East Sydenham, traditionally a working class area on the southern fringe of Christchurch is today an inner city suburb with interesting potential for redevelopment. South of Moorhouse Ave, it reveals a remarkably consistent urban footprint of industrial factories, warehouses and commercial premises. Outside the mooted Green Frame and the CBD (Central Business District) of Christchurch’s Blueprint, East Sydenham might easily fall outside the purview of the city planners. Such areas display pragmatic commercial forces at work - a condition that seems to occur largely without architects.

Left to their own devices they might tend to the common retail encroachment of modern cities, i.e. the mall, the big box, the ‘category killer’. Just north of Moorhouse Avenue, closer to the city centre, we see already the incursion of big box retail with ‘The Warehouse’ at 555 Colombo Street. One big box with a gigantic car park and pulling power tends to attract similar scaled developments, which seek to take advantage of the passing traffic. Such developments inevitably shift the focus from traditional pedestrian town centres to car-dominated peripheral sites. They tend to dictate the movement patterns of cities, road design and may even determine the location of motorway exit ramps. This type of polycentric development of the city deserves the attention of architects and, in the case of East Sydenham, preferably before the big box destroys the existing scale and grain of the old industrial neighbourhood.

Economic contingency has largely determined the form, scale and material in East Sydenham. Reliance on the motorcar as the dominant mode of transport is evident in the large areas of on-site parking. Paved surfaces dominate and the natural world is suppressed. Low-performance lightweight buildings reflect their period of construction through the decades of cheap and abundant electricity. Programmatic drivers are reflected in the design of buildings from the 1940s and 50s in particular. Portal frames, saw tooth roofs and high level gable-end glazing all speak to the programme and working conditions inside the large footprint buildings. More commonly now transparent profiled roofing removes any need to consider the tectonics of the window opening and the way light enters the interior. In spite of this apparent loss of design attention, architectural oddities and signs of the domestic roof still appear beside the strictly pragmatic flat-roofed tin shed.

It is an area ripe for some kind of investigation and proposition. How might we re-think these environments? How do we bring back residential population? What can we do to recuperate them, or in the case of East Sydenham intervene at a crucial time in the future city’s development? It seems just a matter of time till East Sydenham experiences an economic transformation and the manufacturing and low-value services (car tyre shops) get replaced by creative, high-value activities (designers studios).

The summer school in the first instance investigated the scale, material and programmatic condition of East Sydenham. Students selected a cluster of adjacent sites to investigate and propose architectural interventions that explored the social, cultural, urban, economic and tectonic character of the area. Floor/area ratios as a measure of density were to be doubled or tripled from those currently existing. Live-work-play scenarios that support and sustain domestic life, and new economic activity, within a commercial and hard-urban context were encouraged. Thus the slogan ‘industrial occupation’ was a deliberate double reference: it was the code word for people re-colonising this area as residents, socialisers, consumers, and, workers with occupations in the new, green economy.

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Green innovation – dubbed as ‘greenovation’ – was suggested as the double driver of change: not only does the building stock get a retrofit with clean energy, water and waste technology, but actually the new tenants in these retrofitted buildings are the design and engineering firms who drive the green economy transformation of Christchurch.

In sum, the studio was driven by three agendas rather than just one:
1) **Polycentric City** – as the overarching theme of the whole 2014 Summer School, which asked of all the three studios: What does ‘polycentric development’ mean in the Christchurch case?
2) **Industrial Occupation** – pushing the regeneration of Sydenham beyond the Colombo St spine into the industrial areas east and west of it – that is, to bring back residents, visitors and new businesses to all of Sydenham, and make the once proud manufacturing suburb once again the pioneer of a new industrial era;
3) **Green Innovation** – pursuing the idea that climate change is a serious concern and that nothing short of a global green technology revolution can save the world. In such a global scenario, clean-tech investment is likely to boom and that presents an economic opportunity for Christchurch. The recovering city could play a special role - both as the key innovator, and the key demonstrator of what the urban (re)development should look like in the future and how it should work. If there is a case for a ‘green-tech’ cluster in Christchurch, then Sydenham East looks perfect for such initiative.

In response to this challenging multi-brief, the students have produced a double proposition, at two spatial scales:
1) at the level of a cluster of 3 or 4 private commercial properties, they proposed a new functional programme – a mix of commercial, residential and public use – while at the same time introducing architectural and technology features which enhance sustainability and resilience.
2) At the level of the whole suburb, they looked for broader application of their ideas – to other sites, and with other clients, in Sydenham East. Without exception, they managed to identify some generic values in their design strategies and solutions and match them with opportunities across Sydenham East.

The second point, importantly, addresses the original intent of the Summer School – to evolve the Polycentric City concept so that it meets the actual spatial-physical conditions of Christchurch. In showing how Sydenham East could regain its industrial past and recover some of its residential use, the student projects demonstrate that Christchurch has more than one layer of polycentricity. What is more, the ring of old suburbs around the CBD is potentially Christchurch’s best opportunity to speed up the rebuilding the inner city. There is no reason to suspect that places like Addington, or Sydenham, or Linwood, might be in competition with the CBD. They have their own histories, characters, potentials and futures, as this case for Canterbury’s gateway into the Green Economy, attempts to prove.

Jeanette Budge and Dushko Bogunovich, February 2014
The aim of this project is to create a live-work environment within the industrial fabric of Sydenham.

East Sydenham in 1940's consisted of a mix of residential lots and a few industrial areas, but over time the site developed and the industrial programmes took over, pushing residents to the south.

Dominated by a monotonous industrial occupation, the project proposes to intervene by introducing a diagonal cut that acts as an entry point into the industrial side of east Sydenham. It challenges the existing grid to create a pedestrian friendly circulation route within the car dominated grid. The diagonal cut expresses a contrast between warm and cold, bringing warmth into the courtyards of the cold industrial blocks, with a gradient of public and private spaces and bringing greenery and water into the site.

The urban strategy is to continue the pedestrian diagonal and cut through east Sydenham. The project proposes residential occupation to be mixed with office and suitable manufacturing buildings. The range of programs include residential and offices upon entry, the studios and public amenities are located further inside the block, and the exhibition space is at the centre.
SUSTAINABLE FEATURES

- PV / SHW panels
- Natural cooling
- Atrium ventilation
- Passive solar heating/cooling
- Natural ventilation
- Rainwater storage
- Food production

SOUTH ELEVATION
This project introduces a promenade through the industrial area of Sydenham. The industrial area of north Sydenham divides the residential neighbourhoods in the south from the CBD in the north, and acts as a barrier between the two areas. The area is predominantly made up of grey, large scale industrial buildings and very little else. The promenade works like a crack in a surface, bringing life to the concrete dominated landscape. The design of the promenade introduces greenery and residential housing along a path and connects Sydenham's residential neighborhoods with the CBD. The aim of the project is to create a catalyst for a greener, more pedestrian friendly, mixed use area.

This scheme proposes commercial and community based activities within the existing industrial buildings that border the promenade. The programmes include a food court, art studio and gallery, sports centre, and a community centre.

The green promenade itself will have a cycling lane and a walking path to provide a safer pedestrian and cycling route to and from the CBD. We believe that this design opens up opportunities for a more welcoming, safe, sustainable and human friendly lifestyle within the industrial area in Sydenham.

The surprise element along the promenade are small courtyards that act as magnets, and are created in the voids between the existing buildings. Each courtyard has a unique activity such as: open air movie screenings, public dance floors (inspired by the Dance-O-Mat gap filler that was such a hit), public barbecues and picnic tables. Each courtyard will be colour coded for easy reference, for example some people might meet in the red courtyard at 7pm for a movie screening, or the music studio is holding a concert in the purple courtyard on Friday. The biggest magnet will be situated at the heart of the green promenade, which is an amphitheatre that can comfortably seat 120 people. The idea is to offer places for people to gather and destinations along the promenade for both local and neighbouring residents.

Residences are built on top of the existing industrial buildings and will be made of lightweight, sustainable materials.
PEDESTRIAN PATH
Trelises are placed in blocks at intervals to define the pedestrian path.

NORTHERN ENTRANCE
A designated cycle path passes through the lane.

BUILDING PROGRAMMES
The existing buildings around the promenade would be repurposed to cater to community based programmes (as seen in the key).

FUTURE VISION
In the future the promenade could extended through the remaining blocks to connect to the CBD. Each block would have a central magnet and smaller courtyards. Pedestrian traffic lights could be placed directly in front of the pedestrian path for easier access to people in the residential area.

SECTION A
The main materials in our design are brick and lightweight materials such as bamboo and channel glass.
CARS DOMINATE
The project focuses on the streetscapes of Sydenham East. The site has a strong industrial character and a landscape dominated by vehicles and carparks. There is an obvious lack of green infrastructure and pedestrian space. Greening Sydenham claims carparks and underutilized lots to attract pedestrians and turn Sydenham into an outdoor living room for the community.

The project is located along the axis of Wordworth Road, and introduces curves and vegetation to create a unique recreational space for social interaction, hospitality, wildlife, art, play. The aim is to create a pedestrian friendly area through the rehabilitation of the natural and physical environment of Sydenham. The surrounding areas within Sydenham provide some of the major inspiration and design ideas such as Sydenham pod park, wildflowers and in general the reuse of hardscape materials.

GREENING SYDENHAM
RECLAIMING LAND FOR PEDESTRIANS
EXISTING STREETSCAPE
PROPOSED STREETSCAPE
EXISTING OPEN SPACE
MOUND PARK
INTERACTIVE PARK
OUTDOOR CINEMAS

UNITEC, THE UNIVERSITY OF AUCKLAND, CPIT
SYDENHAM 2020 INDUSTRIAL OCCUPATION
PATRICIA MORRISON
St. ART
What is Sydenham’s identity? Sydenham has a unique persona which is portrayed within the industrial typology. Although this area remains untouched, it conveys remnants of a diverse creative culture that has potential to act as a catalyst for the future of Sydenham as well as Christchurch. The project’s aim is to utilize the artistic discipline of Street Art and morph it into a scenario that acts as a shared space for all to dwell within the site and to freely allow the public to express their designs and artworks.

The site is located on a major intersection in Sydenham East, at the corner of Gasson St. and Wordsworth Rd. The site contains a cluster of industrial rectangular buildings, of which the project incorporates a portion of in order to maintain the existing structure and emphasize the working character of the area. The design capitalizes on the dynamic edge of this intersection by placing the main new building on the corner. The artist workshops and concrete canvases are located at the back of the site, while the principal interface with the public is the courtyard.
This project proposes the repurposing of existing factories into a place of combined live-work. Factories constructed of portal frames and tilt slab concrete are typical structures in Sydenham. They use skylights to penetrate natural light deep into the building. Light is the driving design impetus for this project. By preserving the existing skylights and structure, the building retains the traditional industrial appearance but transforms into a live-work environment. The preserved skylights allow a maximum amount of natural light into the building space.

The North-East corner of Sydenham is an industrial area operating mainly during the day. It's location offers opportunities for the area to be develop into a mixed use district, as it is a buffer zone between the residential area in the South and the CBD to the North. Sydenham has the potential to become a sustainable and affordable area where new technologies and arts come together to liven the area. Future Sydenham can be used to hold event such as Luxcity to encourage people to dwell, as well as bring light back into Sydenham during the night time.
The project is located on the corner of Byron St. and Brisbane St. in East Sydenham. The brief was to take an industrial site and turn it from an existing ‘big box’ environment, into a mixed-use development that caters to innovative start up businesses.

The site has an existing furniture business in a saw tooth roof warehouse. It is proposed to retain and transform the business into an eco-innovative furniture business that refurbishes or uses recycled materials, thus turning the place into a learning centre on how to live with a greener approach in innovation.

A public passage way passes through the existing sawtooth building connecting the street to a courtyard on the other side. A cafe and office are located in the front section, providing a place for people to gather.

The pattern of the sawtooth roof was the initial inspiration for the new mixed-use design. In addition we discovered a tukutuku panel of Ngāi Tahu te iwi o te rohe o Otautahi, which resembled the same sawtooth pattern. We derived the design concept from both of these forms. It was a key aim to retain and strengthen the unique identity as a place of industry, action, and innovation. At the same time it was important to offer attractive places for businesses, residents and the community that seek a different experience to that of the CBD.

The new buildings are composed of three different typologies, derived from a triangular form. The smallest of the three modular designs is 12m x 6m and accommodates retail and office space. The medium module is 12m x 9m, and is designed for mixed use, such as a light industrial workshop with residential living above. The double module has two different designs: one is a 12m x 6m backed onto an 18m x 6m module and the second is a 12m x 9m module back onto an 18m x 9m, both are designed for mixed use.

All modules were designed with a passive intent, allowing for solar energy collection, air ventilation, water collection, the use of concrete as a building material for thermal mass and a green edible garden at the bottom of each module.
The design is based on four identified problems: the lack of residents, the absence of 24 hours activity, the poor use of unbuilt spaces and the high crime rate. The project aims to create a sustainable live, work and play community by creating pockets of density where lively sub-centres incorporate basic daily facilities.

The design was inspired by the drastic shift in residential accommodation from the 1920's (full of residents) to 2000's (with no residents). These studies drove the shape and form of the design by stacking and compacting the years one on top of another, starting with the 1920's at the bottom and the 2000's at the top. The program distribution places residents on the upper floors, retail on the ground floor and offices in between. By placing the smaller footprint buildings on the bottom floor, it creates an easy flow of movements for pedestrians throughout the buildings.
FLOOR AREA RATIO
The average Floor Area Ratio (FAR) is 0.39 - given that the buildings are predominantly single story it means that only 39% of the area is being used.

POCKETS OF DENSITY
Three pockets of density were created and strategically located where there is a lower average block FAR so that the unused space could be transformed into an amenity. By proposing basic daily needs within a 1-kilometre radius, the foundation of a sustainable living community is formed, and ultimately this contributes to reducing the need for excessive car travel.
REPROGRAMMING SYDM

Sydenham is beautiful. It has a raw, uncompromising character that is the result of decades of industrial activity, resulting in a complex urban pattern that not only resembles a work of art, but is also the physical evidence of a surprisingly rich cultural history that has been and may continue to be of vital importance to the development of past and future Christchurch.

Reprogramming Sydenham is about appreciating the inherent beauty, and developing an architectural language using both the physical and historical material that constitute the area today.

The architectural language is guided by strategically reducing and adding architecture, so that existing spatial configurations can be transformed into spaces that can house new types of functionality in a manner the original architecture wasn’t intended for, in the case of this particular brief, a center for Arts & Technology.
Located at the critical junction where Moorhouse Avenue and Waltham Road intersect, Junc.Factory stands as an icon and landmark of East Sydenham. The complex consists of a series of buildings (old and new) including a factory workshop, exhibition space, several art workshops, lecture rooms and an office tower for studio and live-work space. The architecture builds on Sydenham’s identity as a manufacturing nexus in the city. It also celebrates the culture of Kiwi ingenuity of the DIY culture.

A CULTURE OF MAKING
Ever since Christchurch’s first passenger railway terminal was built on Moorhouse Avenue in 1863¹, Sydenham population has gradually increased, followed by rapid development of a variety of light industries.

“Today Sydenham stands pre-eminent amidst the large number of progressive and successful districts in a most progressive and successful colony. Numerous industries have been established, chief of which is Booth Macdoland & Company, a roller flourmill, a large furniture factory, a stocking and knitting mill, wholesale boot manufacturers, a cyclist workshop and carriage works, a soap factory and many other industries.”

Chronickers (1904)
SITE

The site is not only located at the North East corner of Sydenham East, but also on the fringe of Christchurch’s CBD where two busy roads intersect. (Moorhouse Avenue and Waltham Road). A large number of people pass through the intersection everyday, making the site an appropriate location for a landmark building. While it is a prime location, the current existing infrastructure (the bridge and railway) divides the area, making the site inaccessible and hidden.

ACCESS

In order to improve the current lack of access, terraces are designed to connect to the exiting bridge which spans across the railway. This forms a pedestrian friendly, direct connection between the existing skate park, the bridge and the site. The dynamic circulation of the terraces extend into the complex of Junc. Factory.

LOCATION MAP

IMPROVEMENT 1
Widen the bridge to be more pedestrian and cycle friendly.

IMPROVEMENT 2
Make use of existing skate park and existing bridge by adding more greenery to the site.

IMPROVEMENT 3
Implement a direct connection (both visually and physically) to the site from Moorhouse Ave.
Rain water is collected from the roof and terraces and recycled for reuse.

The tower is to be built with Post Tensioned LVL system, an innovative building technology developed in Christchurch utilized for Multi-storey timber construction.

Windows are designed to create adequate cross-ventilation to reduce the use of air-conditioning.

A collection of solar panels and wind turbines are placed on top of the roof of the building to generate electricity.

The rooftop is dedicated to showcasing different types of solar panels, wind turbines, solar tubes, thermal panels etc.

Workshops/Rooms: Smaller workshops generally for arts and crafts (smaller scale DIY including pottery, arts, and smaller groups of community gathering.

DIY Factory Workshop: Large open space where people share tools and machinery to make/fix their own items.

Exhibition Hall: Display historical industrial machinery, DIY products, items etc.

Reception: Information Hub

Viewing Tower

Barr/Restaurant

L2-L5 Live/Work Office