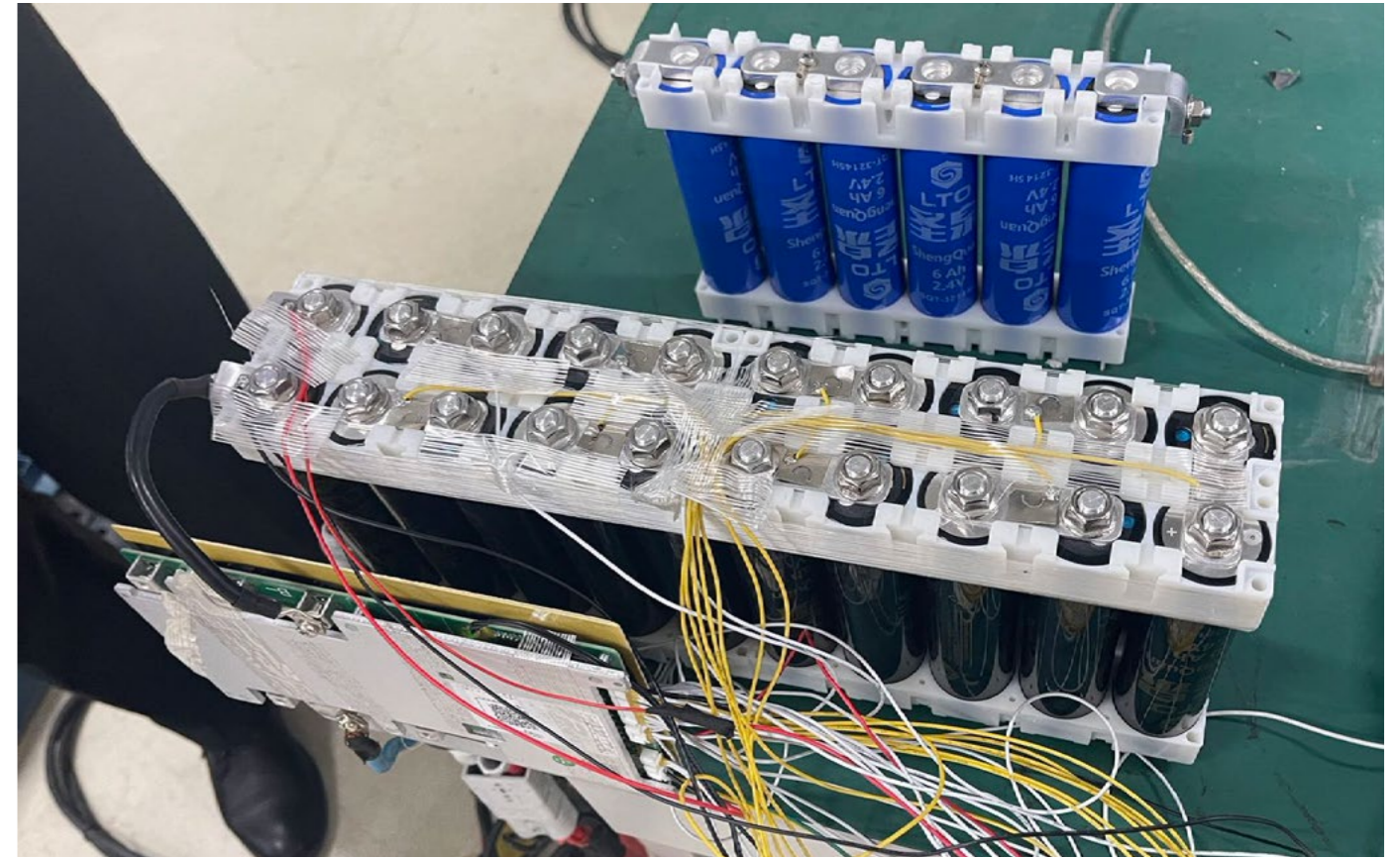


The ZED Life



zedPower[™]
zero fossil energy developments



Casing made from 1.5mm formed Aluminum sheet: Outer Sleeve and Spine, with the outerplastic made from CNC milled HDPE 12mm sheet.

Standard stainless-steel screws, power display and Anderson SB50 power connector, various thicknesses of EPDM Foam sheet provide waterproofing and protects battery from vibrations.

Exchangeable LTO Batteries “Power for Life”

The docks are constructed from various thickness of CNC Milled HDPE Sheet - 8mm, 12mm, 15mm, 22mm and standard size stainless-steel screws. Batteries are locked in docks using integrated standard barrel lock and key.

Battery docks are fixed to 80x40 RHS freestanding frame with standard screws.



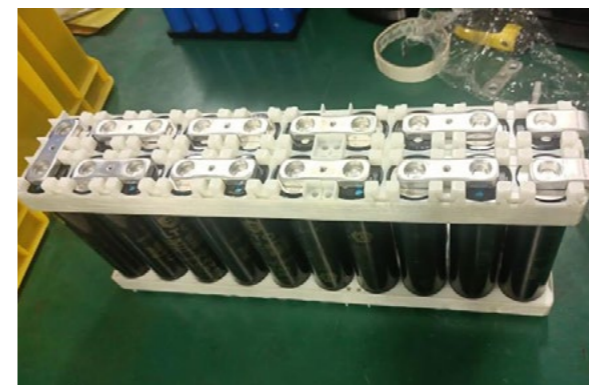
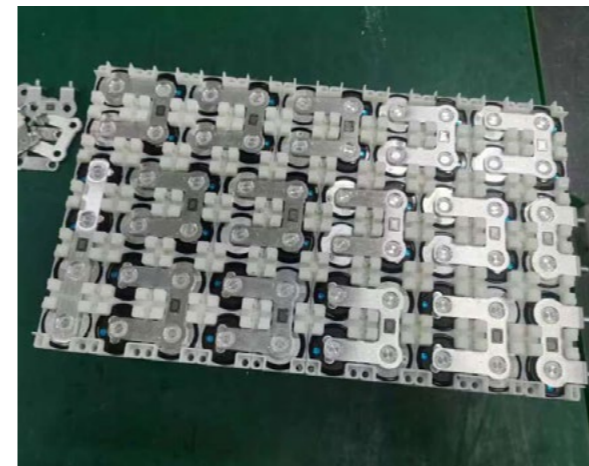


More modules can be added if needed

These LTO batteries are less affected by cold weather, and vehicles will not lose their range in winter.

LTO batteries last longer and cost less / charge:

- Battery life @ 80 % depth of discharge is 10 times longer than lifepo4.
- Cheap lithium battery = 500 to 1000 charge cycles @ 80 % depth of discharge.
- Industry standard LiFePo4 battery = 2,500 charge cycles @ 80 % depth of discharge.
- Lithium titanium oxide cell = 25,000 charge cycles @ 80 % depth of discharge.



Power For Life product, Designed by ZEDpower

ZED Bike + Motorbike



Battery Application

However it is now possible to build a 48 volt 0.5 kwh battery that can be picked up and easily exchanged and each battery charged in about 15 minutes. There is a shortage of global lithium, and reserves will run down fast if too many short life batteries are specified by manufacturers, even with recycling.

It is also possible to charge these batteries from a street type 2 electric car charger. It makes little sense to have a 10 kwh lithium battery in your house, 40 kwh in your car, 0.5kwh in your e bike, 2 kwh in your moped, 8kwh in your micro car, three wheeler or ATV – all with short life batteries.

This is the power source for the future –a battery that can power a modern lifestyle. It is now important that micro electric vehicles are designed to take this exchangeable / fixed battery product with integrated lockable docks. We have developed prototypes for a two battery e bike, a three battery moped, a four battery moto, and a micro car.

We believe the longer battery life and more robust chemistry allows communal battery pools and dispensers – often coupled with charge docks and BIPV solar canopies or E ports.



“Power for Life” ZED Vehicles using the batteries

ZED Bike



ZED Motor Bike

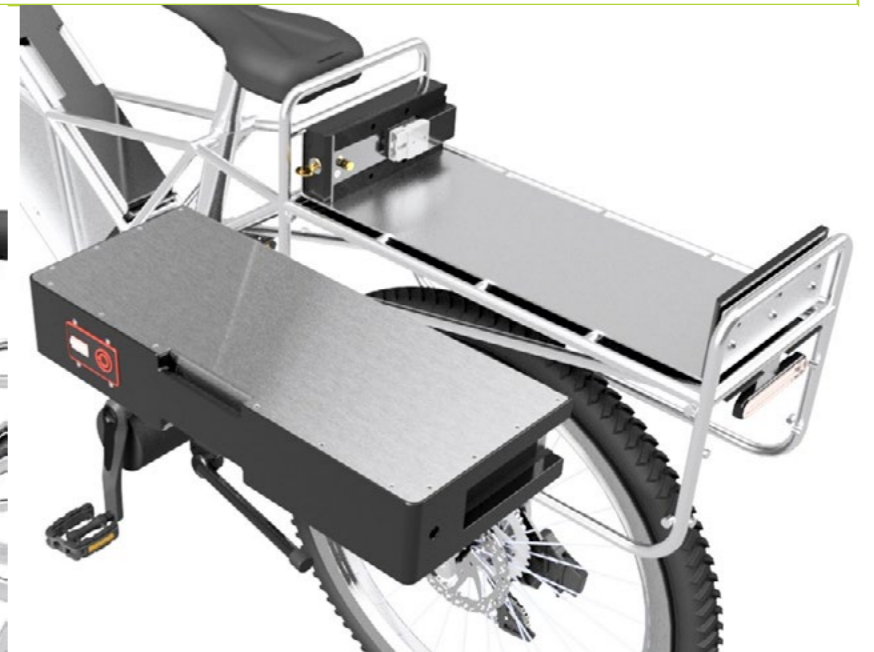


It is important that battery life, durability, and safety are now considered for this scarce and valuable technology that facilitates electric vehicles.

However it is now possible to build a 48 volt 0.5 kwh battery that can be picked up and easily exchanged and each battery charged in about 15 minutes.

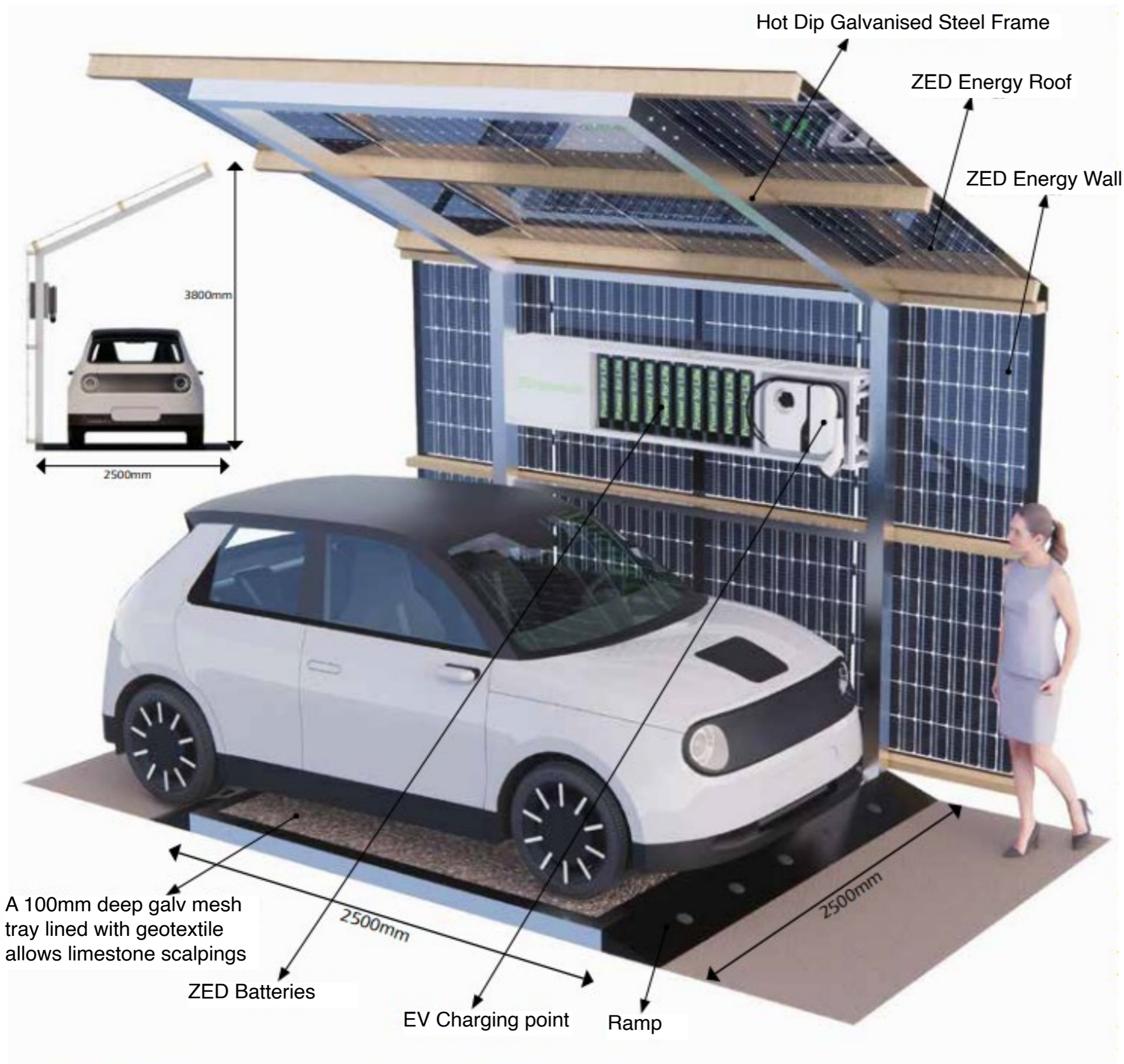


- The same docks are used on E-Moto as freestanding frame – they are fixed into the Moto frame (RHS 80x40mm) using standard stainless steel screws



Power For Life product, Designed by ZEDpower

ZED Port



The hot dip galvanised steel and timber e port has been designed to fit almost any hardstanding or compacted surface that cars can park on. It is a high quality, durable product designed to last a lifetime with minimal maintenance. It can be quickly installed and moved if changing home. It avoids having to disturb existing homes to fit solar panels.

The electrics can be wired into the consumer unit of a typical home by an approved mcs registered electrician, or if its off grid anyone competent. Make sure the vertical surfaces face southish and are not shaded by trees, plants or buildings.

Specially designed legs sit on recycled rubber mats in order not to damage existing paving or surface finishes. On most sites it can be installed in one day, leaving the installation for an electrician to make the connections the following day.

A 100 mm deep galv mesh tray lined with geotextile allows limestone scalplings to provide both a surface to park on plus provides ballast to resist overturning in high winds. A ramp at each end allows vehicles to park on the raised limestone surface. The E port has been designed to harvest and store solar electricity to minimise reliance on expensive grid electricity. The basic model is an Option 1 '3.56 kw peak e port' with one fixed 5 kwh LiFePo4 battery and an option for a minimum of two exchangeable 0.5 kwh batteries plus one specially designed e bike to take these batteries.

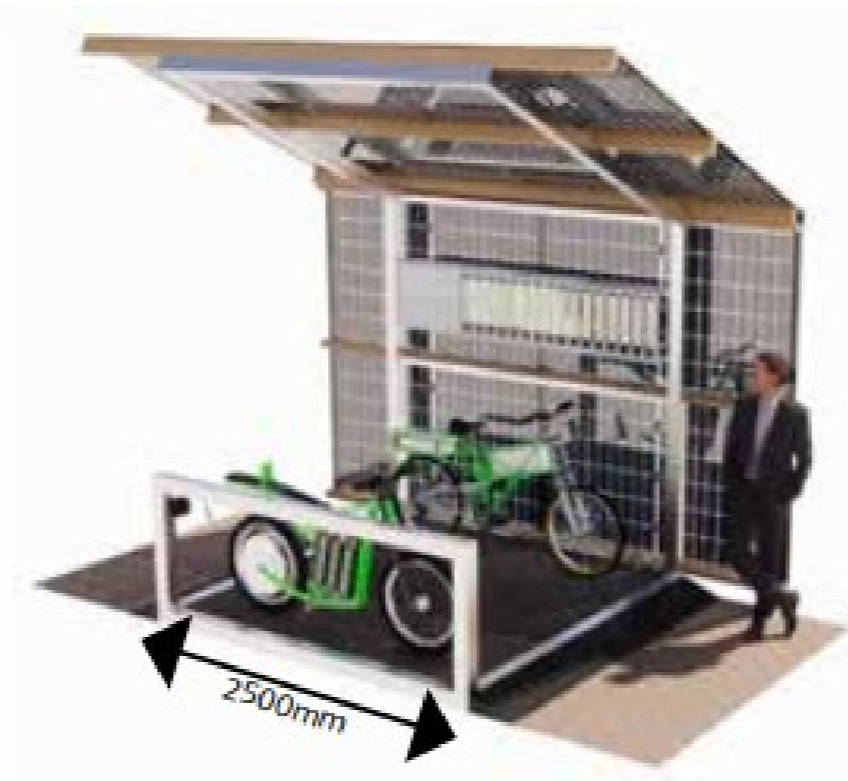
Most typical 48 volt LiFePo4 batteries would require replacing many times over the life of one LTO battery, creating a genuine 'Power for Life' solution. The E port solar panels can be off grid spec or grid connected and different solar charge controllers need choosing once this decision has been made.

The fixed battery stores electricity generated during the day for use at night, avoiding the need to import power from other sources.

This gives the best value for power storage and power production, and an e port can go anywhere without needing foundations.



ZED Car Port- 10 solar panles - column version
Size: 2500mm (W) x 2500mm (L) x 4400mm (H)



ZED Car Port- 8 solar panles - balustrade version
Size: 2500mm (W) x 2500mm (L) x 3800mm (H)



ZED Car Port- 12 solar panles - balustrade version
Size: 2500mm (W) x 5000mm (L) x 3800mm (H)



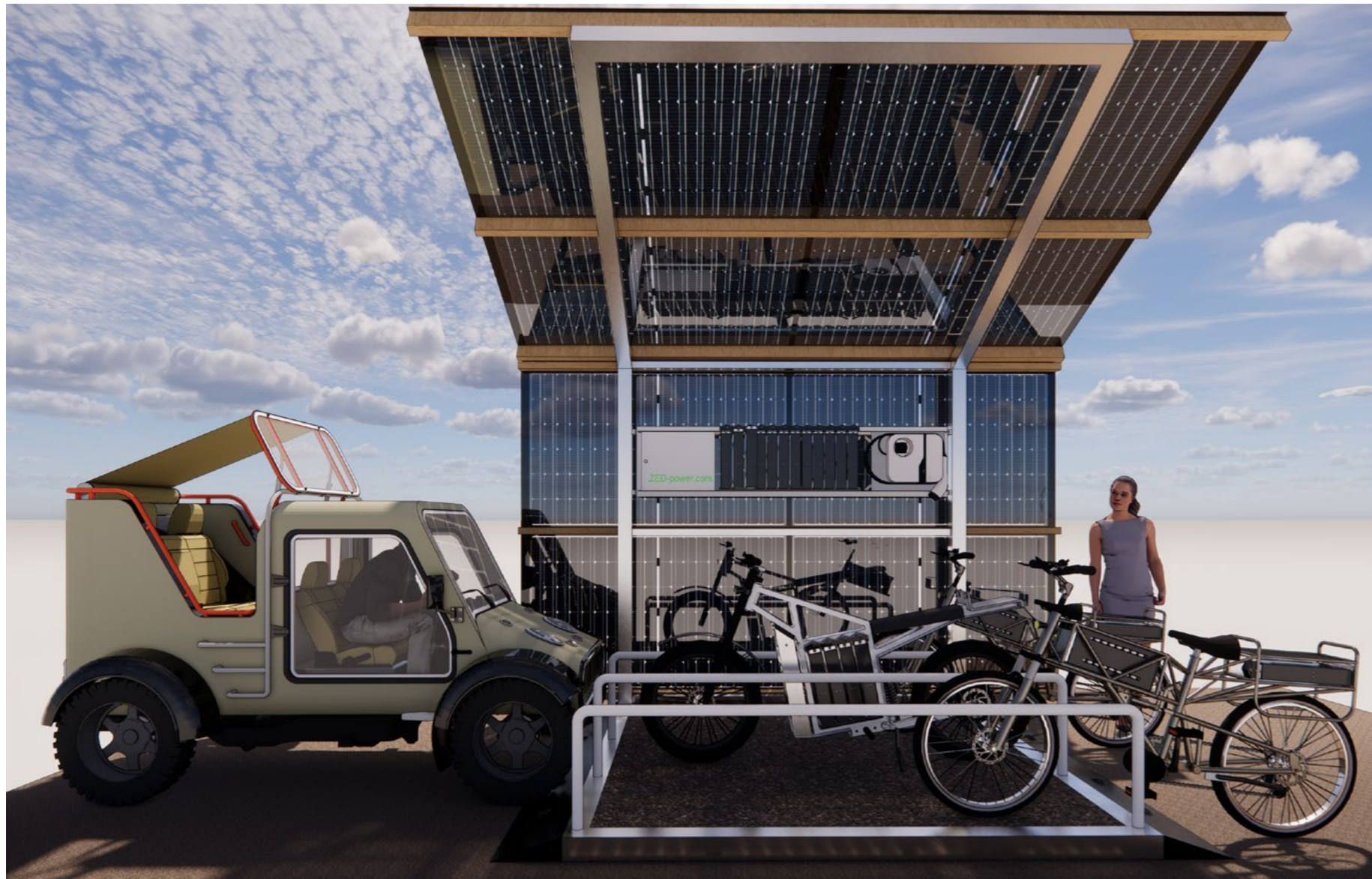
ZED Car Port- 8 solar panles - simple version
Size: 2500mm (W) x 2500mm (L) x 3800mm (H)



ZED Car Port- 12 solar panles - simple version
Size: 2500mm (W) x 5000mm (L) x 3800mm (H)



ZED Car Port- 15 solar panles - column version
Size: 2500mm (W) x 5000mm (L) x 4400mm (H)



There should be at least two exchangeable batteries for every vehicle or e bike battery, so that that a freshly charged battery is always available.

The exchangeable LTO batteries can charge in 20 mins from a type 2 standard public / street vehicle chargepoint and can be recharged quickly on longer journeys

The same Type 2 EV charging point is integrated into the E port and can charge both ZEDbikes, ZED motorcycles and most standard Electric cars.

Larger e ports are available with different numbers of solar panels – ranging from 3.5 to 6.5 kw peak

Customers can choose what they want and can afford.

The standard lockable cabinet can take up to 8 exchangeable batteries or up to 10kwh of the larger fixed batteries plus any combination of the two types.

A spare external lockable cabinet can be ordered as an external toolstore – on request. A bench table can be ordered to enable the E port to become a workshop for maintaining and repairing electric vehicles.

We are in discussions with an external finance house to provide hire purchase at reasonable rates.

The customer then has 20 plus years of free electricity and free net zero transport.

Product used by one of our clients:

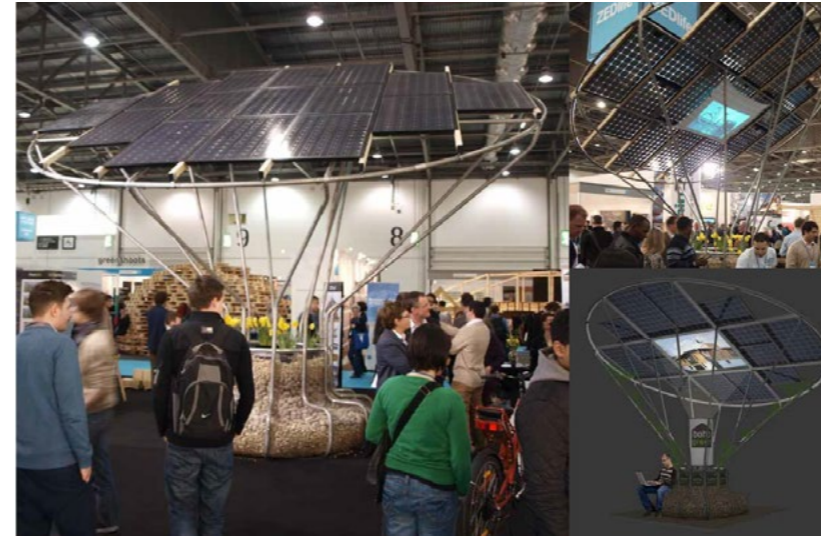
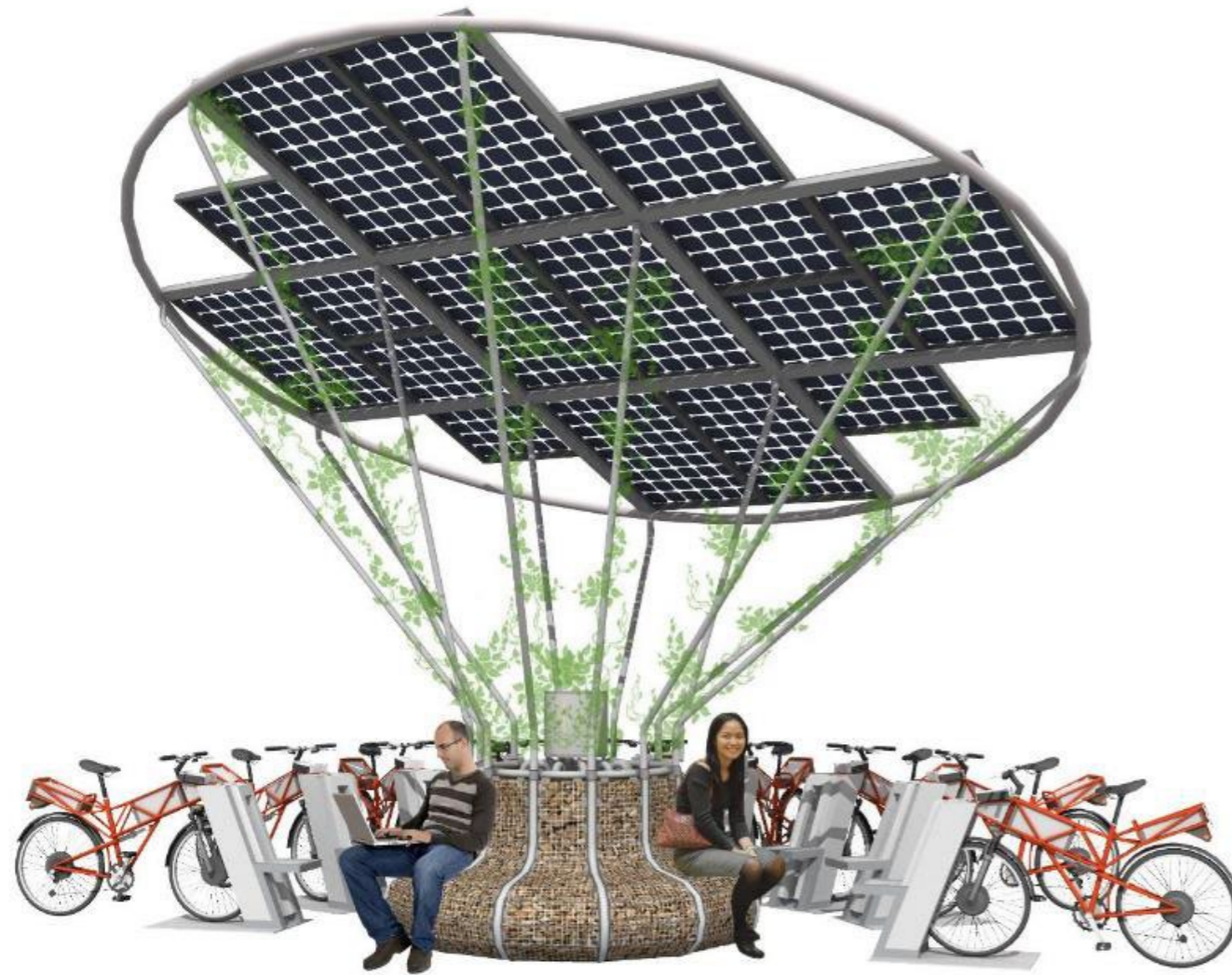


ZED Solar Tree



Facts & features:

The solar tree consists of a canopy composed of photovoltaic (PV) panels oriented 20 degrees south to optimise solar energy harvesting. Each tree has a total peak power output of 3kW, and the electricity generated from this can either be stored in batteries or connected to the national grid. The tree has been designed and engineered to stand up in the strongest of winds and can be installed without foundations or mechanical fixings to the ground. In this sense they can also be considered as temporary, since there are no structural elements that are cast in concrete or permanently fixed to anything.



The ZED Solar Tree is a sculptural piece of street furniture that creates an iconic public space whilst generating green electricity and integrating public amenities. As well as providing shade from the summer sun, the tree can provide a range of services such as a means of charging phones and laptops, docking electric bikes or even the integration of a coffee shop, advertising space, and projected animated visual images. Or it can simply provide a comfortable place to sit and rest, out of the summer sun. There are a wide range of applications, both private and public, that the solar tree could be deployed for.

The panels allow sunlight between the solar cells, creating a beautiful dappled shading effect beneath.

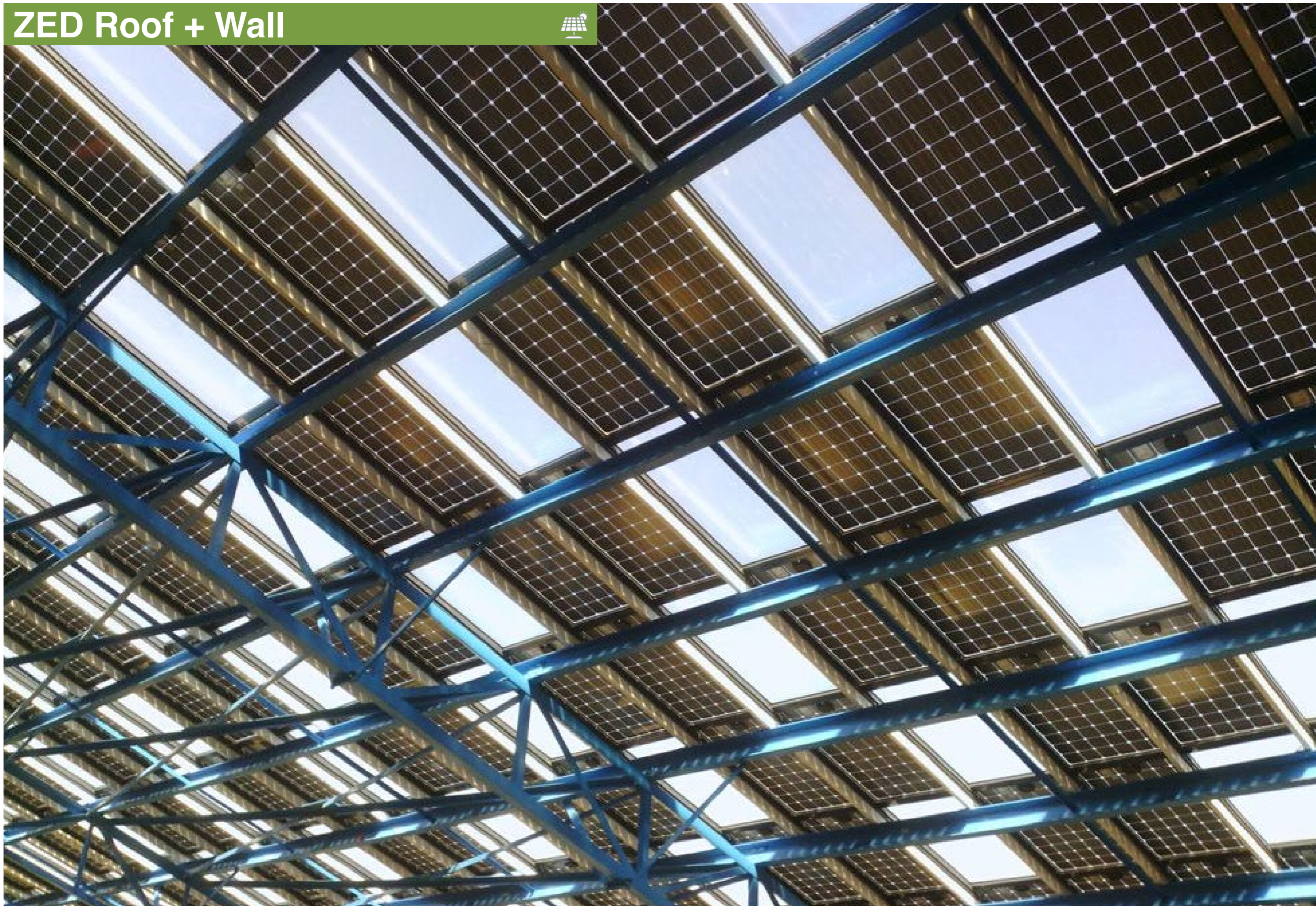
Unlike most solar panels, these are easily recognised and identified from beneath, rather than just from a distance or from above. This gives them a high public presence, increasing awareness of renewable energy technologies and demonstrating the clients commitment to a low carbon future.

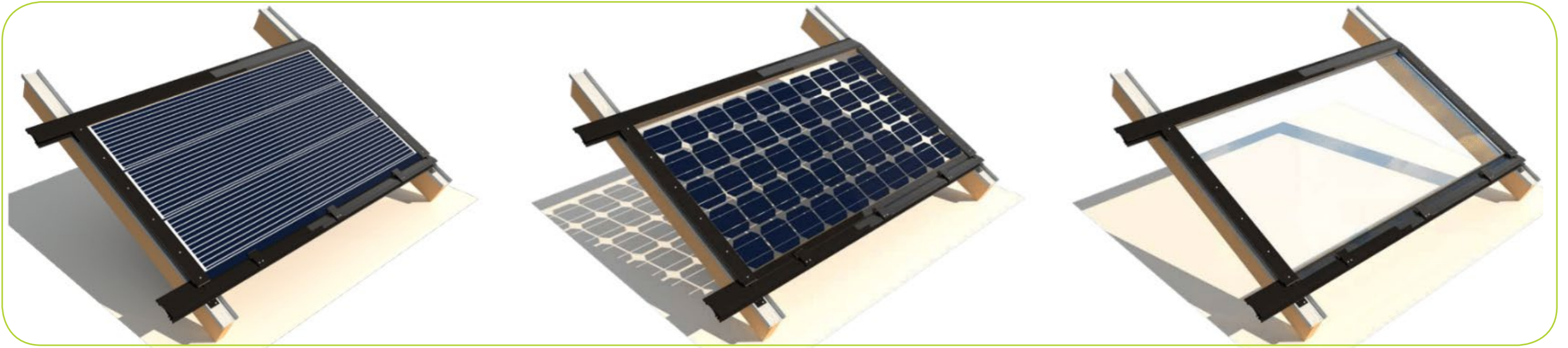


- A** Translucent 255W solar panels
- B** Secure store
- C** Galvanised steel frame
- D** Solar powered E-bike
- E** Inverter and battery dispenser
- F** Foundation-less integrated gableon
- G** Wi-fi Transmitter and device charge outlet
- H** Tensile hammock trampoline floor



ZED Roof + Wall

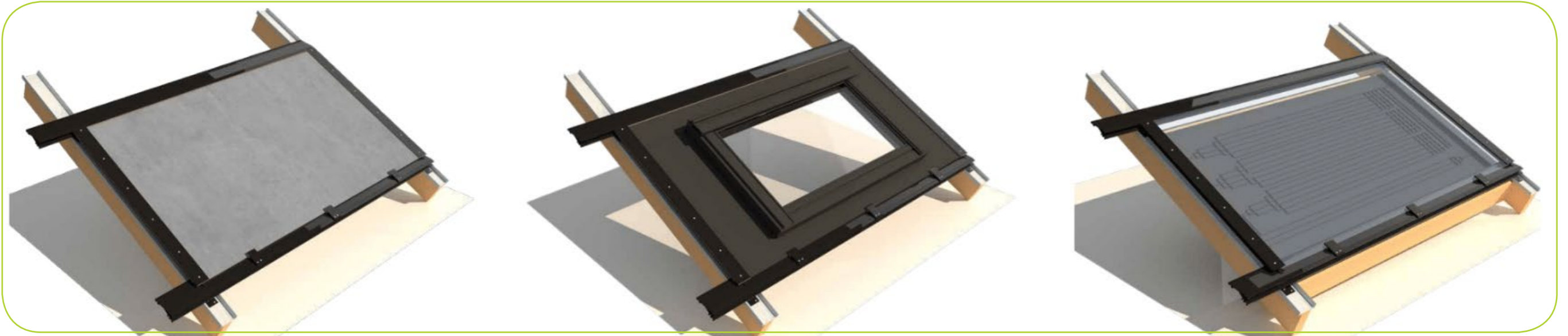




Mono PV with Black Interlayer so no daylight transmission for use over insulated surfaces.

Mono PV with Clear Glass between cells for daylight.

Clear Glass Panel for daylight.



Solid Cembrit Slate Cement Board Panel for cladding

Double/Triple Glazed Velux Panel for ventilation

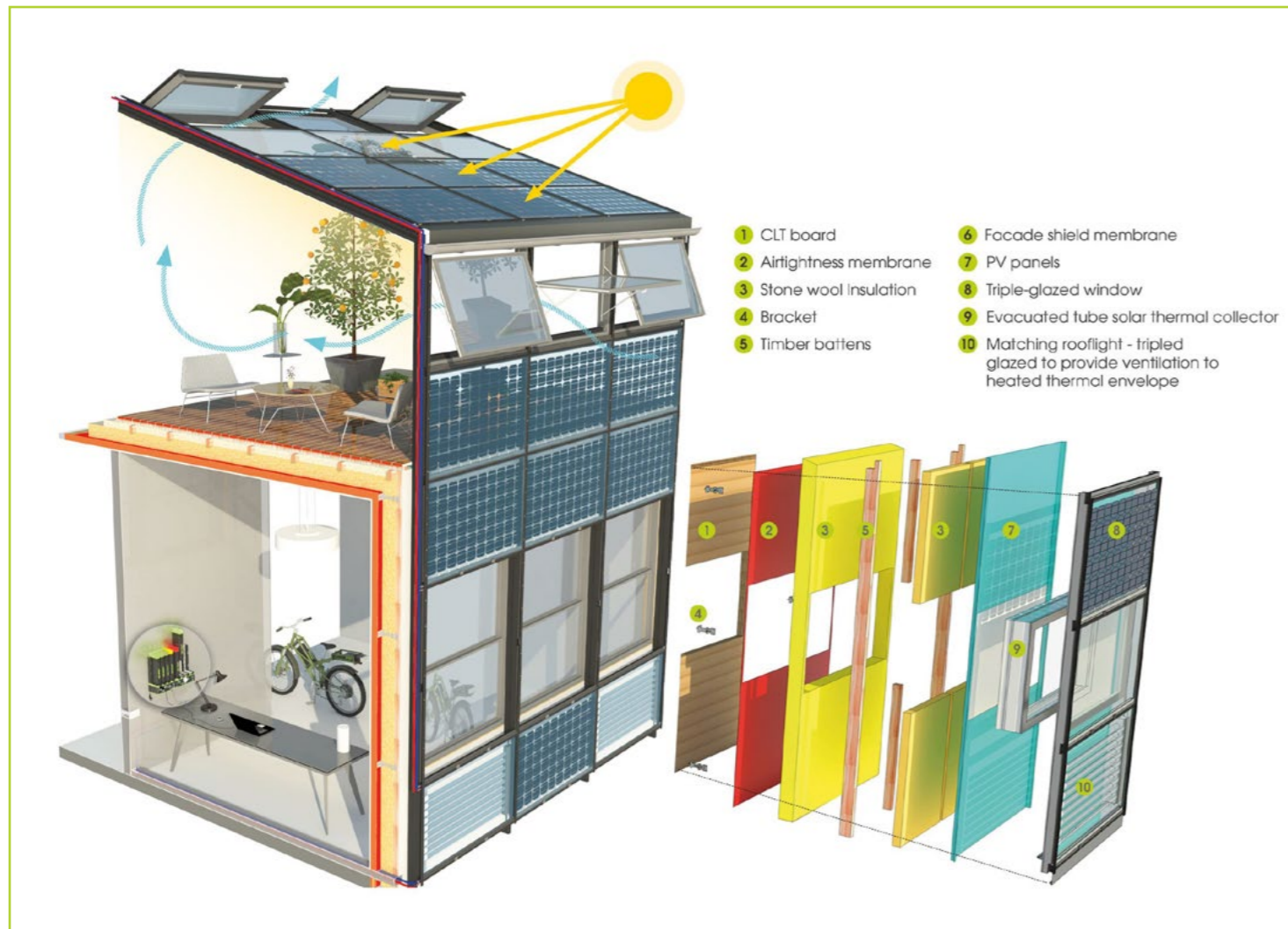
Evaporator Panel for hot water system



Triple Glazed Rational Window Panel for ventilation Type 1

Triple Glazed Rational Window Panel for ventilation Type 2

Triple Glazed Rational Window Panel for ventilation Type 3



Far higher outputs are achieved compared to bolt on / on roof conventional PV systems – often because the generating surface area is so much higher on building integrated photovoltaic systems. The glass / glass laminate avoids the use of a tedlar plastic internal face which can be prone to delamination and mechanical damage, and the panels can be used in marine conditions.

All mechanical frame fixings are self drilling stainless steel torx head screws and all gaskets are extruded silicon. The specially designed ZEDroof extrusions replace the need for conventional on roof solar aluminium cladding rails and support brackets that penetrate the waterproof envelope – avoiding future maintenance and failure points.

The idea is that the building envelope becomes a solar power station, with each panel approx. 2m wide x 1.2m high on a landscape orientation. This configuration has been chosen so that the vertical grid matches common domestic floor to floor heights, and the horizontal grid matches common door and window configurations with sufficient width for disabled access.

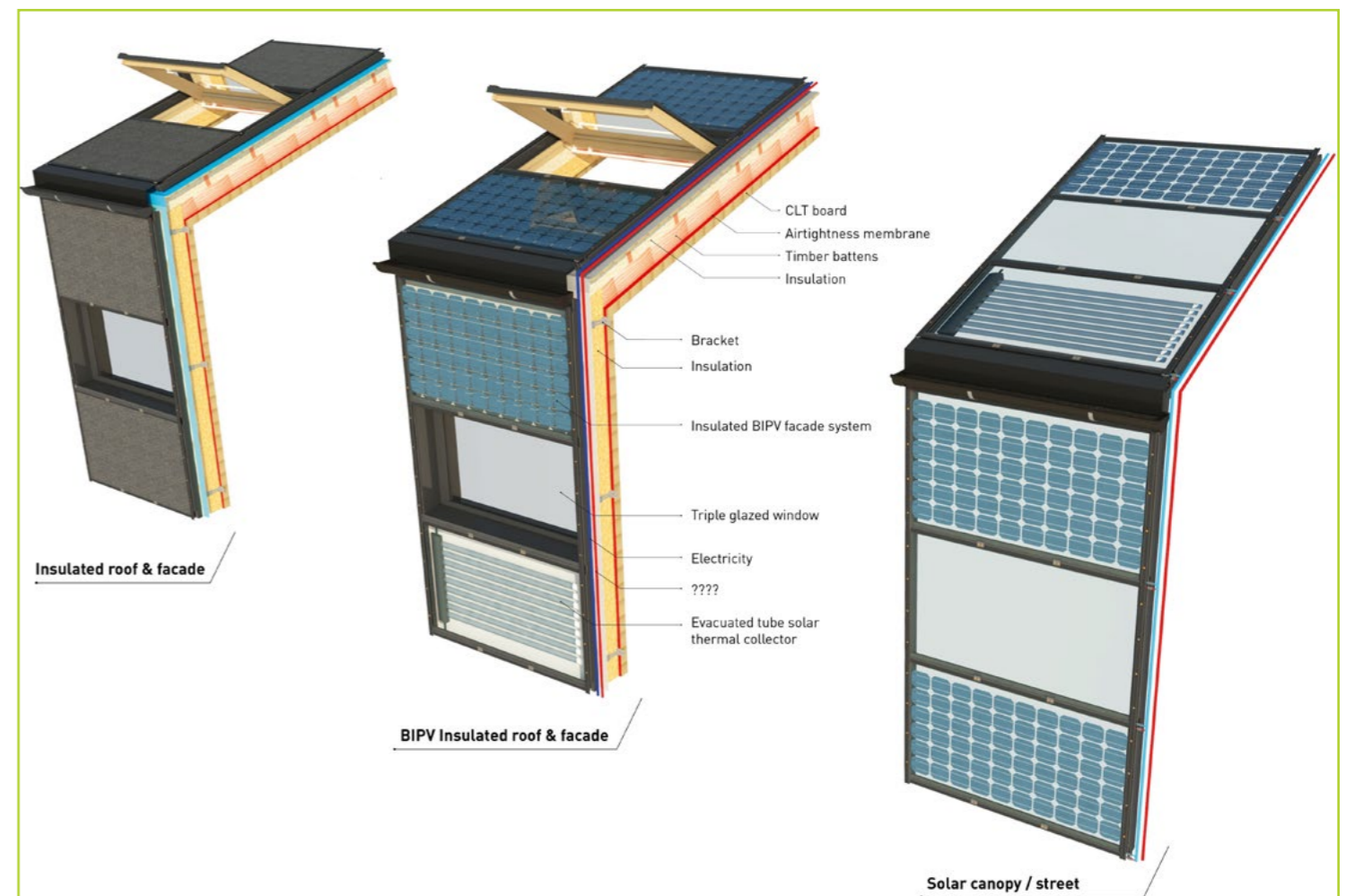
There is no need to purchase additional cladding to make a building watertight. The omitted cost of conventional cladding can then be used to subsidise the solar installation often achieving 5 to 7 year paybacks. The solar panels are TUV certified and 445 watt peak / glass slate minimizing the number of waterproof snap fit wiring connectors needed for large installations. This is far more reliable and easy to maintain than the multiple electrical connections required by conventional smaller solar slates. The glass panels can be both installed and replaced externally enabling easy replacement if damaged.

The ZEDroof replaces the need for conventional waterproof roofs and rainscreen cladding systems, by mounting a glass / glass laminate monocrystalline photovoltaic toughened glass sheet into a fully gasketed powder coated aluminium framing system that can be mounted either vertically or pitched at 25 degrees or higher.

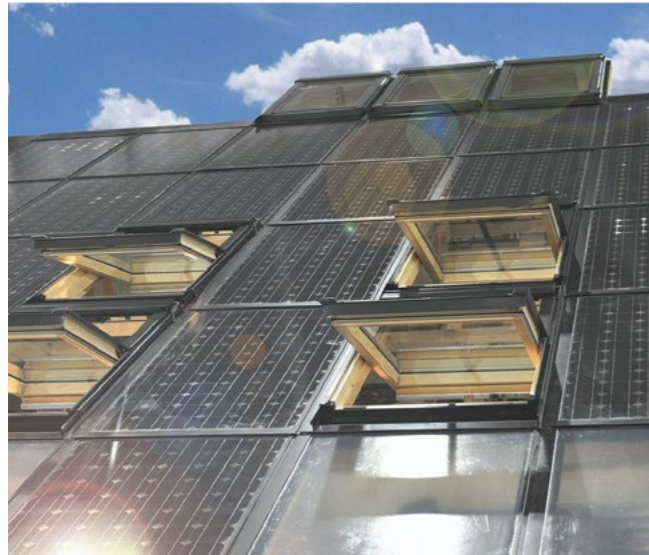
The glass / glass laminate looks good from below and allows daylight between the silicon wafers sandwiched inside the toughened glass panel. This provides a dappled light with around 6 % daylight transmission when required, or if an insulated panel is necessary – an opaque black interlayer is introduced behind the silicon wafers that blocks all light transmission.

A ventilated cavity prevents the photovoltaics from overheating when backed by insulation, with condensation caught by a conventional breathing sarking membrane such as Tyvek or perforated multifoil. In its translucent mode – the ZEDroof can be mounted on low embodied CO2 glulam beams and span over arcades, streets or atriums. In its opaque mode – the panels can be used as roofing or cladding.

Clear glass panels, opening rooflights and thermally broken triple glazed windows and doors are also available manufactured to the same size as the 445 watt solar glass panels, allowing the cladding and roofing system to cover all inclined south facing walls and roof surfaces. This enables the south'ish facing building envelope to generate substantial amounts of solar electricity at different times of day and season, with a long life and little maintenance required.



ZEDroof is composed of fully interchangeable modular photovoltaic components, including PV photovoltaic modules, fixed skylights, and operable skylights, which can be flexibly adjusted and repositioned based on the functions underneath the roof. The semi-transparent Tedlar-backed photovoltaic modules allow natural light to penetrate the space below, creating a beautiful and practical greenhouse effect on the roof.





Assembly Details



BRE Weather Test



BRE Weather Test



Internal View



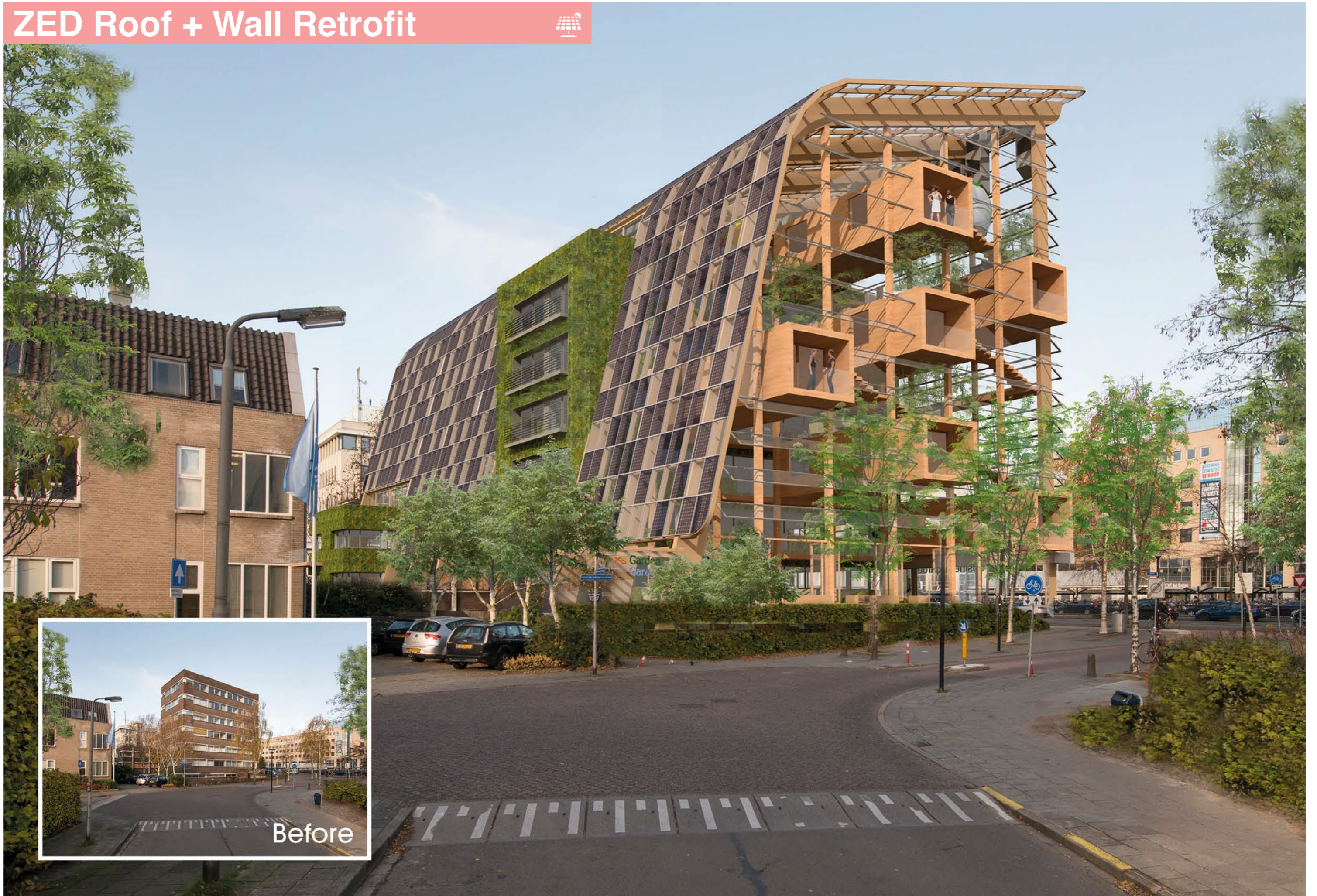
Balcony View

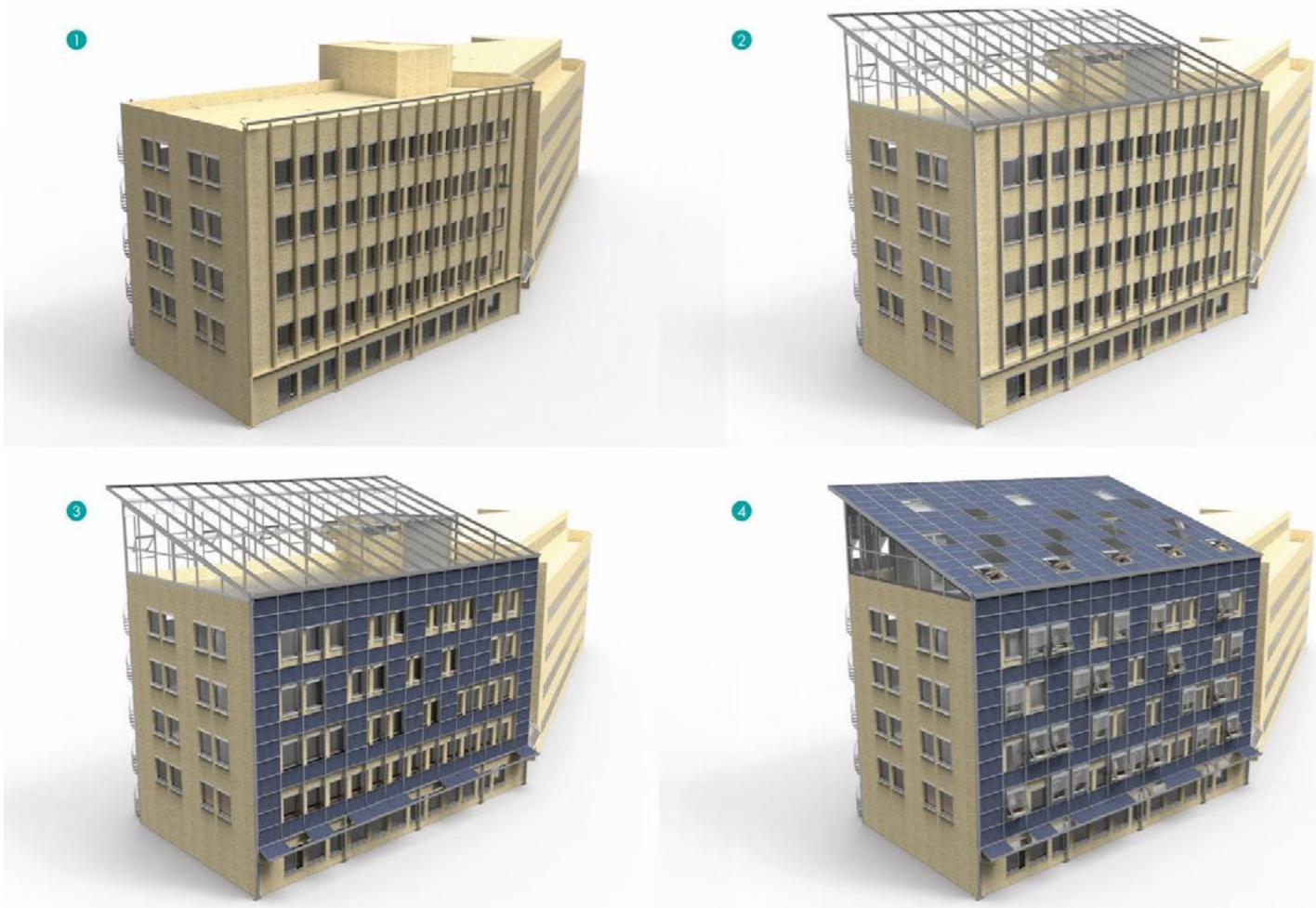


Solar Loft



ZED Roof + Wall Retrofit

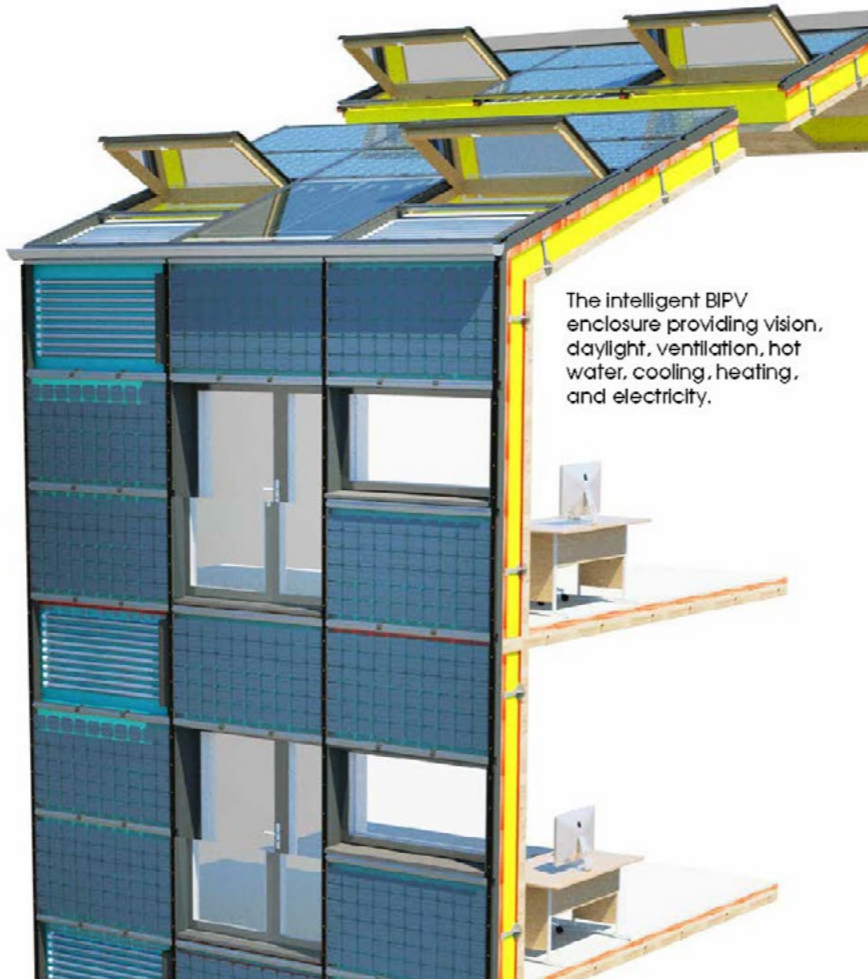




The BIPV rainscreen and translucent roofing system can be retrofitted over existing buildings. This retains the embodied carbon retained within their structural frames and enables improved airtightness and external insulation to be added at the same time as generating much if not all of their annual electric requirements.

Hot water generating panels can be integrated behind the BIPV to generate heat using an evaporator plate heat pump with no additional façade area needed.

If the existing building has flat roofs – these can be turned into wintergardens and the volume between the translucent solar envelope and the existing structure can become useful unheated seasonal amenity space.



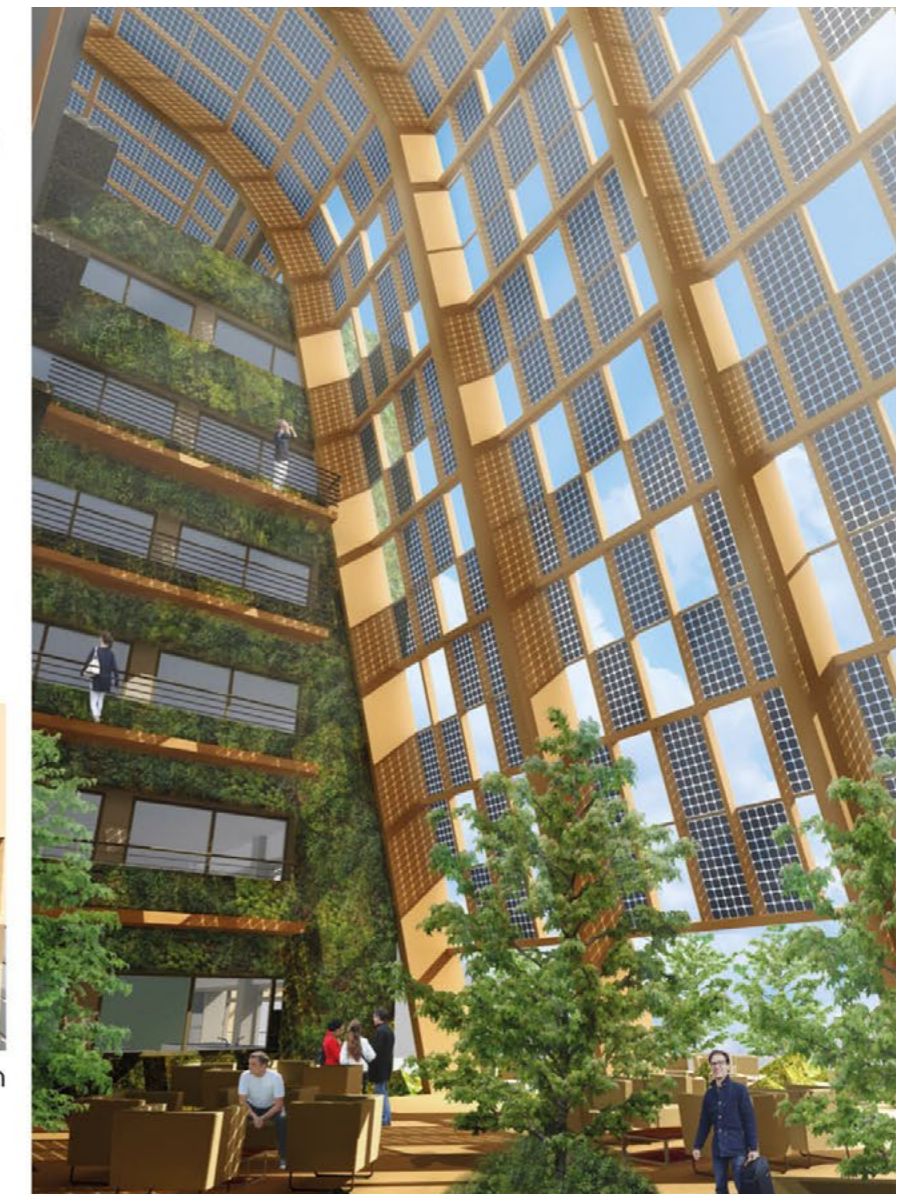
A Building Integrated PhotoVoltaic (BIPV) system of glass on glass PV solar panels that are fitted on an interlocking weatherproof framework to provide a secure and effective rainscreen cladding system, which can be fitted on both vertical (façade) and inclined (roof) surfaces, generating electricity from both surfaces. Patents have been applied for as regards the mounting systems for both the façade and roof surfaces.

Insulation materials — non-flammable mineral wool — can be installed between the inner building surface and the external solar panels to improve building thermal performance. These opaque materials in the wall build up would preclude the possibility of allowing light to enter the building, whereas the panels have transparent spaces in between the cells that would allow sunlight to penetrate the building (with about 7.5% daylight transmission) if desired. The solar electric panels can be mixed with clear glass panels to increase light penetration to the level required for such features as canopies, conservatories, passages or stairways.

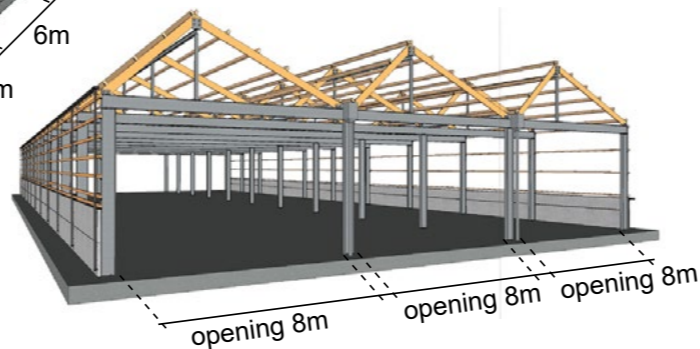
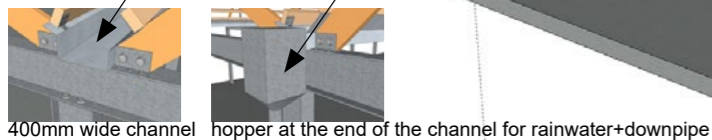
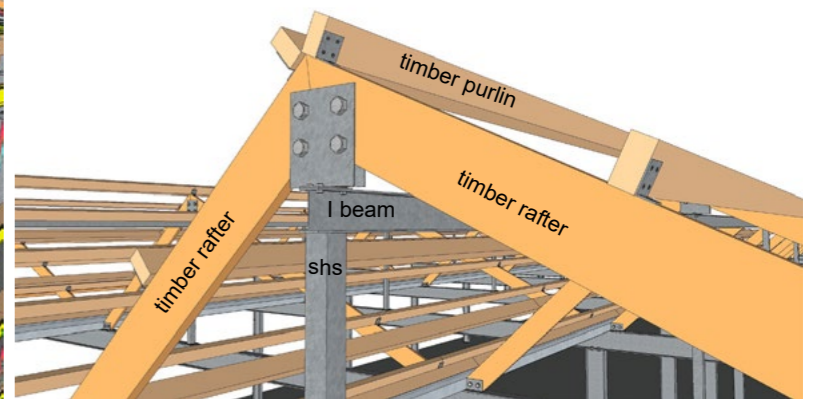
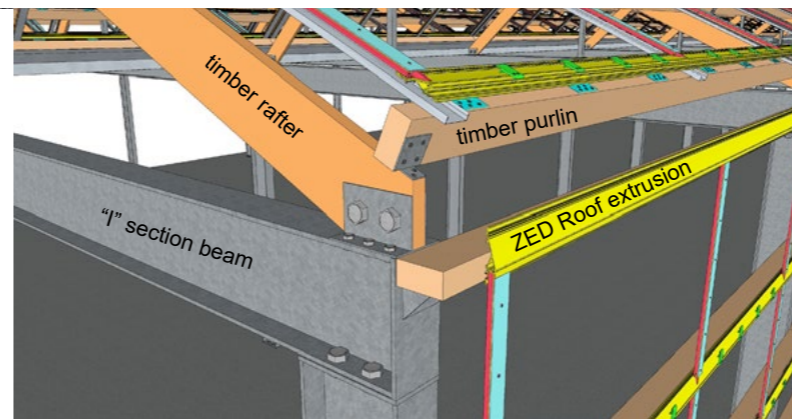
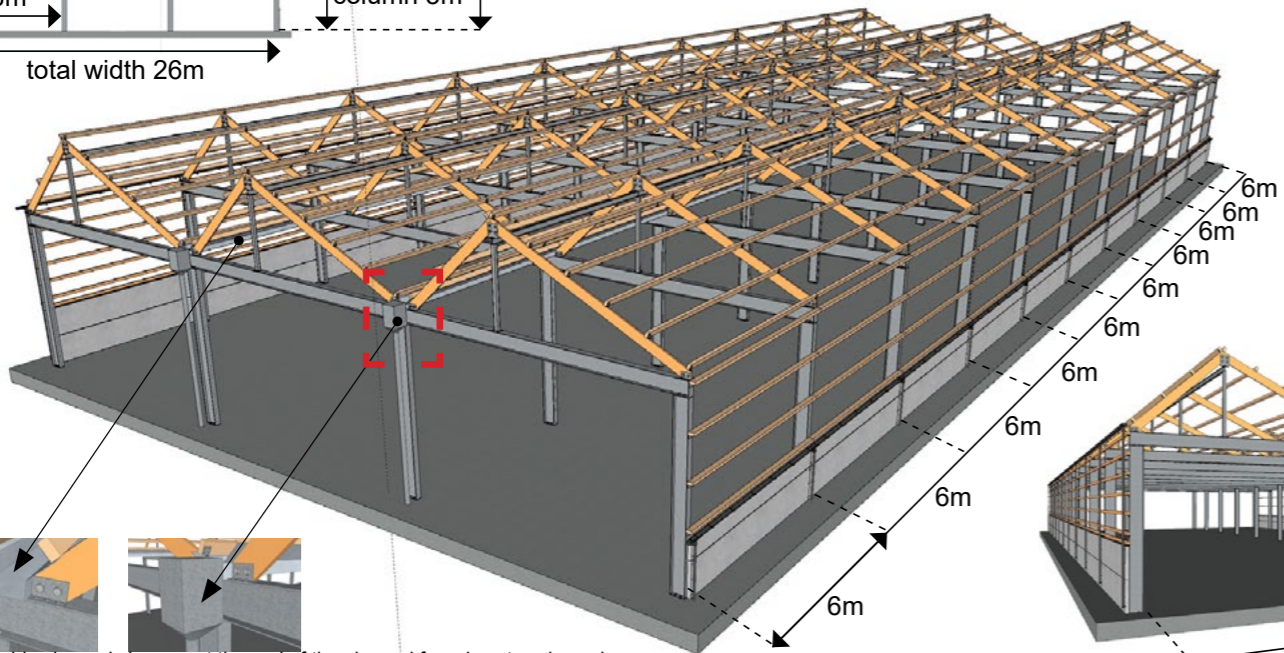
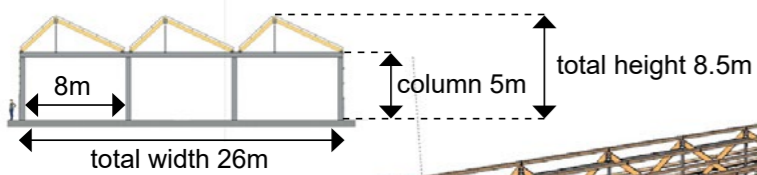
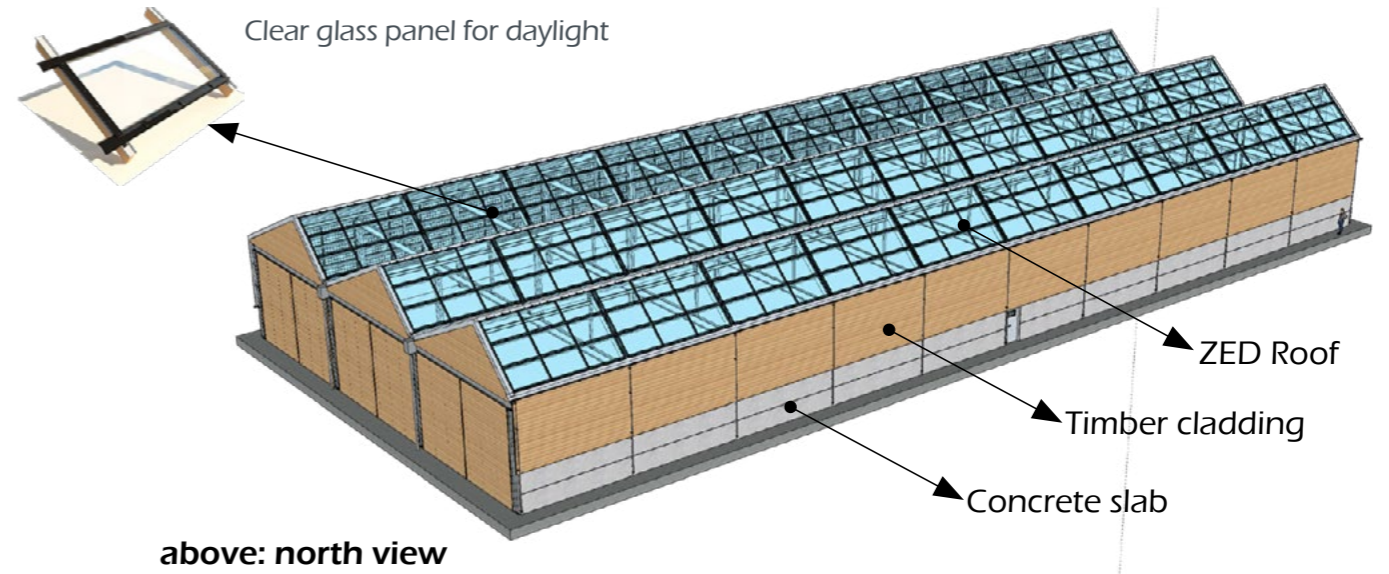
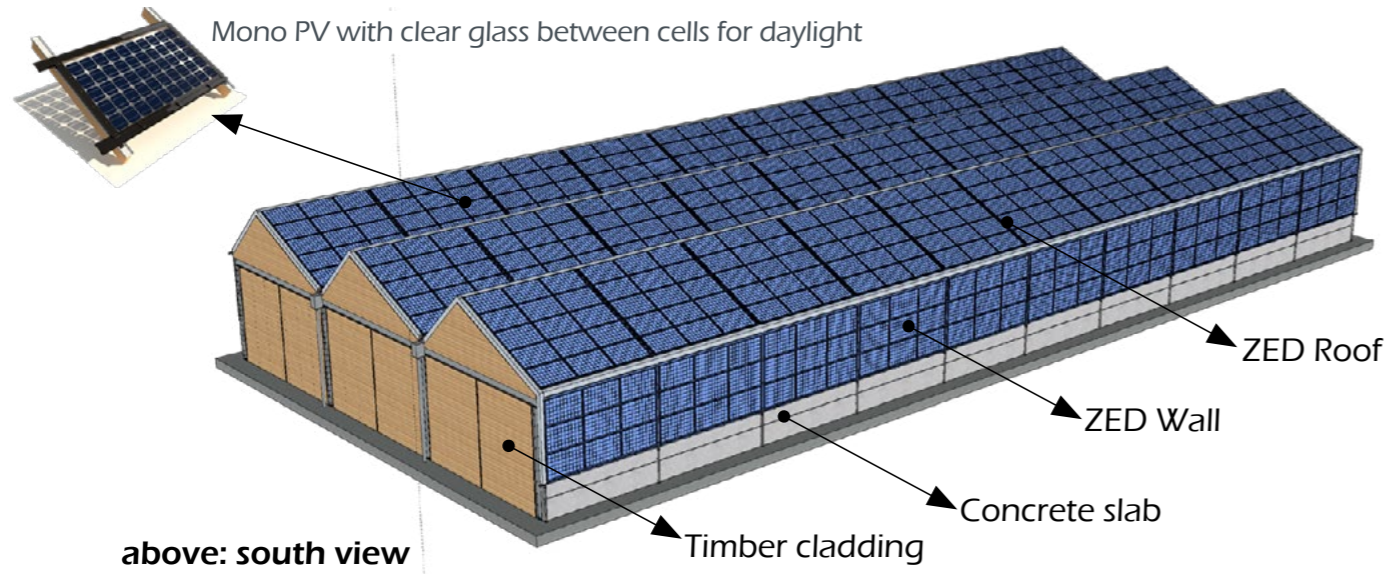
The intelligent BIPV enclosure providing vision, daylight, ventilation, hot water, cooling, heating, and electricity.



Work in a garden



ZED Solar Barn Structure



ZED CNC structural system 1



Pop-up assembly line

The ZED micro homes are designed with extensive glazed elevations and balcony decks that connect the interiors to the surrounding landscape without looking at neighbours. This enables hamlets to be planned that look out over shared communal landscape, and not simply at each other, as is common in many park type developments.

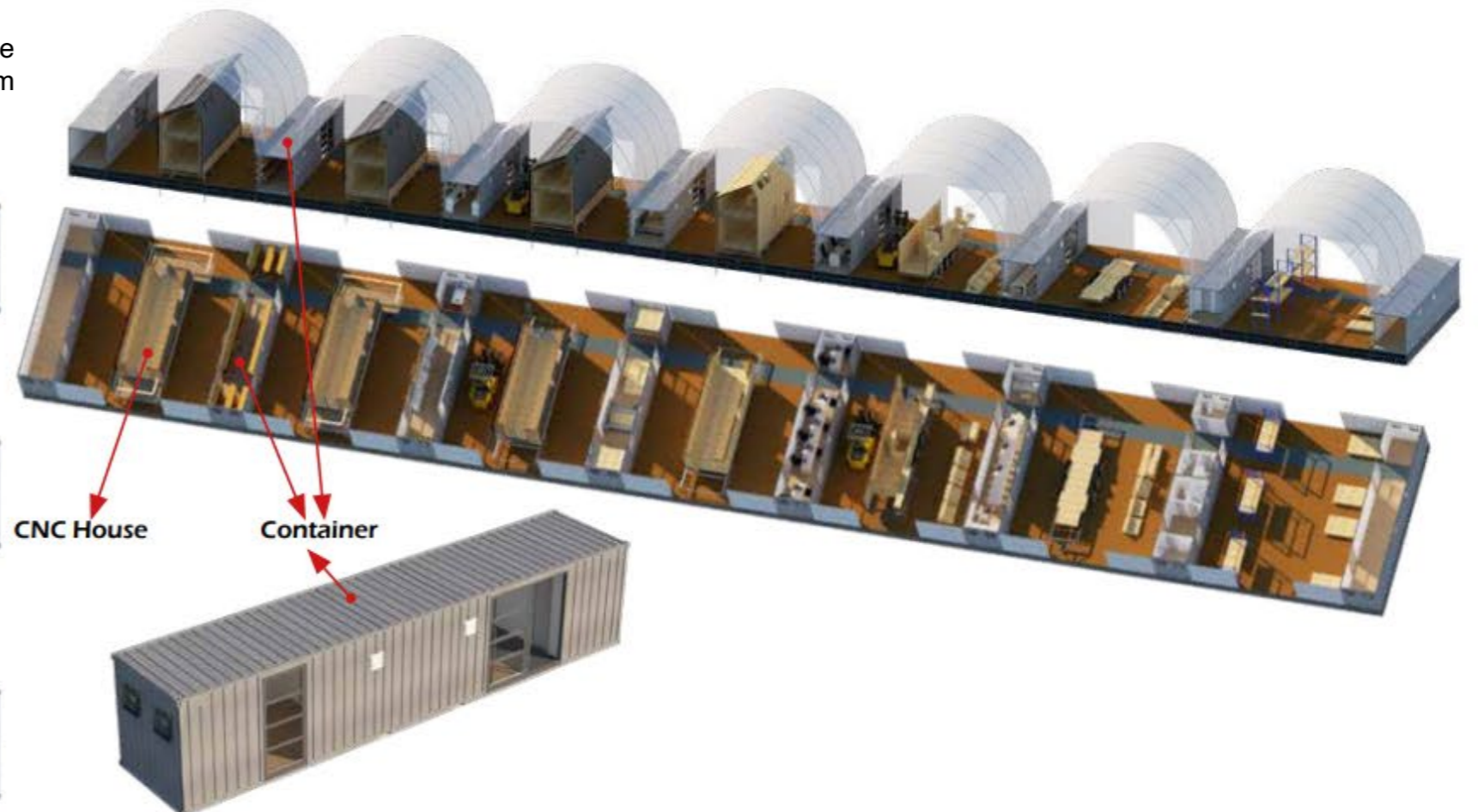
The materials are always natural and designed to weather without requiring high maintenance and without standing out in the host landscape.

Parking bays with electric vehicle charging points can provide residents with silent zero emissions personal transport facilitating a low environmental impact lifestyle at a far lower cost than conventional development. These homes are more energy efficient than almost any permanent building regs compliant housing, and have more integrated renewable energy systems and storage providing a lower carbon footprint at a far lower capital cost than conventional housing.

They are delivered by trailer, jacked up to the correct height on site and the trailer is removed for reuse. Mini-piles resist wind uplift and provide permanent foundations on most sites. A unique folding roof system enables the solar harvesting roofs to arrive flat for transport and tilt upwards on reaching the desired plot.

The homes can be removed from the host landscape easily and leave no trace of their installation if required by the landowner or local authority. If grid connected each home represents a 8.9 kw solar array, enabling 44 homes to become a 0.39 Megawatt solar farm, capable of providing surplus power and energy resilience to adjoining rural communities or infrastructure systems.

The low embodied CO2 of the initial construction plus the longevity of the materials plus the ability to displace the carbon content of conventional grid energy over a 60 year minimum life results in a unique affordable climate neutral solution for leisure / holidays



ZED Earth Sheltered Building



The amenity building has been placed parallel to the A3 so that its form provides a natural acoustic screen. The use of earth sheltered linear mounds to attenuate traffic noise is an established landscape tool. This building ramps down to the existing field at each end to allow pedestrian and cycle access and to enable the upper surfaces to provide green open space, and landscaped parkland with walkways and a mountain bike cycle track.

Hot dip galvanised steel plate arches create vaulted voids within a linear earthform. This technique is used by gov agencies when building roads over rivers or streams and has an extremely long service life – meeting the criteria for a long life structure. A folded geotextile provides steep earthen banks that will be entirely covered by meadowgrass and wildflowers – in much the same way as any local sunken historic country lane in this part of the National Park. The contoured earthforms make reference to the snaking iron age ramparts and causeways found on hillsides within the National Park. Butser had an inhabited model iron age village on its northern flank a few hundred metres away from this site in a more elevated position for many years. The deep soil pockets between vaults enable substantial root zones for major trees and shrubs which can be irrigated to ensure survival in the hot summers expected as the climate changes.

The minor excavation topsoil and chalk rubble required to create the roadway and charging bays is re-used to create the infill for the earth sheltered mound. No material need be taken off site, and 95 % of the volume of the new building is material already found on the site. It is hard to see how this building could be more integrated with the landscape. The grassy mound retaining wall system is a well defined and well proven engineered landscape construction detail, and creates steep sided grassy banks very similar to those found in sunken country lanes within the National Park.

The charging bays have been laid out to run parallel to the existing A3 embankment and are screened by the existing A3 roadway. The earth sheltered building in turn screens the charging bays and roadway from the wildflower meadow created in the centre of the site. The charging bays have porous surfaces from block paving designed to absorb surface water run off as part of the site wide SUDS strategy. Clumps of trees and shrubs break up parking bays to increase habitat and provide a green visual focus.





The earth sheltered building is perforated by a roundabout.

This enables visitors to the charging and amenities to turn around and leave the site without entering into the residential quarters. All the CHP plant is located inside the roundabout.

Timber bridges connect the upper surface of the roundabout with the adjoining earth sheltered building flanks, providing continuity of the upper parkland trails, and a viewing point through a flat glass table into the fuel cell chamber. All vaults are connected internally to allow visitors to move freely between spaces

All vaults are designed with glazed oval screens to provide an attractive window to the charging bays and an open plan layout will provide a clear view across to the wildflower meadow. Small undulating paved and decked areas accessed from sliding / folding glazed doors provide outdoor seating for a café and farmshop

The vaults are insulated and lined with chestnut boards sourced from within the national park. The interior feel will be similar to a traditional oak barrel or longship.

An undulating glazed balustrade of toughened glass provides both restraint and acoustic attenuation – effectively increasing the height of the earth sheltered building. The glass will be non reflective and designed to be easily cleaned with an extended powerlance hose from ground level.



above: Mezzanine Floor View of the earth sheltered build-



above: Ground Floor View of the earth sheltered building



ZED Prefabricated Homes

1

Space Standards

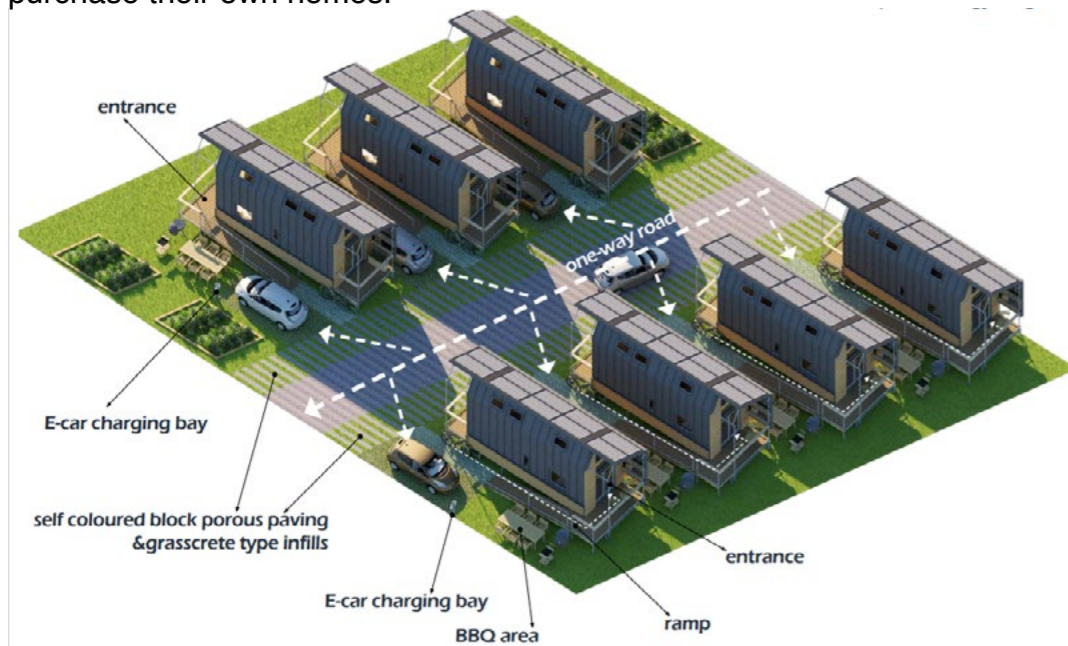
The ZED Space Standards Compliant Prefabricated Homes are designed with extensive glazed elevations and balcony decks that connect the interiors to the surrounding landscape without looking at neighbours. This enables hamlets to be planned that look out over shared communal landscape, and not simply at each other, as is common in many park type developments.

The materials are always natural and designed to weather without requiring high maintenance – and without standing out in the host landscape. Parking bays with electric vehicle charging points can provide residents with silent zero emissions personal transport – facilitating a low environmental impact lifestyle at a far lower cost than conventional development.

These homes are more energy efficient than almost any permanent building regs compliant housing, and have more integrated renewable energy systems and storage – providing a lower carbon footprint at a far lower capital cost than conventional housing. They are delivered by trailer, jacked up to the correct height on site and the trailer is removed for re – use. Mini-piles resist wind uplift and provide permanent foundations on most sites.

A unique folding roof system enables the solar harvesting roofs to arrive flat for transport and tilt upwards on reaching the desired plot. The homes can be removed from the host landscape easily and leave no trace of their installation if required by the landowner or local authority. If grid connected each home represents a 10.5 kw solar array, enabling 50 homes to become a 0.5 Megawatt solar farm, capable of providing surplus power and energy resilience to adjoining rural communities or infrastructure systems.

The low embodied CO2 of the initial construction plus the longevity of the materials plus the ability to displace the carbon content of conventional grid energy over a 60 year minimum life – results in a unique affordable climate neutral housing solution for both leisure / holidays and young people unable to purchase their own homes.



ZED Prefabricated Homes

1



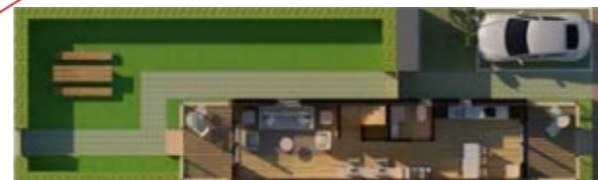
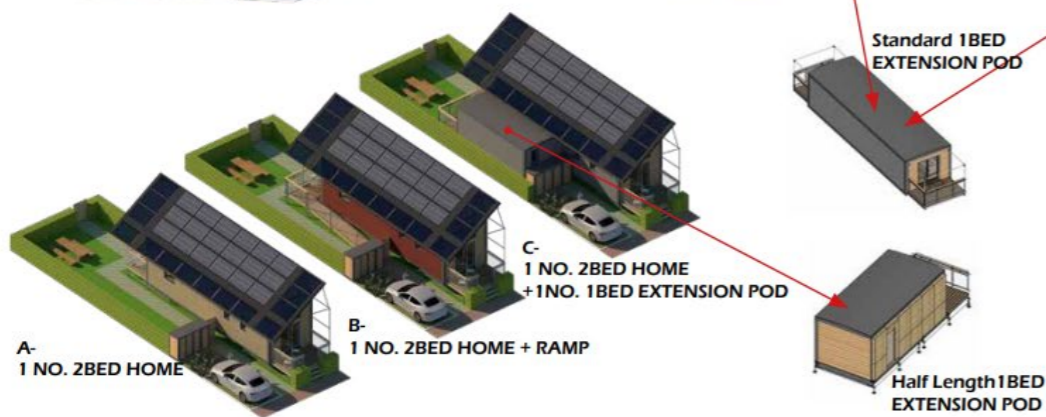
Off site Space Standards Compliant Prefabricated Homes by ZEDpower:

- Delivered by trailer, which is withdrawn for re-use
- Erected and commissioned in days
- Off grid capable, needing only fresh water supply, but with mains drainage and grid connect options
- Re-locateable with near zero waste
- Fully net zero, superinsulated and powered by renewable energy



A two bed home can be both ground mounted and raised above parking with options to add a single bed unit sharing the same staircase to increase density where required.

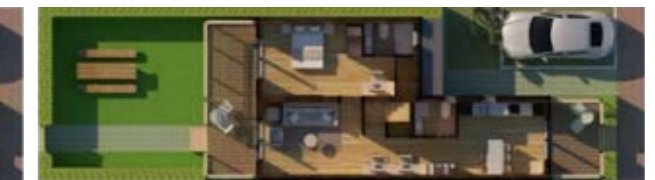
As well as stacking vertically above a single floor apartment, It is also possible to add an extra room horizontally – filling the gap between the maisonettes.



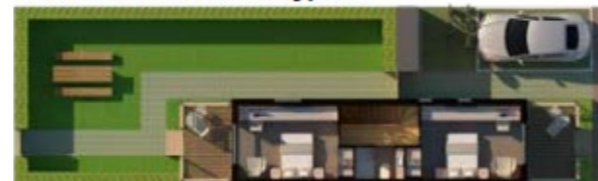
Ground Floor Plan of Type A



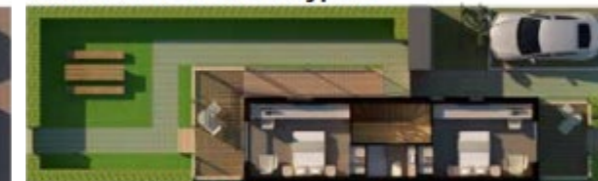
Ground Floor Plan of Type B



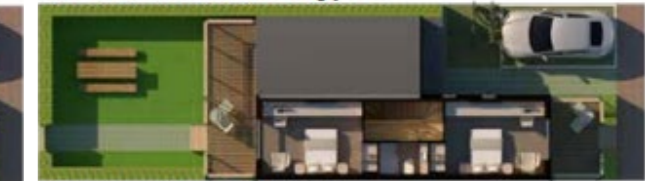
Ground Floor Plan of Type C



First Floor Plan of Type A



First Floor Plan of Type B



First Floor Plan of Type C

ZED Eco Lodges



If grid connected each home represents a 10.5 kw solar array, enabling 50 homes to become a 0.5 Megawatt solar farm, capable of providing surplus power and energy resilience to adjoining rural communities or infrastructure systems.

The low embodied CO2 of the initial construction plus the longevity of the materials plus the ability to displace the carbon content of conventional grid energy over a 60 year minimum life – results in a unique affordable climate neutral housing solution for both leisure / holidays and young people unable to purchase their own homes.



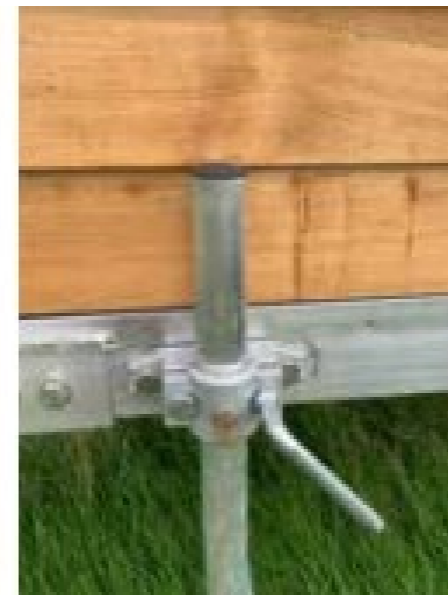
Batteries



Hot water system



Bathroom



Jackleg



Big windows with views



Living room



Dining room



Bedroom



The ZED Eco Lodges are designed with extensive glazed elevations and balcony decks that connect the interiors to the surrounding landscape without looking at neighbours.

This enables hamlets to be planned that look out over shared communal landscape, and not simply at each other, as is common in many park type developments.

The materials are always natural and designed to weather without requiring high maintenance and without standing out in the host landscape.

Parking bays with electric vehicle charging points can provide residents with silent zero emissions personal transport facilitating a low environmental impact lifestyle at a far lower cost than conventional development.

These lodges are more energy efficient than almost any permanent building regs compliant housing, and have more integrated renewable energy systems and storage providing a lower carbon footprint at a far lower capital cost than conventional housing.

They are delivered by trailer, jacked up to the correct height on site and the trailer is removed for re use. Mini-piles resist wind uplift and provide permanent foundations on most sites.

A unique folding roof system enables the solar harvesting roofs to arrive flat for transport and tilt upwards on reaching the desired plot. The homes can be removed from the host landscape easily and leave no trace of their installation if required.



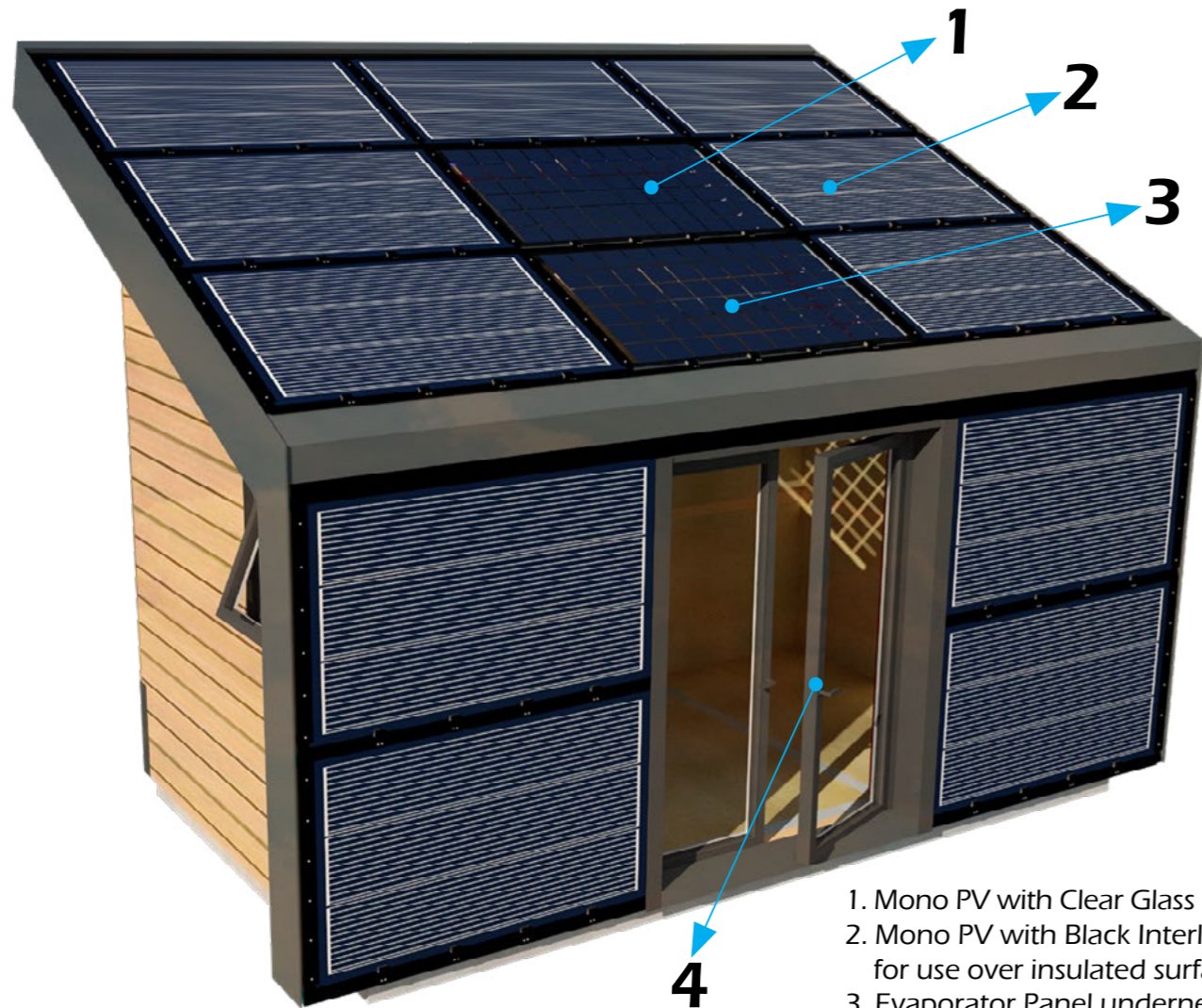


ZED Garden Pavilion

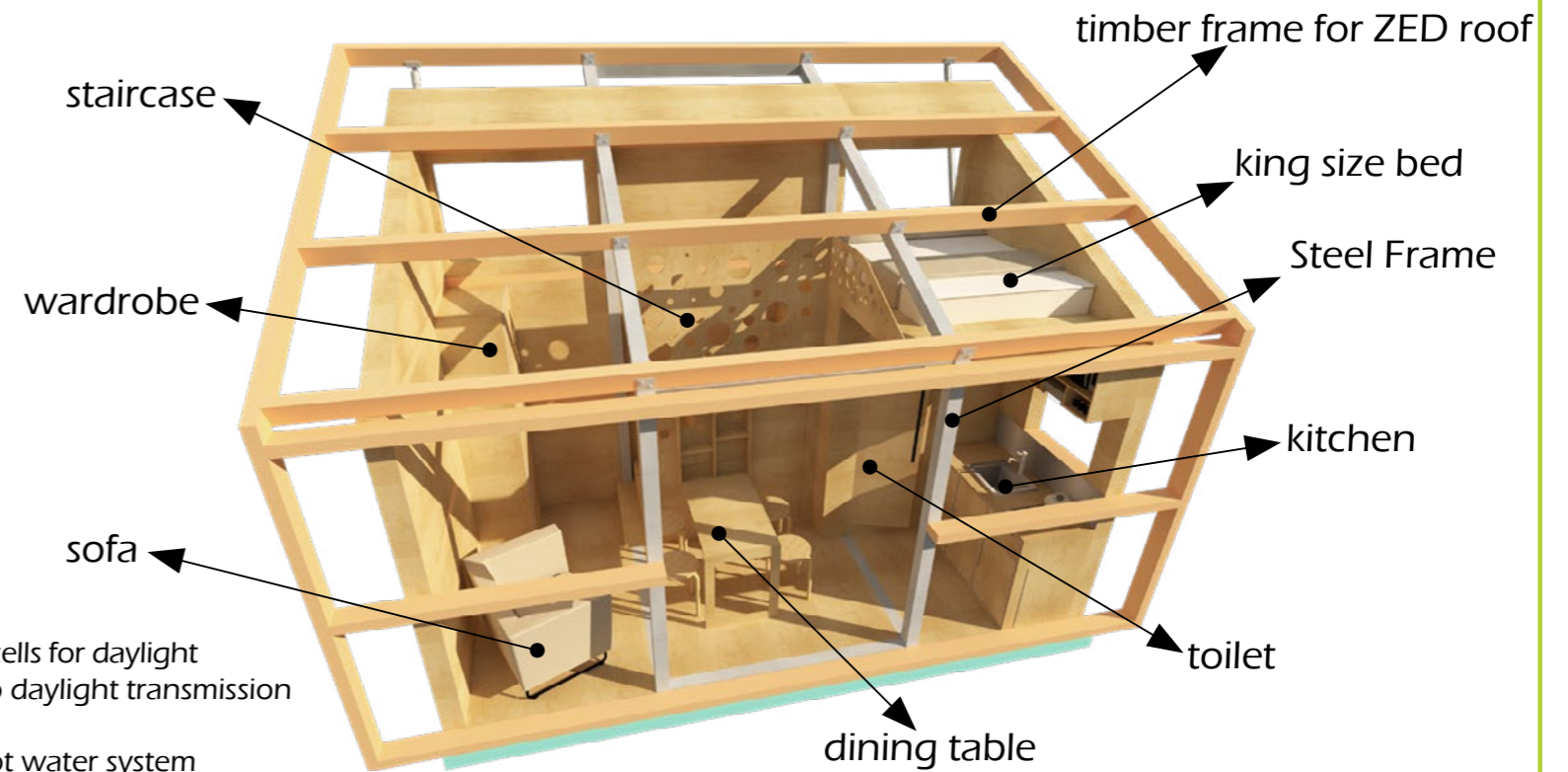


Option 1:

with south patio door
 9 inclined panels (at 25degrees)
 + 4 vertical panels = 13 panles @ 445Wp
 making 5785 watts peak



1. Mono PV with Clear Glass between cells for daylight
2. Mono PV with Black Interlayer so no daylight transmission for use over insulated surfaces
3. Evaporator Panel underneath for hot water system
4. Triple Glazed Rationel Door Panel

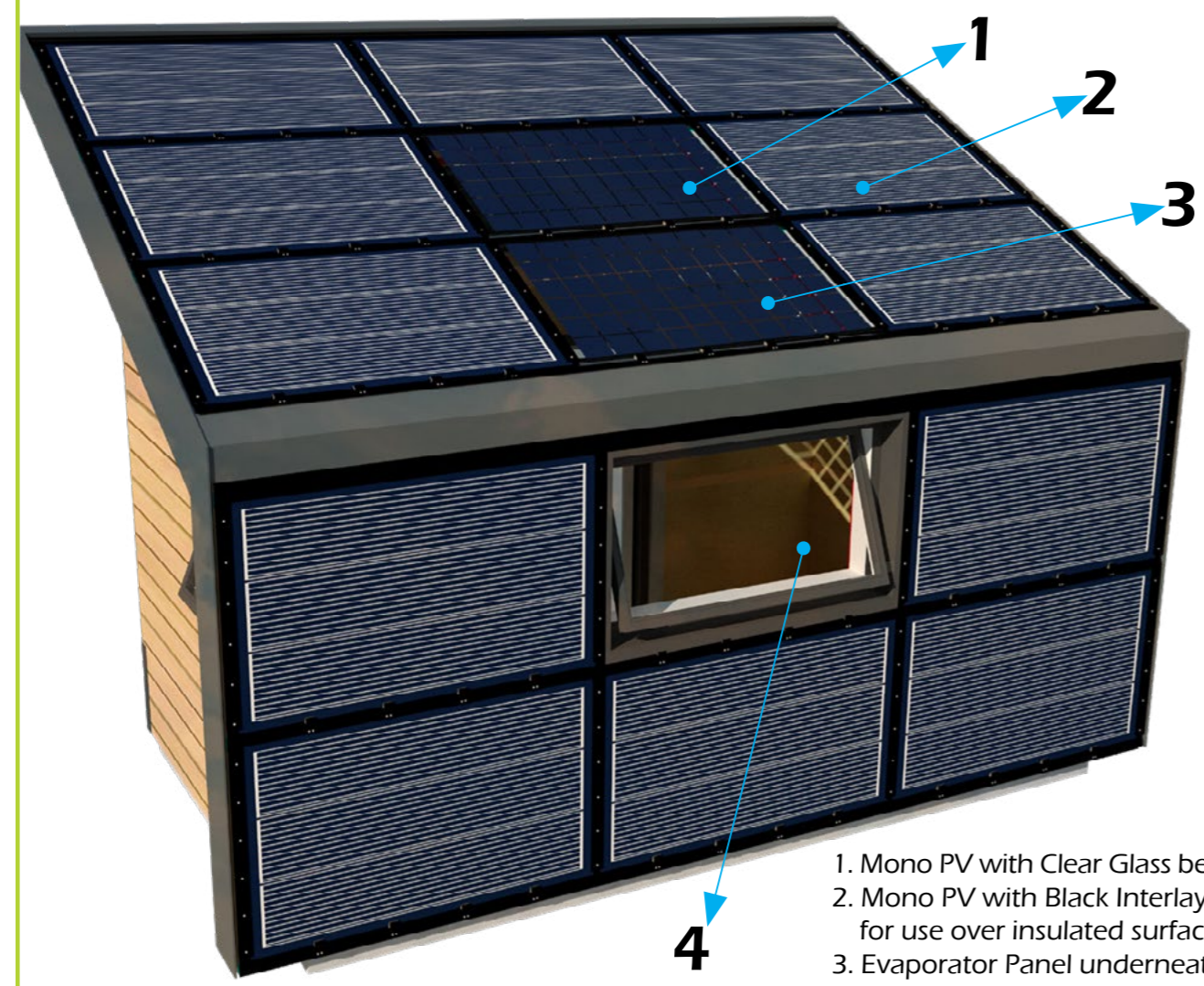


Option 1:

with north patio door
 9 inclined panels (at 25degrees)
 + 5 vertical panels = 14 panles @ 445Wp
 making 6230 watts peak

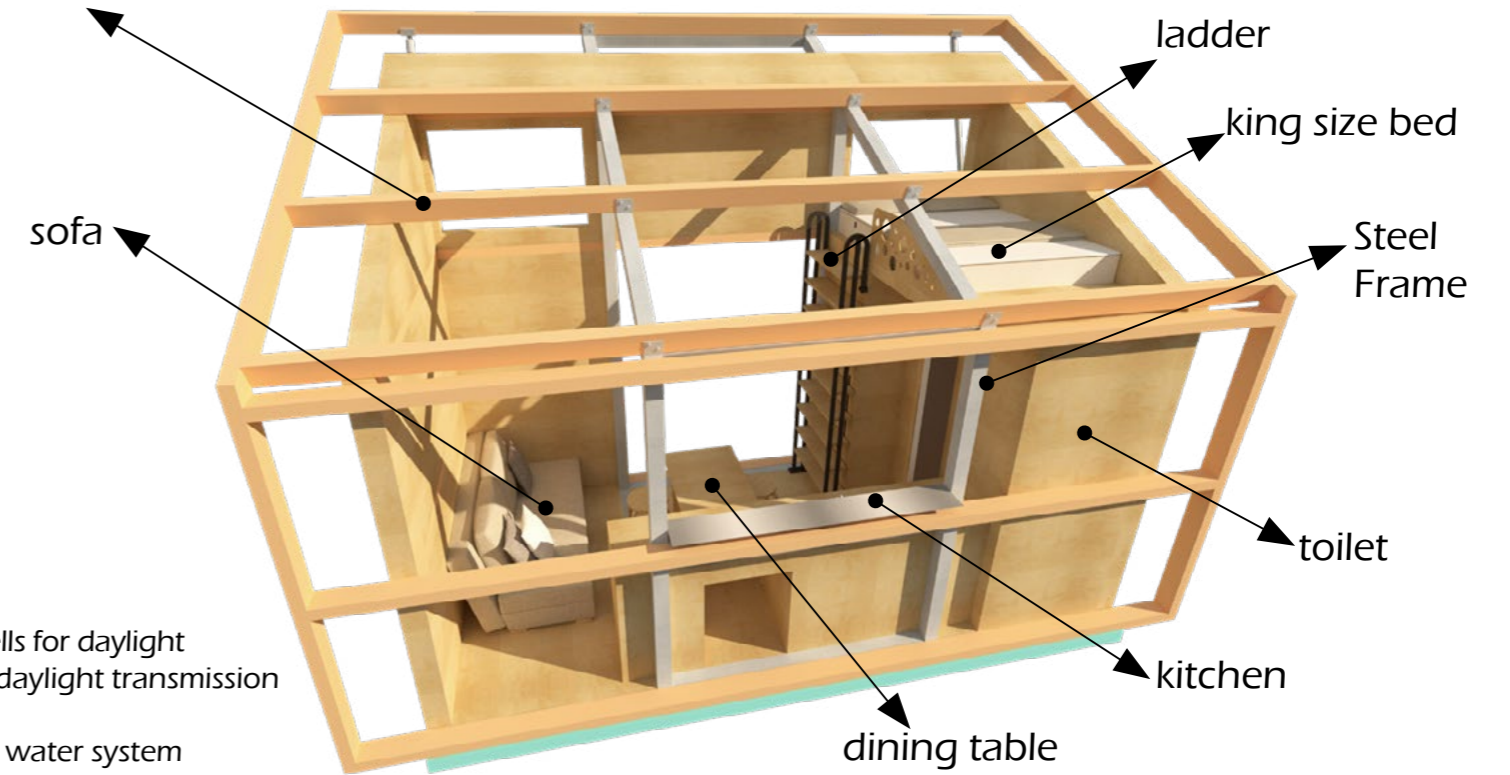


above: Interior view(option2)



1. Mono PV with Clear Glass between cells for daylight
2. Mono PV with Black Interlayer so no daylight transmission for use over insulated surfaces
3. Evaporator Panel underneath for hot water system
4. Triple Glazed Rational Window Panel

timber frame for ZED roof



ZED Net Zero Community Masterplanning



The ZED Eco Village at Gurnard Pines will be the first of a new generation of net-zero holiday destinations in the UK. The plan is to retain the extensive meadow at the heart of the site, and almost all of the existing mature woodland.

The 36 zero-carbon holiday lodges will all be two bedrooms, a number of them paired with communal decks to allow for groups and families. Two small single-storey apartments are proposed within the café / bar hub one for a caretaker and one for rental. Each net zero home has its own dedicated electric car recharging bay and two outdoor sheltered decks for dining and relaxation. Different roof pitches will be developed to ensure that the building's integrated renewable solar harvesting is optimised where possible. All homes look towards a central wildflower meadow with a reed-bounded natural swimming pond and boardwalk leading to a sunbathing island.

The site is screened by mature trees and woodland and is hidden from public roads and the existing Gurnard Pines holiday resort. A café / bar / restaurant selling locally sourced food, craft ale and good coffee / bakery will act as a social focus and is proposed to sit at the top of the site nearest the top road entrance with distant views of the sea. A communal wingboard pool with a rescue rib / trailer and a communal electric fourwheel drive is proposed to tow the boards to the Gurnard communal slipway. An EV micro-car pool built by the Jersey microcar team is being developed using the same exchangeable LTO batteries powering the cabins. A laundrette / drying room and workshop are proposed at the bottom of the site close to the existing Gurnard Pines development. The central wildflower meadow area will be retained with some areas of mown lawn for children to play. An e-bike pool will be incorporated. All homes and business buildings, e-bikes and pool vehicles will be powered by the ZED LTO exchangeable batteries charged from the solar BiPV roofs.



2-bed Eco Lodges with EV charging facilities



Electric rental vehicles parked in front of the lodges



View of central wildflower meadow area

The development will be net zero with off-grid capability and should only take power from the mains in deepest winter or at off-peak times when demand is unusually high. The development will produce more power than it needs over a typical year, and although the majority will be for self-consumption - there could be periods during the summer when it is appropriate to export to the grid or to Gurnard Pines existing village. The carbon credits earned by exporting electricity will be used to offset the embodied CO2 of the original construction over the project life. We can offer to sell these carbon credits to visiting holidaymakers, who will increasingly arrive in electric vehicles, making their journey from home climate neutral. This would be innovative and make the Eco Village an exciting, ethical and beautiful UK holiday option.



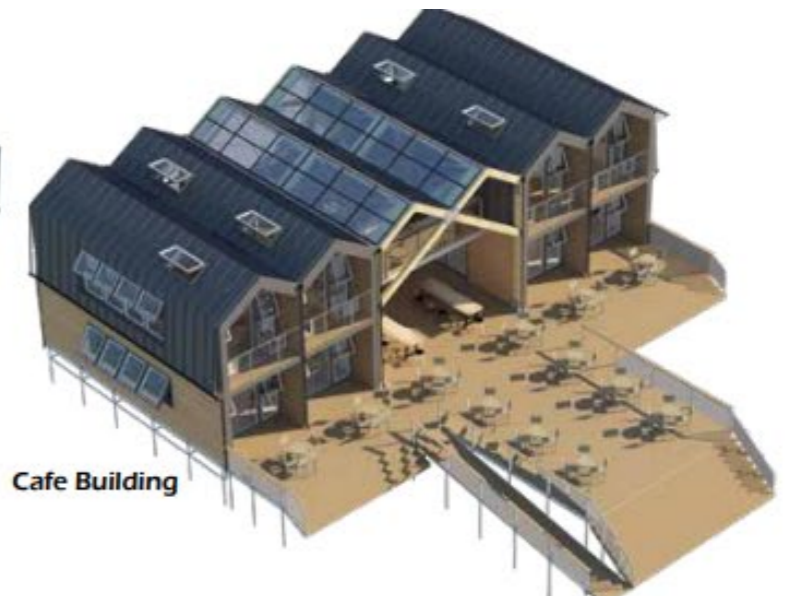
Workshop



Workshop



Cafe Building



Cafe Building



The site is located on the south western edge of Newport village, comprising 4.6 hectares of arable sown land, managed by a local farmer under a yearly renewable lease. The scheme includes 95 residential units and allows for extra retailing and a local market to be allocated. The layout is enriched by a variety of green areas ranging from private gardens to semiprivate courtyard areas to communal village greens. In addition to the substantial soft landscape to site boundaries and within the site, the scheme includes dedicated children's play spaces on the southern boundary, within a substantially planted woodland environment. The landscape proposal will include provision for a pond within the village green with substantial tree and shrub planting to the pond perimeter.

The proposal includes for the provision 0.36 hectares of land for Newport Primary School as part of the Education Contribution. Within which it is proposed to include an additional 24 car parking spaces together with the option to provide vehicular access from the residential development through to the bridal path and Frambury Lane, which currently provide access to the school and village recreational facilities. In addition to the parking facilities the additional the School Board intend to create an ecological park with substantial tree planting forming a buffer zone between the school and the new development and through which the extended pedestrian pathway will provide safe access for local schoolchildren walking to school from Newport.

“

The Trustees have planning permission for a comprehensive mixed residential zero carbon sustainable development appropriate to Newport village.

”

East west Three Story

House Information
 Orientation: East/West
 GIA: 116m²
 Bedrooms: 4

Areas
 Ground floor area: 42.5m²
 First floor area: 42.5m²
 Second floor area: 31m²



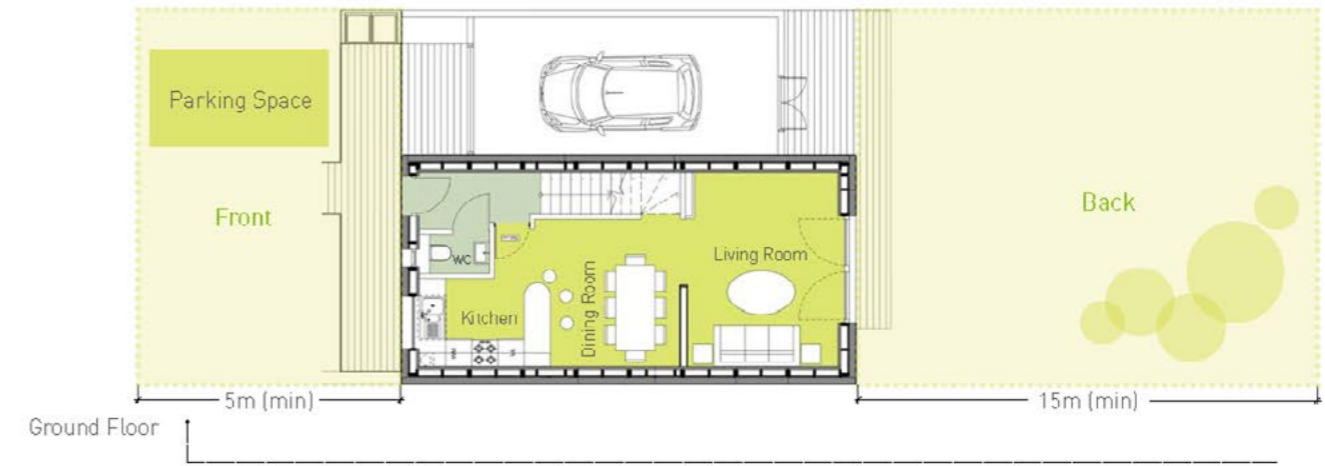
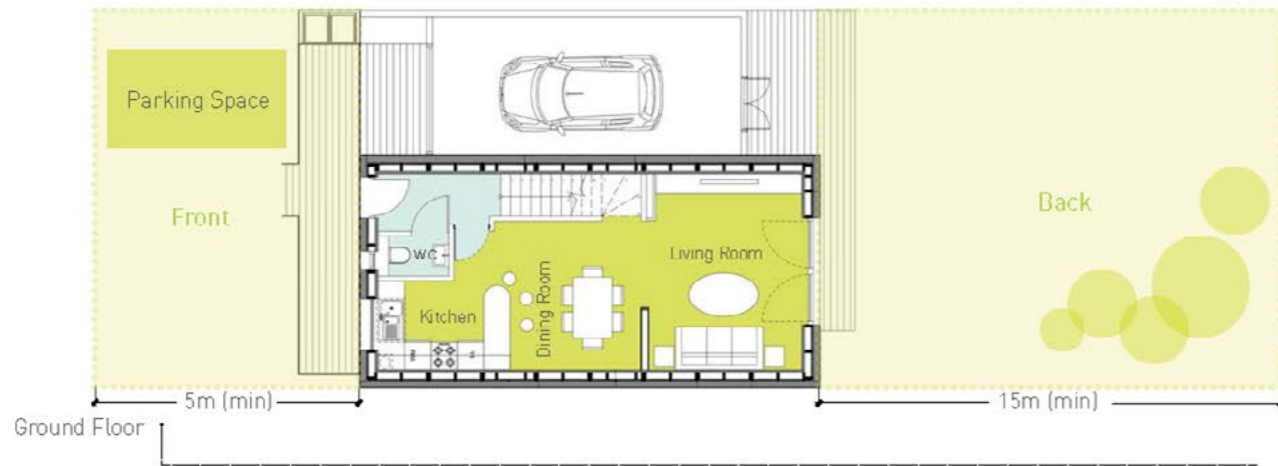
• Demonstration House at BRE Innovation Park

South facing three story



House Information
 Orientation: North/South
 GIA: 111.5 m²
 Bedrooms: 3

Areas
 Ground floor area: 42.5 m²
 First floor area: 42.5 m²
 Second floor area: 26.5 m²

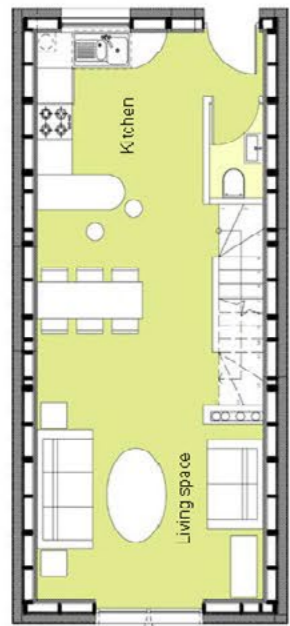


South facing two story



House Information
 Orientation: North/South
 GIA: **96.3 m²**
 Bedrooms: **3**

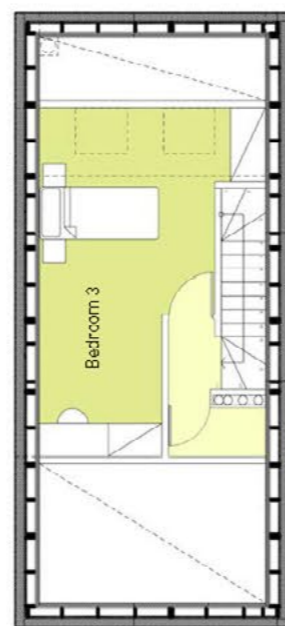
Areas
 Ground floor area: **36.8 m²**
 First floor area: **36.8 m²**
 Second floor area: **22.7 m²**



Ground Floor



First Floor



Second Floor



South Elevation



North Elevation



East Elevation



West Elevation

South facing terraced house



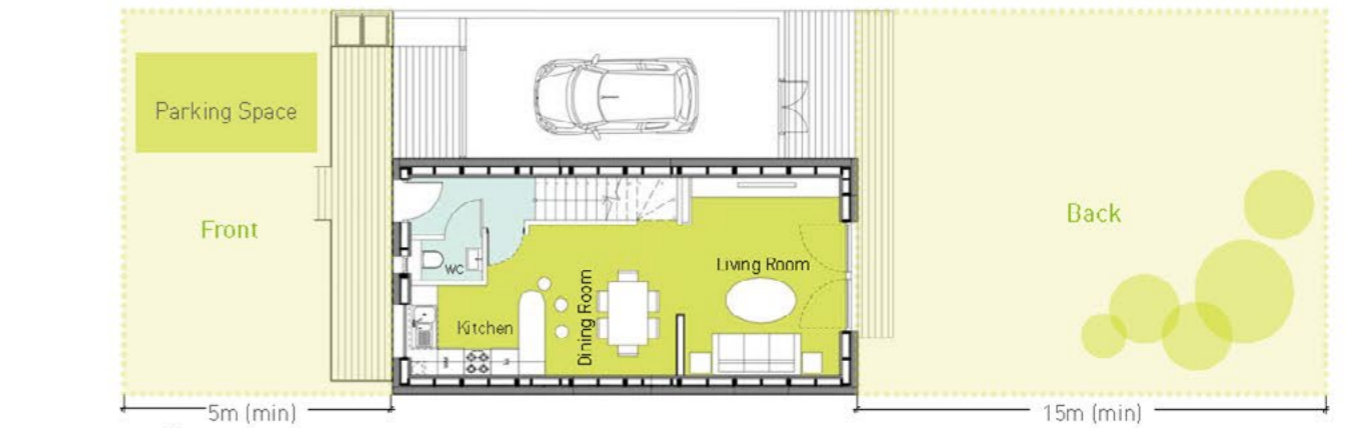
East west two story



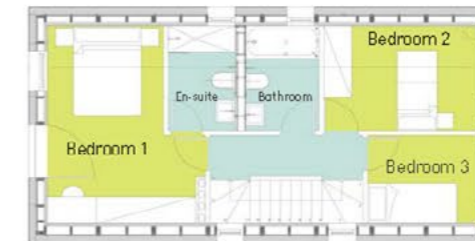
House information
 Orientation: East/West
 GIA: **85 m²**
 Bedrooms: **3**

Areas
 Ground Floor Area: **42.5 m²**
 First Floor Area: **42.5 m²**

East west terraced house



Ground Floor



First Floor



West Elevation



East Elevation



South Elevation



North Elevation

East west bungalow

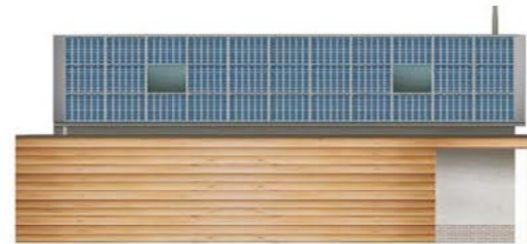


House information
 Orientation: East/West
 GIA: 70.1 m²
 Bedrooms: 2

Areas
 Ground floor area: 70.1 m²



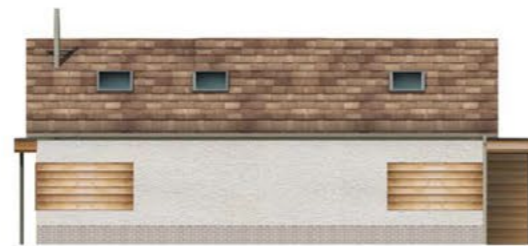
West Elevation



South Elevation



East Elevation



North Elevation



ZED Tompkins Street with C4GS



C4GS-ZEDlife has developed the mountZED Ecovillage in the heart of San Diego, CA., a sustainable living hub that redefines traditional suburban spaces.

The development offers 102 meticulously designed units, ranging from one, two, and three-bedrooms with an unwavering focus on sustainability and community-centric design.

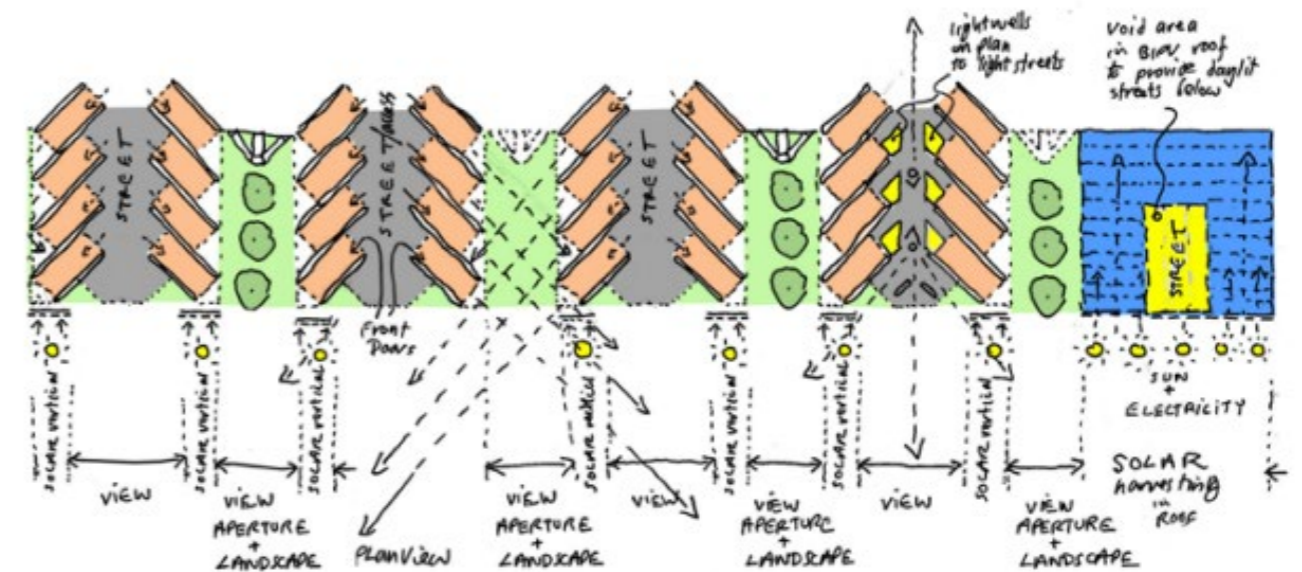
The project's key features include Solar Power Integration and a Californian Kit of Parts System™ integrating seamlessly with ZED-power's international supply chain.

The integrated solar electric canopy generates an impressive 351+ MWh annually thanks to a 1.12 MW solar system and MW scale battery storage. This practical powerhouse contributes significantly to the community's energy needs, reflecting a steadfast commitment to renewable energy. Anticipating 95% of time off the grid, residents contribute to sustainable energy practices, reducing dependence on conventional power sources and fortifying community resilience with both homes and 20,000 miles of personal transportation / household powered by solar electricity generated on site .

The mountZED Ecovillage encompasses 79,075 square feet (24,102.06 meters), and transforms a suburban area into a sustainable living hub, blending environmental responsibility with modernity.

Investors embark on a journey spanning 3 years from initial investment to completion, aligning with the project's growth, development, and eventual success over the years. As of January 26th, 2024, the mountZED Ecovillage is at a pivotal stage, offering investors an opportunity to actively contribute to and witness the ongoing evolution of a project poised to redefine urban living. With \$7M allocated for land acquisition, the project establishes a robust financial foundation.

The estimated \$65 million construction cost covers development, infrastructure, and sustainable features. The anticipated valuation of \$125M positions investors for intrinsic value and significant growth potential, aligning with the growing market demand for sustainable living solutions.





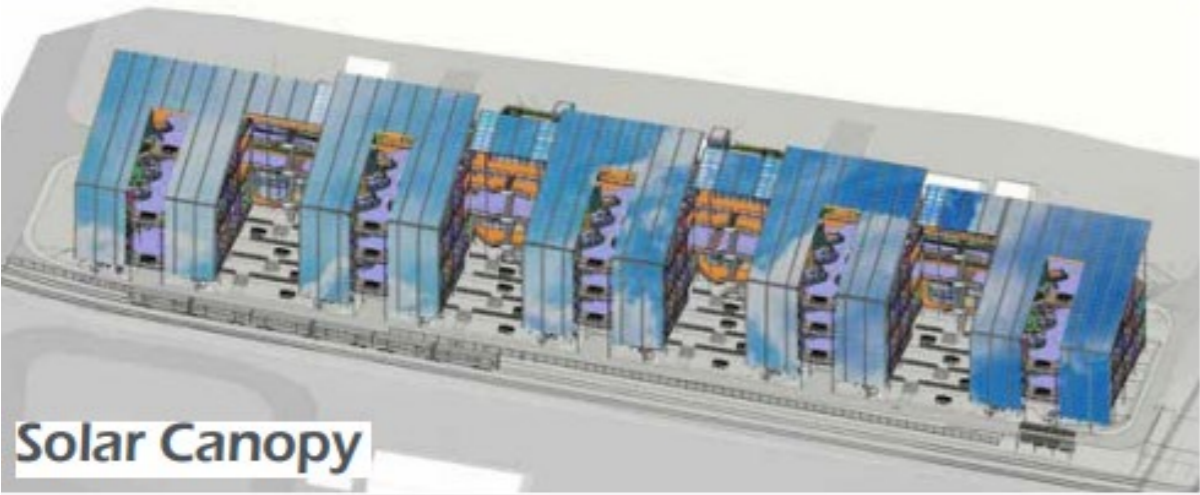
Big Car Ramps



CNC Homes



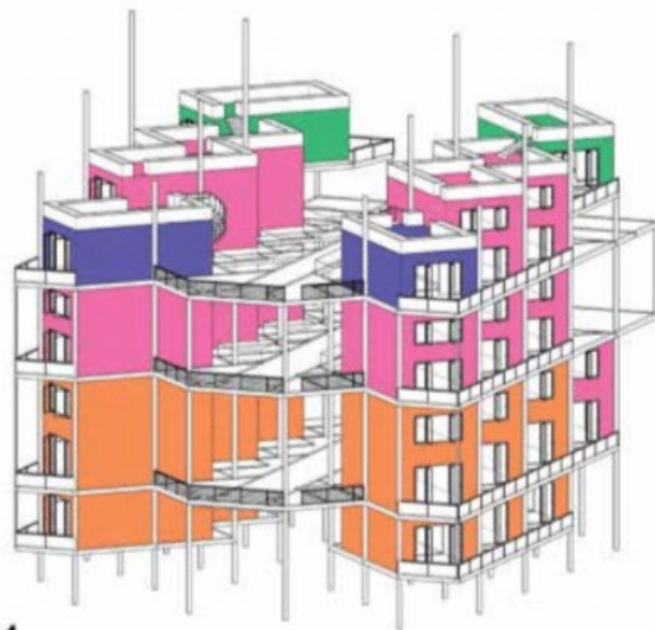
Green Space



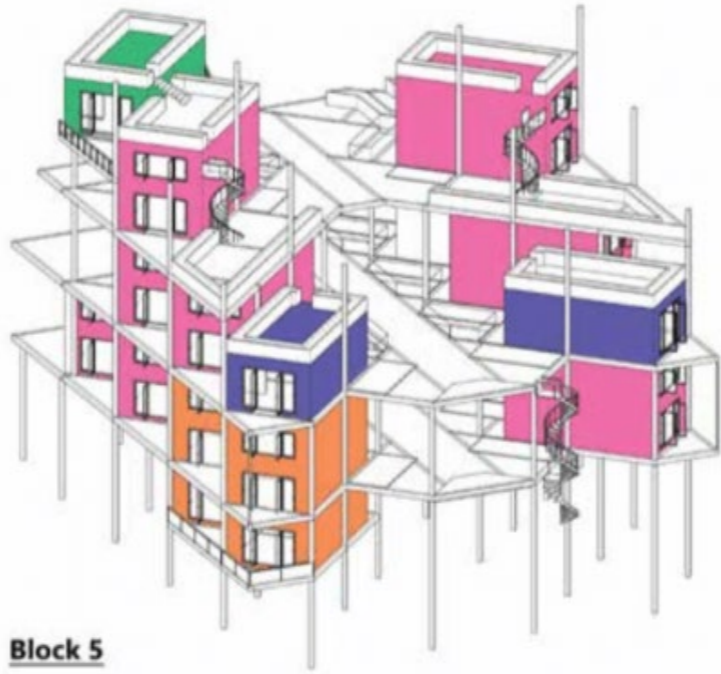
Solar Canopy



Block 1

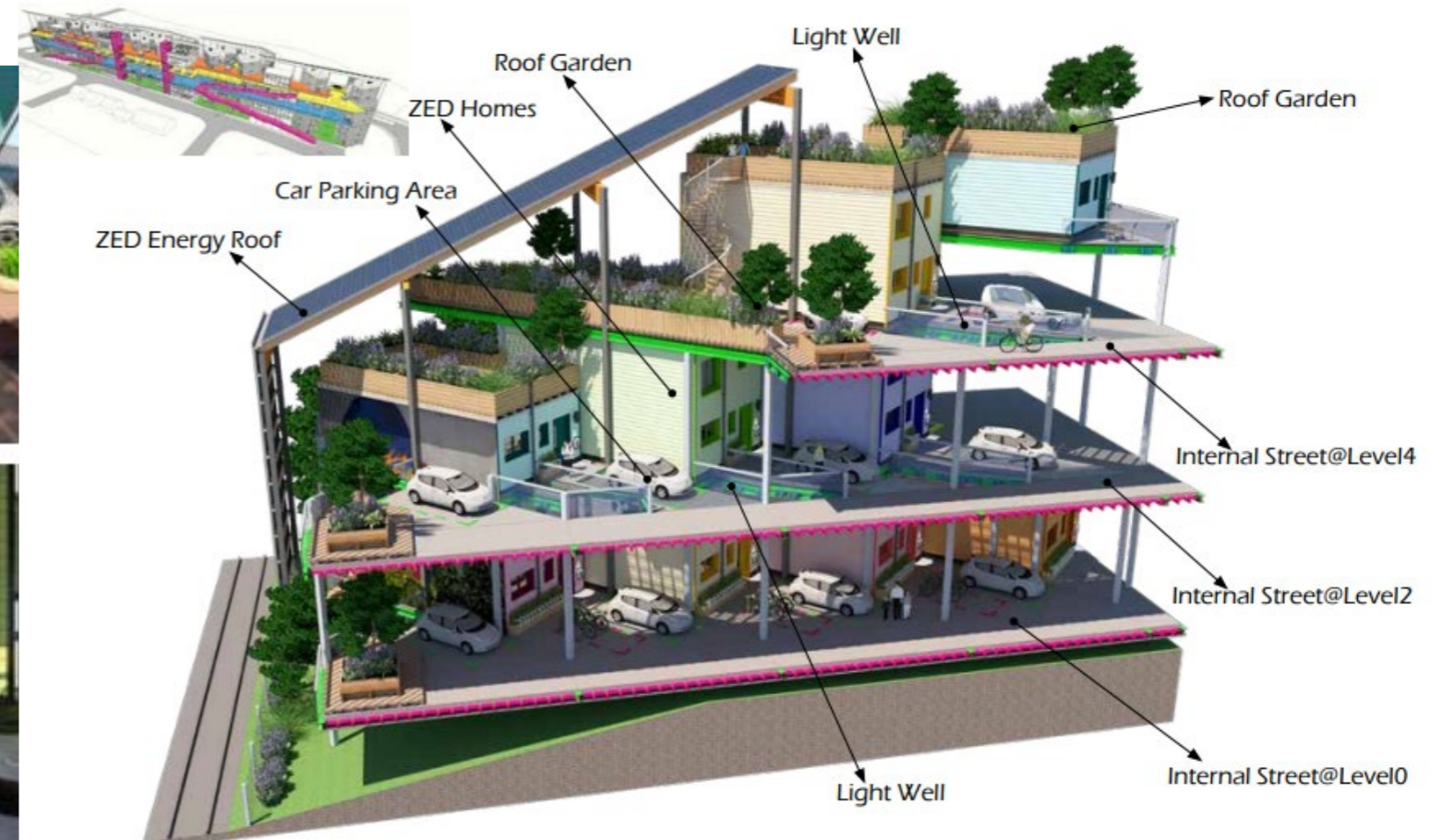
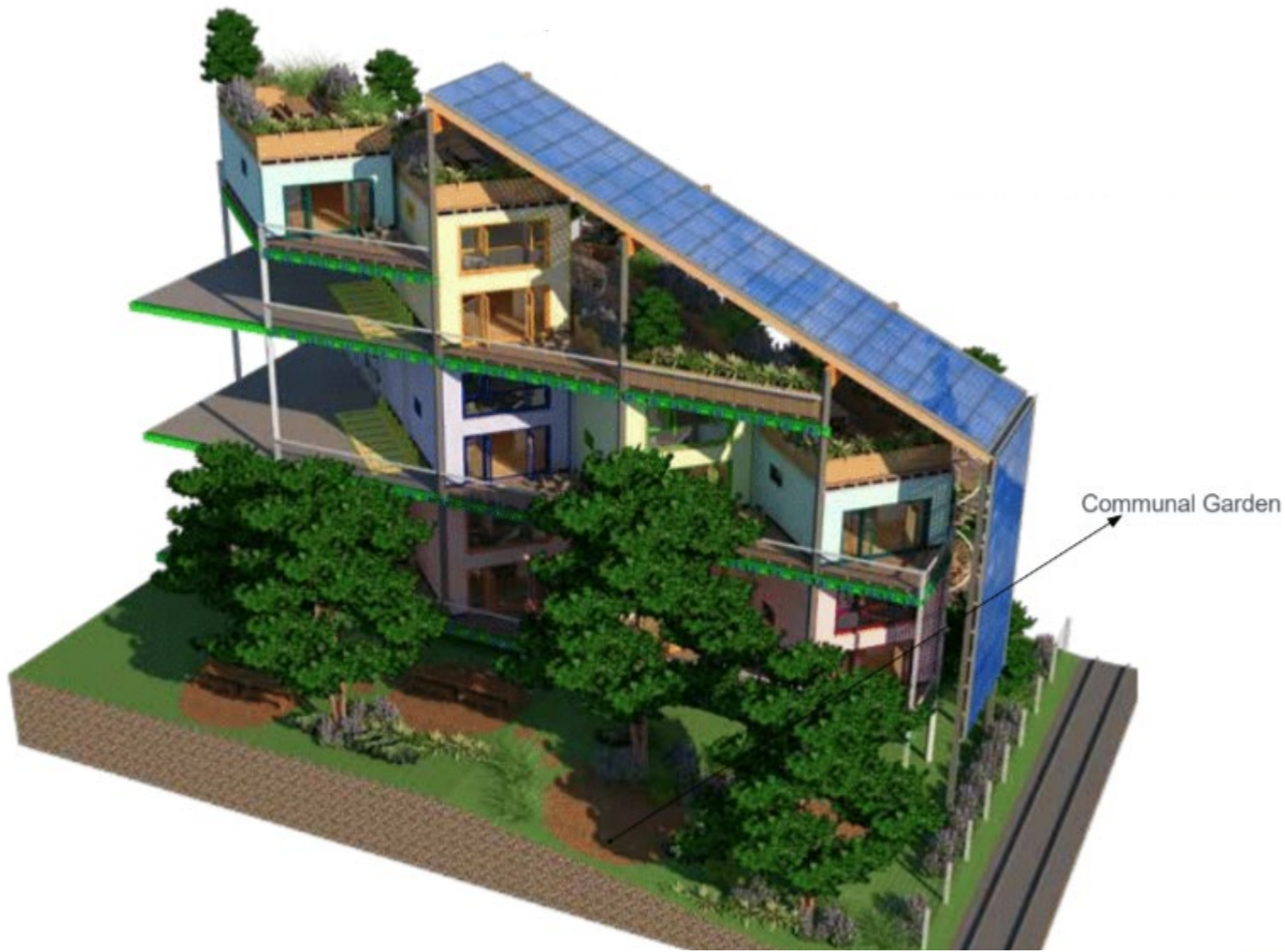


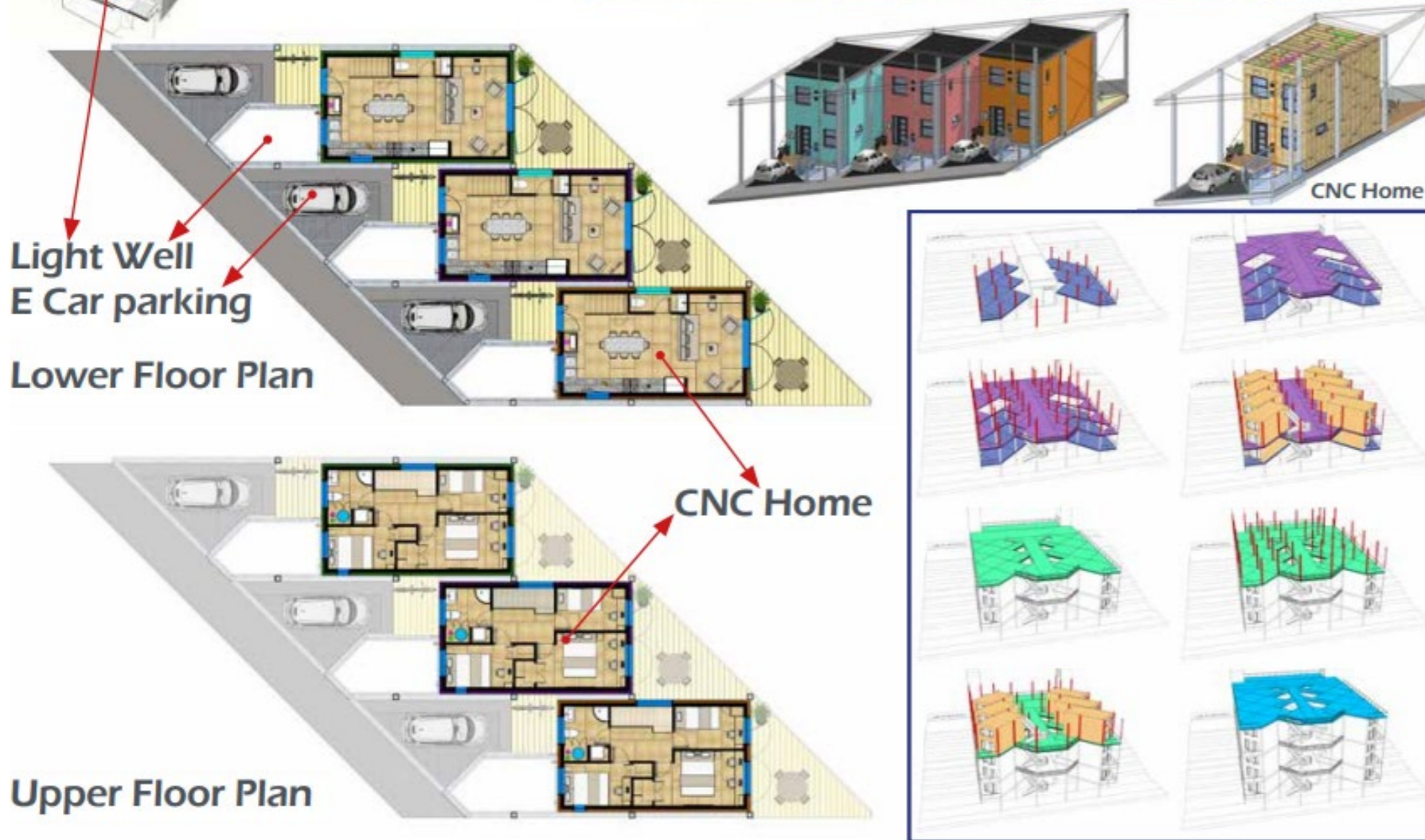
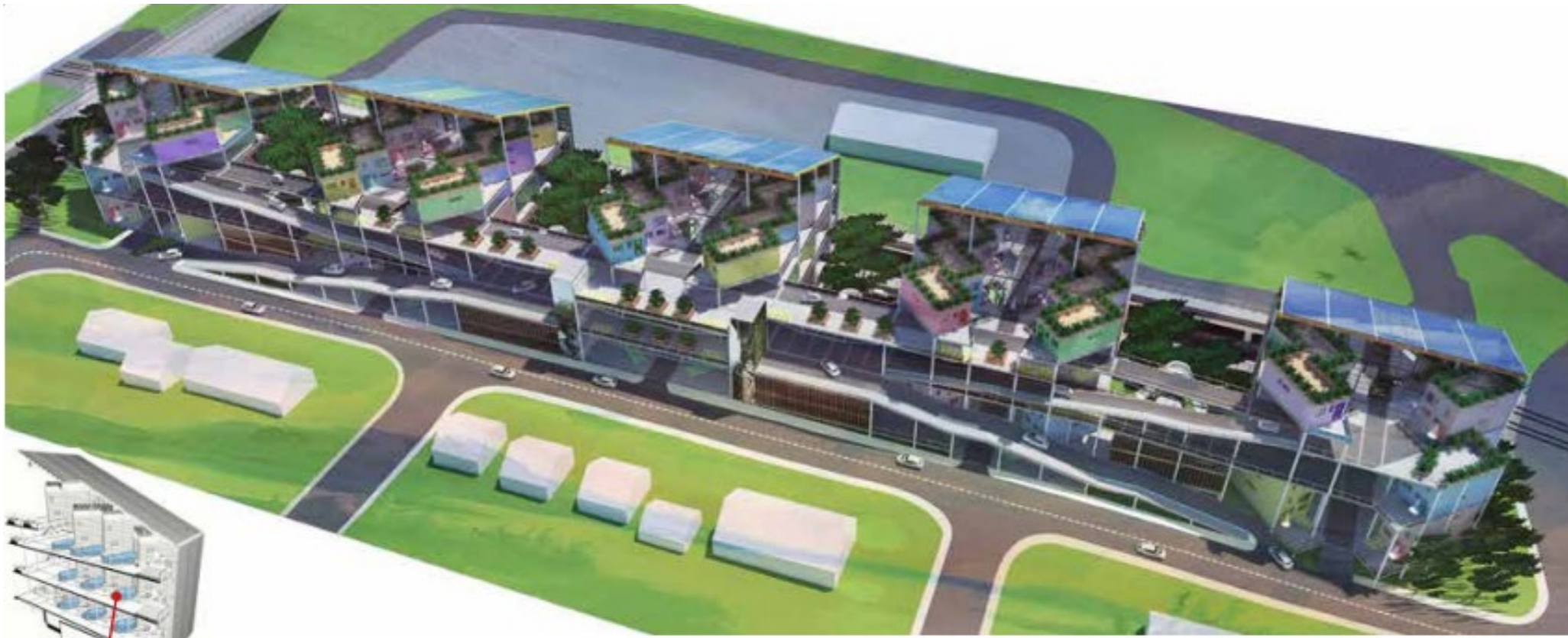
Block 2-4



Block 5

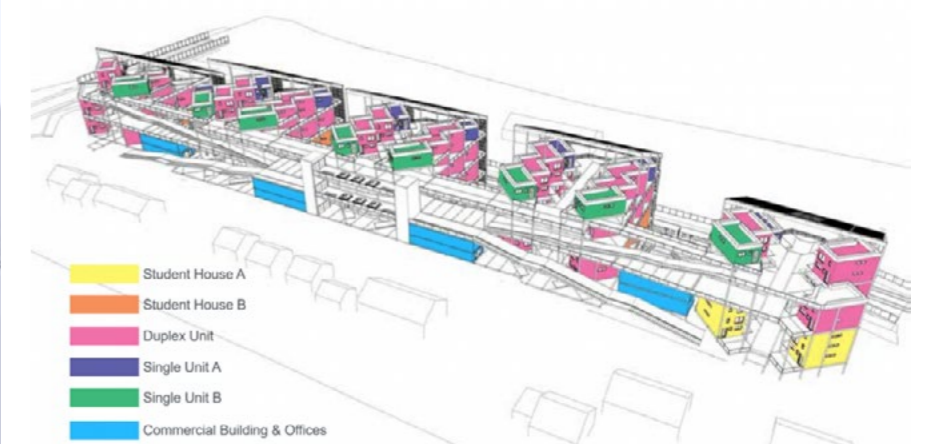






The Tompkins St proposal shows how to :

- Increase residential density in low rise suburbs without good public transport
- With a net zero carbon foot print for both the homes and the personal transportation
- Whilst saving each household approximately \$3k on fossil fuel and \$3k on home energy bills each year
- Whilst creating a good quality of life, and giving every home access and views over green open space
- And avoiding the need to clog up surrounding streets with parking generated by the new development



ZED Zero Bills Home



Overview

This development of five zero carbon homes is located on one of the best plots in Hastings - just a stones throw from Hastings castle, with panoramic views to both the East, the West and the Castle. Perched high up between Hastings Old Town and the Town Centre, it sits in a residential setting within the Old Town Conservation Area.

The ambition of the client is to create a high quality and highly efficient terrace of homes for the 21st century, and to demonstrate that zero carbon dwellings can be commercially viable. ZEDfactory have worked up a design which both delivers in design quality and environmental performance, providing an opportunity to transform this derelict site into a historically important project for the city to coincide with the 950th anniversary celebrations of 1066.

Design

The design is of a staggered terrace of 5, running perpendicular to Castle Hill Rd, optimising the panoramic views from each home. A shared ramped access from Castle Hill Rd leads to a sheltered entrance on the East of the properties. A vehicle access at the SW of the site leads to a garage undercroft for each home, with gardens Located above.

The internal layout is arranged with the living, dining and kitchens on the ground floor - as one open plan space that can spill out to the terrace and garden through a folding / sliding screen. Upstairs are 3 bedrooms and the main bathroom, with the master bedroom benefiting from fantastic views through large windows and a Juliette balcony.

The top floor of each home is a flexible open plan space intended for a range of activities depending on the occupants lifestyles. This could be a studio, office, living room, games room or workshop for example. This floor also benefits from a glass screen opening onto balcony with arguably the best views in town.



ZED Eco Grove Village





■ Residential area ■ Proposed site boundary

Ecogrove will be a flagship eco-village. As well as being super-energy efficient and built to last at least 100 years, the development also provides people with a desirable lifestyle. Homes are well-specified and modern, and are designed to be healthy, easy to run, light and well ventilated.

Homes are air-tight and super-insulated. The building fabric is thermally massive, and ventilation is wind-driven and incorporates heat exchangers to reduce heat loss. Together, these measures reduce the heating requirement and make it cost effective to use renewable energy sources.

Micro-generation technologies, including solar panels to generate electricity will be fitted to individual homes. Each home will also be provided with a back-up wood pellet boiler for provision of hot water in the Winter and space heating if required. Wood-pellet storage facilities will be integrated on site. A strong sense of community integration is to be encouraged by the design, the inclusion of the community farm as part of the wider masterplan will be key to this.

Longevity

Sustainable buildings should last. ZEDfactory projects are designed to last for five generations. Whether using traditional masonry or the timber-frame kit, ZEDfactory structural components are detailed and installed to be durable. Shorter-life components, such as window seals, kitchens and cladding materials, are designed so they can be replaced without affecting the overall integrity of the building.

The design also allows for flexibility in room layout, using non load-bearing internal walls with post and beam structures.







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