



GROUP E
NOT JUST A TIN SHED
STAGE 3 REPORT

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Client

Caerau and Ely Sports Trust
Carl Meredith (Chair)
Wayne Matthews
Gerald Jones
Spencer Clarke
Councillor Peter Bradbury

Client's vision

The client's vision is to provide a community space that focuses on inclusion for isolated groups within the community. Their main driver is to promote health and well-being through sport. The concept for the community centre is to provide facilities to increase the physical activity, provide flexible spaces for existing and new community groups to meet and to increase the involvement of the elderly community with in Ely and Caerau. Their ambition is to spread a sense of belonging within the youth as well as provide a space to eliminate the antisocial behaviour.

Community Consultation

Following the Community Consultation, September 2019, we recognised that although there was a strong need for sport involvement, the primary factors affecting the well-being of the community was a lack of integration across all ages and a lack of knowledge regarding the importance of nutritional health.

Brief

We aim to enrich the local community by providing a scheme run for and by the community, creating a greater sense of social cohesion.

Food poverty is inherently linked to low income lifestyles. Studies have shown that those that are disadvantaged in society have the least access to quality nutrition, leading to poor health outcomes. Physical and mental health both rely on good diet and thus giving for reason to our scheme which will serve as a promotion for healthy eating.

The Ely and Caerau area is significantly affected by poverty. A great deal of the social problems experienced in the area can be addressed through preventative measures, with a focus on health and well being.

Programme

The primary focus of our programme is the community kitchen. This is supplied by onsite community run gardens, this is supplemented by local farmers markets and supermarkets. The sourced food will be prepared into meals supplied for free to local junior sports teams, youth clubs and the onsite nursery. The kitchen will also run cookery classes for local adults wanted to develop their cookery skills and learn about the importance of a healthy diet.

The vision has a wider reaching aim to impact the mental health and well-being of the community. Factors such as sport, mental health and healthy eating are all incorporated into the programme and design.

In terms of the structure of our design, we will look towards creating a lasting building that will remain as part of the community for many years to come.

USP

Our USP is to create a community driven kitchen that influences reach further than the immediate site. Targeting all demographics within the community, we aim to create connections between individuals who may never have had the chance to meet before. Helping the reduce isolation.

PROGRAMME PRECEDENTS



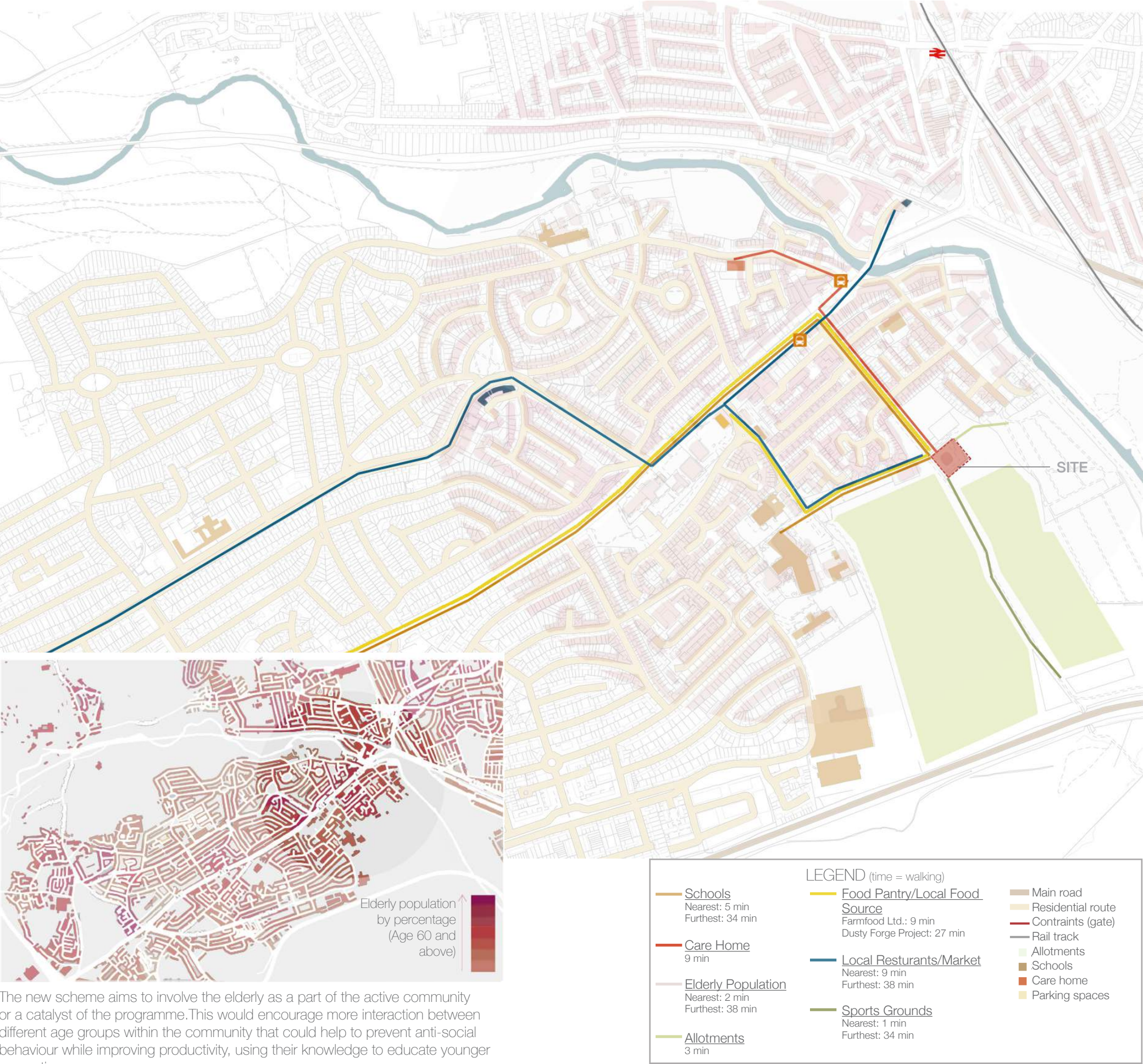
Community Garden
by Grow Cardiff

- Charity promoting and enabling people to grow their own food
- Community garden producing food, connecting with local schools
- Changing the way we think about food and community engagement

We endeavour to nourish this community both physically and mentally.



SITE PLAN



The new scheme aims to involve the elderly as a part of the active community or a catalyst of the programme. This would encourage more interaction between different age groups within the community that could help to prevent anti-social behaviour while improving productivity, using their knowledge to educate younger generations

COMMUNITY CONSULTATION



SPORTS

- The Caerau and Ely Sports Trust are working to promote the health and well-being of the community
- Sports teams and youths in the past have hugely benefited from free meals. The local Food Matters charity has been very successful
- There is currently a highly active sporting community for the youth, but they are in need of a base and space for sports equipment.
- Providing a healthy balanced diet in addition to regular exercise would benefit the children's mental development.



ELDERLY

- The elderly in the community are the least represented
- Many feel isolated from the activities within their communities
- Cooking is no longer for a family and can not be a source of joy anymore
- Sedentary lifestyle has become the norm, clubs supporting gentle physical activity would be welcomed by many of them.



NURSERY

- Being a Welsh speaking the nursery is very popular; often students are turned away as it would breach capacity
- The current nursery does not have a feel of permanency or identity.
- Activities to engage both parents, without singling one out, has proven to be very successful.
- The children enjoy using the play area outside of the nursery boundary; giving them a sense of being 'grown-up' and being trusted to play outside.



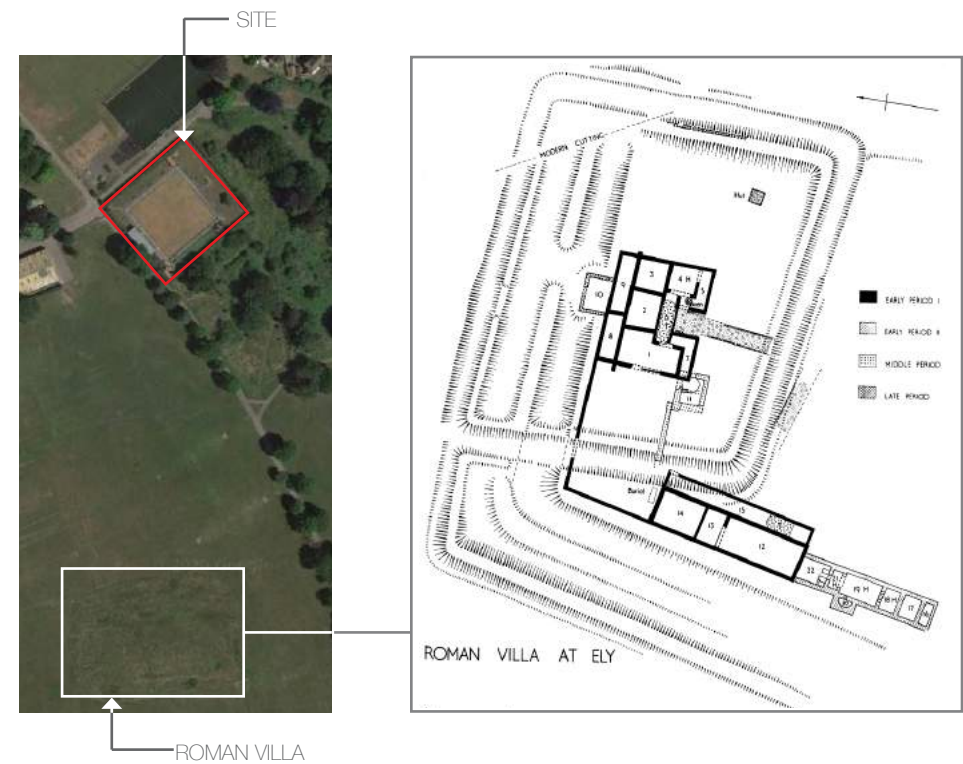
SUPPORT GROUPS

- Numerous community groups express a need for a permanent base to meet that is flexible to group sizes
- A permanent safe place for groups to meet, discuss and share is vital to providing the base for improving homes

Environment



The trees and hedges from the south side shade the site from direct sunlight. The site has large opportunity to capture consistent daylight from the north. Hedges surround the direct boundary of site provide privacy.

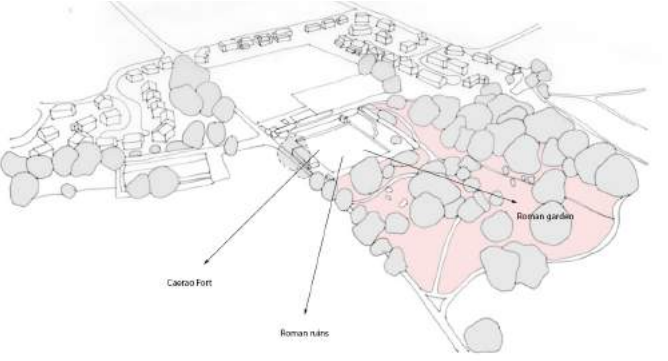


Existing Heritage Scheme

The Caerau And Ely Rediscovering (CAER) Heritage Project was started in 2011 and is a collaboration between ACE, Cardiff University, local schools, residents, community groups and many others. The project is focussed on working with local people to discover more about their local heritage.

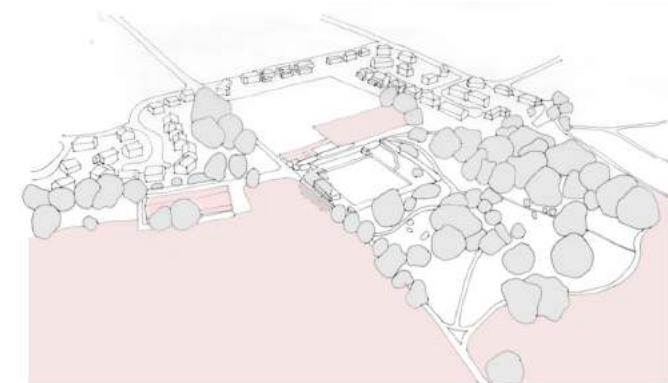
The Roman Villa can be found in close proximity to the site. The design of our community space takes inspiration from the form and construction methods used in the villa and reference the local heritage sites.

Heritage Assets



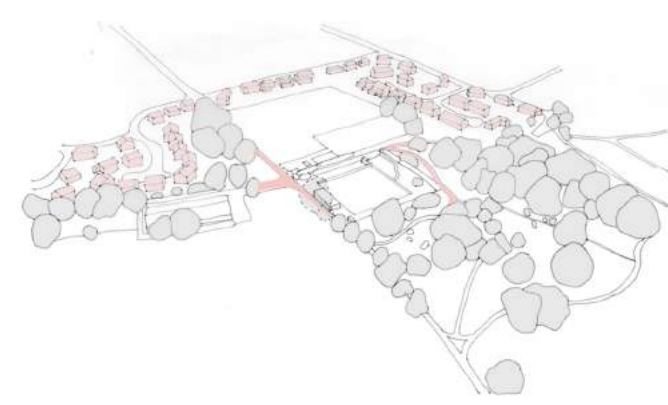
Potential view and visual connection to historical assets, including the Roman ruins, Caerau Fort and Roman Garden.

Sports Facilities



The programme should cater to the key surrounding sporting activities surrounding the site. The existing boxing club serves as current sport facility for Trelai Park and has the potential for expansion.

Residential & Access Routes



The site has an immediate connection to the residence nearby and the community they serve. The community consultation recognising their routines and habits was beneficial to the scheme in understanding social and economic factor.



Footbike entrance South of site



Footbike entrance North of site



View of the nursery from park



View within site boundary

INTEGRATING FOOD AND SPORTS

PROGRAMME

VALUE

FOOD SUPPLY - EXISTING INITIATIVES

HEALTHY EATING & EXERCISE through community gardening

Digging; planting; and harvesting are all considered to be forms of moderate exercise and can enhance physical and mental well-being. The second benefit being the fresh seasonal food supply.

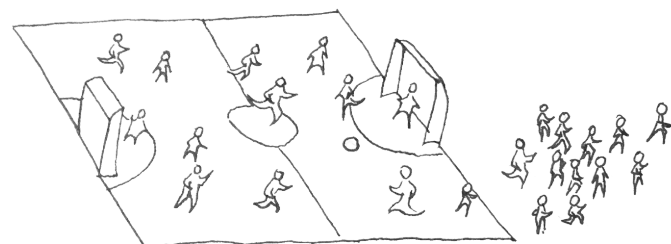
REDUCING ISOLATION through community gardening



Vegetables and fruit grown & collected from community members gardens to provide food for the community kitchen.

Following precedent from the GoodGym, the programme aims to relieve the alienation elderly people in the community are feeling.

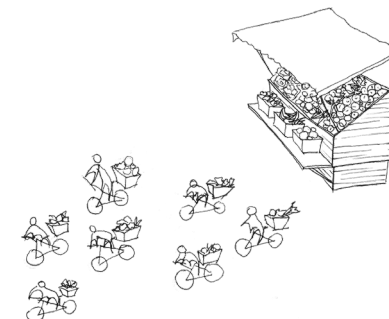
SUPPORTING LOCAL SPORT TEAMS by providing healthy food and education



The kitchen provides lower priced meals for adults and free meals for children participating in sports matches and the nursery. Children will be encouraged to join the cookery sessions and learn more about healthy lifestyles.

The left-overs are frozen and waste is used as a fertilizer on the community gardening.

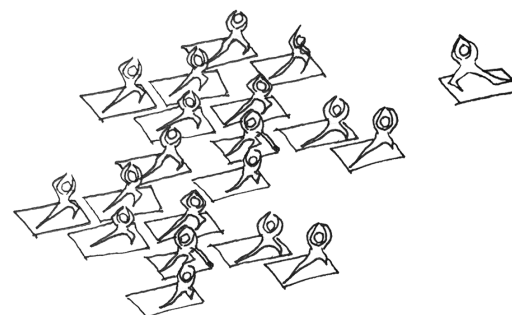
EXERCISE & COMMUNITY collecting local produce with bikes



Food collected on bikes from local farmers markets is a form of weighted exercise for members of the community centre programme.

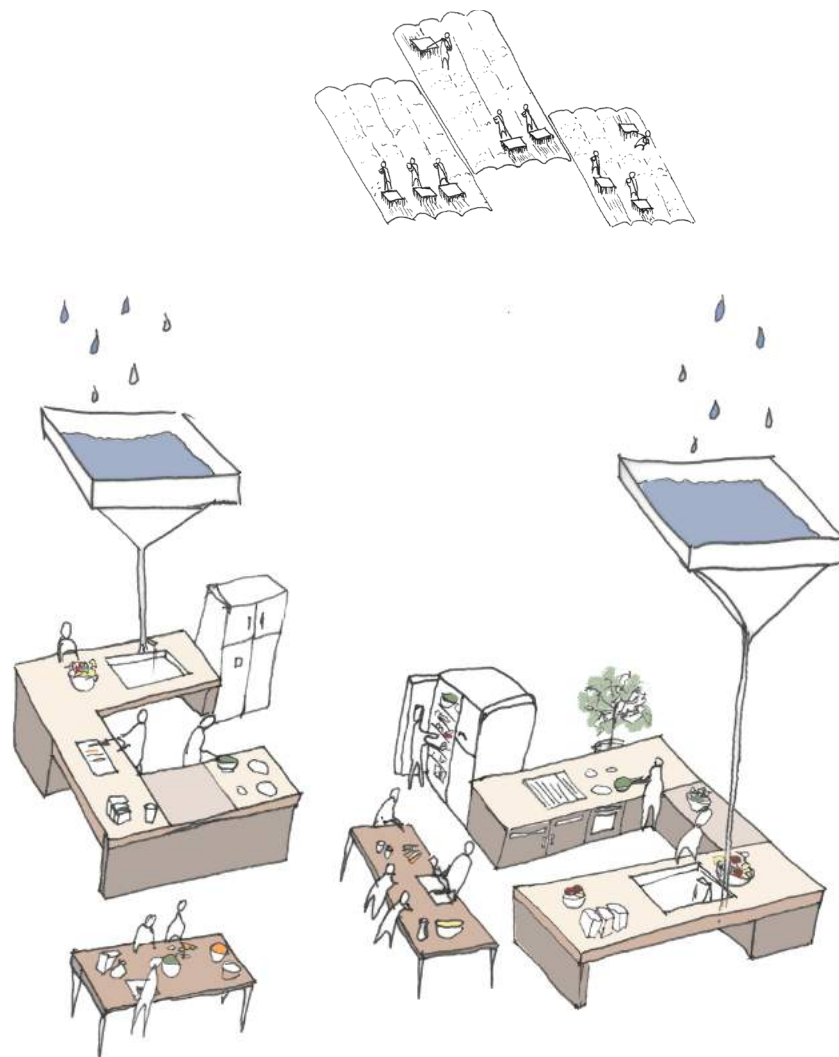
Surplus stock and food donated from supermarkets and food markets is collected. The carbon footprint is reduced by utilising local sources.

SUPPORTING LOCAL GROUPS by providing space to meet/teach/learn



Multi-functional spaces allow for various support group meetings and exercise classes, as well as being available for sports teams as meeting spaces, helping to give them a feeling of ownership.

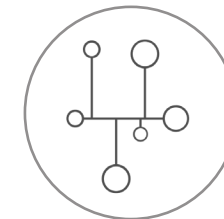
SUSTAINABLE KITCHEN a hub for community involvement



RESPONSIBILITY



ENGAGEMENT WITH THE WIDER COMMUNITY



INTER-GENERATIONAL ENGAGEMENT



MENTAL HEALTH



PHYSICAL ACTIVITY



EDUCATION



Food Matters/ Bwyd o Bwys Project

Three-year project funded by Big Lottery was targeted at secondary school pupils and their families. The project provides food nutrition knowledge, practical cooking skills and encourages 'grow your own' allotment schemes in schools across Ely and Caerau. The program aimed for educating young people on a balanced diet and therefore decreasing the risk of heart disease and diet related cancers.

Dusty Forge Pantry

The project is run by a charity Church Action on Poverty working with Action in Caerau & Ely (ACE). The pantry is an alternative to food-banks and is a way of helping people after the introduction of the bedroom-tax. Members of Ely and Careau community can choose 10 food items at a local centre after a payment of only £5.00 a week. The food is supplied by FareShare that collects surplus stock from the supermarkets and then delivers it to the Pantry.

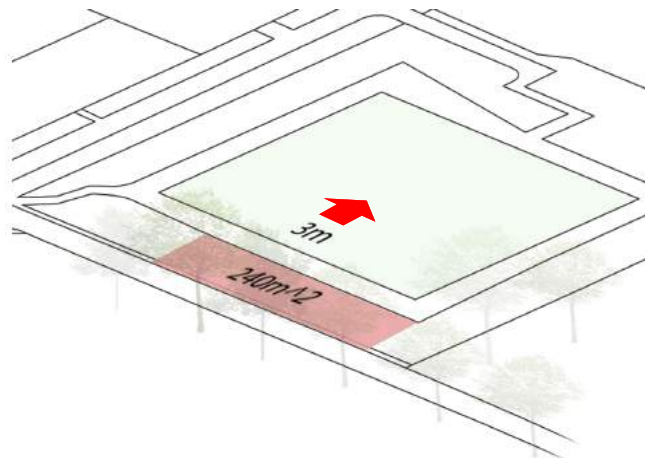
GoodGym

The running club is a charity set up to help increase physical health at the same time helping the community projects and older people in Cardiff. There are three different types of runs: mission, coach and group; with missions like planting trees at a local garden, running to help elderly with one-off tasks like gardening or just for weekly meetings/coaches. It is a great way of motivating people for the run and helping others to feel independent and not alienated.

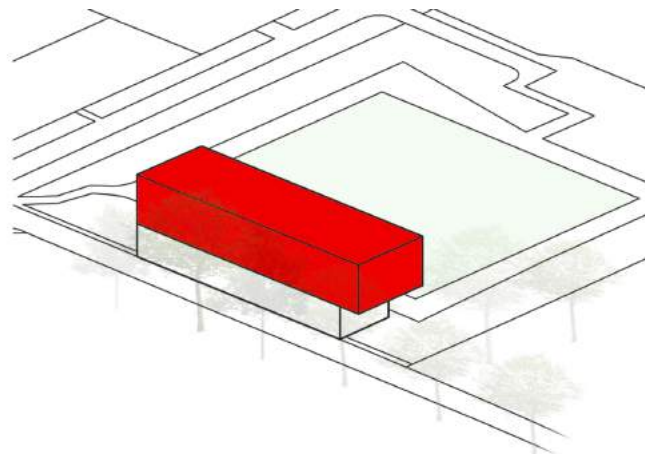
PROPOSED SCHEME

The design draws from the above mentioned initiatives, with the food being supplied in different ways. Items that are not sold at supermarkets and would otherwise be thrown away can be collected by the community members at the end of the day. The programme would be promoting the existing schemes that donate food and encourage people to learn cookery skills. In addition to food produced at the allotments next to the site, elderly people's gardens can become small 'allotments' and provide the vegetables and fruit for the community centre in a similar way to how the GoodGym is operating. Moreover, biodegradable food waste can be collected in the same way and at local schools. Young people are encouraged to get involved with both cooking and regular exercise, such as helping with the allotments.

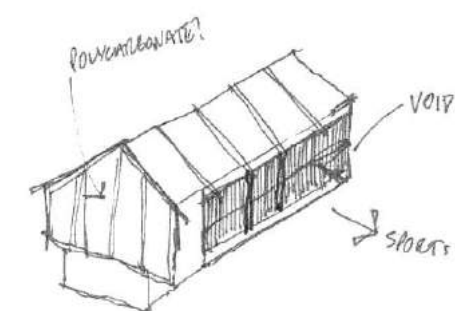
MASSING PRINCIPLES



Situating our structure at the South end of the site, we aim to create a connection between the sports fields and bowls green area.



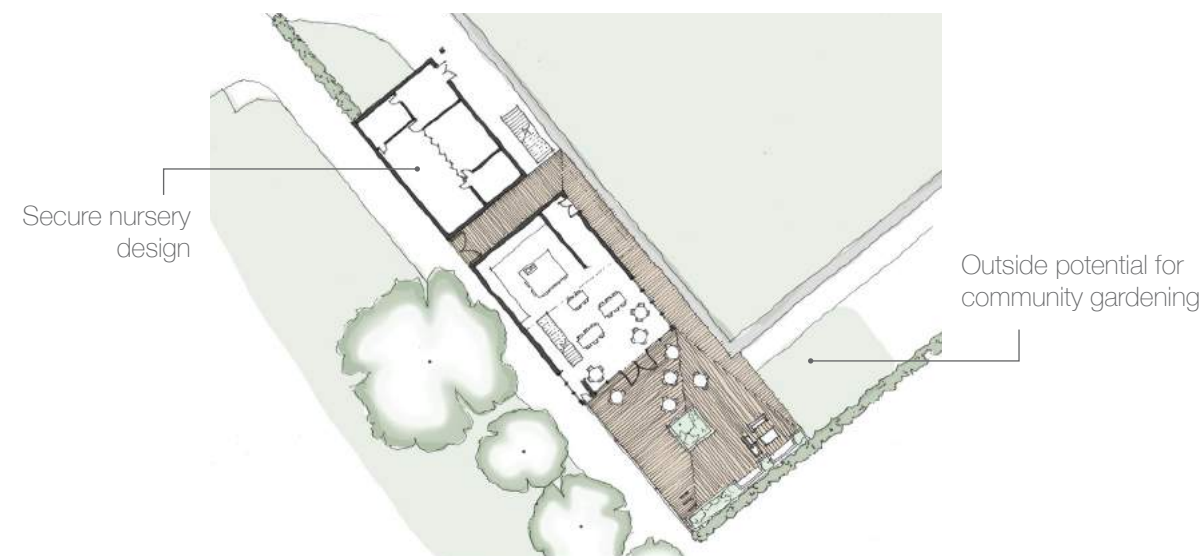
The basic principles are the design consists of a two storey building built on the existing footprint of the nursery. The scale of the building will not be considerate towards the existing.



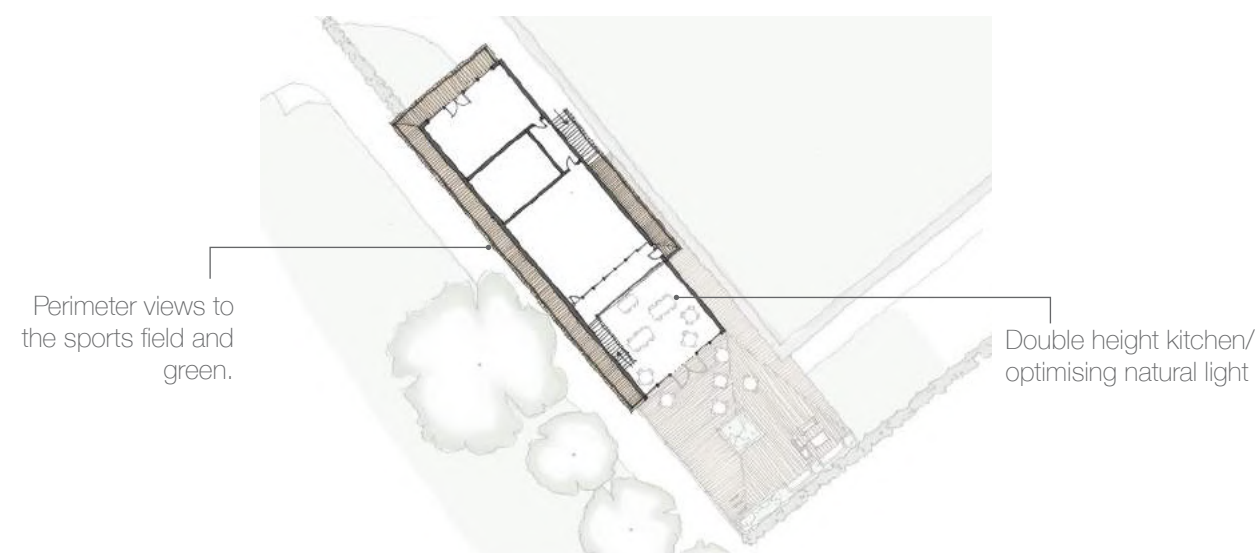
CONCEPT DESIGN



The focus was on creating a fully accessible and inviting space that the community could relate with. The kitchen/ cafe is to be a flexible, inside outside space.



Ground Floor Plan



First Floor Plan

DESIGN PRECEDENTS



Insect Museum
by AWP Architects

- Sustainable and economic design
- Look and feel is light and open
- Modern design with a simple construction concept



Eden Kitchen, The Eden Project
by Nicholas Grimshaw

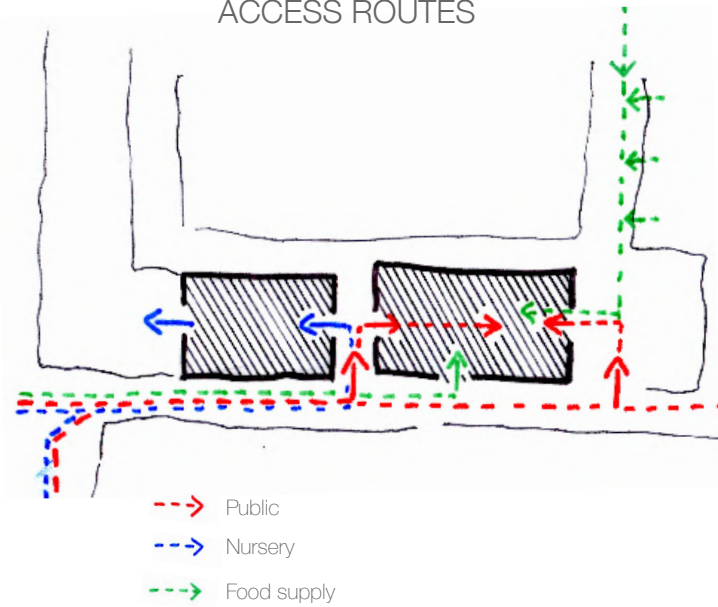
- Double height space maximising natural light
- Central hot food serving area
- Linear table layout - social and space effective



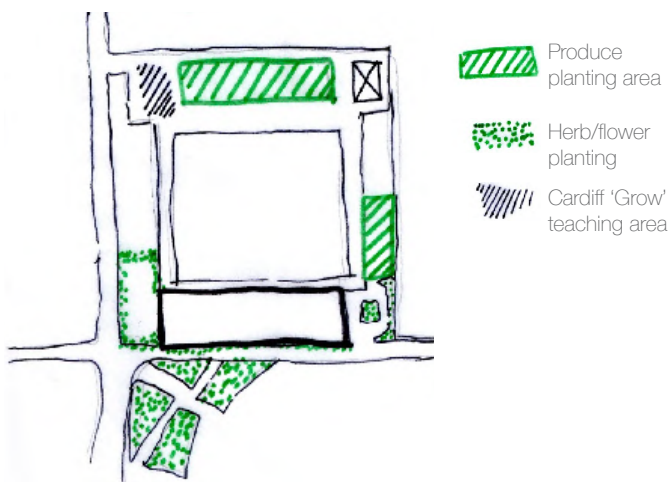
The Lost Gardens of Heligan Cafe
by Dominic Cole Landscape Architects

- Outside meets inside
- Cafe with a sheltered seating area but no built walls so naturally ventilated
- Light construction to appear unobtrusive in the outdoor setting
- Event catering

ACCESS ROUTES



GROWING STRATEGY



ACCOMODATION SCHEDULE

External Spaces		Nursery	
0 Playground	123.00	18 Playroom	62.0
1 Cafe (outer space)	117.00	19 Staff Room	13.0
2 Balcony 1	34.0	20 Reception	8.0
3 Balcony 2	120.0	21 Kitchenette	7.0
Total Area: 270.00 m2		22 Storage	8.0
		23 Bathroom=	12
		Each WC	1
		Nursery Total NIA: 112.00 m2	
Community Centre		Total Gross External Area of Scheme: 990.84 m2	
4 Cafe	106.0	Total Gross External Area of Scheme: 595.75 m2 (excluding balconies & playground)	
5 Circulation Space	58.0		
6 Kitchen	18.0		
7 Storage	6.0		
8 Elevator	4.0		
9 WC1	3.0		
10 WC 2	3.0		
11 Riser	1.0		
12 Plant Room	12.0		
13 Cooking	74.0		
14 Multi.Hall	120.0		
15 Room 1	7.0		
16 WC 1	2.0		
17 WC 2	2.0		
Community Hall Total NIA: 300.00 m2			

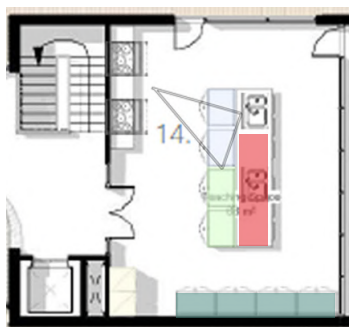
EXAMPLE OF COMMUNITY GARDEN PRODUCE



KITCHEN LAYOUT

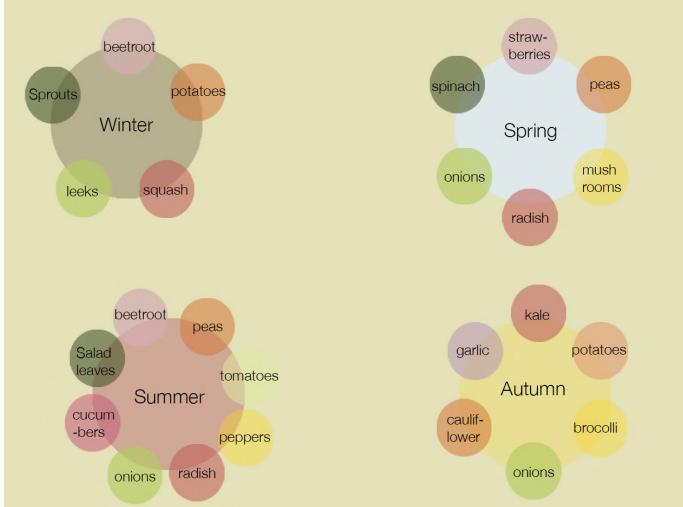


Ground Floor



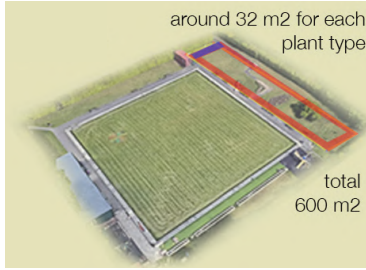
First Floor

SEASONAL PRODUCE

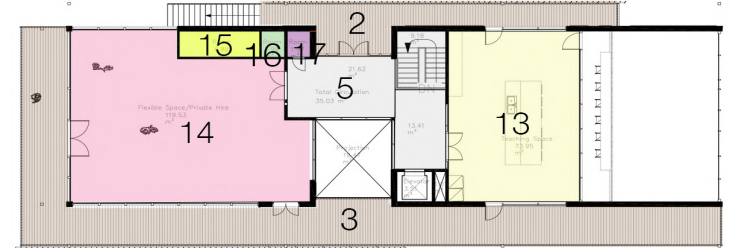


CAPACITY

To grow the above for a community of 50 people, > 500m² is required.



Ground Floor



First Floor

USERS PER SPACE

60 people	15 people	10 people
3 people	79 people	79 people
10 people	2 people	3 people
2 people	3 people	1 people
2 people	1 people	1 people
5 people	1 people	200 people
60 people	4 people	25 people
40 people		

According to Table C1 'Floorspace Factors'

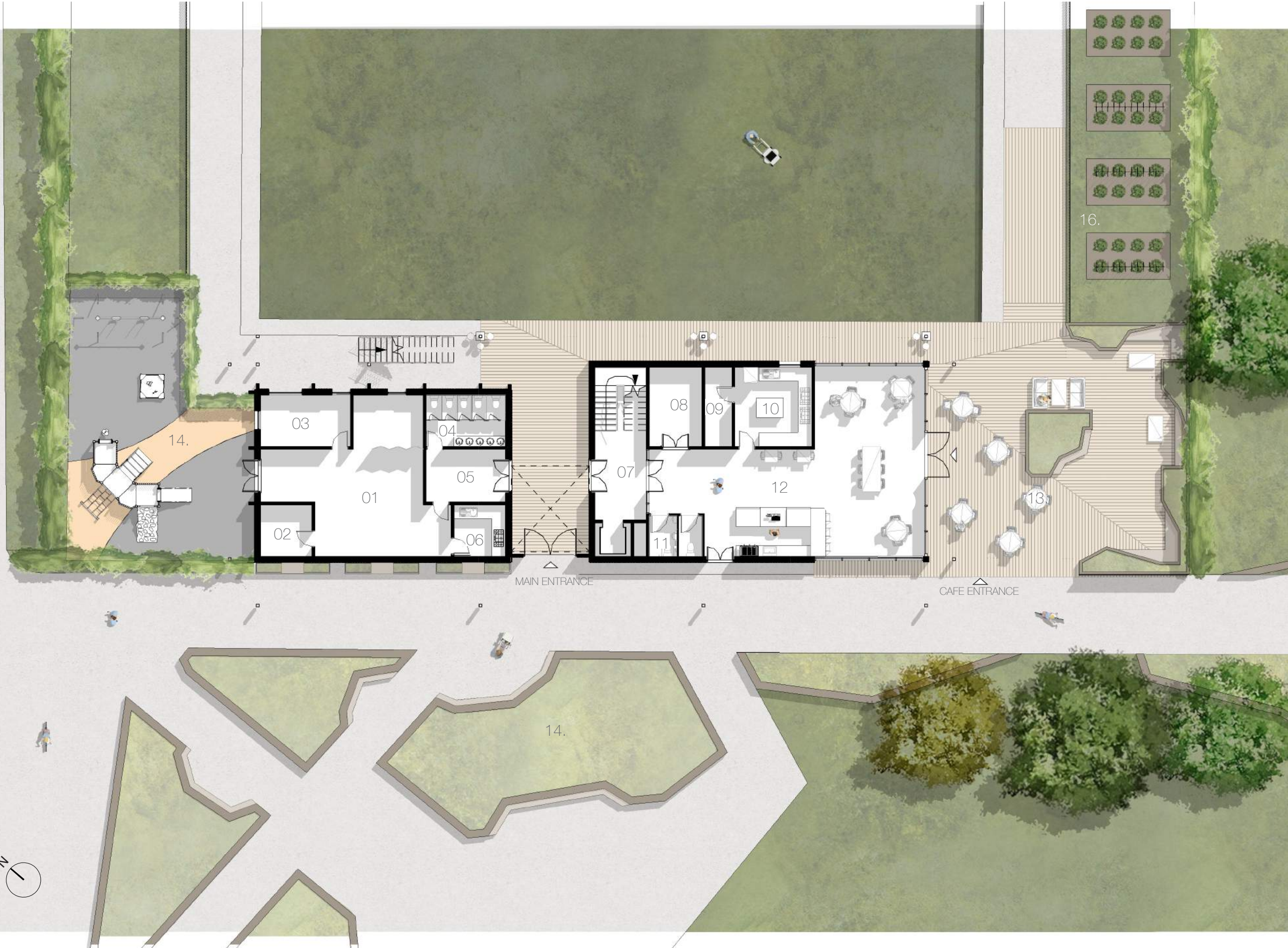
- Key
- Working triangle
 - Raw ingredient storage
 - Refridgerator (processed food storage)
 - Vegetable counter
 - Meat counter
 - Service bar and hot/cold drinks
 - Storage and food waste collection
 - Tutorial bench
 - Students benches

Data sources for the community garden;
<http://sustainable-farming.rutgers.edu/wp-content/uploads/2017/12/urbanfringe-v07n01.pdf>
<http://www.ufseeds.com/learning/calculators/>
<http://msue.anr.msu.edu/files/Tables/204.pdf>

2.03 PROPOSED GROUND FLOOR PLAN

Not Just A Tin Shed

1:100 @ A3

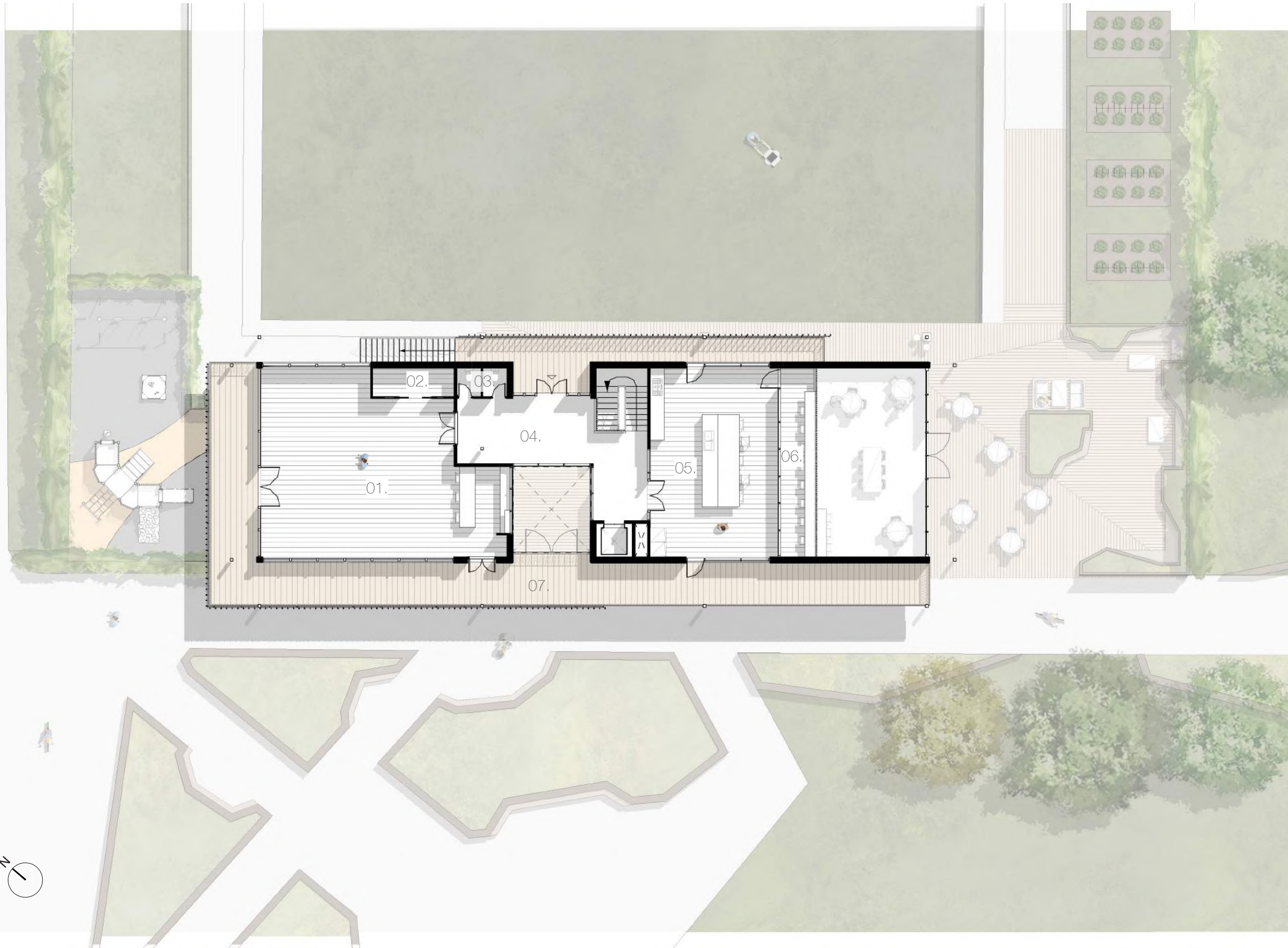


- Nursery Room 01.
- Storage 02.
- Staff Room 03.
- Childrens WCs 04.
- Nursery Reception 05.
- Nursery Kitchenette 06.
- Circulation 07.
- Plant 08.
- Dry Store 09.
- Cafe Kitchen 10.
- W/C 11.
- Cafe 12.
- Cafe Terrace 13.
- Nursery Playground 14.
- Integrated Seating 15.
- Planting 16.

2.04 PROPOSED FIRST FLOOR PLAN

Not Just A Tin Shed

1:100 @ A3



Flexible Space 01.

Storage 02.

W/Cs 03.

Circulation 04.

Cookery School 05.

High Top Bar 06.

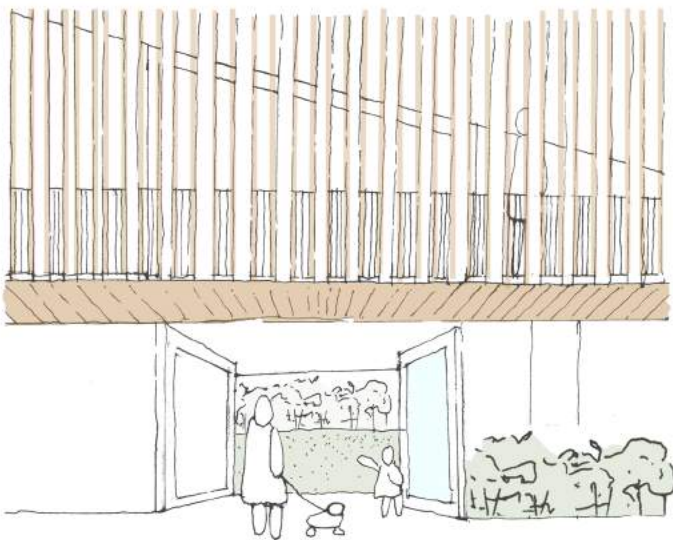
Viewing Deck 07.



SECTION BB



MULTI-FUNCTIONAL SPACE
Space for events and functions, can be sub-divided with partitions for smaller group meetings.



ENTRANCE
Views through connecting all elements of the programme
Visually open and protected from elements by viewing deck above.



COOKERY SCHOOL
On the 1st floor to be separated from the cafe to support those not confident with cookery.



KITCHEN CAFE
Timber beams expressed to celebrate the construction that was aided by members of the community, as well as the use of local materials.

2.06 LANDSCAPE STRATEGY & PLACEMAKING

Not Just A Tin Shed

1. COMMUNITY GARDEN

With the primary focus of the scheme being the community kitchen, the provision of a community garden on site provides a space for users of the scheme to grow and prepare fresh food to aid in the running of the kitchen and cookery classes. The sourced food will be prepared into meals supplied for free to local junior sports teams and young children.

2. SEATING WITH INTEGRATED PLANTING

'Meeting Points' - The spill out space by the cafe has been identified as a key space for gathering and can be used as a meeting point for the local community. Through the continued use of integrated planting throughout these areas the program is echoed throughout the scheme. With the nursery and cafe both having their own presence, the wrap around decking allows a lot of 'common' overspill space. The large area provides a mutual ground and a stepping stone from the wider scheme to the site itself.

3. FLOOD MANAGEMENT

To prevent flooding on the site and encourage the scheme both through the use of new pedestrianised routes as well as energising and exciting the landscape, rain gardens and permeable pavements will be implemented across the area to encourage the use of the new community hub as well as integrating seating providing views onto the fields.

4. PUBLIC REALM

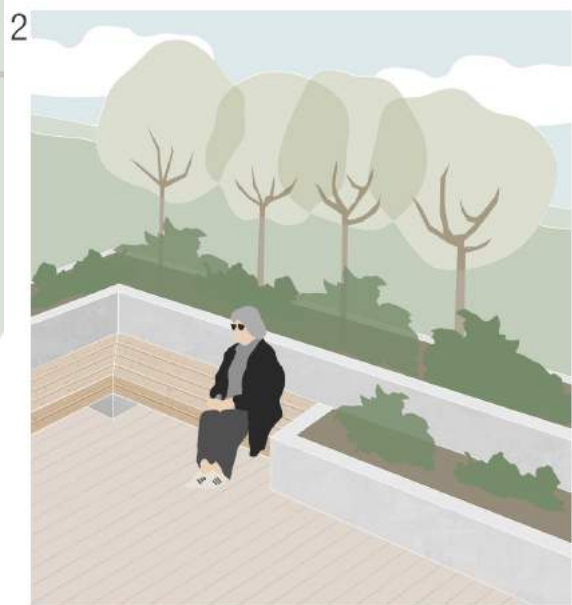
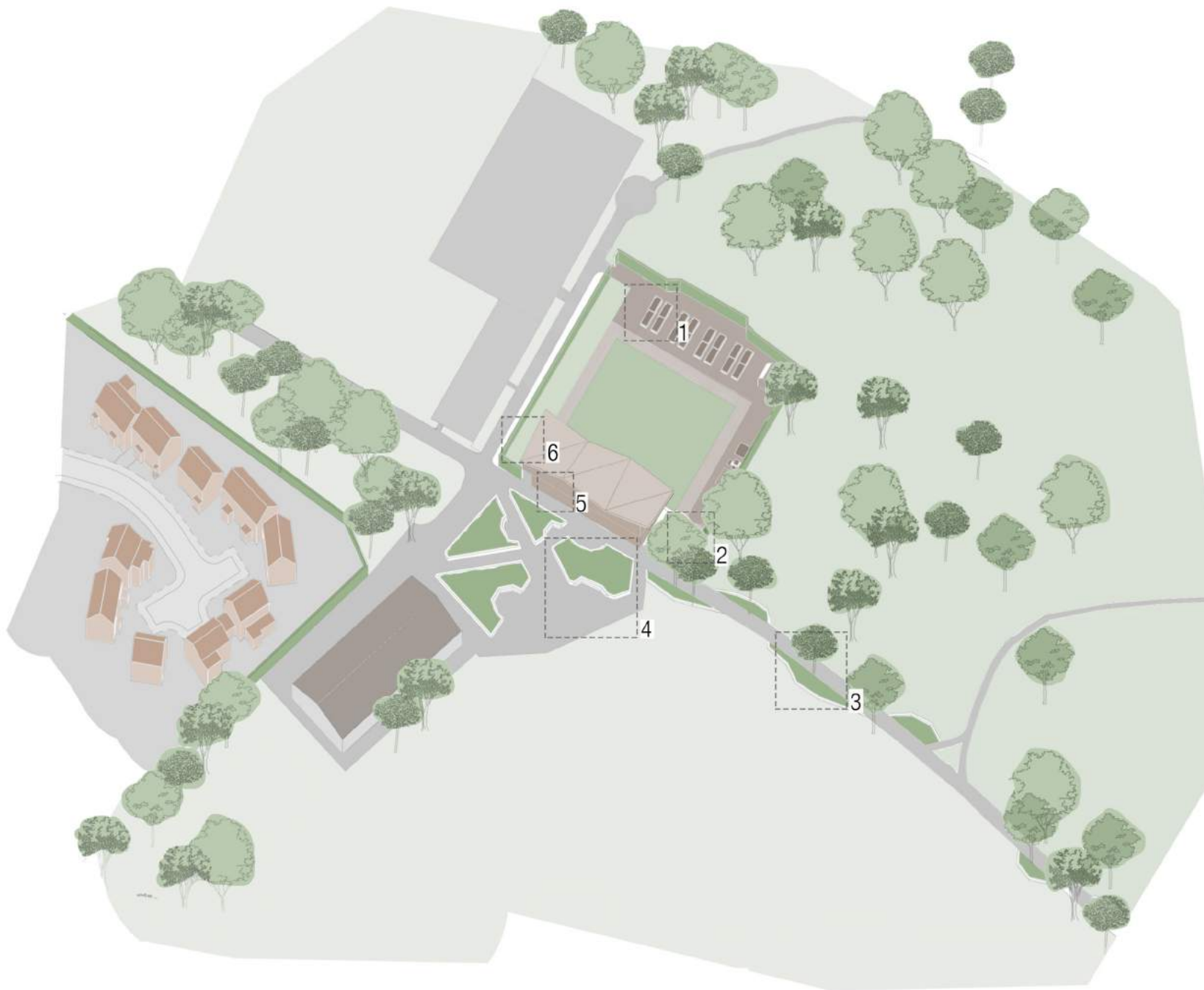
The landscaping is proposed around a key space where all of the entrance routes are connected. Creating a welcome outside space. By utilising this un-used area the programme can expand into the landscape directly around it.

5. PLANTING IN BUILDING DESIGN

A continuation of the scheme highlights the program before you enter the building.

6. PRIVACY PLANTING

To provide privacy to the nursery children in the public scheme, climbing plants can act as a soft barrier.

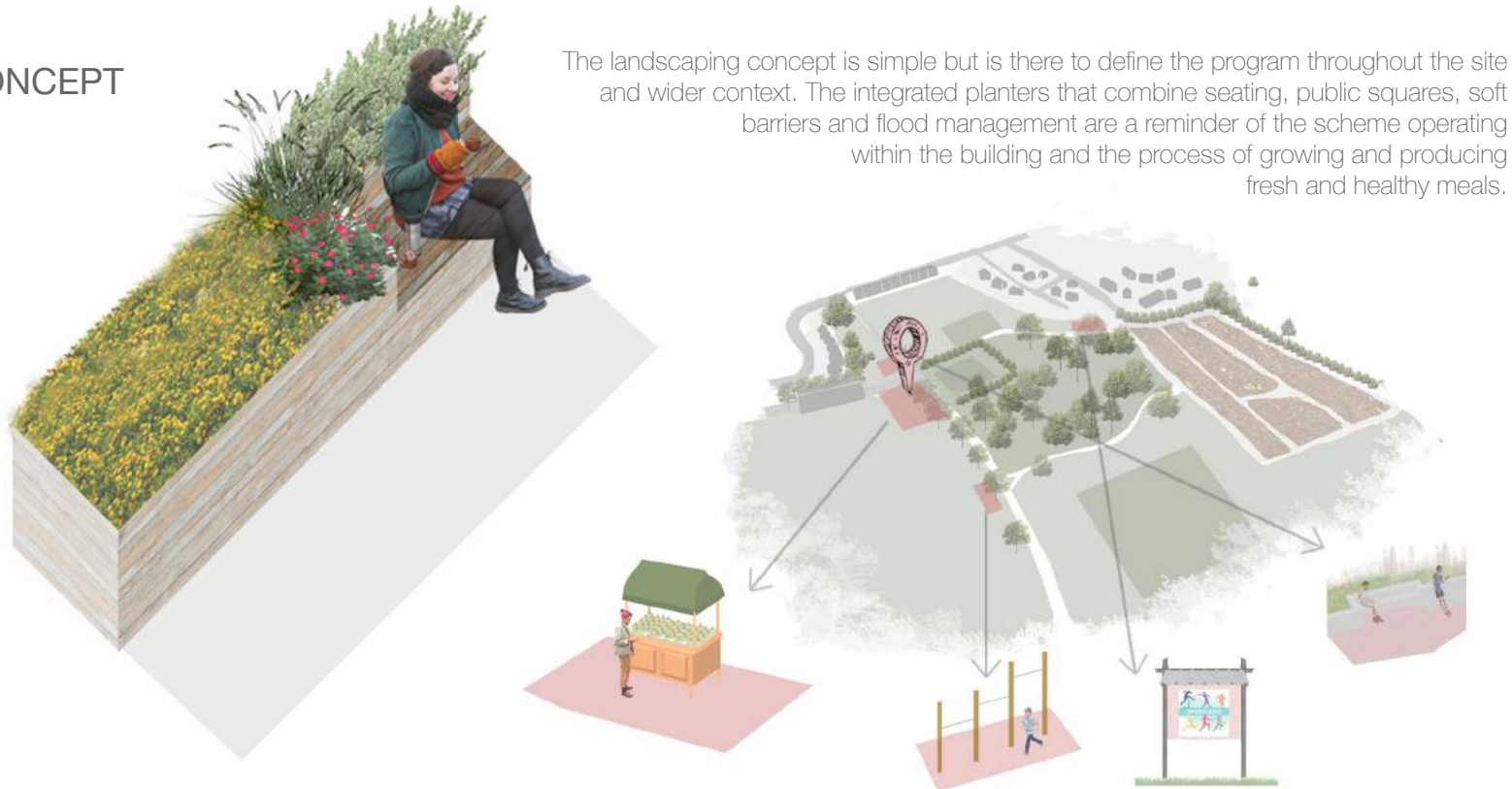


Delfland Water Authority
by Mecanoo Architects

- Integrated seating and planting to extend programme outside
- Uninterrupted views



CONCEPT

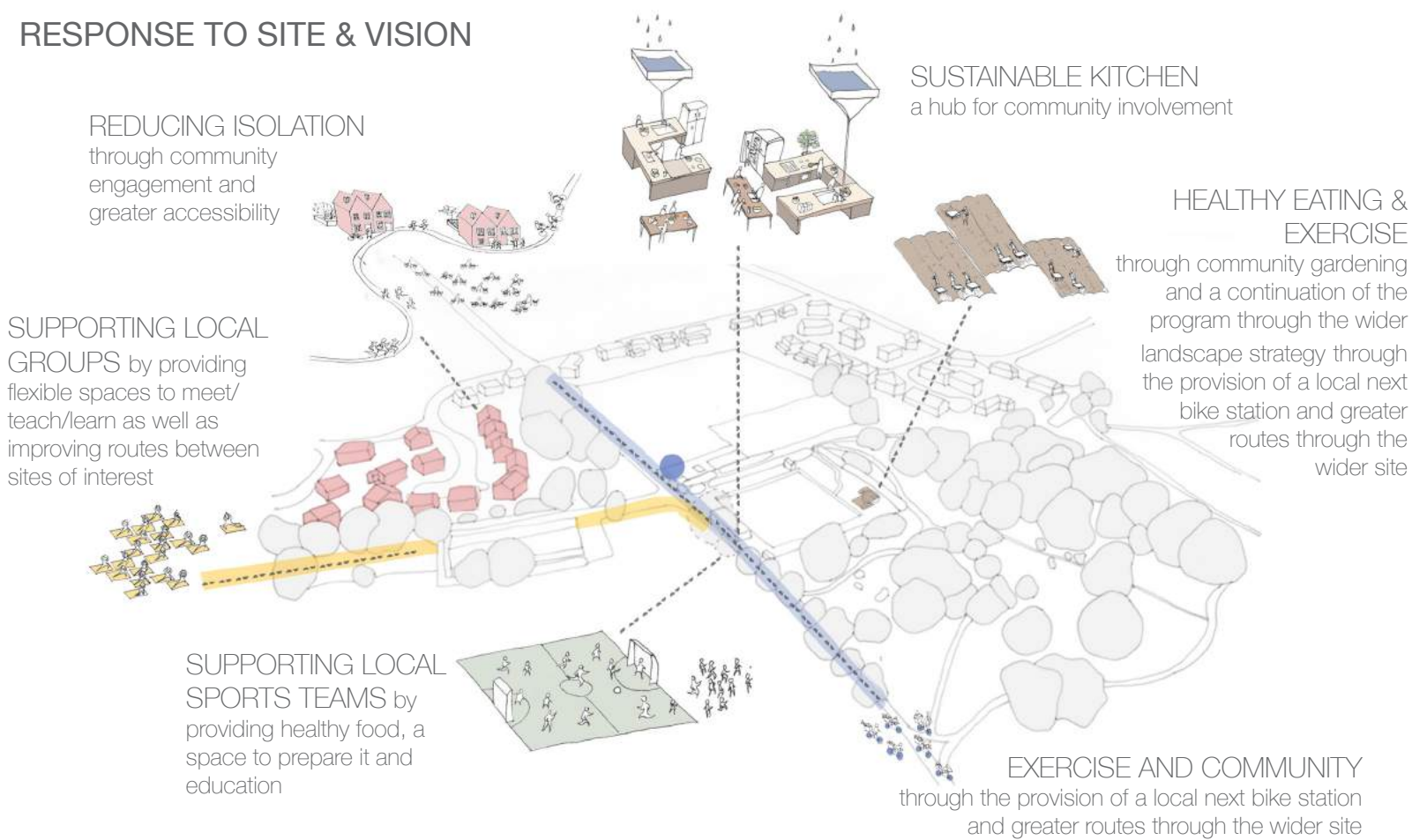


The landscaping is proposed around a key space where all of the entrance routes are connected. Creating a welcome outside space. By utilising this un-used area the programme can expand into the landscape directly around it. The courtyard proposal can act as a meeting point and social area. The planters continuing the concept lead to the 'square' which can also provide views onto the fields.

Areas implemented along public routes designed to engage people with the scheme, whether this be market stalls, informative areas/maps, exercise area or seating/viewing areas. By combining these areas with flood risk management schemes the site becomes more accessible and engaging.

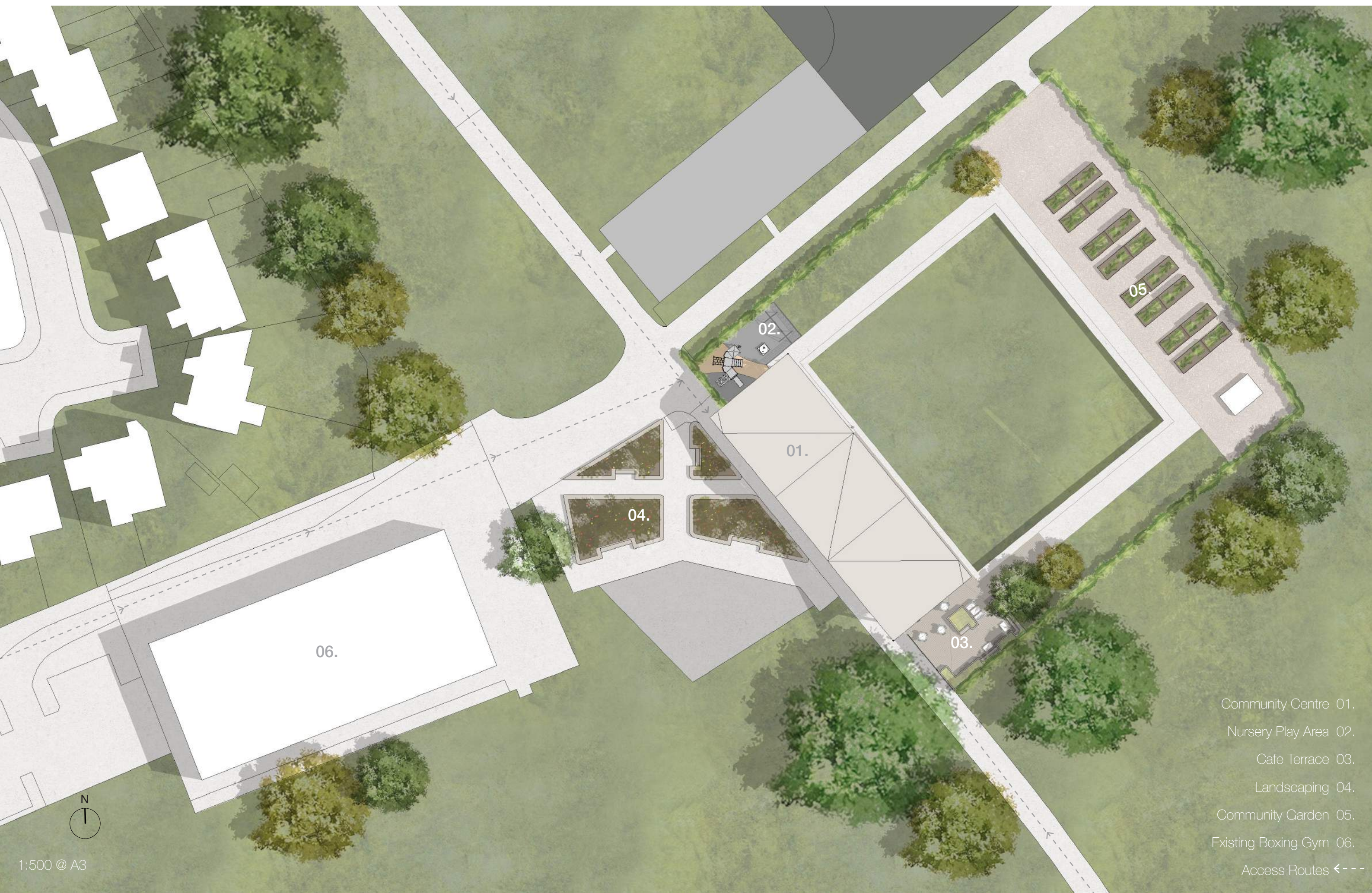


RESPONSE TO SITE & VISION









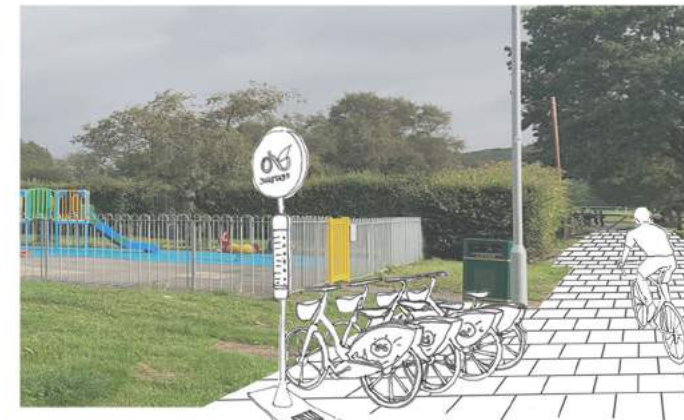
- Community Centre 01.
- Nursery Play Area 02.
- Cafe Terrace 03.
- Landscaping 04.
- Community Garden 05.
- Existing Boxing Gym 06.
- Access Routes <--->



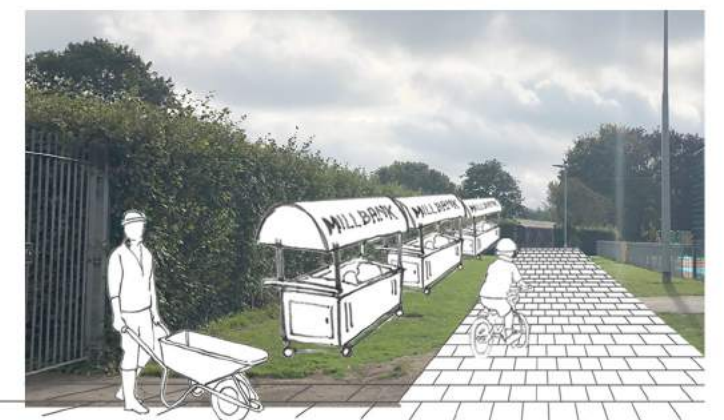
Crucial junction where cyclists, pedestrians and cars meet. Crossings and distinctive divider are proposed to ensure safety.



Transporting raw foods from local sources to the kitchen by bike



Encouraging cycling by providing a Nextbike station on site



Parking space for respective schools' food waste trolleys to give a sense of place



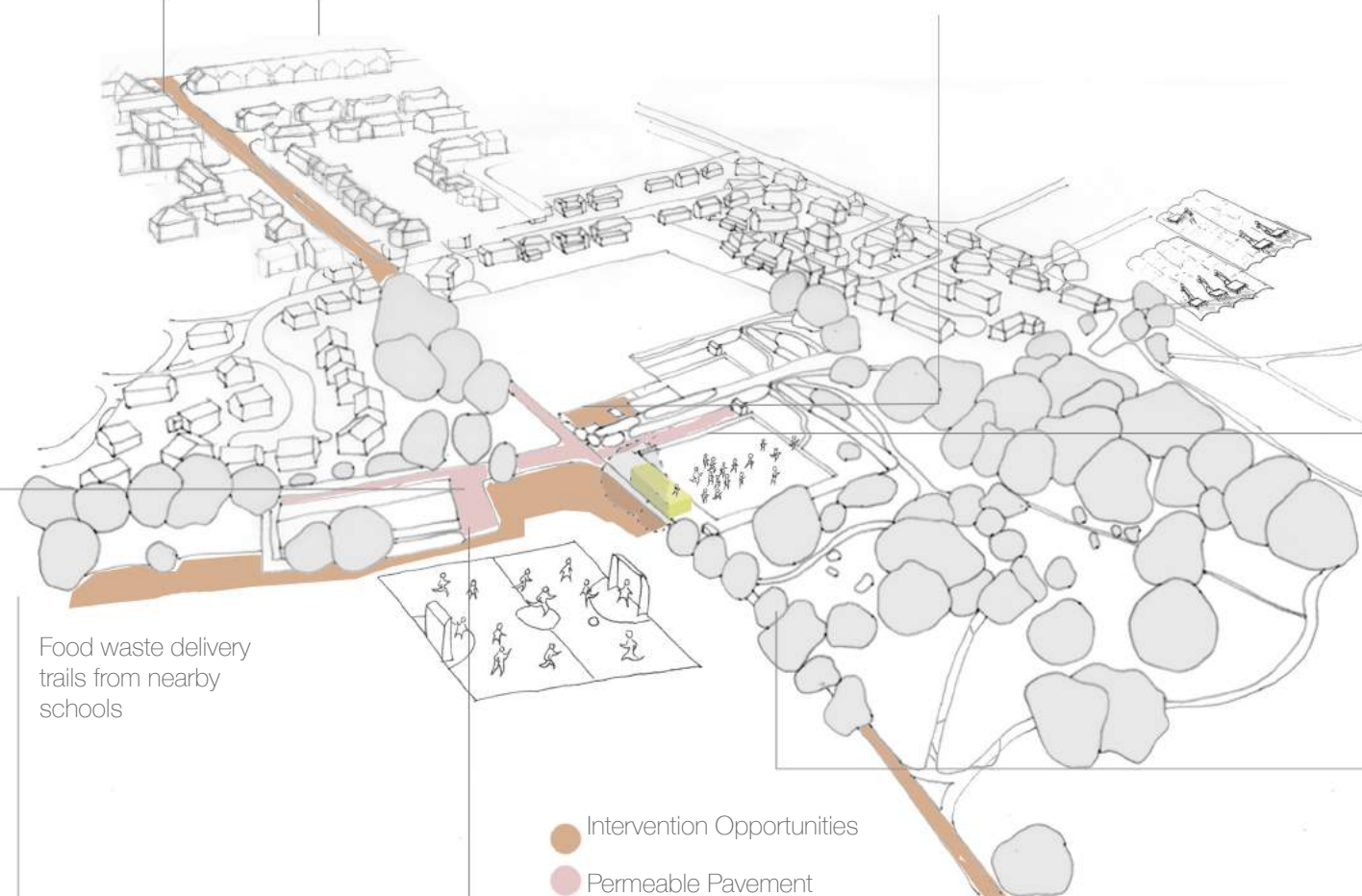
Benches or bars as a more subtle way of introducing exercise



Street lights on long quiet routes and separate cycling from walking to ensure safety



Main carpark area and route used from local food source



The route connects the site to the wider neighbourhood up to Canton. Other than having rain gardens along the trail, we are also proposing historical signage to raise awareness about the heritage value of the site.



Strategy to adapt from: Greener Grangetown

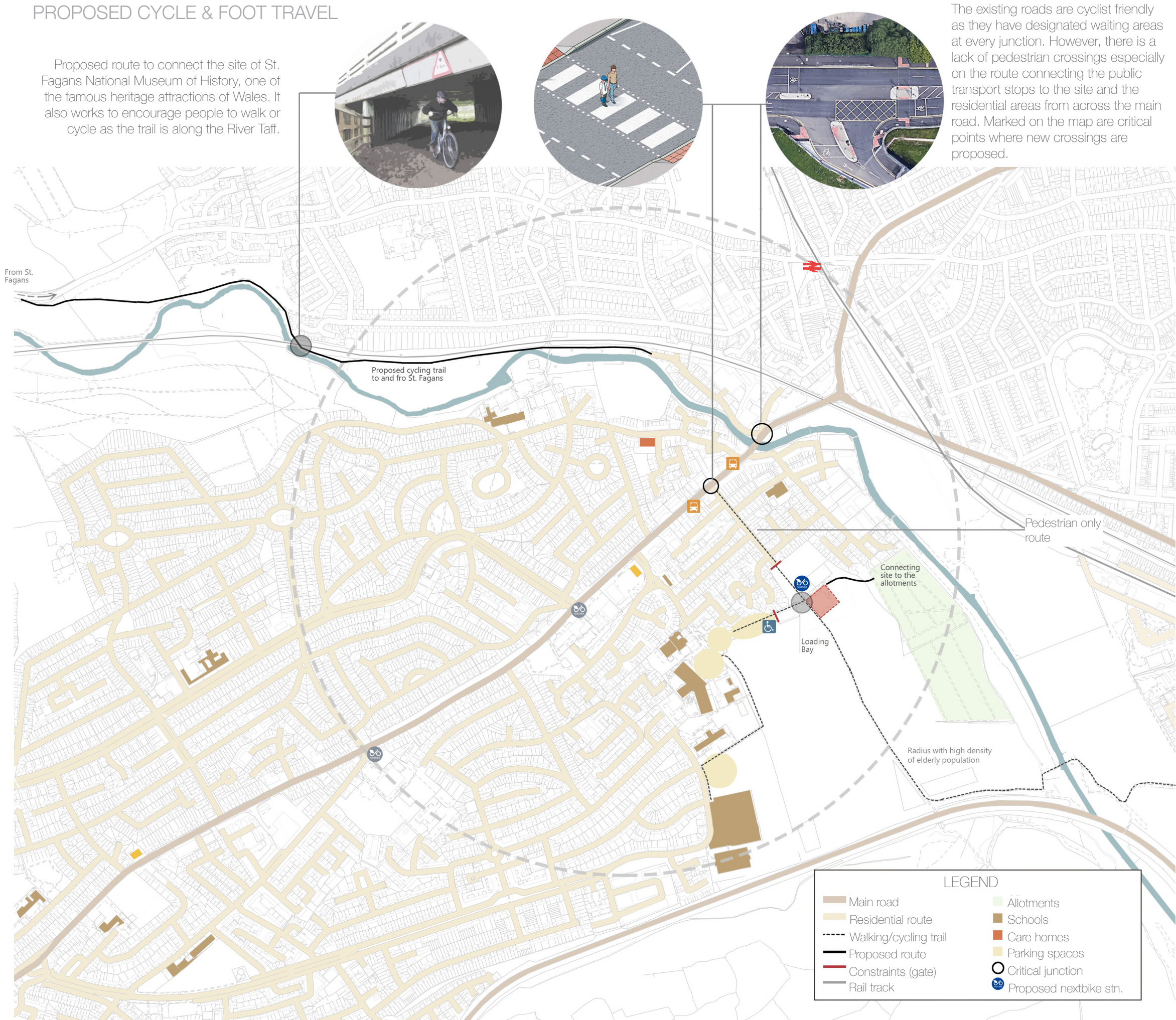
Improved streetscape by:

- Increasing green space by making use of the location that is nearby the river
- Improve bio-diversity and water quality, drainage system
- Improving cycling and pedestrian facilities and safety
- Installing and growing plants and vegetables with community
- Raise awareness to keep the neighbourhood clean and green

2.12 SITE ACCESS PROPOSAL

PROPOSED CYCLE & FOOT TRAVEL

Proposed route to connect the site of St. Fagans National Museum of History, one of the famous heritage attractions of Wales. It also works to encourage people to walk or cycle as the trail is along the River Taff.



The existing roads are cyclist friendly as they have designated waiting areas at every junction. However, there is a lack of pedestrian crossings especially on the route connecting the public transport stops to the site and the residential areas from across the main road. Marked on the map are critical points where new crossings are proposed.



Proposed Routes in Cardiff

Working alongside the council, new schemes are being introduced to encourage people to walk, ride a bike, and use public transport, rather than use their car. With schemes such as nextbike and new cycle paths that are being introduced, which is beneficial to personal well-being & the environment.

Nextbike Stations in Ely & Caerau



Cardiff Cycling Campaign

Cardiff Cycling Campaign is committed to considering the needs of cyclists in all highway schemes, including:

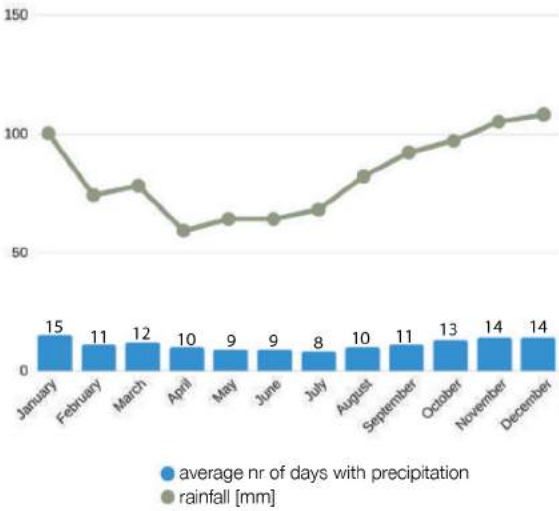
- Reduce traffic speeds and/flows
- Mandatory cycle lanes
- Advisory cycle lanes
- Providing parallel off road routes



Pedal Power, Cardiff

- A charity based in Cardiff that encourages and enables children and adults of all ages and abilities to experience the benefits of cycling that matches our values and aim.
- A person centred service, a community where people feel they belong and a great place to work and volunteer
- Equality; engagement with disadvantaged individuals and communities, finding out what they want and offering opportunities

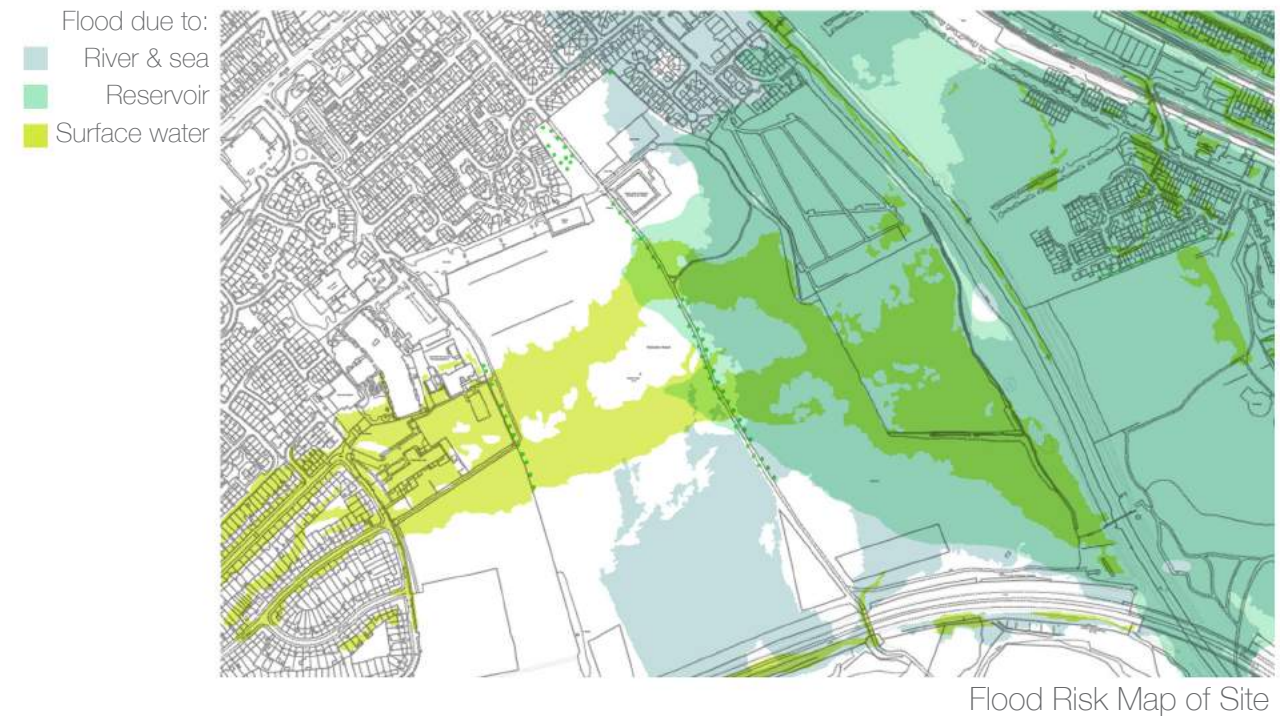
SUSTAINABLE DRAINAGE SOLUTIONS & NEW GREENER ROUTES



CLIMATE in Ely, as in most of the UK is temperate oceanic. It is characterised with mild summers and mild winters. The average temperatures during the year equates to 10.3°C. With low temperature difference there's no need for architecture that withstands extremes. The site is naturally enclosed from the South-East which protects it from winds reaching 6.7m/s. The precipitation in Wales is more intense than the rest of the UK and 136 days in a year can be expected to be rainy. One millimetre of rainfall is equivalent of one litre of rainfall per square metre. In Ely the precipitation averages 91mm per year.

Precedent - Greener Grangetown
The high levels of rain in the area and the nature of the site means that there is a high risk of flooding. SuDS in Cardiff is a multi organisation group that aims to support the implementation of solutions to tackle surface water issues in Wales. One of SuDS very successful projects is 'Greener Grange-town' that has been designed to 'transform the quality of the public realm and improve cycling and pedestrian infrastructure across a city centre neighbourhood. The result is a more resilient urban sewer network and a street environment that is more attractive - and more useful - for residents and commuters.'

The project removes more than 40,000m³ of rainwater each year from entering the combined sewer network, and with similar levels of rainfall in Ely, similar techniques can be used for the benefit of the local community.



SOLUTIONS

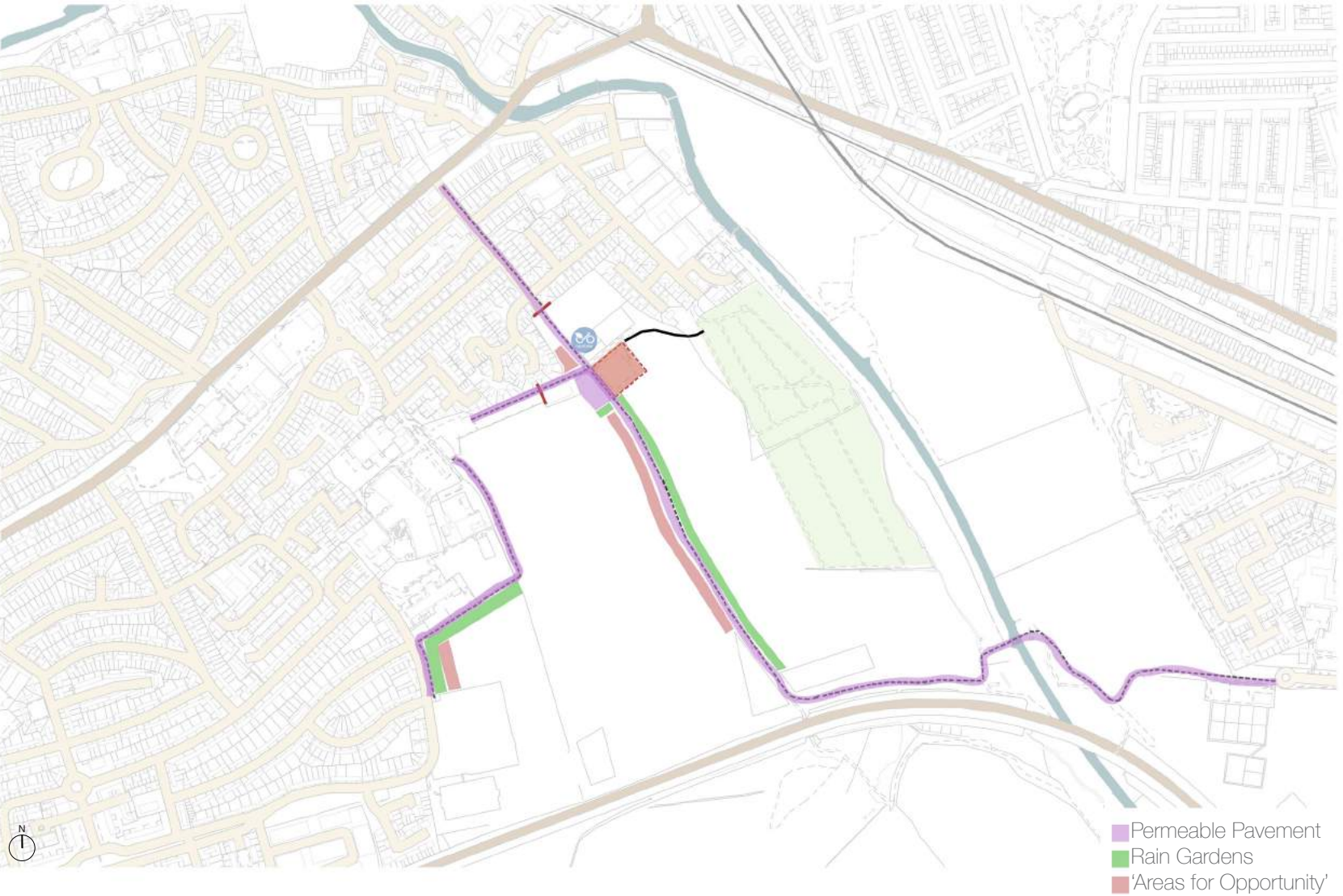
To prevent flooding on the site and encourage the scheme both through the use of new pedestrianised routes as well as energising and exciting the landscape, rain gardens and permeable pavements will be implemented across the area to encourage the use of the new community hub.

RAIN GARDENS

Rain gardens are planted area that incorporated a filter drain within a trench that is lined with a geotextile and filled with gravel. Run off water is led either directly, or via a pipe system. The gravel provides a degree of filtering, trapping sediment, organic matter and oil residues that can be broken down over time. Surface water is reduced and run off storage is also provided. Stored water can also pass through the geotextile membrane and some filter drains direct water to other sources.

PERMEABLE PAVEMENT

Permeable pavements allow water to filter through the paved structure rather than running off it. Both the surface and the sub-grade need to be designed with these considerations. Water may infiltrate directly into the subsoil when suitable or can be held in a reservoir structure under the paving for reuse, infiltration or delayed discharge.

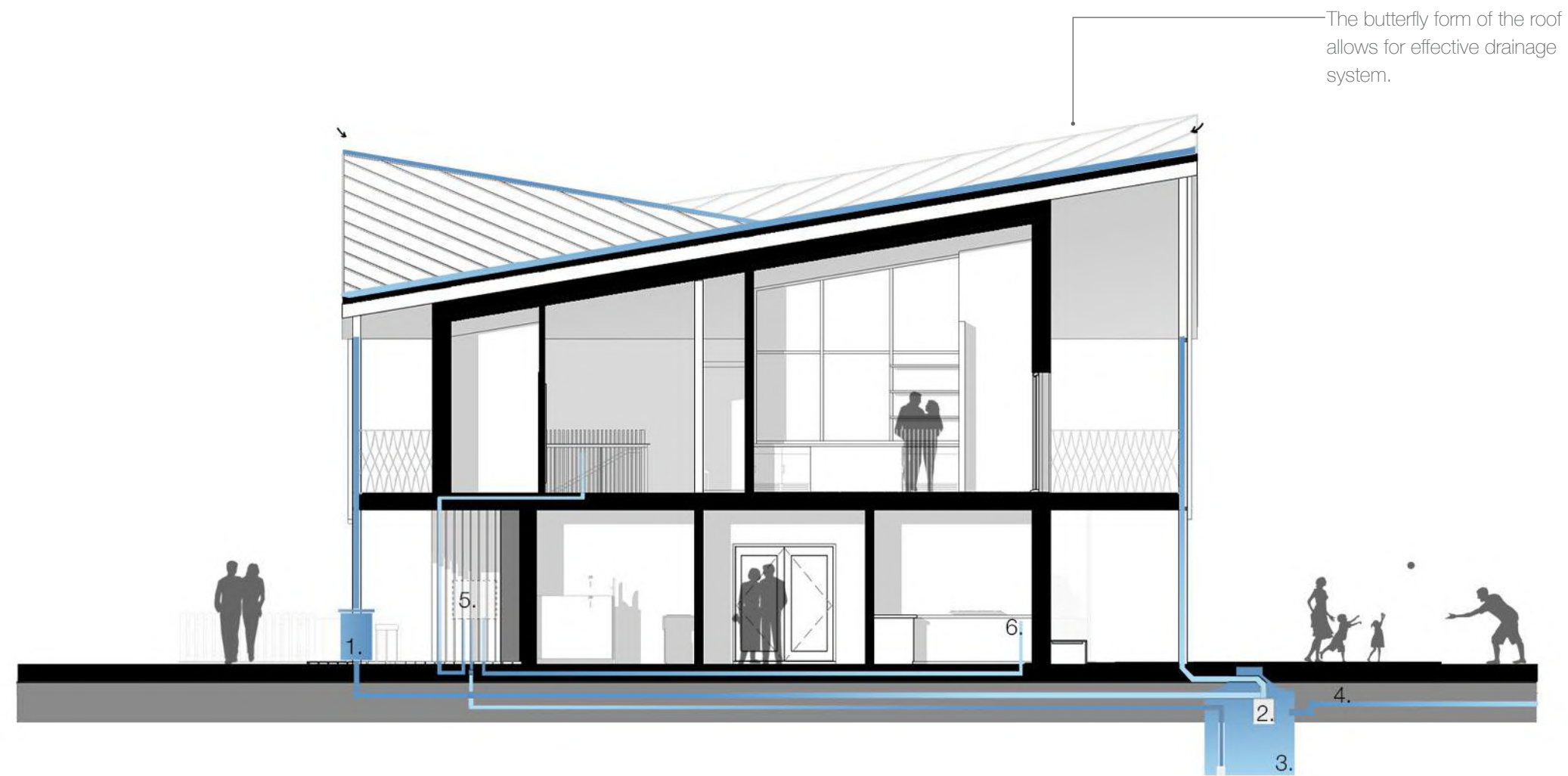
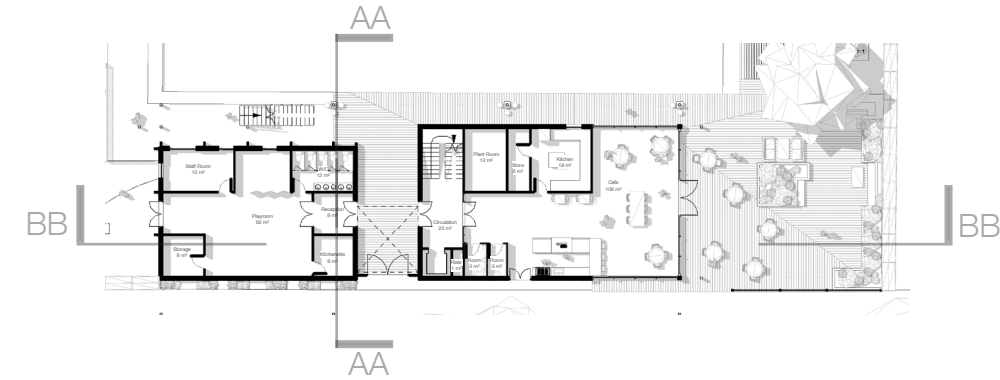


3.02 ENVIRONMENTAL STRATEGY

Not Just A Tin Shed

SECTION AA

1:100 @ A3



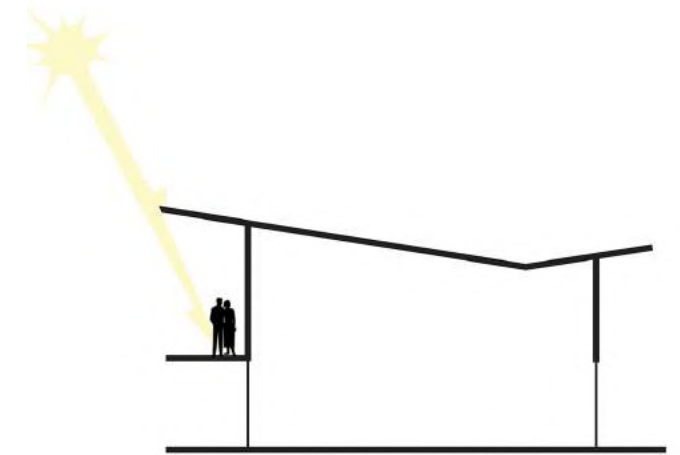
1. rainwater storage tanks
2. filter inside the storage tank
3. underground storage tank
4. infiltration outlet
5. compact system with service water pump
6. end use

Water harvesting is an important part of the scheme as not only does it lower the running cost but also showcases part of the process occurring in the design. Even though the installation is costly it provides the water in the facilities which can be a huge cost in public buildings. It is also used for the irrigation system that waters the community gardens.

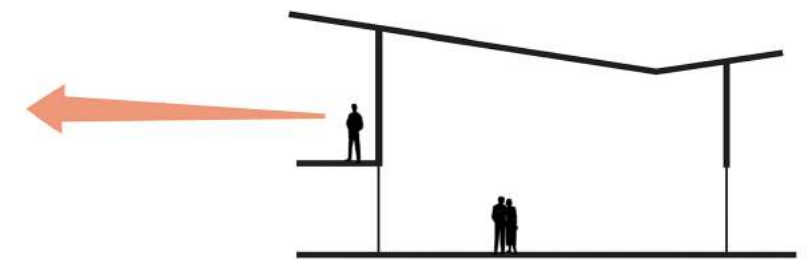
The butterfly form of the roof allows for effective drainage system.

The main storage tank is located underground however smaller ones are used as tables around the columns to showcase the process. Water tanks should be appropriately sized as the site is located in the flood risk area.

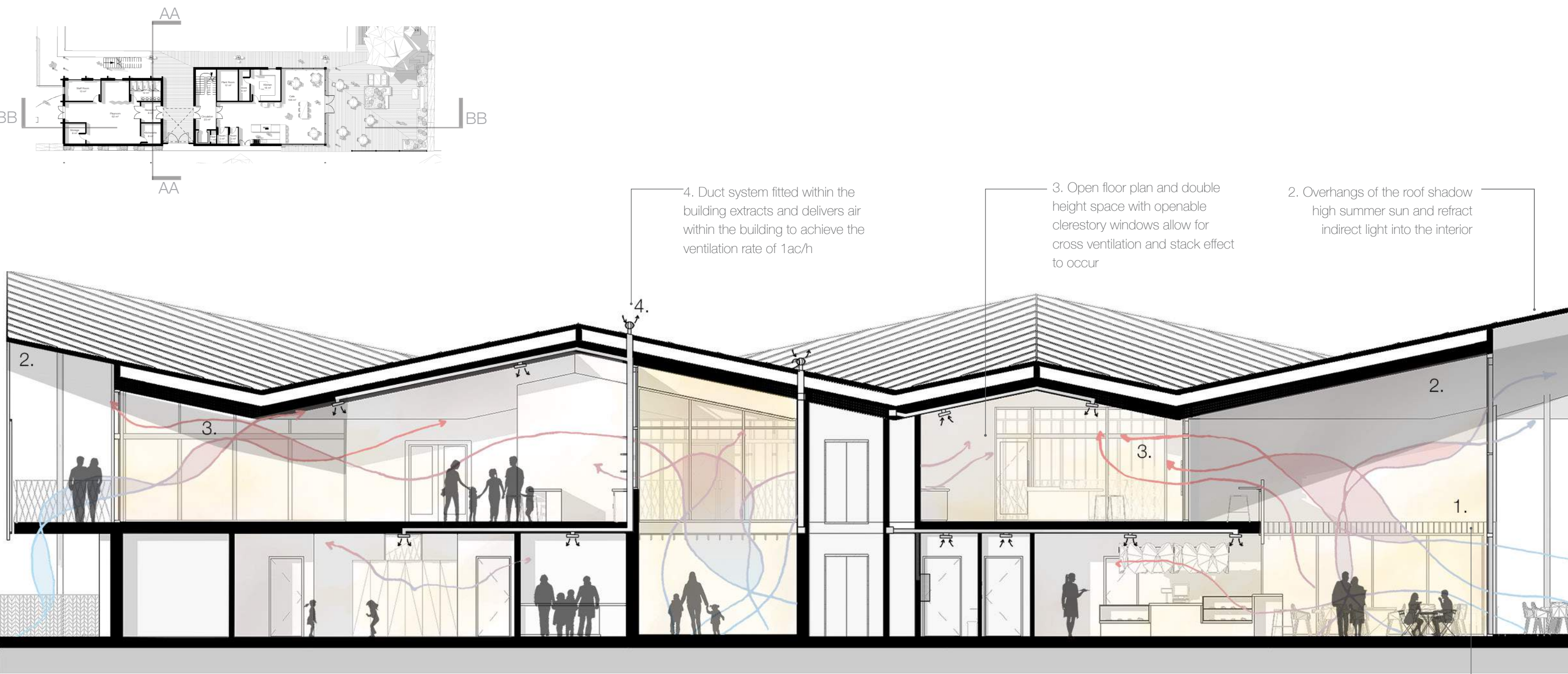
DESIGN RATIONAL SCHEMATICS



Shadow terraces underneath roof design.

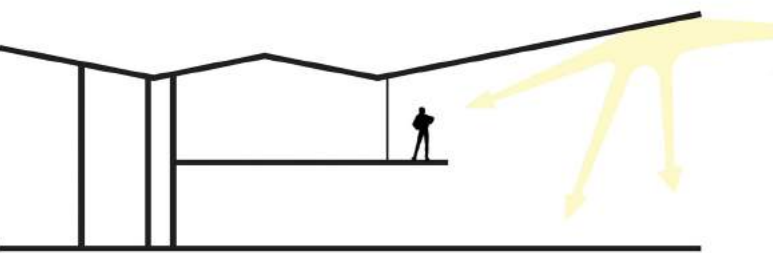


Direct views out towards the playing fields.

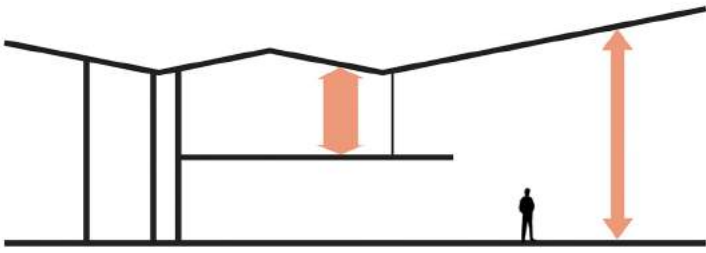


SECTION BB
1:100 @ A3

DESIGN RATIONAL SCHEMATICS



Roof design allows daylight to be diffused throughout the building.



Double height space within the cafe, creating a destination.

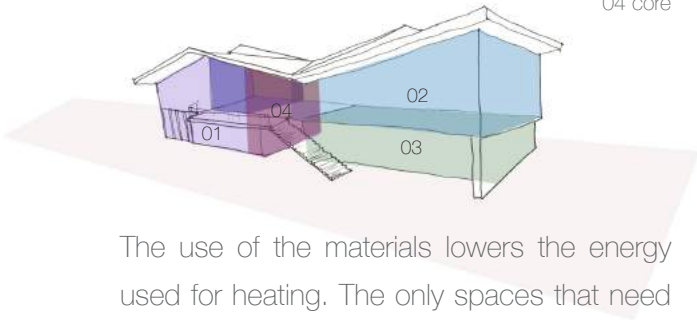
1. The building is orientated on the NE-SW axis. This allows for soft light throughout the whole day. Café/kitchen is the most public and therefore glazed part of the scheme. As a result, it will require extra heating during winter. Natural shading from the south helps to minimize the overheating during summer.

HIGH CAPITAL - LOW RUNNING COST

Community is led to form the sense of ownership from the start and gain the experience in running a facility. This provides more certainty rather than being dependant on the grand. Zone heating and high insulation and local employment are ways to improve the performance of the building and lower its cost. The revenue is achieved through room hire, cafe and nursery.

ZONE HEATING

- 01 kitchen/cafe - heated 9am-6pm
- 02 multi-function hall - heated 9am-9pm
- 03 nursery - heated 9am-3.30pm
- 04 core



The use of the materials lowers the energy used for heating. The only spaces that need to be heated and lit after 6pm are entrance, toilets and multifunctional space. Nursery is open from 8-3:30 and therefore doesn't have to be heated in the afternoon.

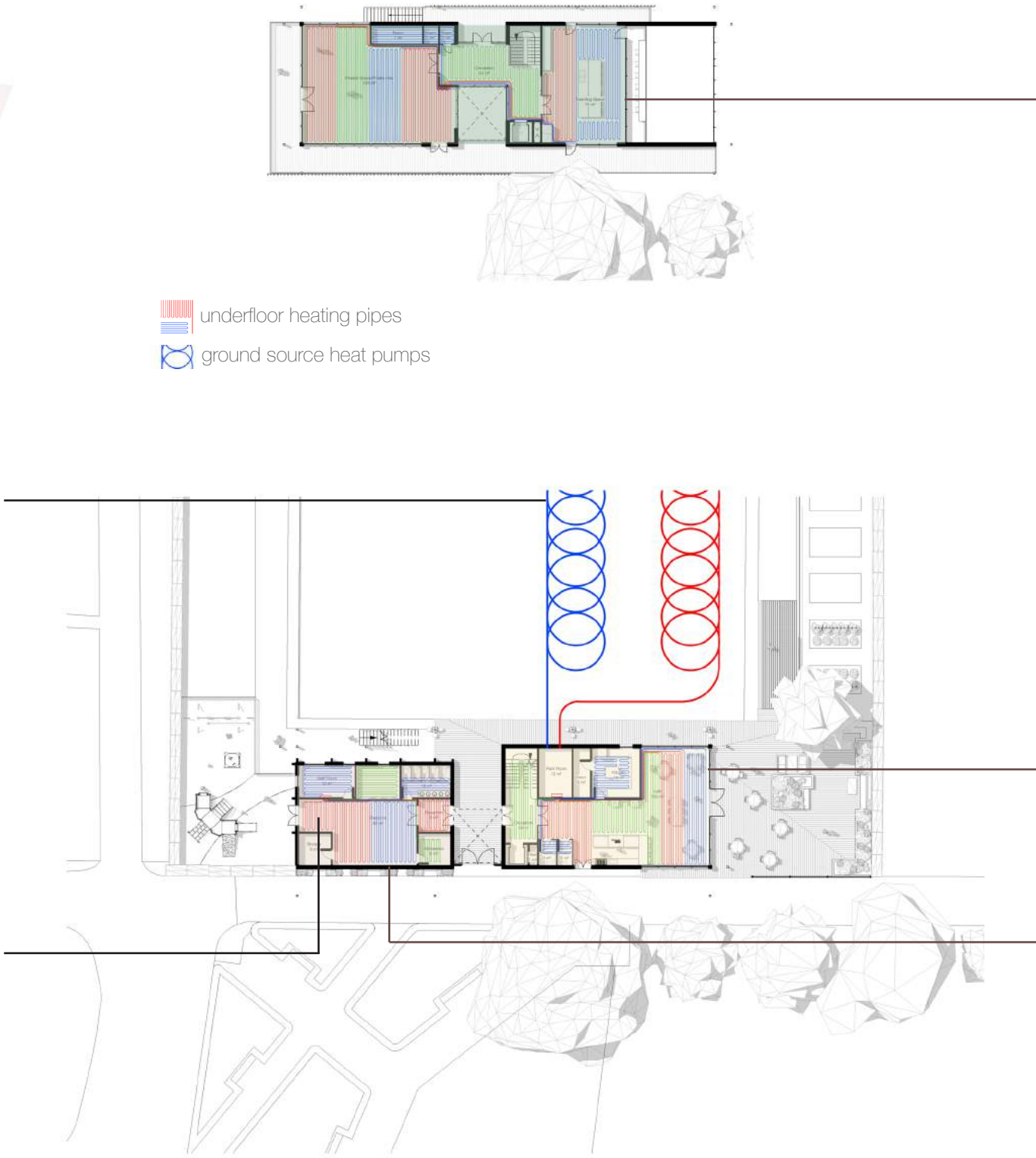
Ground Source Heat Pump

Ground source heat pump is used to power the underfloor heating. Even though the installation cost is higher than other heating systems, it lowers the maintenance cost and carbon emissions. It is more energy efficient than other systems like air-source and more subtle as the pipes are buried underground and connected with the pumps located in the plant room, therefore don't need any outdoor units. The 1500m² area of bowling green provides enough space for the system to be installed.

Underfloor Heating

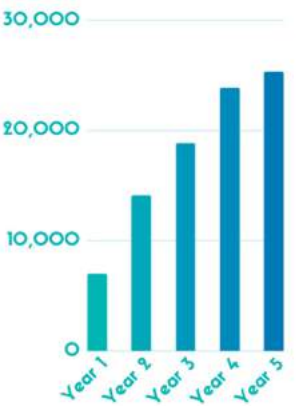
Underfloor heating is cost effective and distributes the heat evenly, it uses 15-40% less energy than radiators. The pipes are connected to multi zoned manifolds which allow for different thermal comfort levels in different rooms.

- underfloor heating pipes
- ground source heat pumps

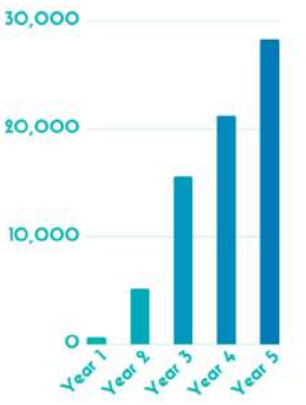


REVENUE BREAKDOWN

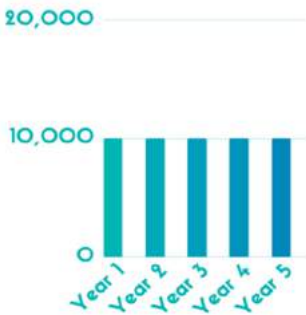
Room Hire
Within the first year, limited usage has been predicted as there may not be much publicity and the spaces can be used on a trial basis. A slight spike in interest has been estimated for the second year as the centre gains acknowledgement and a steady increase thereon. After year 4, there may be less of an increase as relationships would have been established and near full capacity achieved.

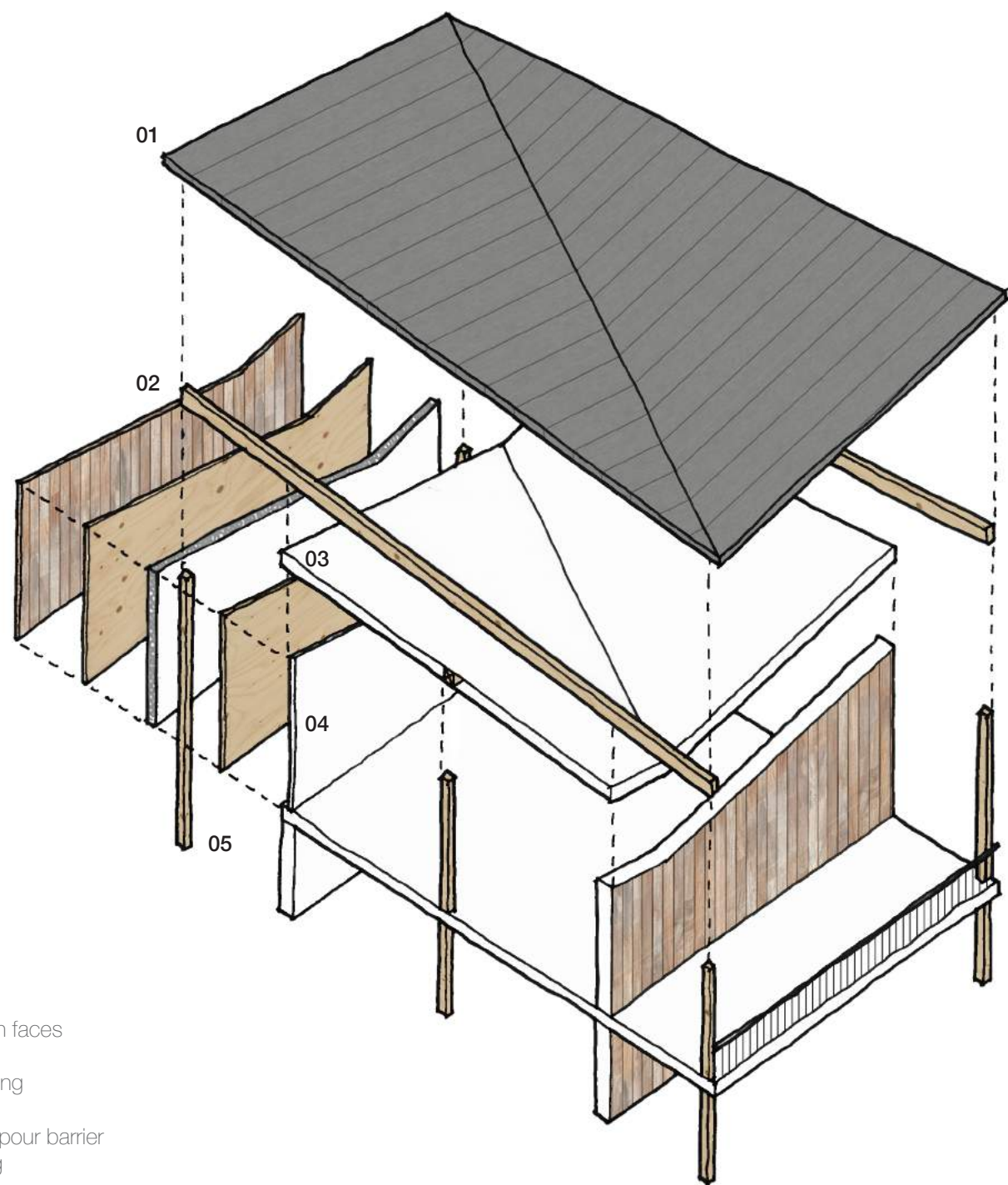


Cafe
The cafe profit has been calculated eliminating additional kitchen costs (consumables, card transactions, salaries). Income generated is anticipated to be slow for the first year, offering a limited selection of meals and snacks. An increase in increase has been estimated due to gradual attendance and wider variety of meals on offer. Free meals to sports teams have been calculated within expenditure.



Nursery
Nursery profit has been calculated using standard rental rates based on similar precedent. The kitchen will provide discounted meals and snacks for children and staff within the nursery.





- 01 zinc roof
- 02 150x400 glulam beams
- 03 ceiling build up:
rafters
thermal insulation
gypsym boarding on both faces
- 04 external wall build up:
rendered acoustic panelling
20mm plywood boarding
thermal insulation with vapour barrier
70x200mm oak boarding
- 05 150x150mm timber columns

Timber Structure

The use of timber has many advantages. The most pertinent for our scheme as highlighted by the client concerns cost and construction time:

- Panels can be factory made off site, making construction fast.
- Able to source native species' of oak from local sawmills, reducing the cost, time and environmental impact of transporting materials to site.
- Timber frame structures usually provide better thermal insulation than masonry, while also allowing for a thinner build up.

Maintenance and Use

Oak is classified as 'durable' under BS EN 350-2 and so does not require any treatment prior to installation.

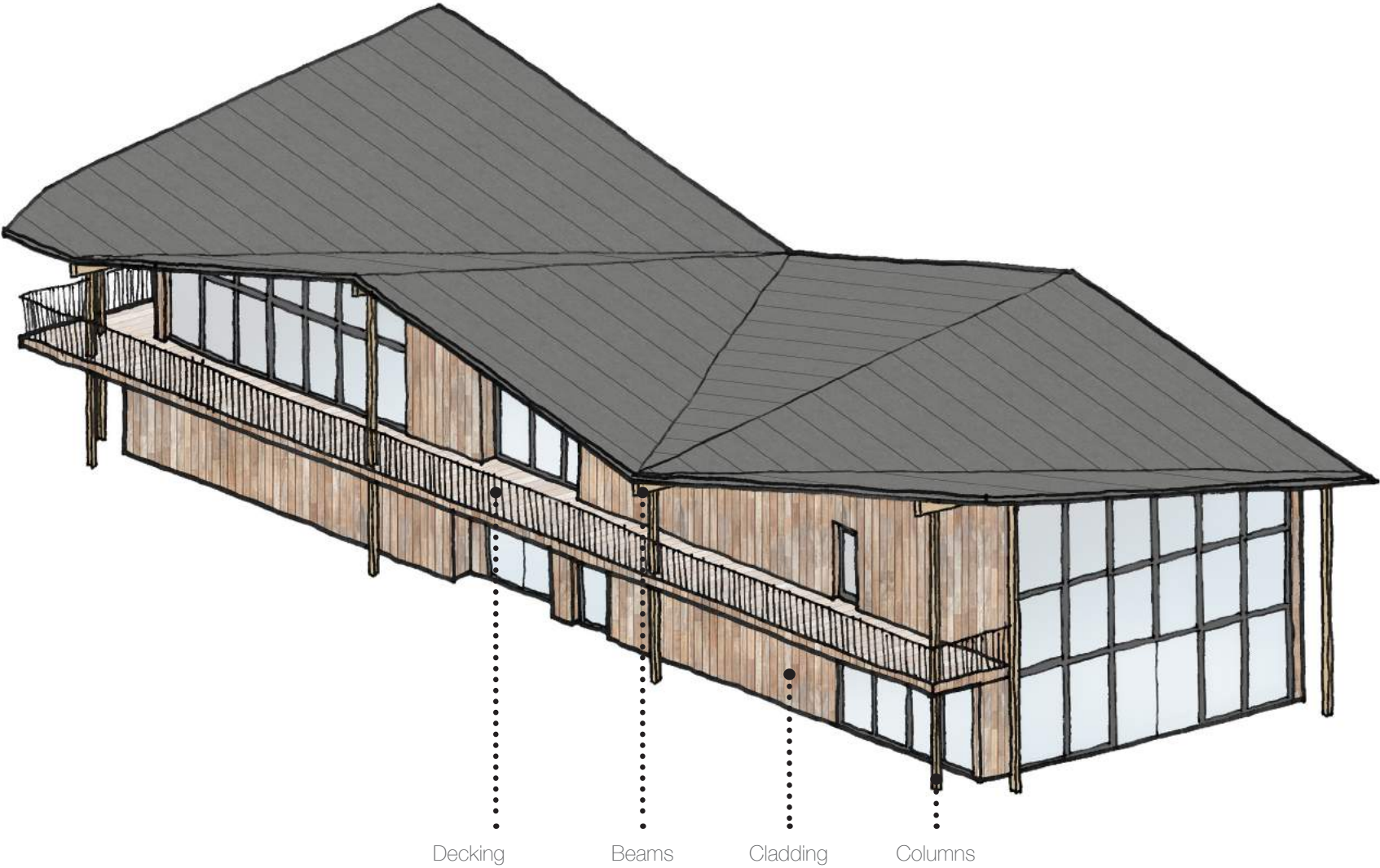
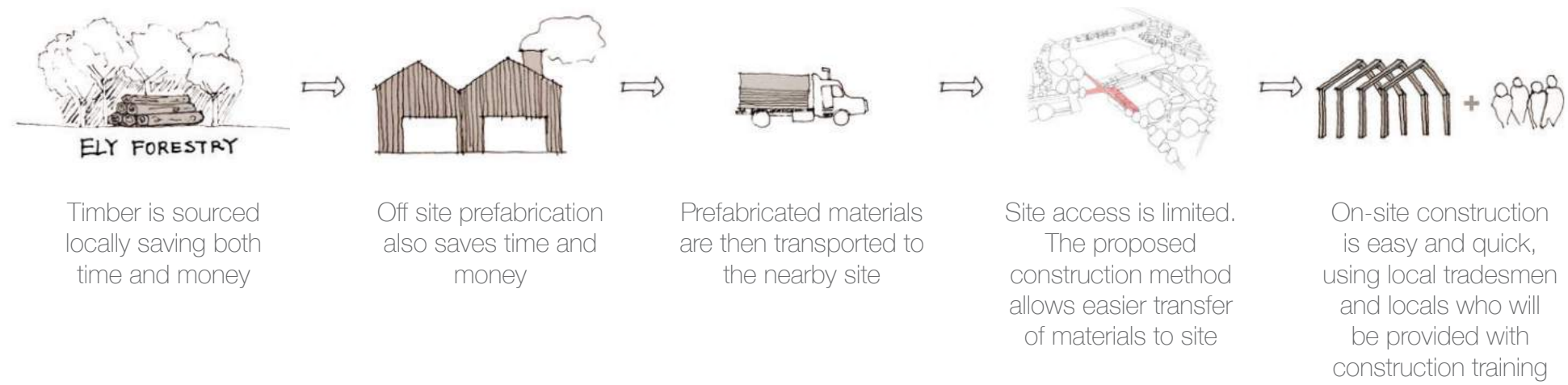
A maintenance cycle of 5 years will be adhered to nonetheless to ensure the cladding's appearance is preserved, which will involve the application of a coating to provide both UV and water resistance.



Material Tectonics

The widespread use of timber merges the building with its natural setting.

The use of greenery around the building is also appropriate given the building's function, while also providing defensible space around key parts of the perimeter that require added security and protection from vandalism.



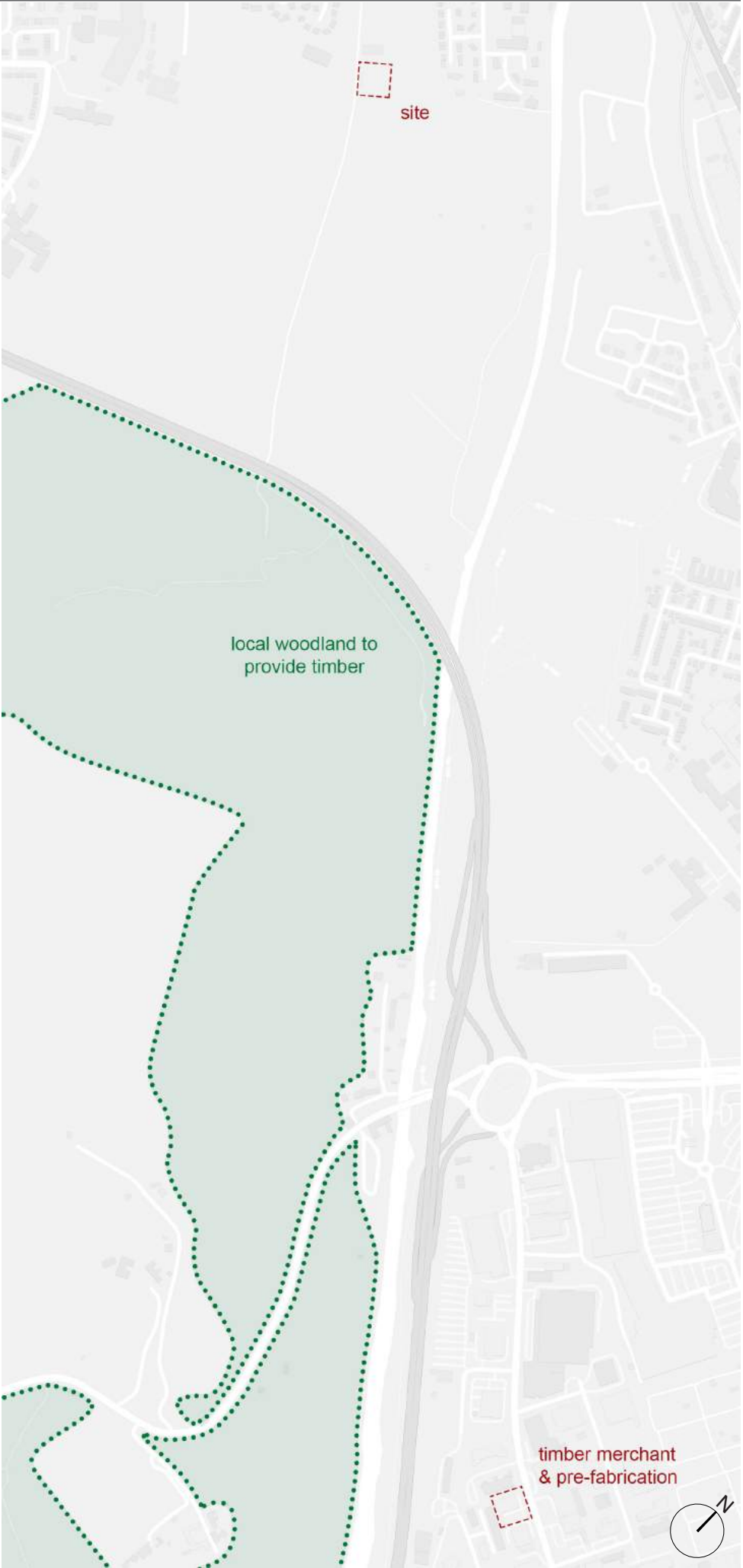
Identity and Locality

The use of materials from just over a mile away enhances the sense that the building is 'of its place'. Creating a building with a strong sense of identity and belonging is more likely to garner acceptance within the community.

Keeping the construction simple means that locals can get involved with building works.

These concepts are important considerations in an area with as high a crime rate as Ely.

A community centre built with a high level of involvement and acceptance from the community will reduce the likelihood of vandalism, and also gives them a strong connection with the building.



4.01 FUNDING OPPORTUNITIES

Not Just A Tin Shed

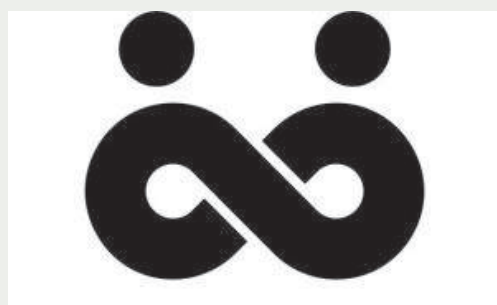


People and Places: Large Grant
Possible Grant- £100,001 to £500,000
Available to voluntary or community groups working together to make positive impacts.
Allows for- capital applications, equipment, staff costs and refurbishments.

Supporting Great Ideas
Possible Grant- £10,001 and over
Supporting innovative and strategically important project ideas that encourage positive and social change in Wales. It is available to community organisations that are people led, strengths based and committed to inclusion and the environment.
Allows for- staff salaries, project activities, running costs, equipment and organisational development.



Community Facilities Programme
Possible Grant- £25,000 to £250,000
Working with social enterprises to improve community facilities. Working with partners in the public, private and third sectors. Giving priority to former Communities First Cluster areas (including Ely and Careau) and must earn less than £150,000 in unrestricted reserves. Allows for- capital only grant schemes, sustainable for 3-5 years.



Healthy and Active Fund
Possible Grant- approx. £300,000
Strengthening community assets and improving well being by promoting social interactions and improving access to spaces for physical activity.
Allows for- 3 financial years
Eg. Sporting Memories, £400,000 grant, supporting the improvement of mental and physical health and reducing social isolation by enabling the adoption of healthy and active lifestyles across Wales.



Section 106 Agreement
Private agreement attached to planning permission to make acceptable development that wouldn't be otherwise within the area.
E.g. A development of 44 dwellings Clos-y-Cwarra, St Fagins. £105,000 towards education and neighbourhood regeneration.
E.g. Residential Development for 41 Units Former Ely Farm, Dyfrig Road, Caerau. £8,841 to support community facilities in the area.

Project Based Partnerships
Revenue funding that has implications on building requirements.

Food and Fun
Local school based schemes providing healthy meals, nutrition education and physical activity to children during school holidays involving a partnership approach.

Food Cardiff
Sustainable food cities network working with Food Sense Wales, aiming to make healthy and sustainable food a defining feature of the city.

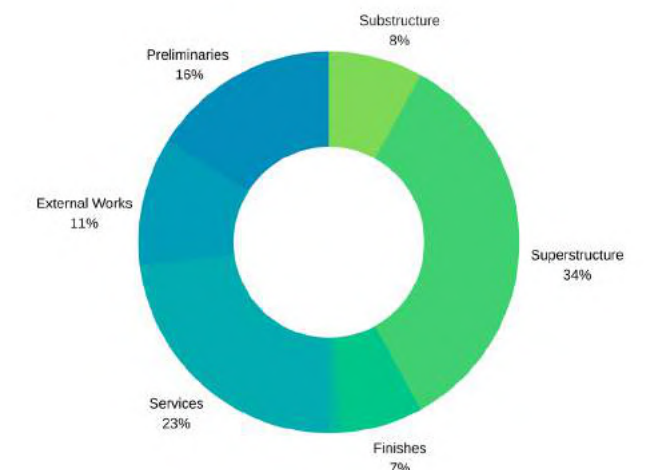
Other grants available: Rainwater harvesting, lifts and changing place.



Hardy's Birthplace Visitors Centre



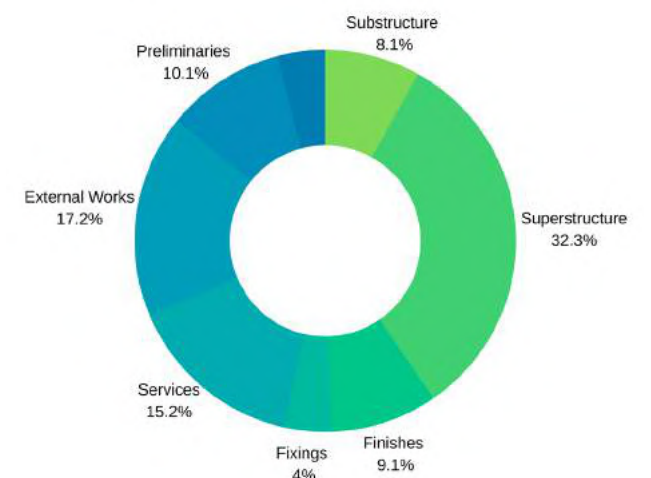
Completed - 2013
Cost - £678,587
Size - 208m2
Cost Per m2 - £3,262
- Timber frame, timber clad, environmentally friendly, low energy solution



Kings Buildings Nursery



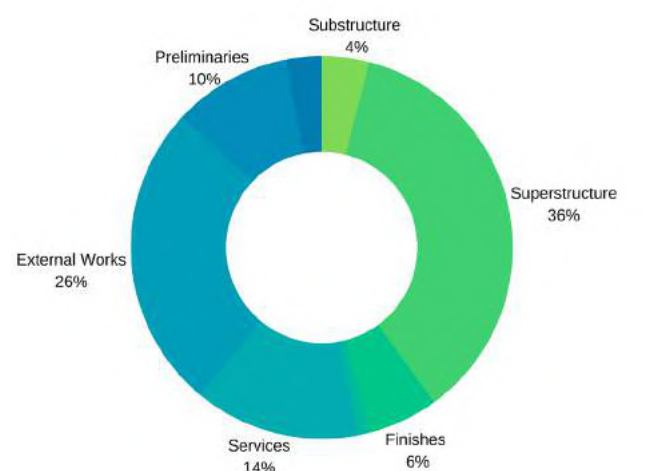
Completed - 2013
Cost - £2,497,702
Size - 825m2
Cost Per m2 - £3,028
- Two storey timber frame, timber weatherboarding
- Built to BREEAM excellent rating

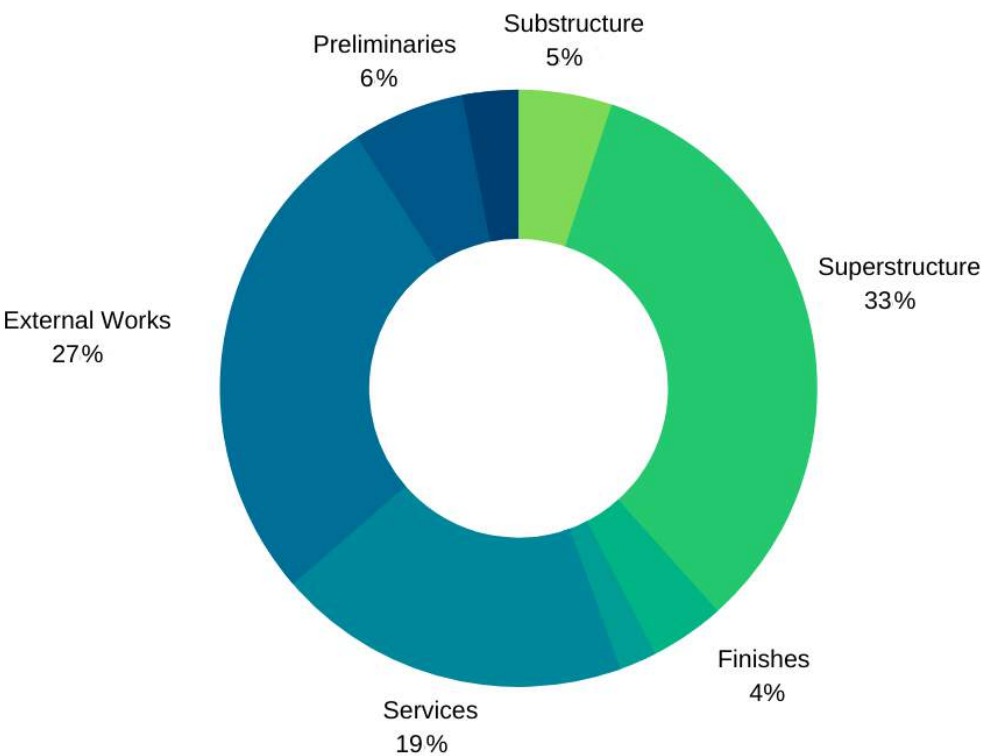


St Christopher's Primary School



Completed - 2013
Cost - £648,641
Size - 351m2
Cost Per m2 - £1,848
- Two storey timber frame, part timber clad



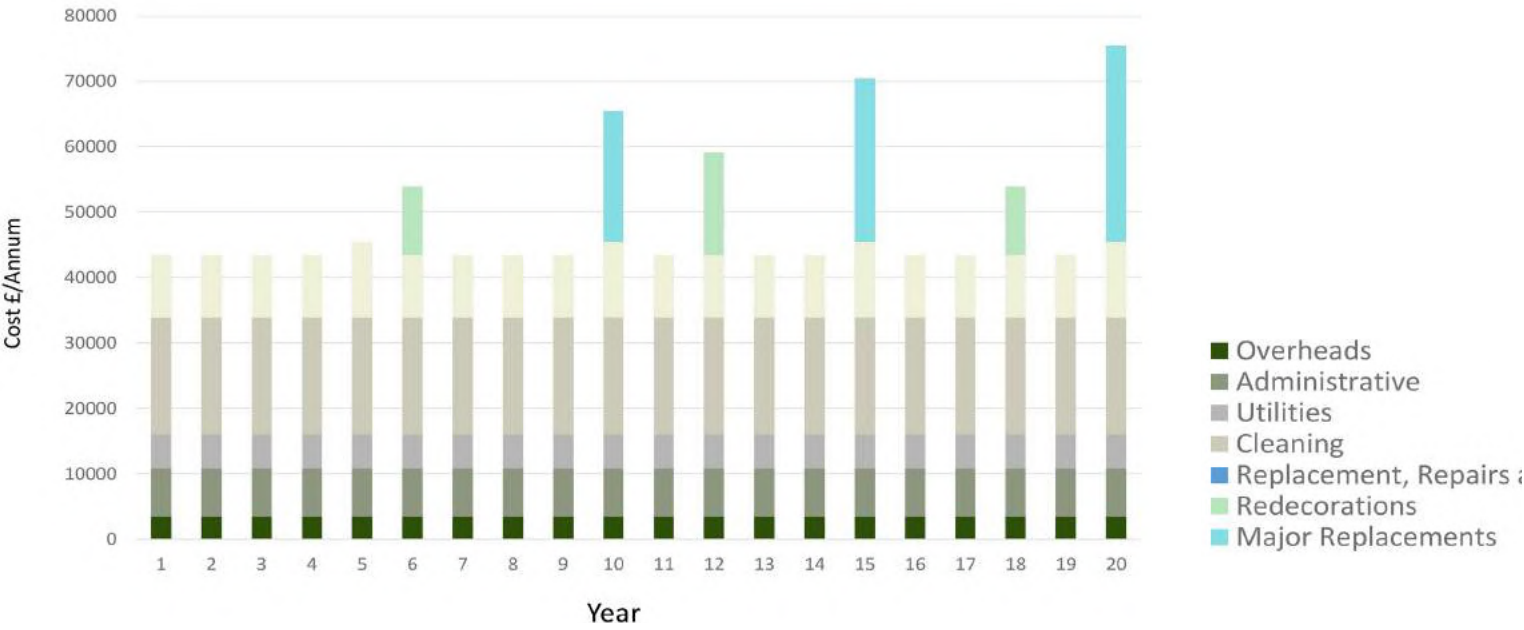


The building aims to provide an affordable strategy, addressing the constraints of the site and response to the brief as quickly and efficiently as possible. The client expressed a strong interest in beginning works as fast as possible. Running costs will be limited through heat zoning and lighting control sensors to avoid unnecessary cost. Although a potentially a larger initial investment, rainwater harvesting as dictated by the roof formation, creates a reduction to the amount that is paid for mains supply and creates a return on investment. Even though a potentially larger capital cost, the future costs of the building will be reduced. Natural materials chosen require minimal maintenance and are well understood the way in which they work. Extensive landscape and soft landscaping works account for a large proportion of cost, as they are part of the driving force behind the scheme, and there is scope for additional funders to be utilised for these items.

Element	Total Cost	Cost per m2	Percentage	Specification
1 Substructure	£82650	£153.05	5	
2A Frame (Costs include other elements)	£165300	£306.10	10	Timber frame.
2B Upper Floors (Costs Included in 2A)				
2C Roof	£148770	£275.49	9	Butterfly form timber structure roof, zinc clad.
2D Stairs	£16530	£30.61	1	
2E External Walls	£115710	£214.27	7	Insulated timber frame oak clad external walls.
2F External Windows and Doors	£82650	£153.05	5	Polycarbonate and glass glazing.
2G Internal Walls and Partitions	£16530	£30.61	1	Moveable room partitions.
2H Internal Doors	£16530	£30.61	1	Solid core timber doors.
2 Superstructure	£545490	£1010.13	33	
3A Wall Finishes	£16530	£30.61	1	
3B Floor Finishes	£33060	£61.22	2	
3C Ceiling Finishes	£33060	£61.22	2	
3 Finishes	£66120	£122.44	4	
4 Fittings and Furnishings	£33060	£61.22	2	Kitchen fittings and appliances. Nursery appliances- units and worktops, tables etc.
5A Sanitary Appliances	£16530	£30.61	1	Sanitary-ware, inc. Doc M Pac.
5B Services Equipment	£16530	£30.61	1	Provisional sum for kitchen appliances.
5C Disposal Installations (Costs Included in 5A)				Soil and waste pipes.
5D Water Installations	£49590	£91.83	3	Hot and cold water services. Rainwater harvesting system for toilet flushing and irrigation.
5E Heat Source (Costs Included in 5F)				
5F Space Heating and Air Conditioning	£66120	£122.44	4	Ground source heat pump and zoned underfloor heating throughout building.
5G Ventilating Systems (Costs Included in 5F)				
5H Electrical Installations	£99180	£183.66	6	Electric light and power.
5I Fuel Installations	£0	£0	0	
5J Lift and Conveyor Installations	£16530	£30.61	1	Platform lift.
5K Fire and Lightening Protection	£16530	£30.61	1	Emergency lighting. Lightening protection.
5L Communications and Security Installations (Costs Included in 5H)				Fire, intruder and disabled call alarms. Data cabling. CCTV extension.
5M Special Installations	£33060	£61.22	2	Install rainwater harvesting system.
5N Builders Work in Connection	£16530	£30.61	1	General BWIC.
5O Management of the Commissioning of Services	£0	£0	0	
5 Services	£314070	£581.59	19	
6A Site Works	£314070	£581.59	19	Move bowling green perimeter. Extensive land-
6B Drainage	£16530	£30.61	1	scaping, soft landscaping, spill out cafe space.
6C External Services	£33060	£61.22	2	Below ground drainage and manholes.
6D Minor Building Works	£0	£0	0	Services and utilities connections. Site lighting.
6E Demolition and Work Outside the Site	£99180	£183.66	6	Demolish existing nursery unit.
6 External Works	£446310	£826.47	27	
7 Preliminaries	£99180	£183.66	6	6% of remainder of contract sum (excluding contingencies)
8 Contingencies	£49590	£91.83	3	3% of remainder of contract sum (excluding preliminaries)
Total (less design fees)	£1653000	£3061	100	

Element		Cost per 100m2	
	5 Years	19 Years	20 Years
Fabric Maintenance	£483.18	£773.09	£927.71
Services Maintenance	£1288.48	£1675.02	£1726.56
Redecoration	£0	£322	£338.10
Maintenance Cost	£1771.66	£2730.11	£2992.37
Cleaning	£3301.73	£3301.73	£3301.73
Utilities	£966.36	£966.36	£966.36
Administrative Costs	£1369.01	£1355.32	£1368.87
Overheads	£644.24	£644.24	£644.24
Operation Costs	£6281.34	£6267.65	£6281.20
Total Running Costs	£8053.00	£8997.79	£9273.57

Redecoration has been allowed at six-yearly intervals. Resilient finishes that will not require regular replacement. Rewiring and boiler replacement takes place at 20 years. Structural inspections are carried out every 5 years. Major repairs are carried out after 10 years and every 5 years thereafter.



	Year 1	Year 2	Year 3	Year 4	Year 5
Cafe Income	72710	87976	103810	112683	123228
Room Hire	6960	14100	18800	23850	25300
Rent from Nursery	10000	10000	10000	10000	10000
Big Lottery	80000	59000	49000	39000	29000
Total Income	169670	171076	181620	185533	187528
Occupancy Costs	43486	43486	43486	43486	43486
Total Kitchen Costs	27131	32887	38249	41508	44958
Salaries	92000	92000	92000	92000	92000
Total Expenditure	162617	168373	173735	176994	180444
Balance	7053	2703	7885	8539	7084

DAILY TIMELINE OF REVENUE ACTIVITIES

