



THORNHILL PRIMARY SCHOOL HOUGHTON REGIS

VIEW OVERLOOKING SCHOOL AND PLAYGROUND

INTRODUCTION

The project expands Thornhill Primary from a one-form entry to a three-form entry school through the addition of a new building designed to achieve the Passivhaus Certification.

The school is located on the northern edge of an existing residential area, and is a key focal point for the developing Houghton Regis North masterplan which is expanding the town.

The expanded school separates the year groups between the two buildings yet presents as a single facility designed to support alternative methods of learning and offer a platform for both school and community events.

Strategically positioned to address the new town square of the Houghton Regis North masterplan and providing a landmark building the new school stitches the existing and new context together.

The landscape connecting the existing and new building has been designed to create a key node, where external circulation filters around an external covered amphitheatre space, directly adjacent

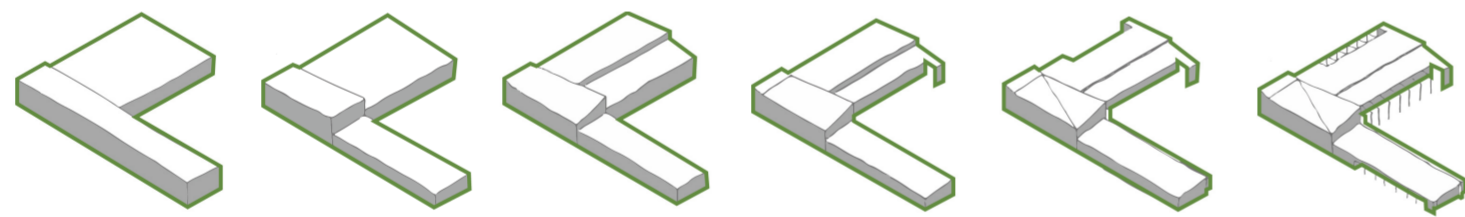
to one of the new large group rooms, which opens on to this space, offering an exciting environment outdoor learning classes for all year groups across both buildings and to host school and community events.

Crafted from Cross-Laminated Timber (CLT) we reduced embodied carbon, exceeding the client sustainability targets and design aspirations, through providing a high-quality designed learning environment with a warm bright homogeneous atmosphere. Benefiting the health and wellbeing of the occupants.

MAIN DRIVERS:

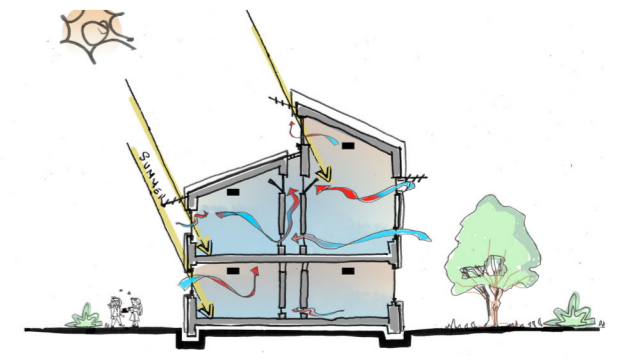
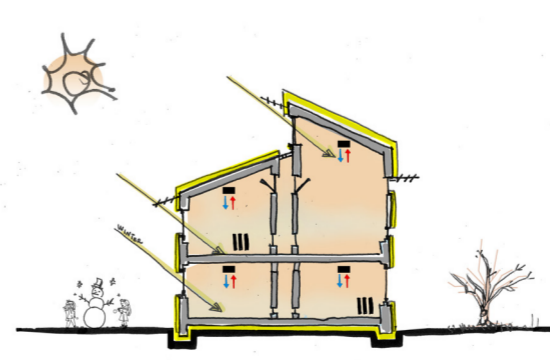
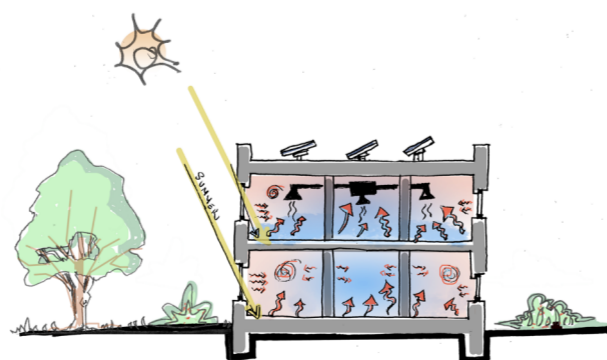
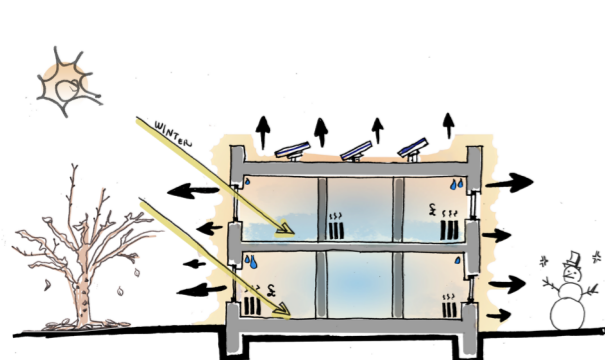
- PASSIVHAUS
- CROSS LAMINATED TIMBER (CLT)
- CIRCULAR ECONOMY
- POSITION AND FORMS

MASSING EVOLUTION

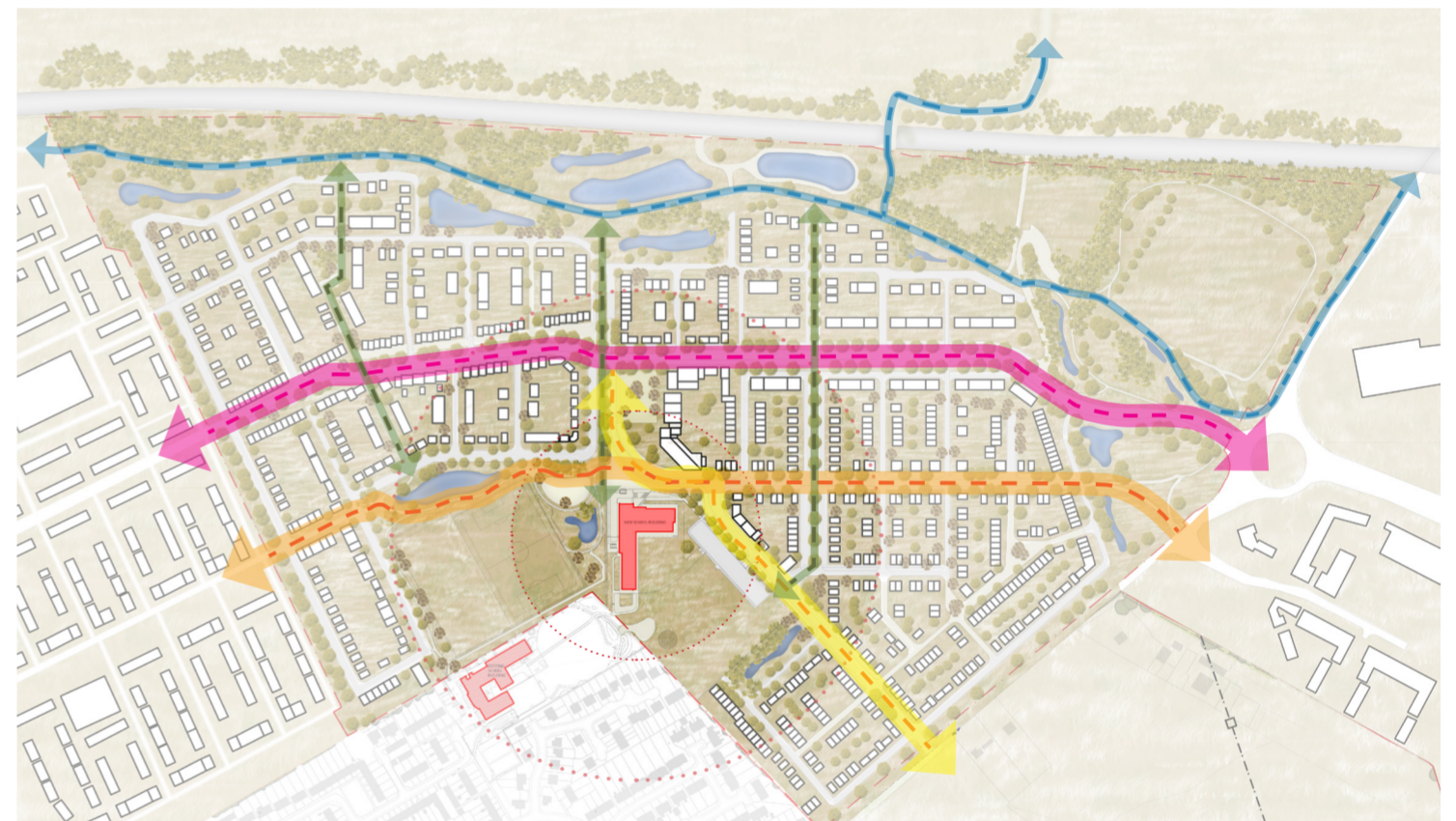


FORM

The height and scale of the teaching wings are representative of the pupil's progression through the school year groups. The lower form is located closest to the existing school building, continuing its massing scale for the transition of the early pupils to the new building, before entering the two-story wing for later year groups. The massing was manipulated to include cross flow ventilation through clerestory windows for summertime ventilation to further reduce overheating.



HOUGHTON REGIS MASTERPLAN



- Masterplan Extent
- Existing School
- Proposed New School
- Surrounding Area
- Existing Public Right of Way
- Main Pedestrian Routes
- Strategic Cycle Route
- Bus Route
- Primary Vehicle Route



Photographs of the Completed School

CLIMATE STRATEGY: PASSIVHAUS

Designed to achieve the Passivhaus Standard; the building will provide the school with high levels of thermal comfort during both the summer and winter months, enhancing both the pupil's and the staff's health and wellbeing, improving the pupil's learning within an environment that is affordable to operate and maintain. The sculpted massing optimises summertime shading while allowing solar heat gains during winter, through projecting roofs with varying roof/balcony depths and porosity of shading elements responding to orientation.



VIEW OF MAIN HALL

Mid-Construction Photograph of CLT Wall Erection



Classroom



Level 01 Bridge View (Compared with early stage CGI)



Corridor & Student Storage



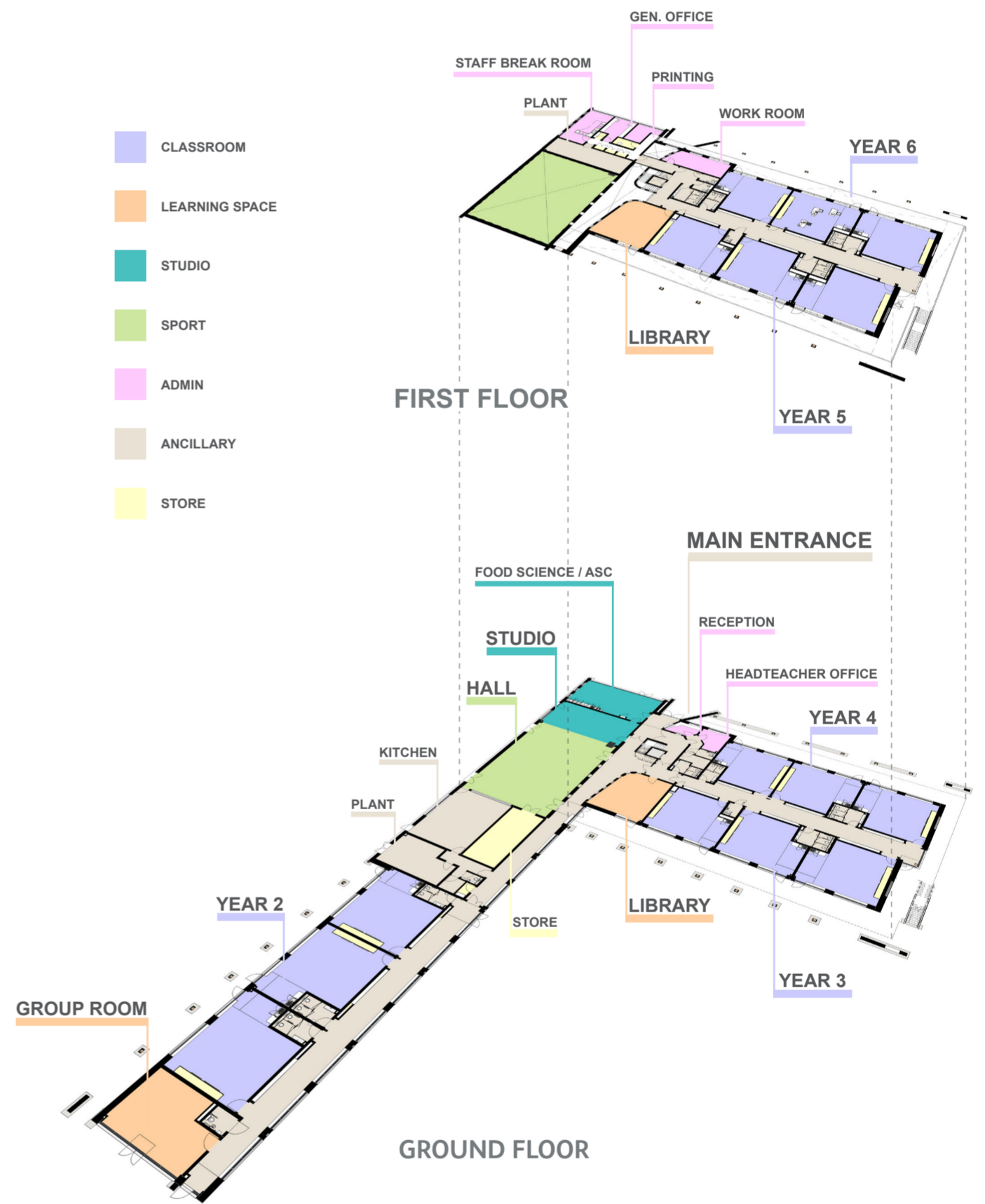
Corridor & Breakout Space (Compared with early stage CGI)



Sports / Dining Hall (Compared with early stage CGI)



Corridor & Student Storage (Compared with early stage CGI)



The shifting form of the roof, split in two parts, is fully revealed in the hall. The volumous space utilises large trapezoidal curtain walling and exposed CLT to create a warm inviting space for both play and learning. The CLT is exposed in all classrooms providing a healthier learning environment for pupils and staff. Research shows that exposed timber, including CLT, has wellbeing benefits such as lower heart rates and lower perception of stress (2010 Cornell University and Netzwerk Psychologie und Umwelt). Coat storage is integrated into the corridor walls to maintain clear open passageways.

The new building is arranged around a central playground, overlooked by circulation spaces and a new first floor external walkway. This walkway wraps the entire two storey section of the building, providing valuable breakout space for smaller group learning, connecting teaching with the outside and the surrounding context following the teaching pedagogy of the existing facility.



Aerial Photograph



Front Entrance Addressing the New Local Centre Photograph