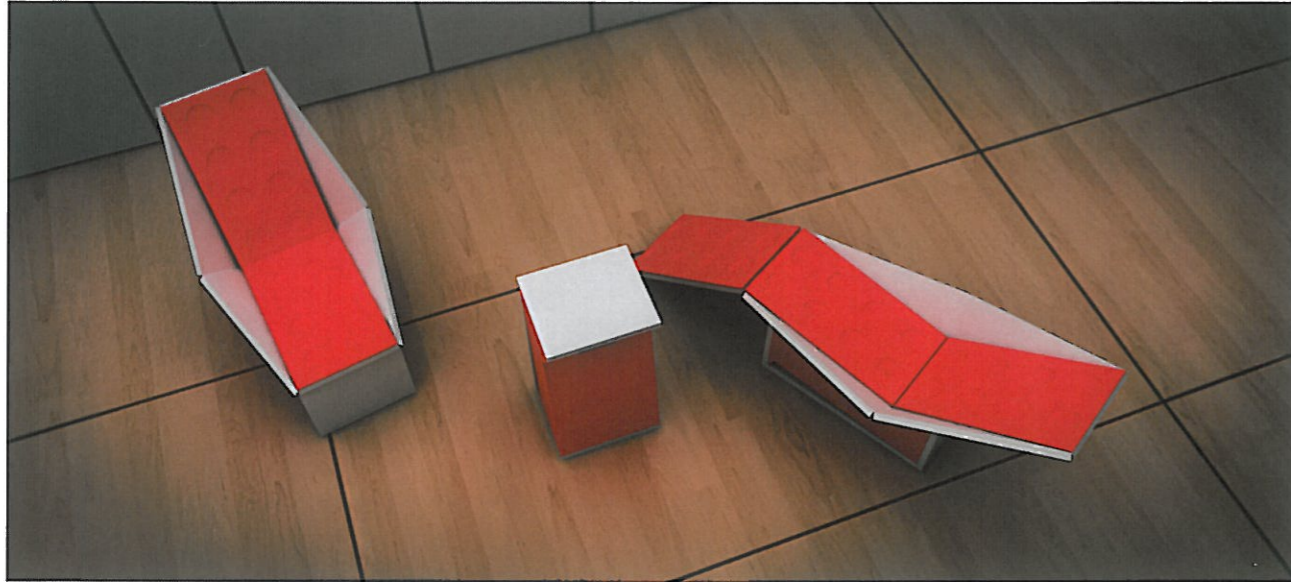


FINAL



FINAL SHOWING ERGONOMICS AND TRANSFORMABILITY



FINAL EVALUATION

The challenge of this design was to provide an innovative transformable furniture item for a young design graduate from AUT. The item needed to blend well with the existing apartment space and be multifunctional, given that the apartment was only 32 square meters. In order to address the lack of seating in the apartment, a transformable chair was designed. This chair has three transformations - stool, lounge chair and desk chair.

Design Aesthetics

Unity with existing Apartment: The chair meets the design aesthetics of the existing apartment through the continuation of the Lego theme, as seen in the existing bookshelf. The storage box resembles a Lego block and needs an element of disassembling. The entire design plays on the idea of getting something out of a box - construction and deconstruction being important aspects of Lego. Like Lego, simple connection mechanisms are used and mechanical features are avoided.

Also, the circular indents on the chair represent the clips in Lego.

The chair is asymmetrical in one direction so blends well with the asymmetry of the apartment. The rectilinear clean lines of the stool and chair provide additional unity to the design.

Colour and Materials: The chair also reflects the Lego theme through its use of a bright bold primary colour (red) contrasting with monochrome white. The materials reference Lego due to the glossy red perspex, which can be seen in Lego. In addition, the chair will contrast with the natural textures of the wooden flooring in the apartment.

Innovation: Storing the chair in its compartment in the bookshelf adds an innovative, surprising touch and the user will not be expecting a chair to emerge from this.

Function

Transformability: This chair is multi-functional and flexible. It transforms from stool to desk chair to lounge chair and can be used in varying locations in the apartment - under the kitchen bar, in the office area and in the lounging area.

Stackability and Storage: The chair, in boxed form, can be easily stacked inside the book shelf so it is possible to store more than one chair. Given its location in the bookshelf, it is easily accessible from anywhere in the apartment.

Ergonomics: This design is ergonomic in a number of ways:

Chair: Different options for seating angle are offered. The desk chair has been angled at 115 degrees and is near upright; this is a compromise because, although it does not fully conform to desk standards, it does make for more comfortable seating over a long period of time. The lounge seat angle is at 135 degrees; the optimal angle for a lounge chair. This was proven after a 1:1 scale test. Angled edging has been provided on the sides to meet optimal width requirements, avoid slipping off the seat and increase comfort. A headrest and adjustable footrest were considered to make the lounge seat more ergonomic but were not developed due to time constraints and concerns about compromising the structural integrity of the design.

Padding from dense memory foam and wool/nylon blend upholstery makes the seat more comfortable and cushions the pressure points. No lumbar support is provided to keep with the rectilinear and planar themes of Lego - however loose cushioning can be added if need be.

The chair is easy to walk around and there is no chance of falling over the base as it is hidden under the seat. The centre of gravity is between the supports of the base therefore there is little likelihood that the chair could flip over. In addition, it is compact, light and easy to move so there will be no risks to the user.

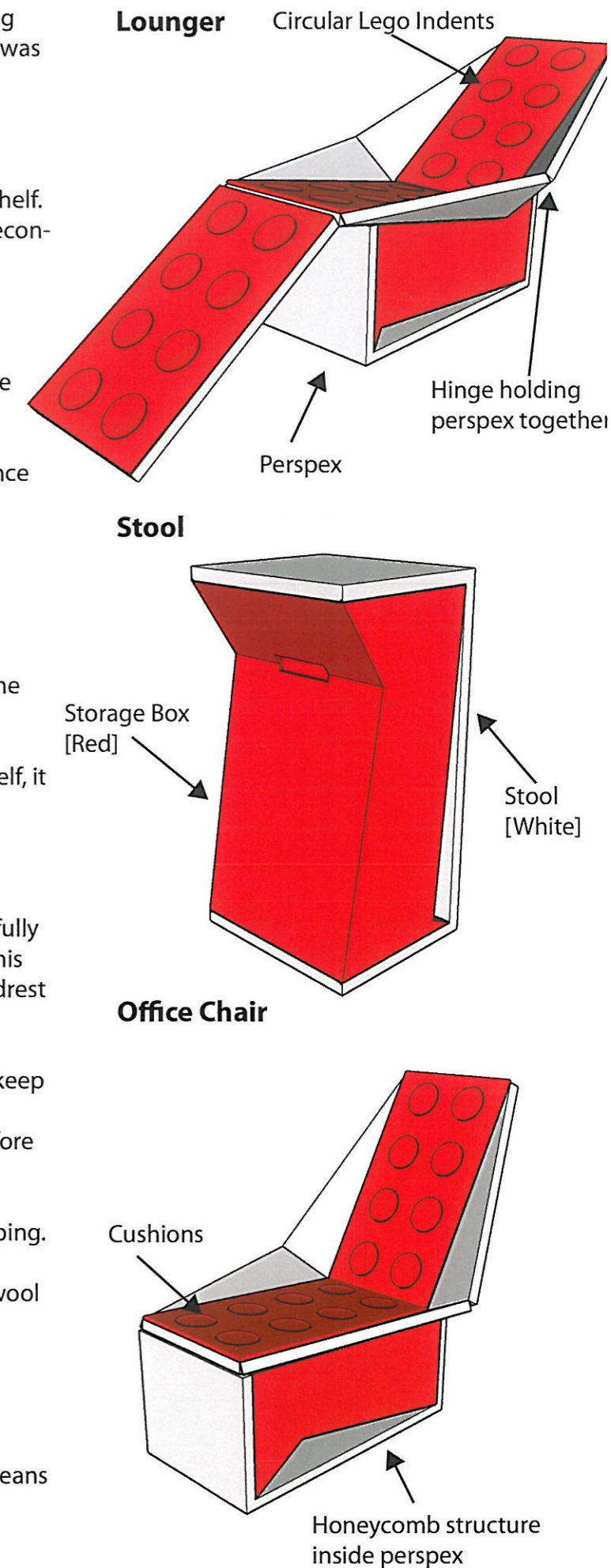
Stool: At 600 mm high, the stool sits 300 mm under the kitchen bar; this is the optimal seating height for eating. The stool also has a large base so there is little chance of tipping.

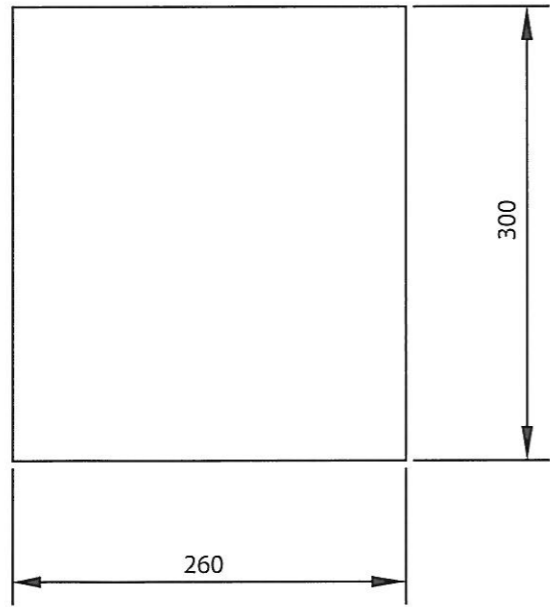
Materials: A simple combination of materials has been used (as shown in the developments) to retain the minimalist aesthetics. The combined Perspex, memory foam and wool blend covering are long wearing products which are easy to clean and will not fade. Rounded edges and a large surface area touching the floor will reduce scratching.

Connections: Simple connectors, magnets and rubberised plastic, are robust and less likely to scratch or suffer damage as mechanical connections. These connections are hidden on the underside of the seat when it is in chair mode; this retains a smooth, flush finish to the seat and reduces any risk of scratching.

Weight: The chair weighs a total of 9 Kg, this has been achieved through the use of a honeycomb structure inside the perspex which is 4 mm on the outside. This light weight means that the chair can easily be carried around the apartment.

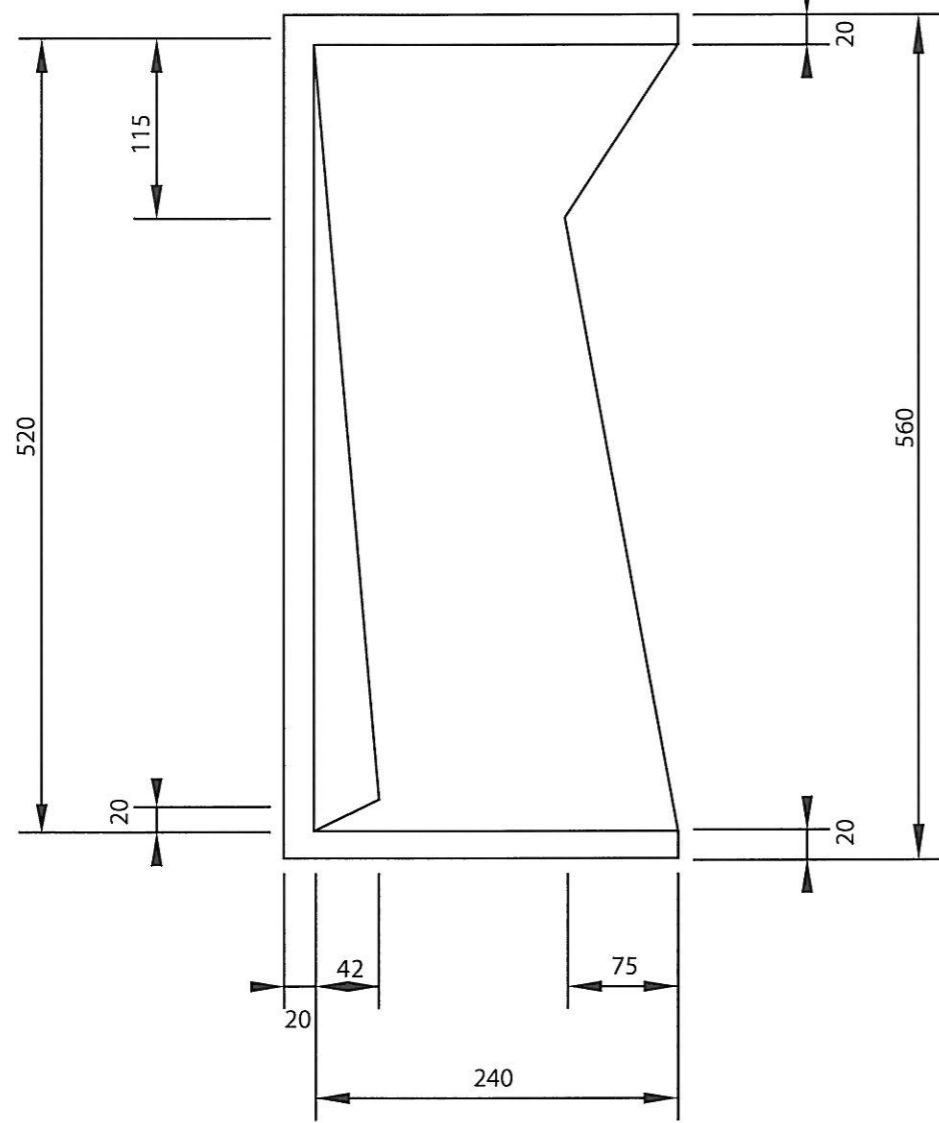
In conclusion, this unique chair meets the client's requirements for an innovative transformable furniture item and it fits well within the stylish blank canvas of the existing apartment.



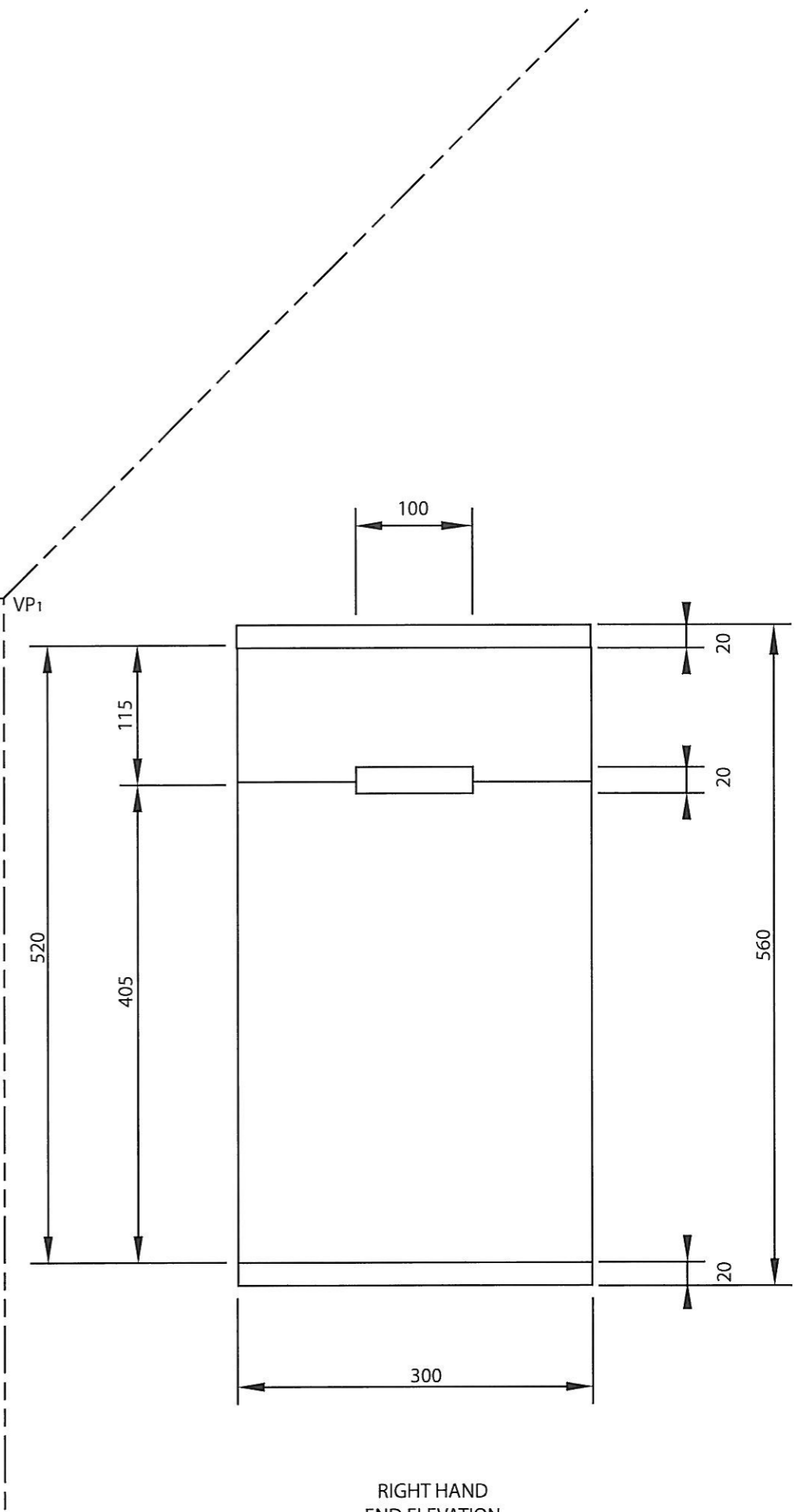


PLAN

HP
VP
VP₁



MAIN ELEVATION

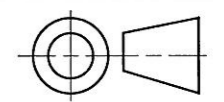


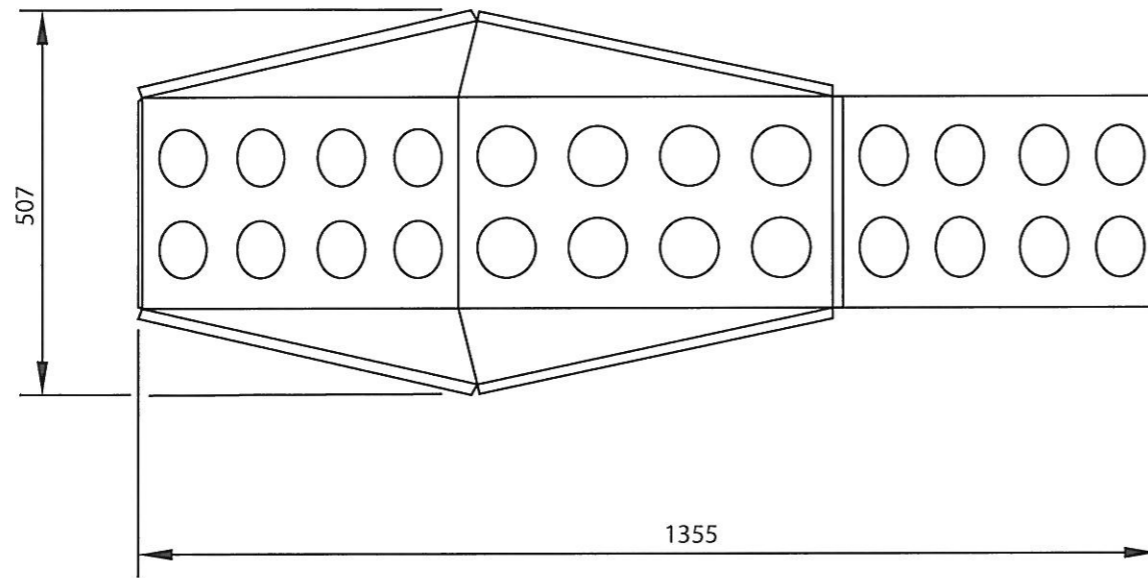
RIGHT HAND
END ELEVATION

NAME: SAMUEL BLOK

TRANSFORMABLE FURNITURE ORTHOGRAPHIC STOOL

SCALE: 1:5

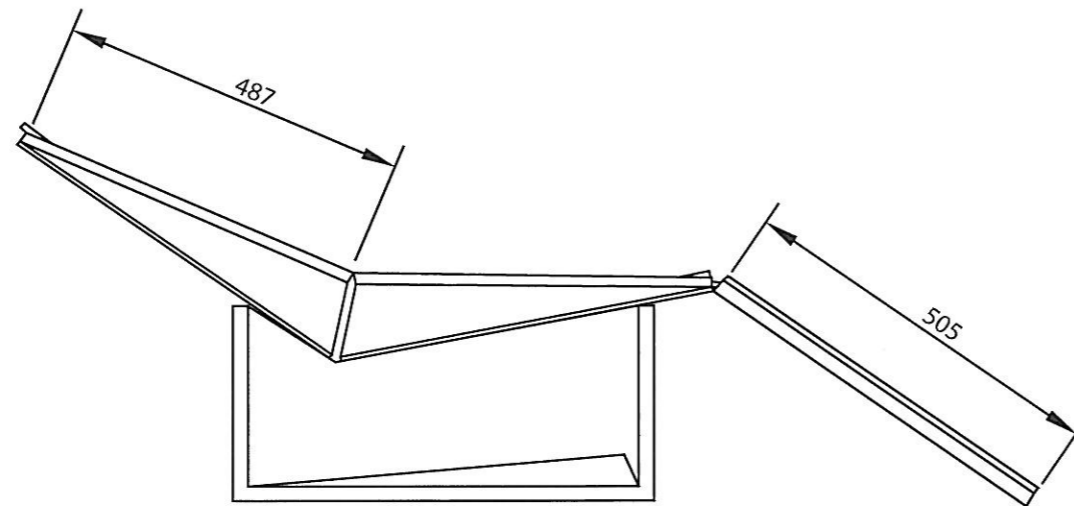




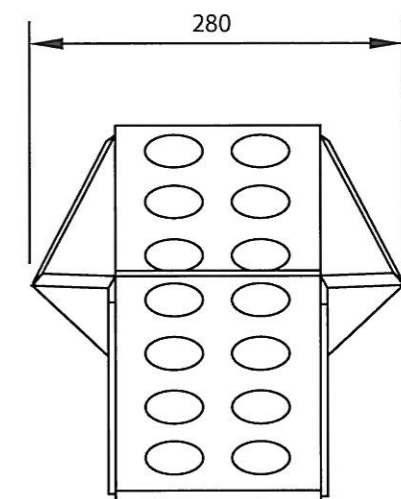
PLAN

HP
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MAIN ELEVATION

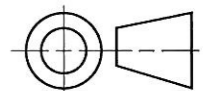


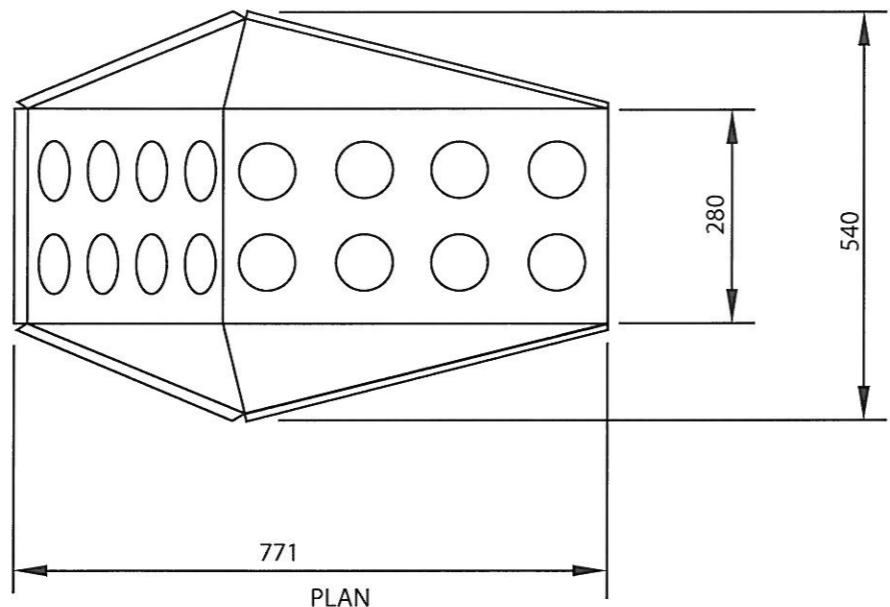
RIGHT HAND
END ELEVATION

NAME: SAMUEL BLOK

TRANSFORMABLE FURNITURE ORTHOGRAPHIC LOUNGER

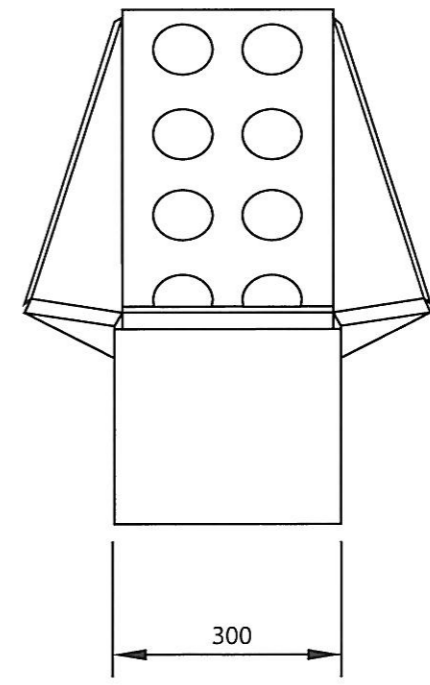
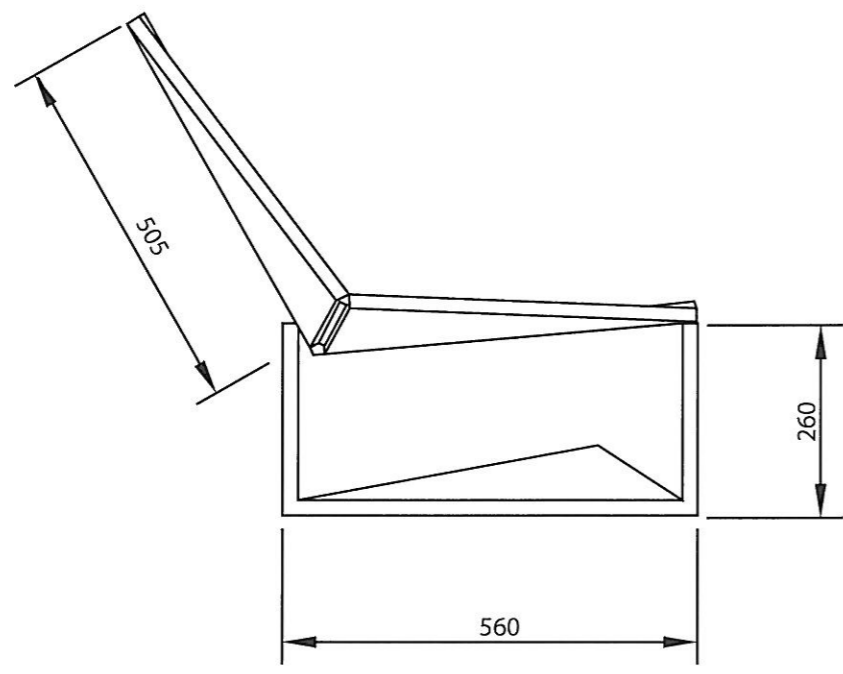
SCALE: 1:10





HP
VP

VP₁



MAIN ELEVATION

RIGHT HAND
END ELEVATION

NAME: SAMUEL BLOK

TRANSFORMABLE FURNITURE ORTHOGRAPHIC OFFICE CHAIR

SCALE: 1:10

