

PARC PEMBERTON

LLANELLI



EDENSTONE





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BACKGROUND INFO

LOCATED IN LLWYNHENDY, LLANELLI

LAND PURCHASED FROM TATA STEEL WHO WILL ALSO SUPPLY KEY CONSTRUCTION MATERIALS

TOTAL SITE AREA OF APPROX. 2.02 HECTARES

THE SCHEME WILL DELIVER 70 SOCIAL RENT HOMES FOR CLIENT BEACON CYMRU

THE UNITS ARE A MIX OF 1 BED APARTMENTS, 2/3/4 BEDROOM HOMES AND BUNGALOWS

SAB & MMC INCLUSIVE SITE

CONSTRUCTION DURATION: 2 YEARS, WITH HANDOVERS TO COMMENCE MID 2026.







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SITE KEY

Boundary Treatments

- Site Boundary
- 1.8m High Brick Screen Wall
- 1.8m High Close Board Fence
- 2.0m High Hit & Miss Board Fence
- 0.45m High Timber Knee Rail
- 1.1m High Ball Top Metal Railings
- 1.8m High Ball Top Metal Railings

Access Points

- Primary door to dwelling
- Secondary door(s) to dwelling
- 1.8m High close board personnel gate
- Parking Space
- Disabled Parking Space

Hard Surfacing

- Highway - Adoptable Standard Finish
- Highway Footpath - Adoptable Standard Finish
- Private Driveway - Porous Tarmacadam Finish
- Private Driveway - Porous Block Paving Finish
- Private Footpath / Patio Area - Non-slip Flagstone Paving
- Refuse collection point - PCC Slabs
(for plots accessed off shared private drives)

Soft Surfacing

- Bio-retention System Feature / Attenuation System

Site Features

- Existing Tree(s) to be retained
- Existing Tree(s) to be removed
- Indicative Tree(s) Planting Location

Refer to EDP detailed soft landscaping design for proposed landscape

- Shed Storage
- Bin Slab Location - Locations to be agreed
- Rotary Line
- Air Source Heat Pump
- Proposed Easement
- Existing Easement

[illegible]



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MODERN METHODS OF CONSTRUCTION : A PUSH FOR MMC IN WALES



TO AID MEETING THE
WELSH HOUSING DEMAND



ADDRESSING RURAL &
REGIONAL CHALLENGES



TYPICALLY, MORE INSULATED
AND AIRTIGHT (WDQR)



SUPPORTS WALES'
NET ZERO AND
SUSTAINABILITY AGENDA



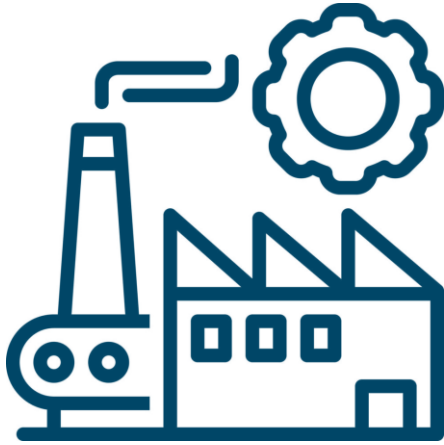
PROMOTES INVESTMENT
FROM COMPANIES AND
MANUFACTURERS



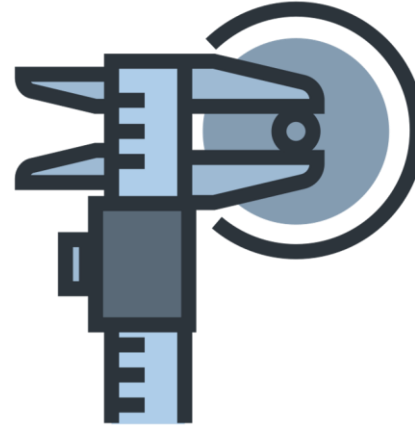


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STEEL FRAME : MODERN METHODS OF CONSTRUCTION



**OFF SITE MANUFACTURED
STEEL PANELS**



**PRECISE DESIGN
AND COORDINATION**



**FASTER ON-SITE
BUILD PROGRAMMES**



REDUCED WASTE ON SITE



CONSISTENT, REPEATABLE & SCALABLE



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CONSTRUCTION TECHNOLOGY OVERVIEW

SYSTEMS IN USE AT PARC PEMBERTON



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CONSTRUCTION : SUBSTRUCTURE

GRENCEM 'ECO LOW-CARBON CONCRETE' SUPPLIED BY G.D. HARRIES
USED IN TRENCHFILL POUR AND FOR SUSPENDED CONCRETE SLABS



DUFAYLITE VOID FORMER
MADE FROM RECYCLED PAPER AND IS ALSO 100% RECYCLABLE

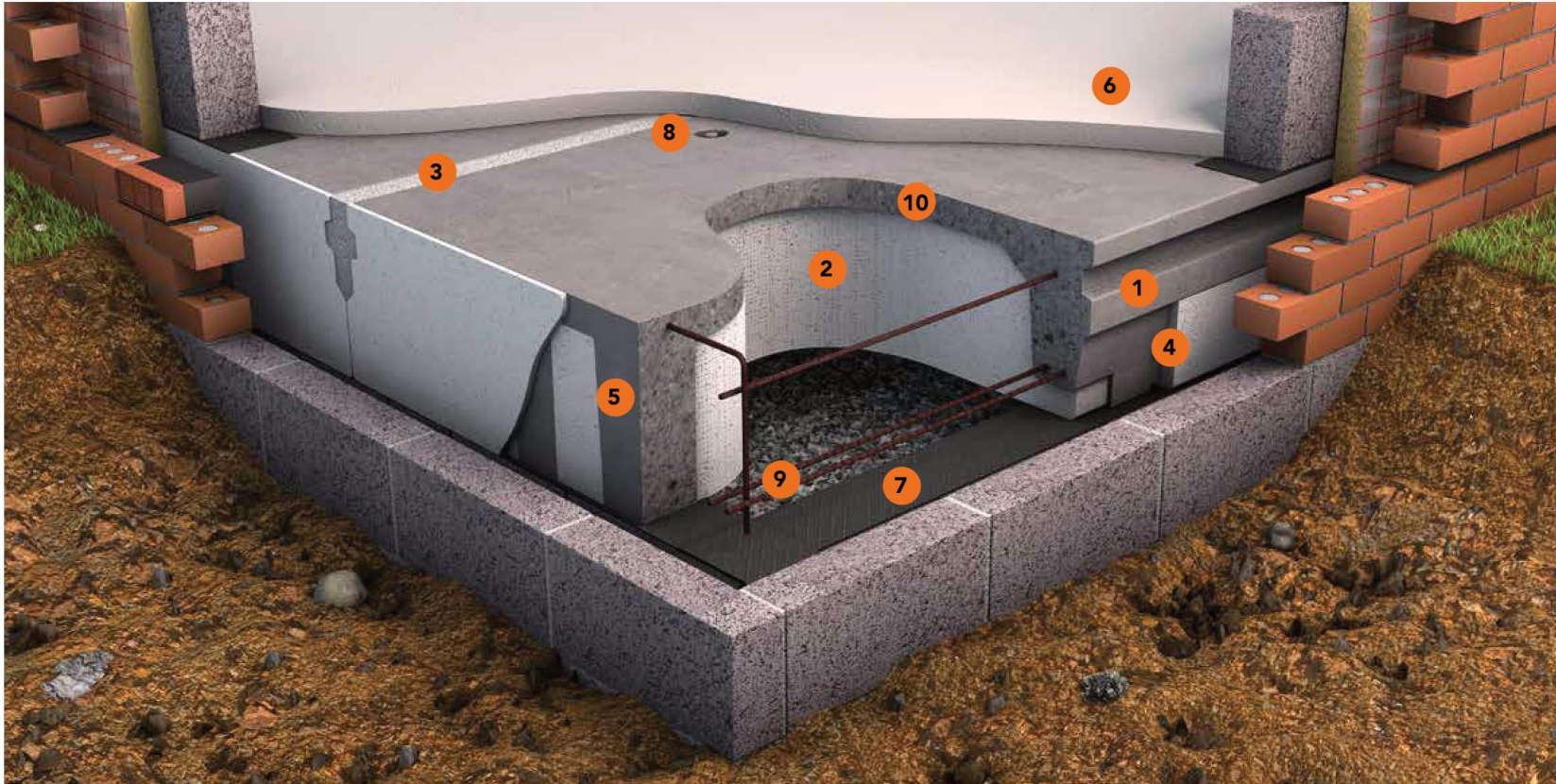


150MM ROCKWOOL EUROTHANE PIR INSULATION
ENHANCED INSULATION REQUIRED TO MEET CLIENT SPECIFICATION



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CONSTRUCTION : SUBSTRUCTURE



INSTALLATION PROCESS

Units are delivered to site ready for installation by Creagh fitting team or your ground workers.

Once in position, the units are joined together with a structural concrete grout.

Floor is safe and accessible immediately after fit.
Full structural strength is achieved in 72 hours, allowing loading of the floor to commence.

A finished floor surface ready to accept internal floor finishes is provided by the application of a non structural concrete topping.

PRODUCT KEY: 1200mm wide 375mm/300mm deep Spantherm unit

- | | | |
|---------------------------|-----------------------------------|--|
| 1 Structural rib | 5 End bearing stool | 9 Rebar reinforcement within structural rib |
| 2 EPS insulation | 6 Non structural concrete topping | 10 Steel mesh reinforcement or macro synthetic fibre reinforcement, dependant on project specification |
| 3 C25/30 structural grout | 7 DPC | |
| 4 Side bearing stool | 8 Cast-in lifting pins | |

spantherm
Insulated Concrete Floors from Creagh

CREAGH CONCRETE'S PRE-INSULATED, PRECAST CONCRETE PLANKS TO BE INTRODUCED IN 'PHASE 2' OF THE PROJECT

<https://youtu.be/FDeiXmFXoZU?si=u9dscn7HWZ0TeLXw>

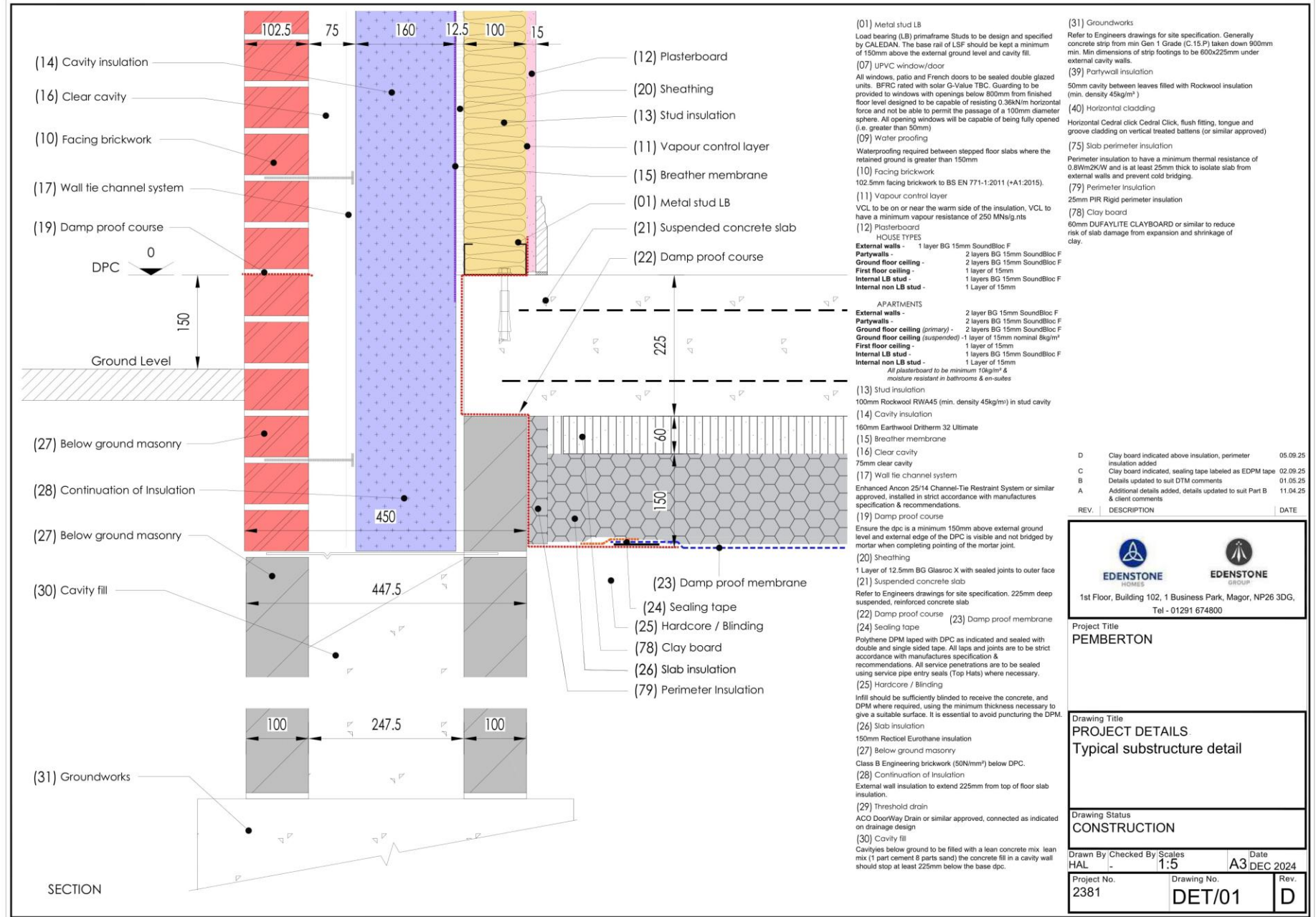
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LLANELLI

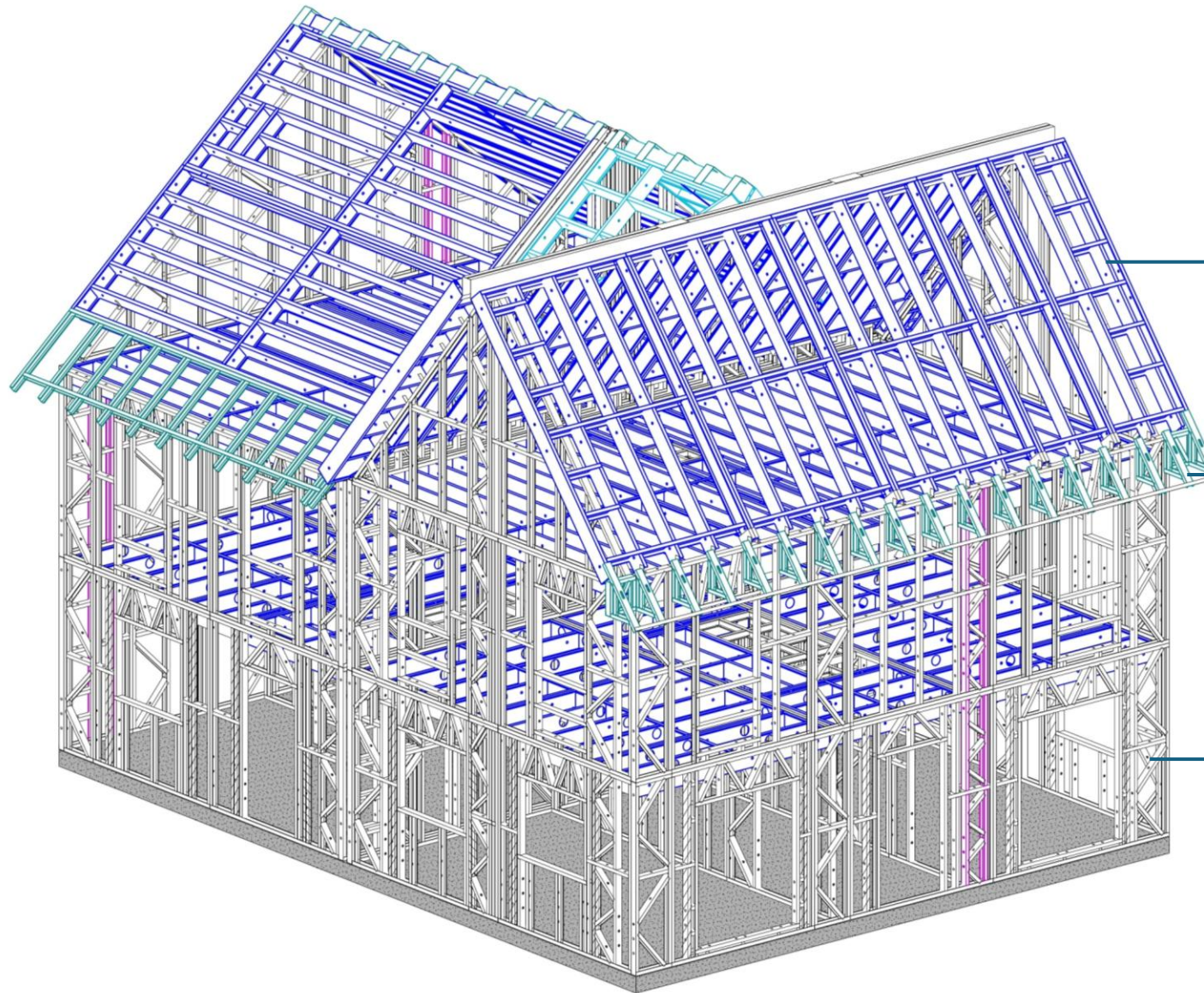
CONSTRUCTION : SUBSTRUCTURE DETAIL





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STEEL FRAME SYSTEMS : STRUCTURAL DESIGN



**FULL CASSETTE STEEL
ROOF CONSTRUCTION**

**BOLT ON SECTIONS TO
CREATE AN EAVES DETAIL**

**LIGHTWEIGHT STEEL
FRAME SYSTEM (100KG PER
PANEL)**



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STEEL FRAME SYSTEMS : IMAGES FROM EXISTING SITES



LEEDS, ENGLAND



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BUILDING FABRIC : ENVELOPE



CATNIC SOLAR SEAM ROOF COVER

STEEL SHEET ROOFING IN PARTNERSHIP WITH BiPVco's PV INTEGRATION

SLATE GREY



STEEL GREY

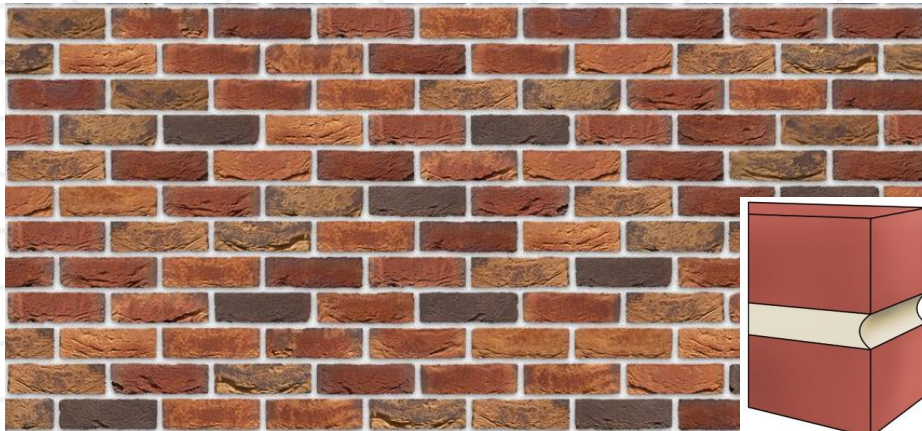


TEA GREEN



CEDRAL LAP HORIZONTAL CLADDING

FIXED TO A 75X38MM BATTEN OFF OF 7.3KN MEDIUM DENSITY BLOCKWORK



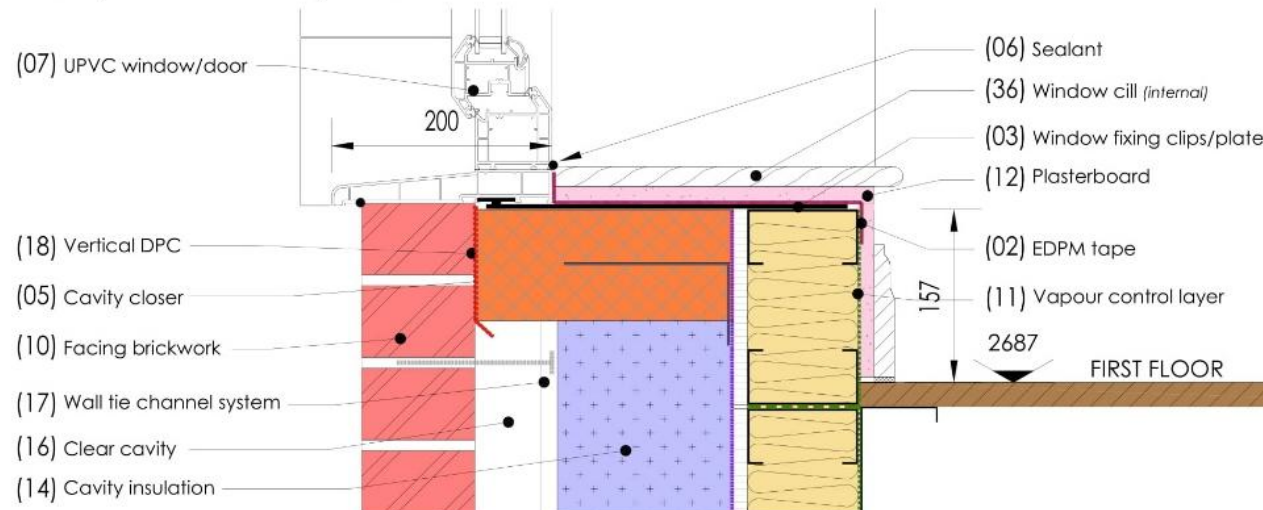
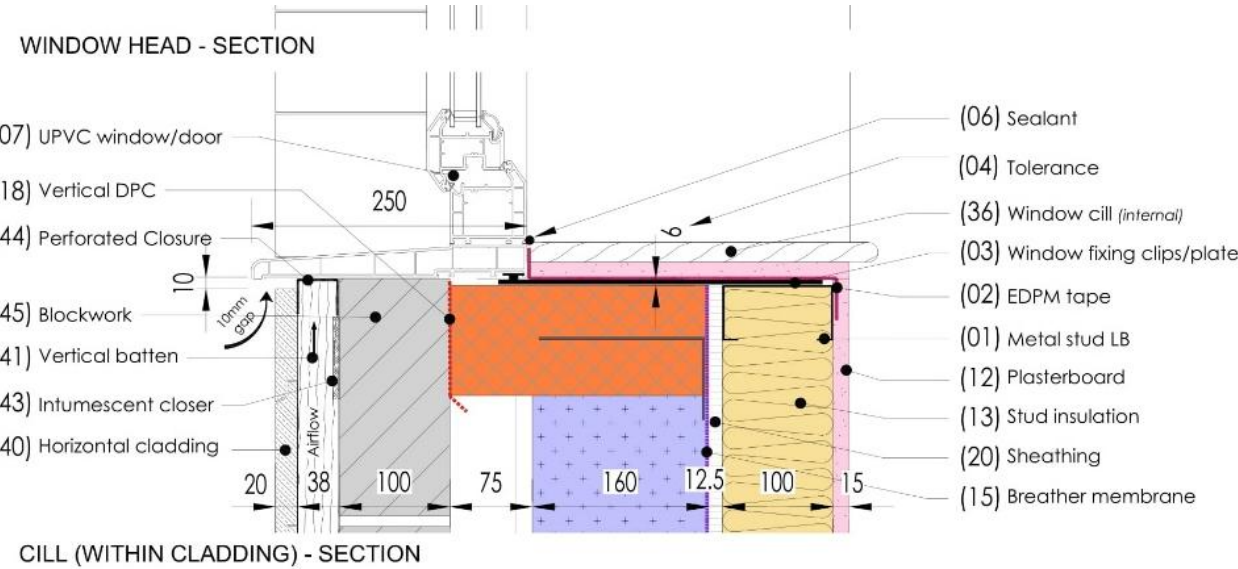
VANDERSANDEN JUBILEE FACING BRICK

NATURAL SAND/CEMENT MIX MORTAR WITH A BUCKET HANDLE JOINT



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BUILDING FABRIC : EXTERNAL WALL DETAIL



WINDOW CILL (AT EDGE OF CLADDING) - SECTION



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CATNIC SOLARSEAM : STEEL SHEET ROOFING



**REDUCES MATERIALS
AND WASTE**



**CLICK LOCK
FIXING SYSTEM**



**INTEGRATED
SYSTEM**



**LOW MAINTENANCE
& SELF CLEANING**



**LOCAL, WELSH
COMPANY**



**A MODULAR
PRODUCT**

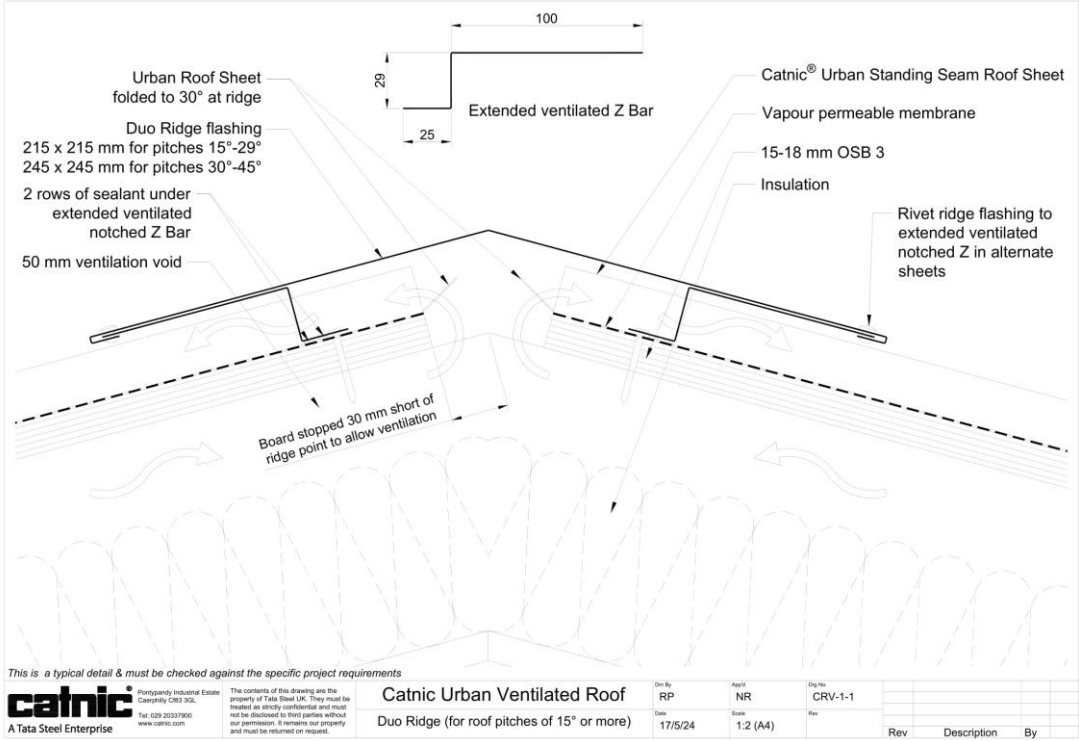
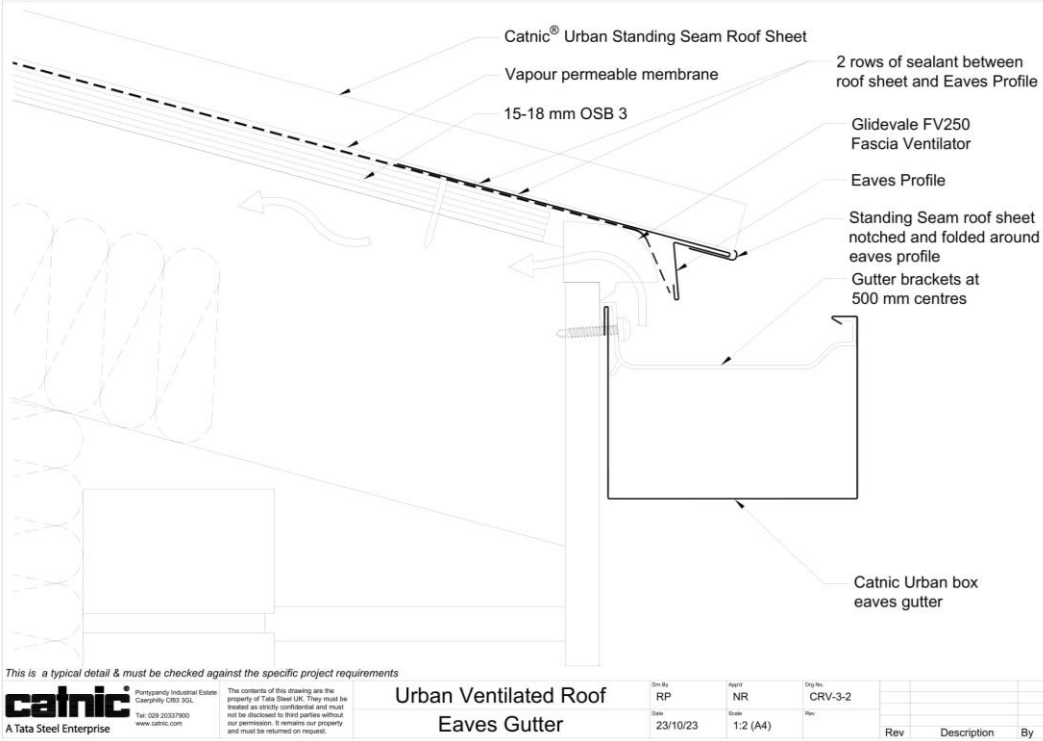
CASE STUDIES





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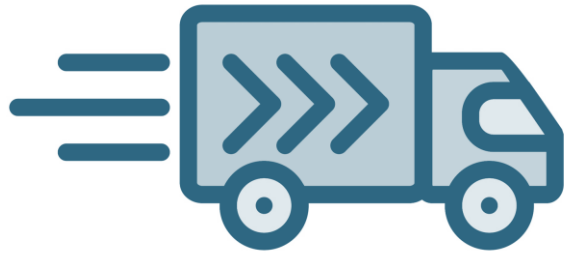
CATNIC STANDING SEAM ROOFING STANDARD DETAILS





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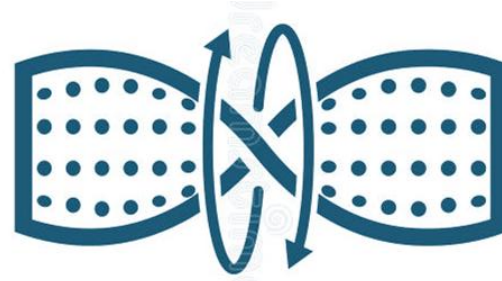
BIPVco : INTEGRATED SOLAR PV PANELS



**DELIVERED TO SITE APPLIED
TO THE ROOF FINISH**



**LOCAL, WELSH
COMPANY**



FLEXIBLE MATERIAL



SHATTERPROOF



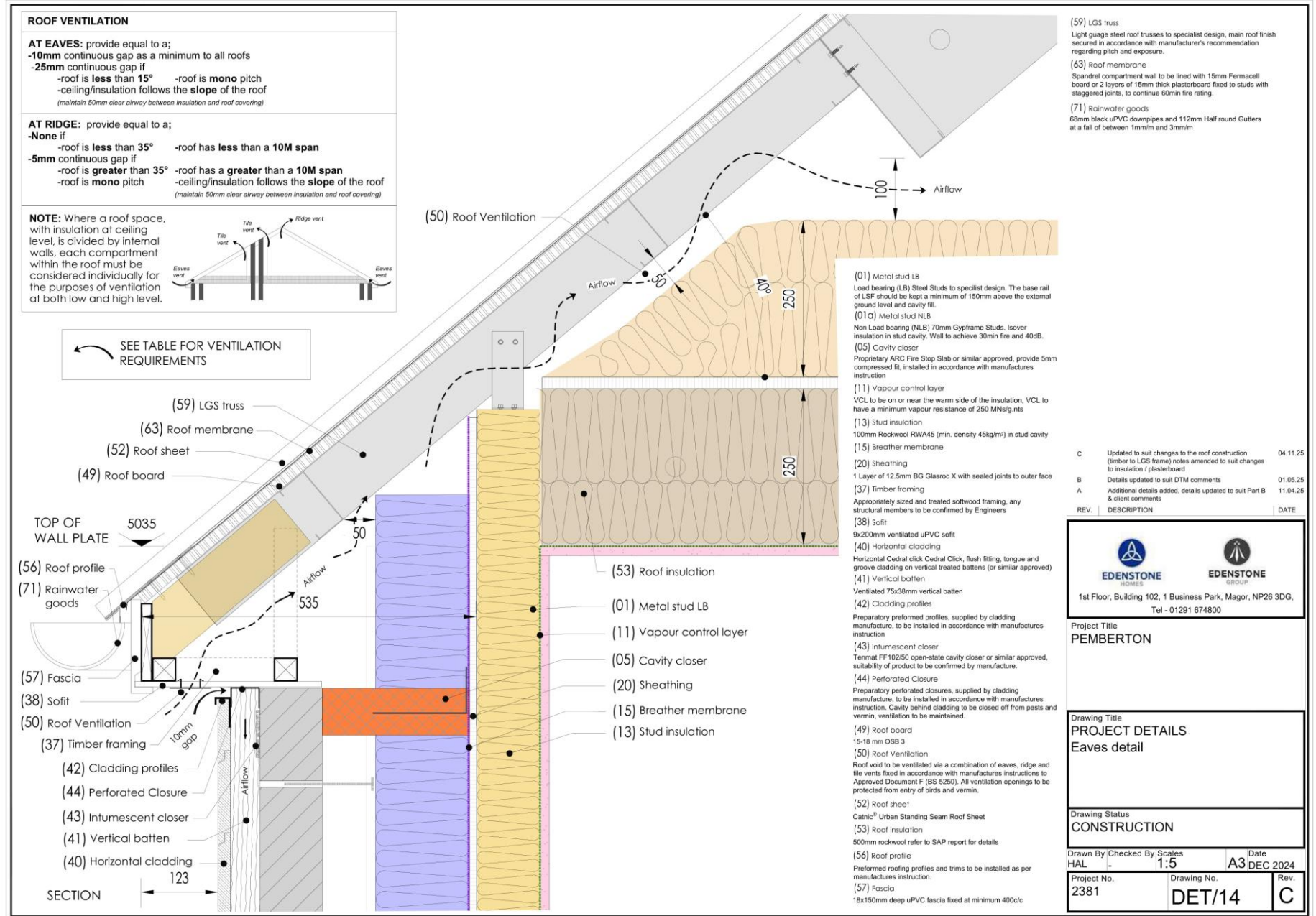
HIGHER PERFORMING





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BUILDING FABRIC : ROOF EAVES DETAIL

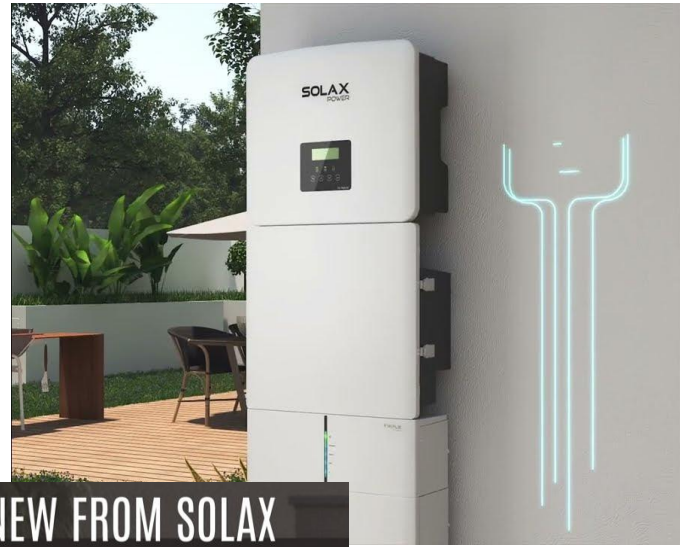


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TECHNOLOGY : SOLAX ENERGY BATTERY STORE



NEW FROM SOLAX
X1-HYBRID G4



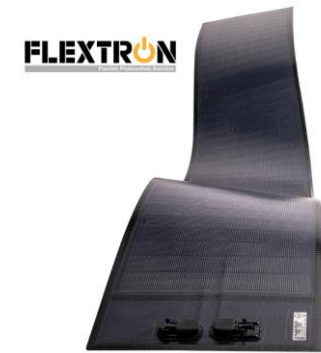
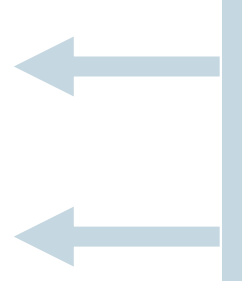
BiPVco
SOLAR PV



SOLAX
INVERTER



SOLAX
BATTERY



PAS 63100:2024

Electrical installations – Protection against fire of battery energy storage systems for use in dwellings – Specification



Department for
Energy Security
& Net Zero



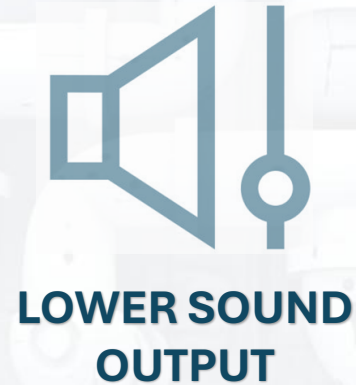
**GUIDANCE ON WHERE
A BATTERY / INVERTERS
SHOULD BE STORED WITHIN
A DOMESTIC DWELLING**



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TECHNOLOGY : IDEAL LOGIC ASHP & HOT WATER CYLINDER

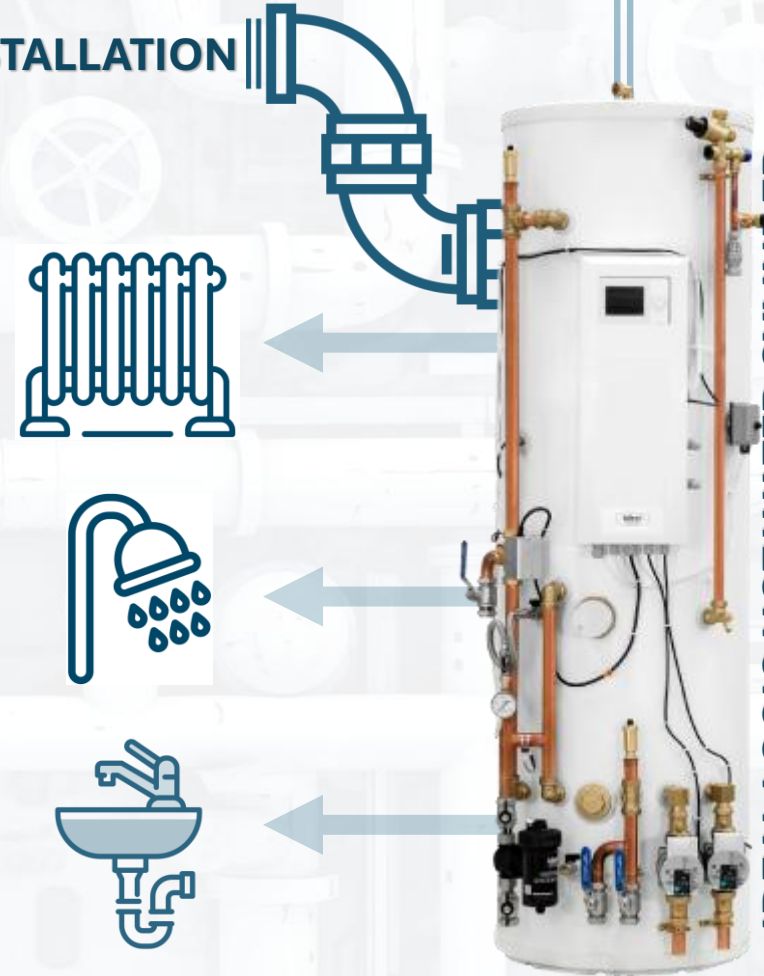
PRE-PLUMBED READY FOR INSTALLATION



LOWER SOUND
OUTPUT



EASILY
INTEGRATED



TRANSFER OF CAPTURED AIR INTO THE CYLINDER



EDENSTONE

TECHNOLOGY : IDEAL LOGIC ASHP & HOT WATER CYLINDER

Radiator System Notes:

1. The mechanical contractor shall ensure that the radiators are not installed back to back in walls and partitions.
2. The mechanical contractor shall liaise with the electrical contractor to ensure that the radiator back boxes and the electrical accessory are not back to back in walls and partitions.
3. Noggins for fixing of mechanical services shall be installed by the Main contractor. Setting out of required noggins shall be agreed with the mechanical contractor.
4. All heating pipework within roof space, service cupboards and unheated space shall be thermally insulated. Thermal insulation thickness shall be in accordance with DBSCG requirements. The elastomeric foam rubber insulation shall have a Class 0 fire performance & shall include an anti-microbial protection to reduce the risk of mould or bacterial growth.
5. Thermal insulation shall be AF-Armalex Class 0 elastomeric nitrile rubber with anti-microbial protection.
6. Heating distribution pipework shall be uponor pipe press-fit plumbing system. Pipeline drops to radiators on external walls shall be in cooper pipeline (EN1057-R295).
7. Pipework and fittings shall be installed in accordance with manufacturers requirements.
8. For radiator & valve schedule refer to 6937-M-ZZ-22-600-07-201.
9. Thermostatic radiator valves shall be located within all rooms except rooms with a zone control thermostat.
10. Radiators shall have the TRV located at high point. Radiators valves shall be preassemble type & have integral differential pressure control.
11. For radiators shown beneath window sills, the actual clear height beneath sill shall be confirmed by site measurement prior to installing the radiator. Where radiators are relocated they shall be coordinated with all other services.
12. Heating system based on 45°C flow & 40°C return, MWT 42.5°C

Heating Legend:

Pipework identification below indicates positioning not service.

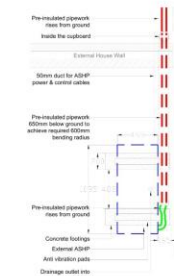
- Low level pipework
- Low level concealed pipework
- High level pipework
- High level concealed pipework
- In ceiling void
- T Thermostat



AustroPUR	PE-Xa	PE-Xa	Outer Casing	Weight	Bending Radius	Coil Length
Twin	(O.D. x x)	(I.D.)	(O.D.)	kg/m	m	m
Art. No.	mm	mm	mm	kg/m	m	m
114APE145240	2-43x3.7	32	145	2.4	0.80	240

6 Pre-insulated Pipework Selection

from NTS



4 Typical External ASHP Unit Detail

from NTS

CDI	Constitution Issue	14.03.25	JD
P01	Preliminary Issue	12.12.24	DL
REV	DESCRIPTION	DATE	NAME



1 Ground Floor - Heating Services Layout

from 1:25

External ASHP	Model	Capacity	Indoor HW Cylinder	Model	Capacity
Manufacturer	Logic Air SWW	SWW	Ideal Heating	Logic Air DHW pre-plumbed cylinder 210L	210L

3 ASHP Unit Schedule

from NTS



2 First Floor - Heating Services Layout

from 1:25

Designbook Ltd
Unit J2, The Granary,
Bridge Farm, Reading Road,
Astonford, Berkhamstead, RG2 9HT
TEL: 0118 9 773 011
E-mail: admin@designbook.co.uk



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Building 102,
Wales 1 Business Park,
Builth Wells
NP23 5DG

STATUS: Construction Issue	PROJECT NUMBER/TITLE:
6937 - PEMBERTON	
DRAWING TITLE:	House Type SP3B CT (DET) (AS) - Heating Services Layout
DATE / DRAWN BY	31/10/2024 / DL
SCALE	1:25 @ A1
DRAWING NUMBER	6937-M-531CTD-100-56-100
REV	C01

Safety, Health and environmental information: unusual significant hazards
It is assumed that all work will be carried out by a competent contractor working, where appropriate, to an approved method statement, in addition to the hazards normally associated with the type of work detailed on this drawing note the following:

Construction

1. Working at high height to install all new high level services shall be managed safely, using the correct equipment.
2. During the creation of new buildwork holes for cables to pass through workers should be using the correct PPE equipment.
3. The use of portable tools should be done through 110V supplies only.

Maintenance/operation

1. The installation of MEPH equipment has been coordinated during the design stage to ease maintenance and avoid unnecessary risks.

Operation

1. There are no unusual operation risks identified.



5 Image A

Pipe outside diameter (mm)	Maximum heat loss (W/m)
8	7.06
10	7.23
12	7.36
15	7.89
22	9.12
28	10.07
35	11.08
42	12.19
54	14.12

7 Thermal insulation thickness with DBSCG requirements

from NTS



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Lumi-Plugin® | IIKL Distribution

LUMI PLUG-IN : MODERN LIGHTING TECHNOLOGY

**SPACE SAVING SPOTLIGHTS
WITH INTERCHANGABLE
FEATURES;**

SMOKE, HEAT,

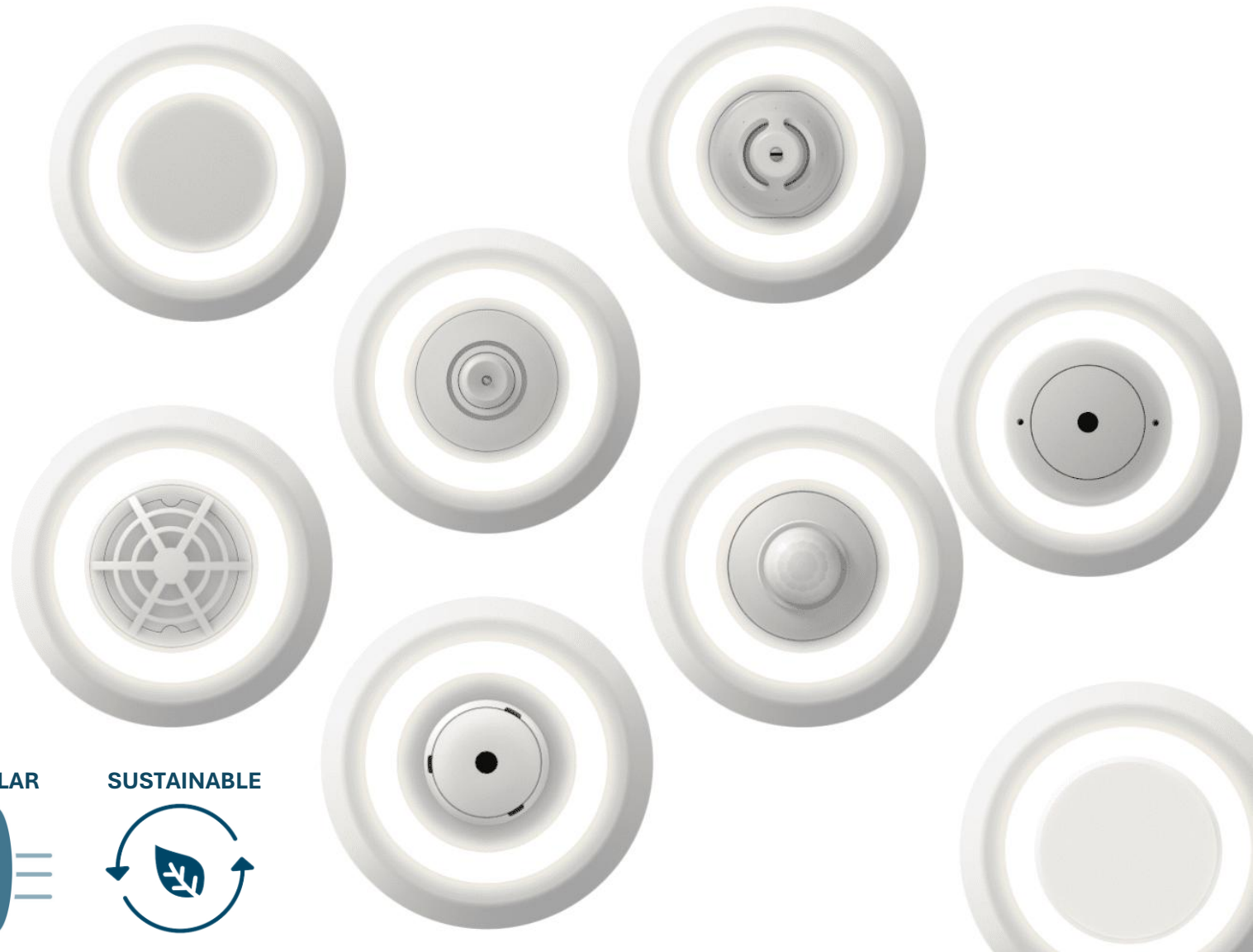
CARBON MONOXIDE,

SPRINKLER, MIST,

EMERGENCY ALARM,

PIR SENSOR &

DOWNLIGHT



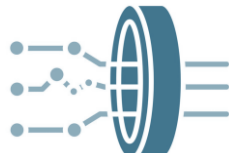
SLEEK DESIGN



PROTECTION



MODULAR



SUSTAINABLE



PARC PEMBERTON
LLANELLI



**CAN BE CONFIGURED
TO CONTROL ALL
ASPECTS OF
TECHNOLOGY WITHIN
THE HOUSEHOLD**



**CAN UNDERSTAND
LIVING PATTERNS, AND
MOVE ENERGY TO THE
MOST PRIORITISED
DEMAND POINT**





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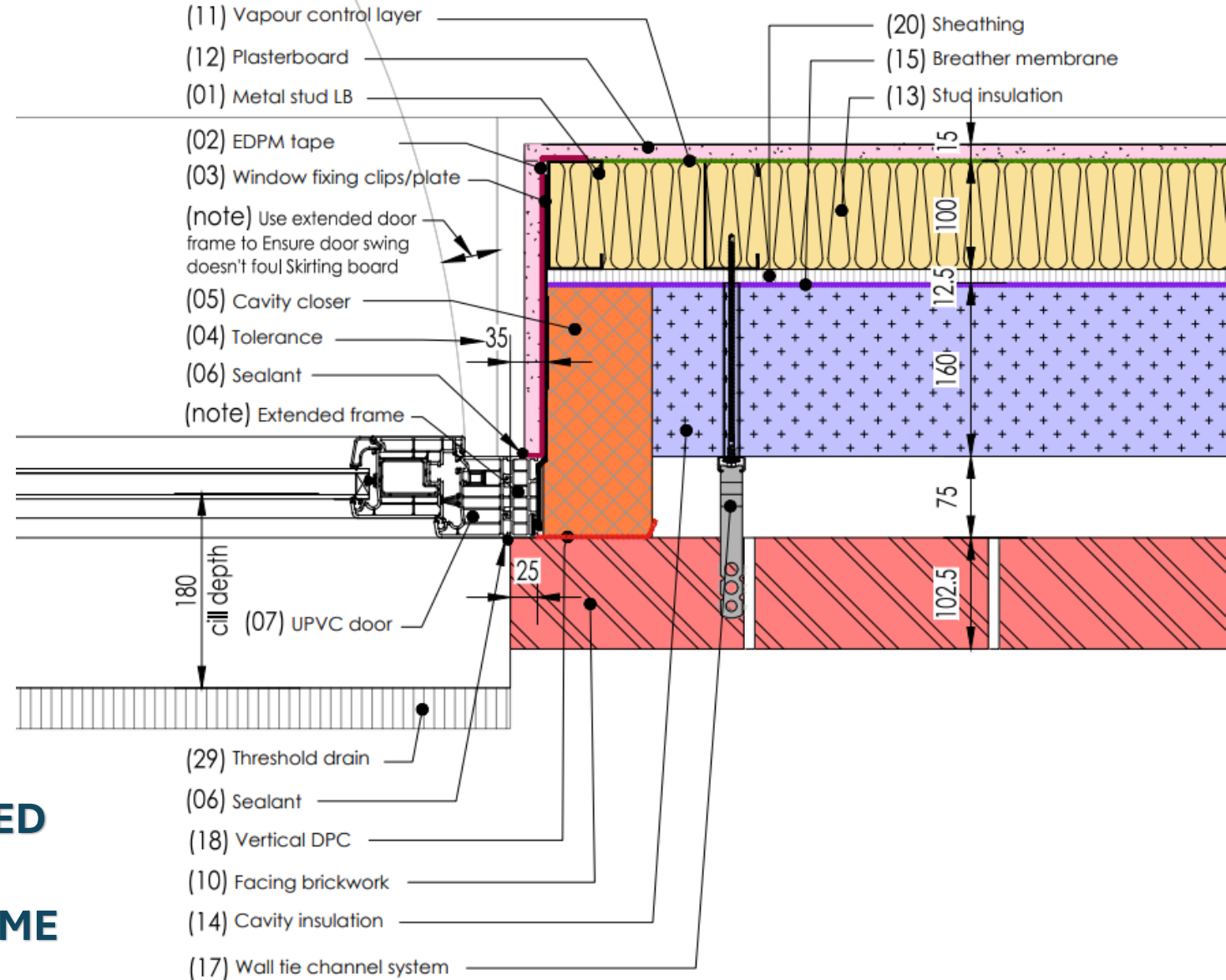
PERFORMANCE, SUSTAINABILITY, CHALLENGES

ENHANCED RISK OF COLD BRIDGING

HIGHER DEMAND FOR INSULATION

GREATER CHANCE OF CONDENSATION WITHOUT ADEQUATE VENTILATION IN PLACE

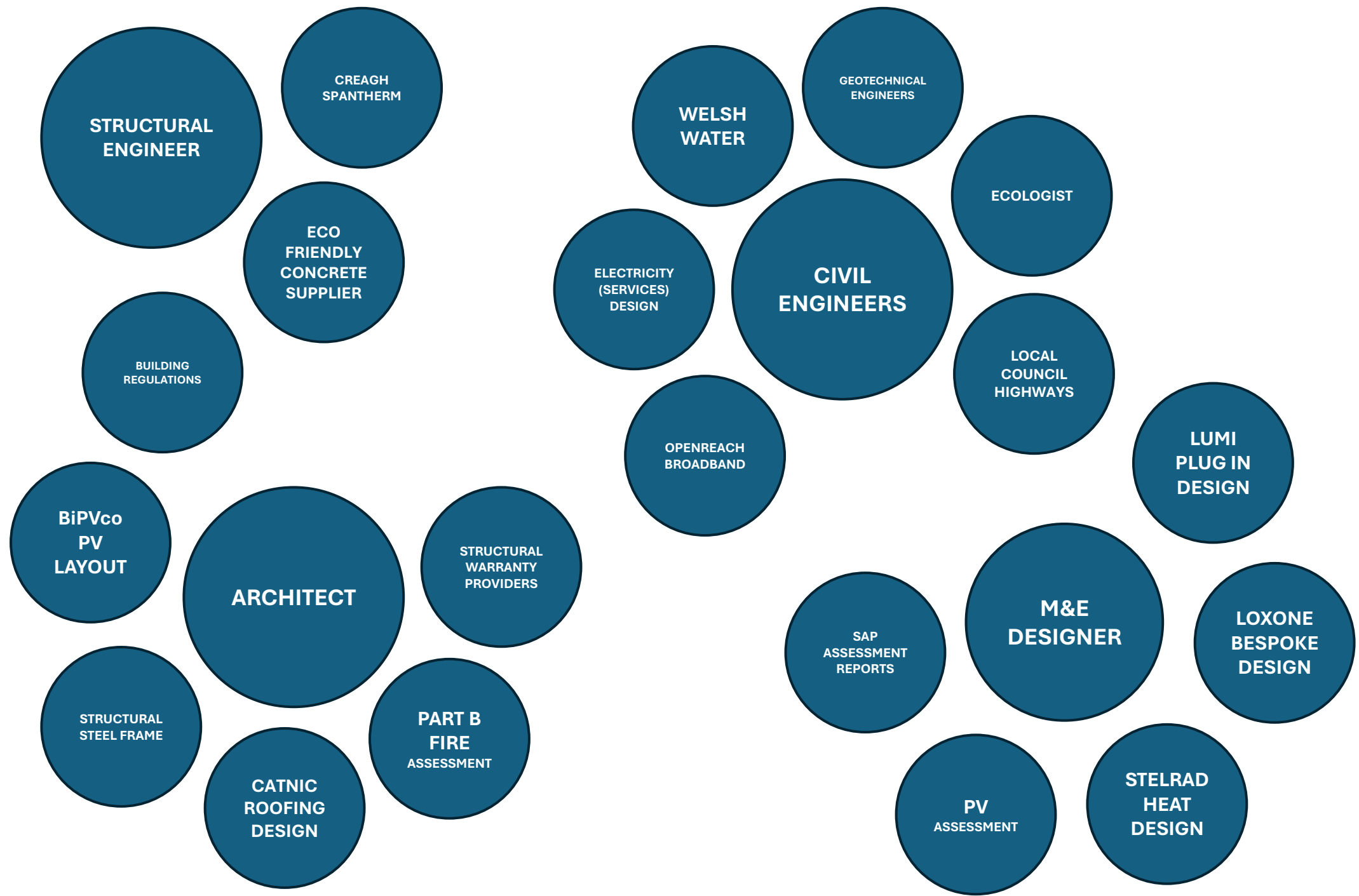
LOWER 'STRUCTURAL' THERMAL VALUES COMPARED TO MASONRY AND TIMBER FRAME





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PARC PEMBERTON
LLANELLI



STRUCTURAL
ENGINEER

CREAGH
SPANTHERM

ECO
FRIENDLY
CONCRETE
SUPPLIER

BUILDING
REGULATIONS

BiPVco
PV
LAYOUT

ARCHITECT

STRUCTURAL
STEEL FRAME

CATNIC
ROOFING
DESIGN

PART B
FIRE
ASSESSMENT

STRUCTURAL
WARRANTY
PROVIDERS

WELSH
WATER

GEOTECHNICAL
ENGINEERS

ECOLOGIST

LOCAL
COUNCIL
HIGHWAYS

LUMI
PLUG IN
DESIGN

LOXONE
BESPOKE
DESIGN

STELRAD
HEAT
DESIGN

PV
ASSESSMENT

SAP
ASSESSMENT
REPORTS

M&E
DESIGNER

ELECTRICITY
(SERVICES)
DESIGN

OPENREACH
BROADBAND

CIVIL
ENGINEERS

THANK YOU
ANY QUESTIONS?



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