

The Scottish Government's
Net Zero Public Sector Buildings Standard

Faifley Campus Case Study

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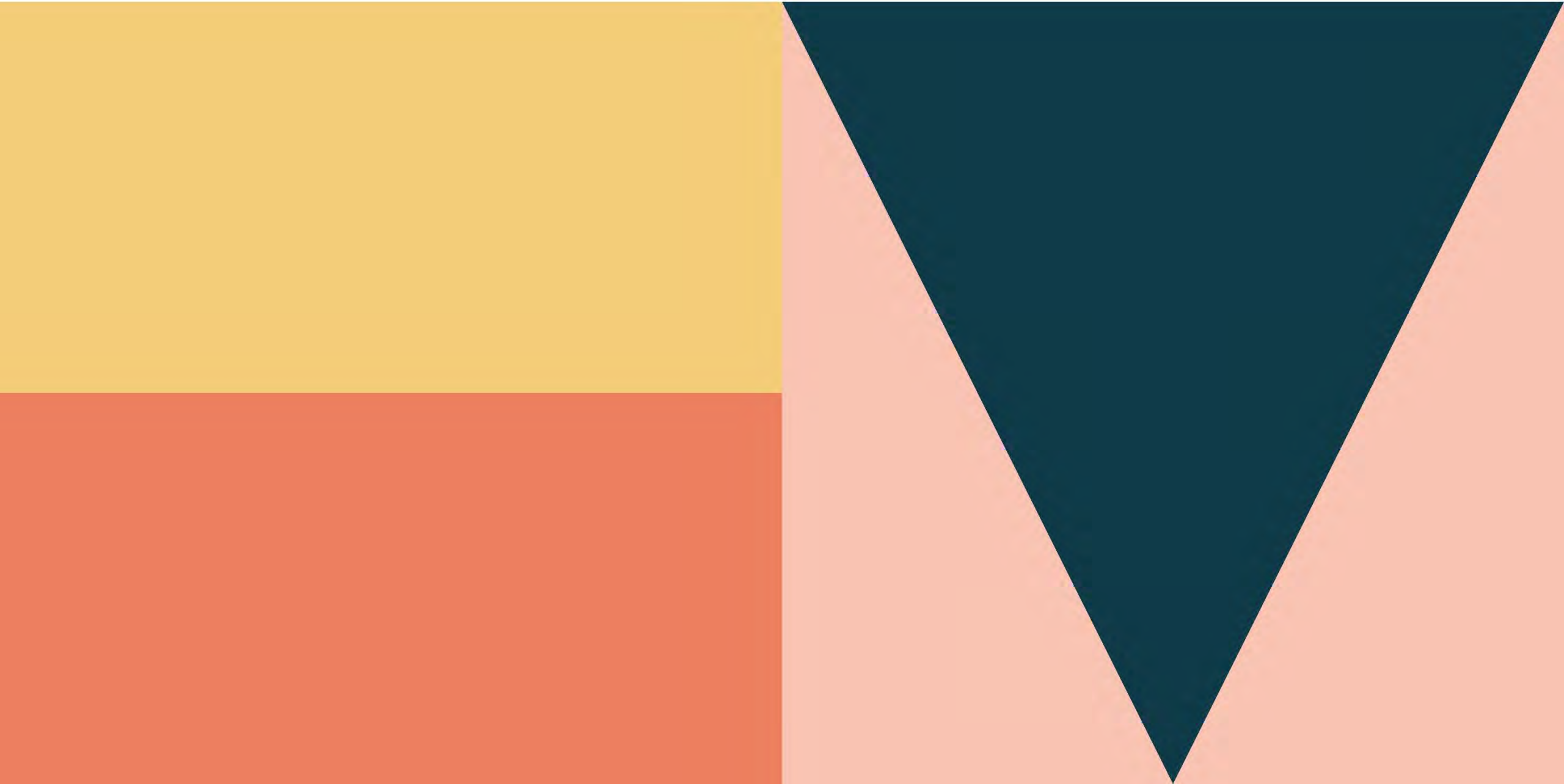


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FUTURES
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Faifley Campus



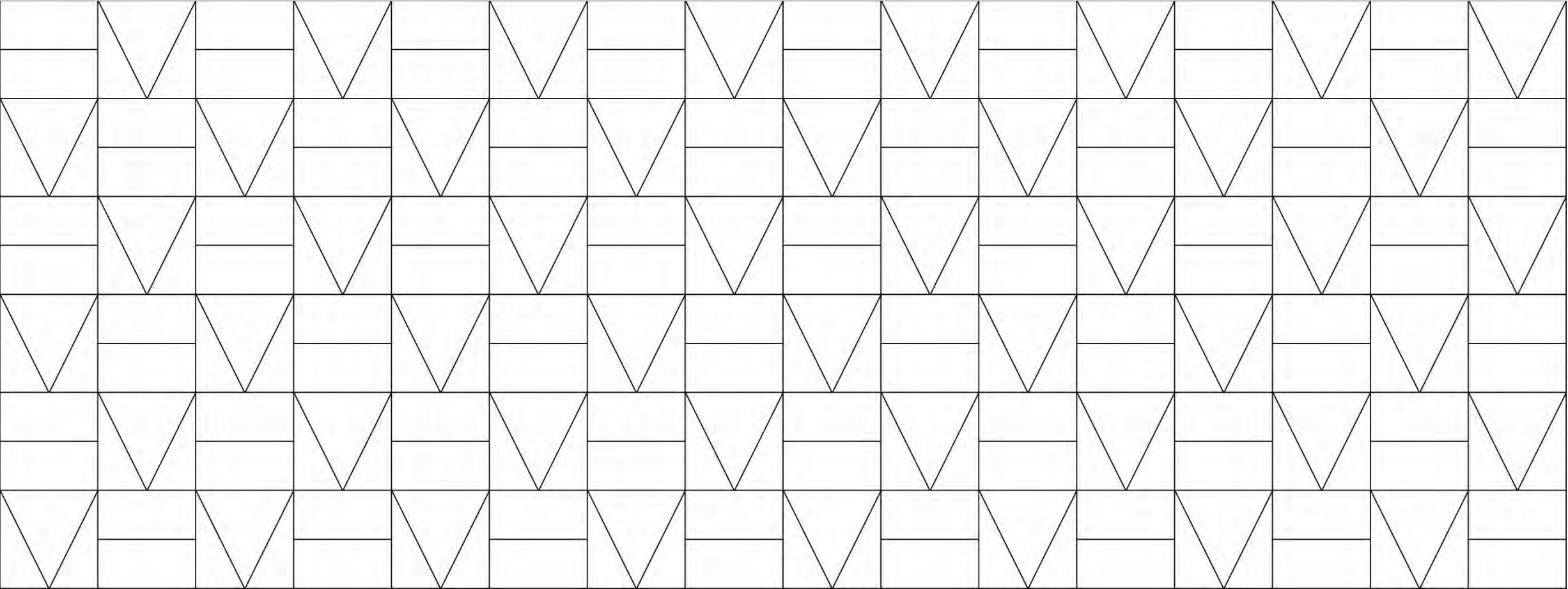


West Dunbartonshire Council & hubWest
Completion Ph1 Oct 2025 / Ph2 Aug 2026
LEIP 2, NZPSBS & Passivhaus
Community & Education Campus
Faifley, Clydebank

GIFA: 6017m ²
Airtightness: 0.474 ACH @ 50 Pa
Energy Consumption: c.67 kWh/m ² .a
PER (Primary Renewable Energy): 75 kWh/m ² .a
Embodied Carbon: 569 kgCO ₂ e/m ² (A1-A5)

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Site & Brief

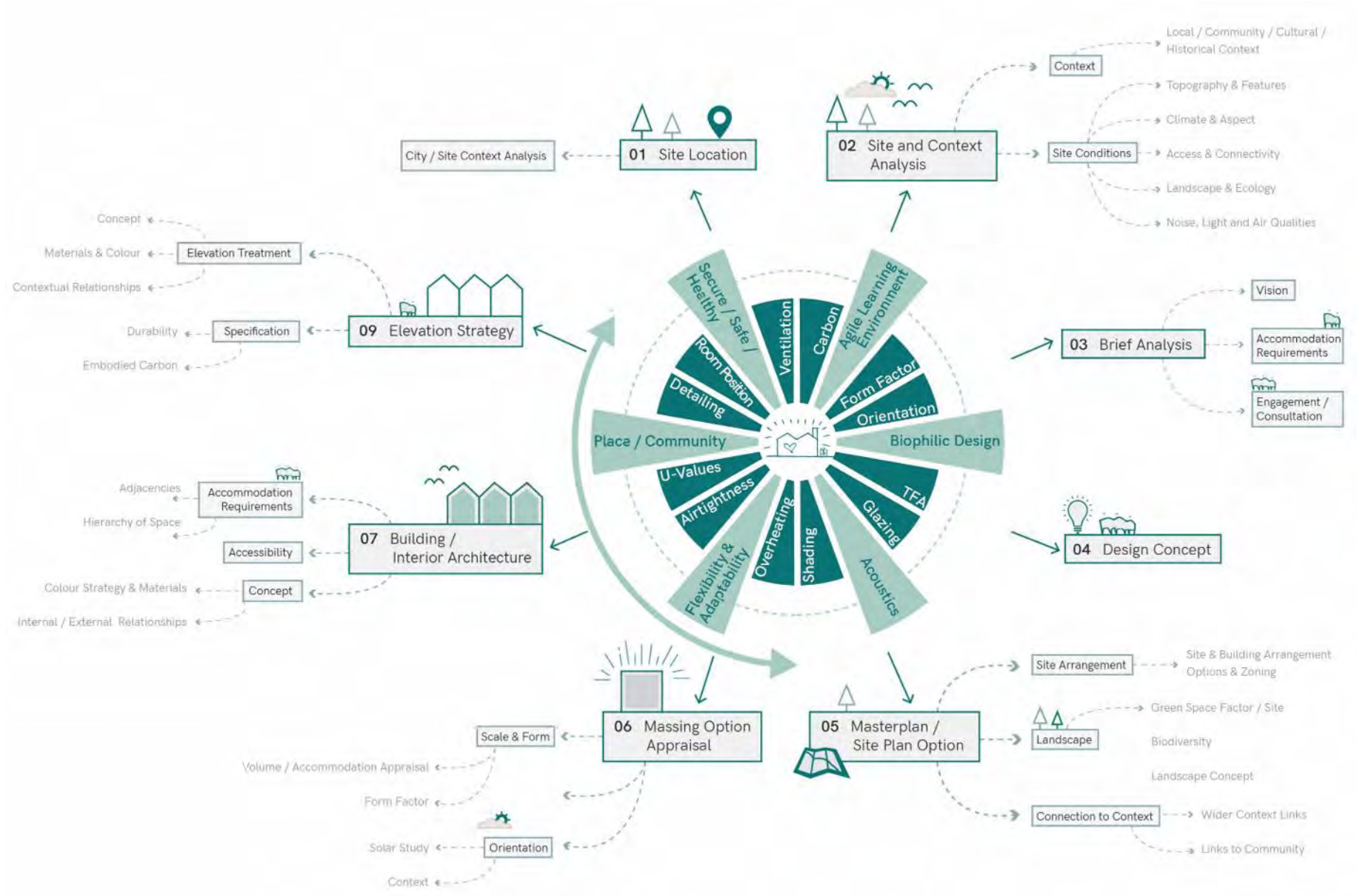


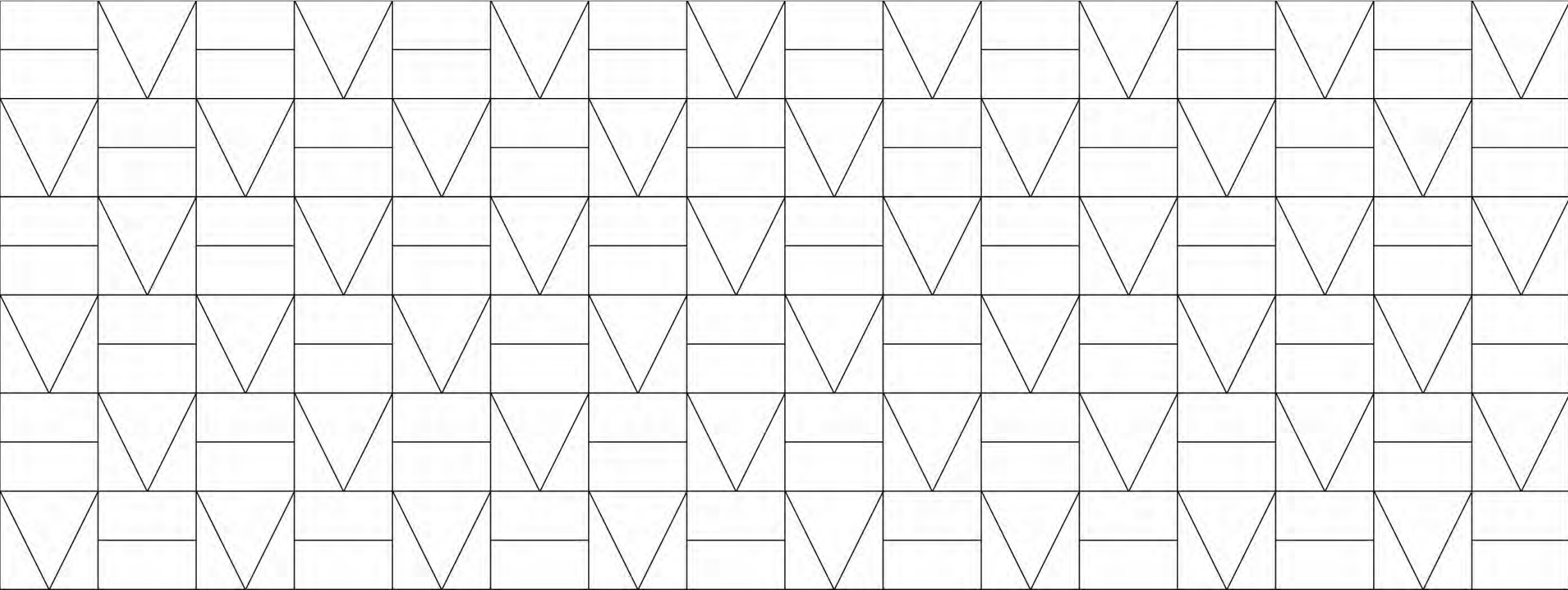


- 1. St Joseph's Primary School & Rainbow Base
- 2. Edinbarnet Primary School & Faifley Library
- 3. Auchnacraig Early Years
- 4. Lennox Early Years
- 5. Skypoint Community Centre
- 6. Faifley Knowes Woodland

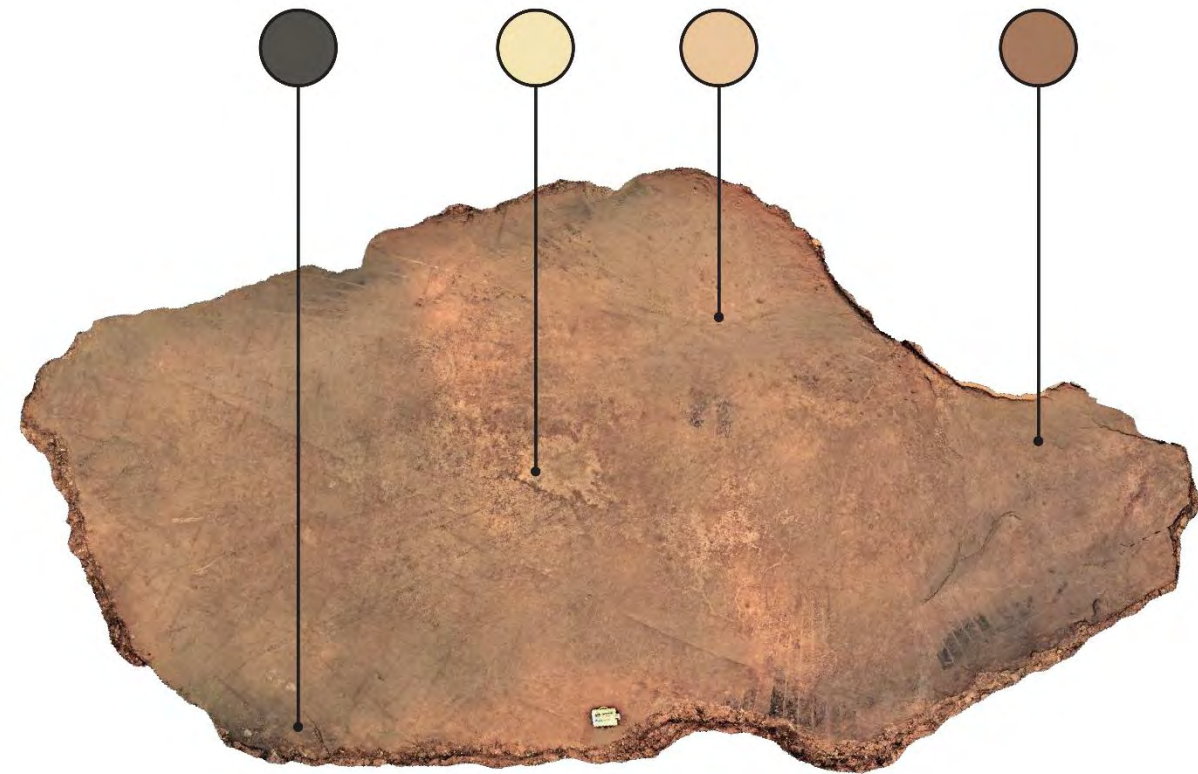


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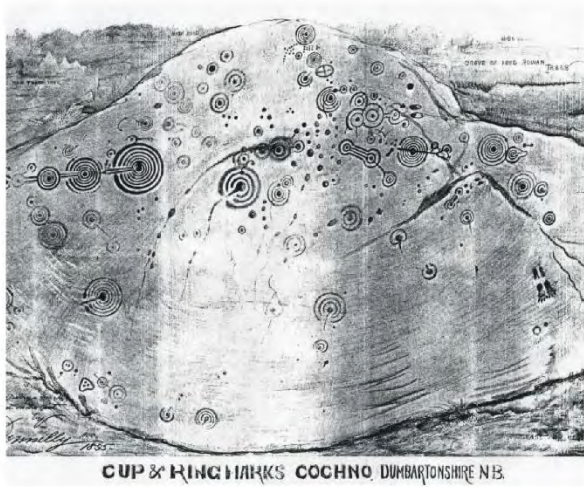








Above
3D laser scan of the stone, available to view online, was recorded in 2016.



Top
1890s - Illustration by W.A. Donnelly commissioned by Rev James Harvey (Duntochar).
Bottom
2015 - The stone is excavated, thoroughly recorded and documented. Attracting media attention and various other press releases at this time.



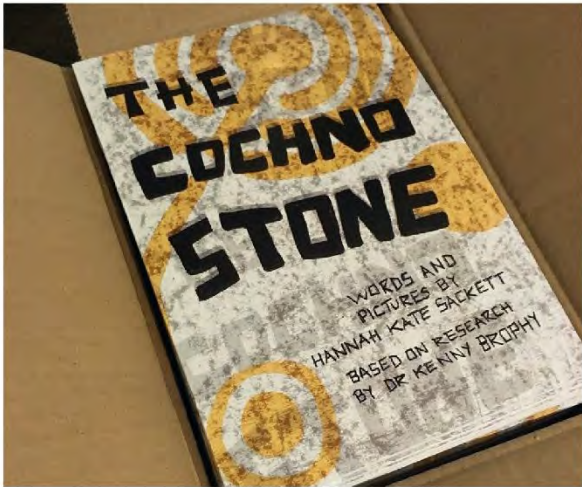
Top
1930s - Ludovic MacLellan Mann painting the stone with his cosmology theory.
Bottom
2016 - The stone is reburied for protection.



Above
The 'Chalkno Stone' schools engagement run by Dr Kenny Brophy across many Scottish Schools.



Top
1930s - Historic photographs of local community wedding taking place at the stone.
Bottom
2009 - Tom McKendrick and Gemma Stevenson building mural artwork as part of Faifley's 'Past, Present and Future' engagement.



Top
Andy Scott's 'Father & Son' and 'Mother & Daughter' sculptures in Faifley depict the cup and ring markings.
Bottom
2017 - Comic Book developed in collaboration with Dr Kenny Brophy and Hannah Kate Sackett as part of the 'Being Human Festival'.

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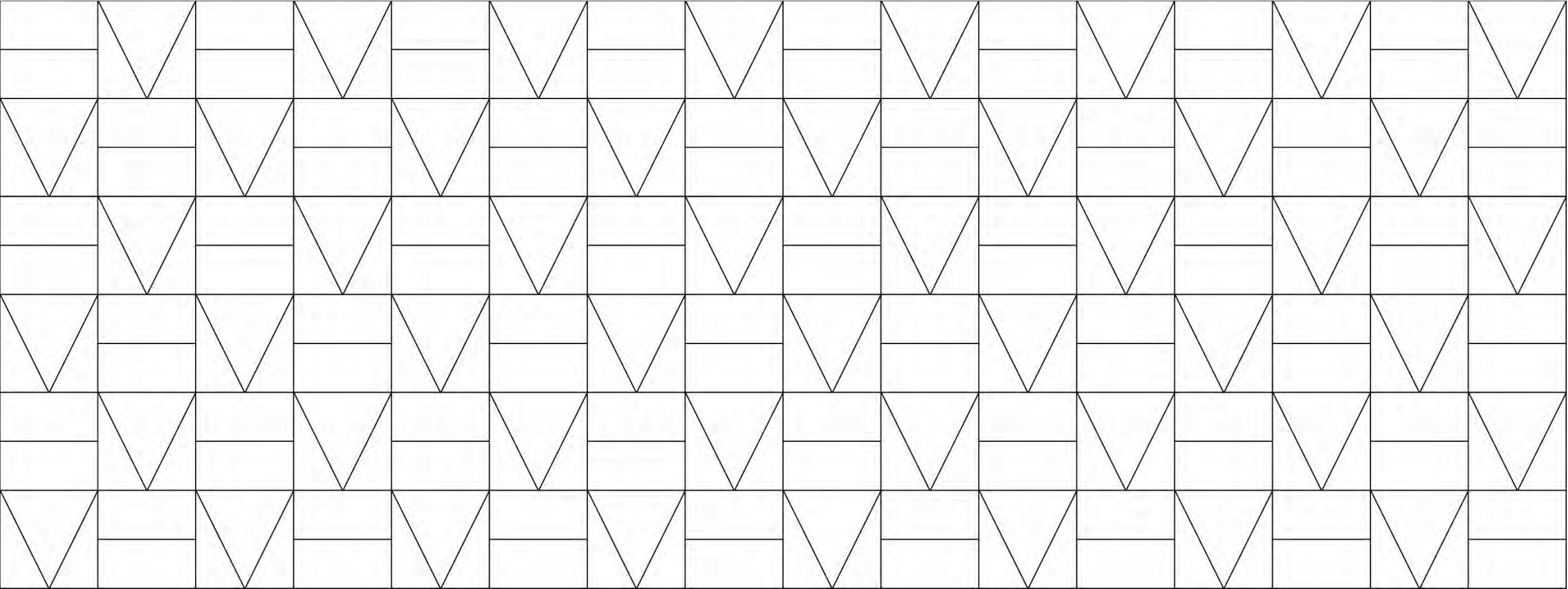


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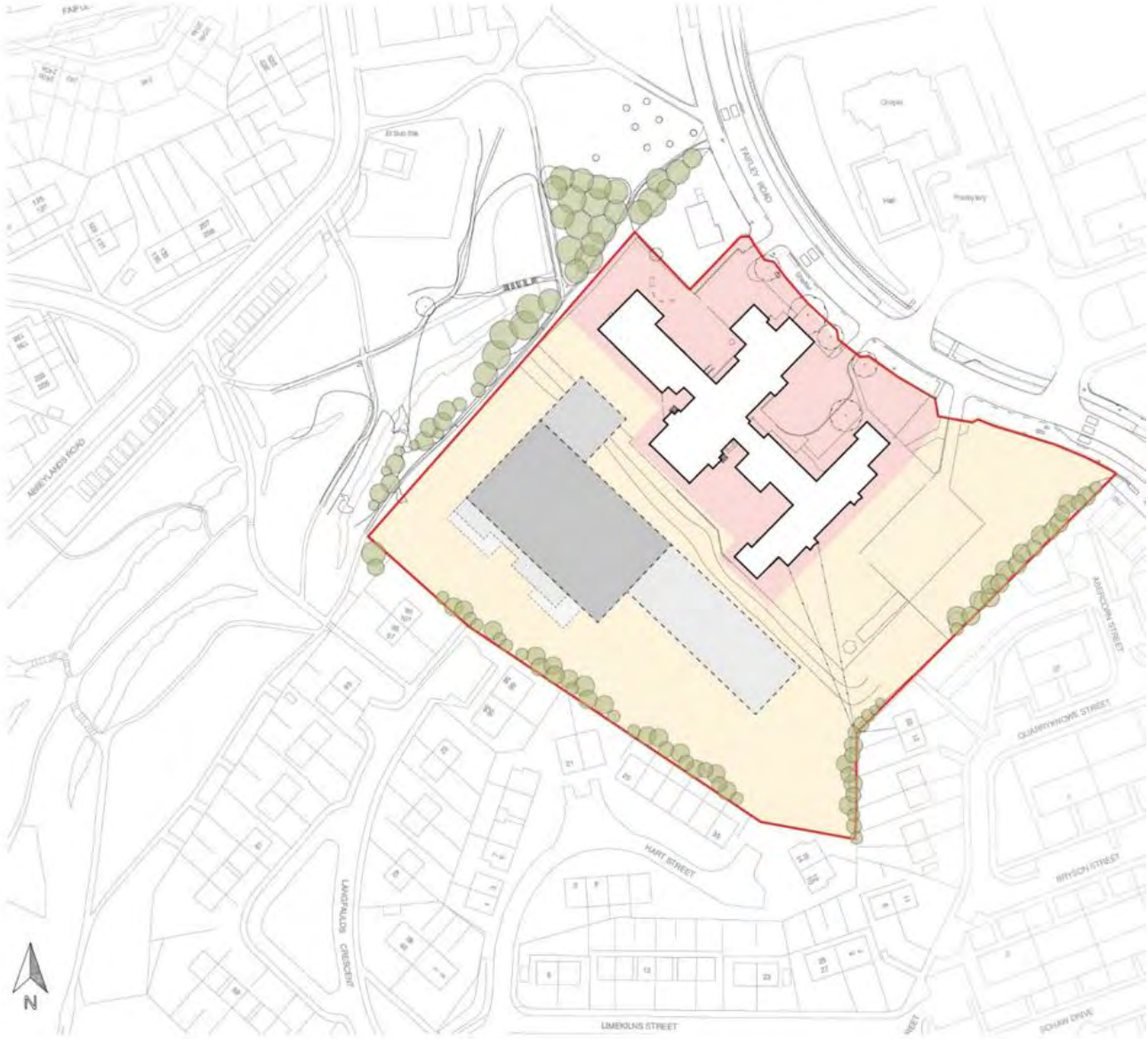
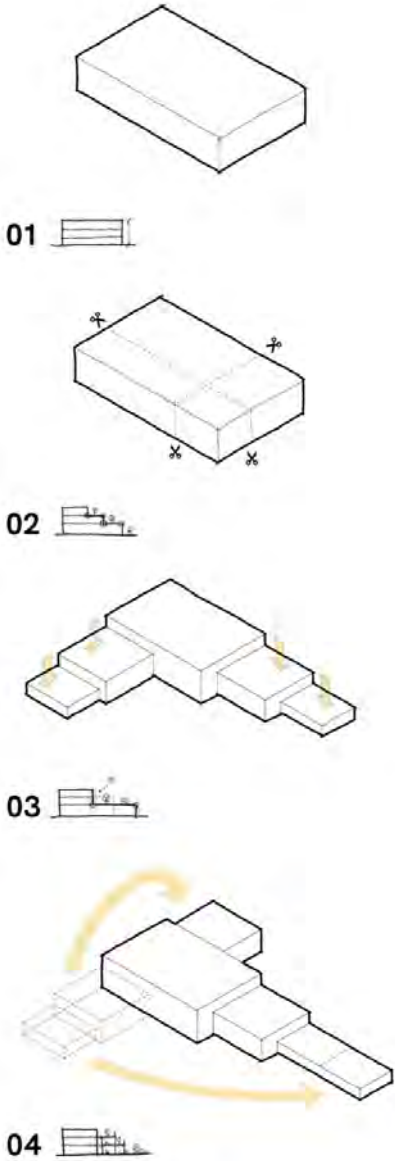


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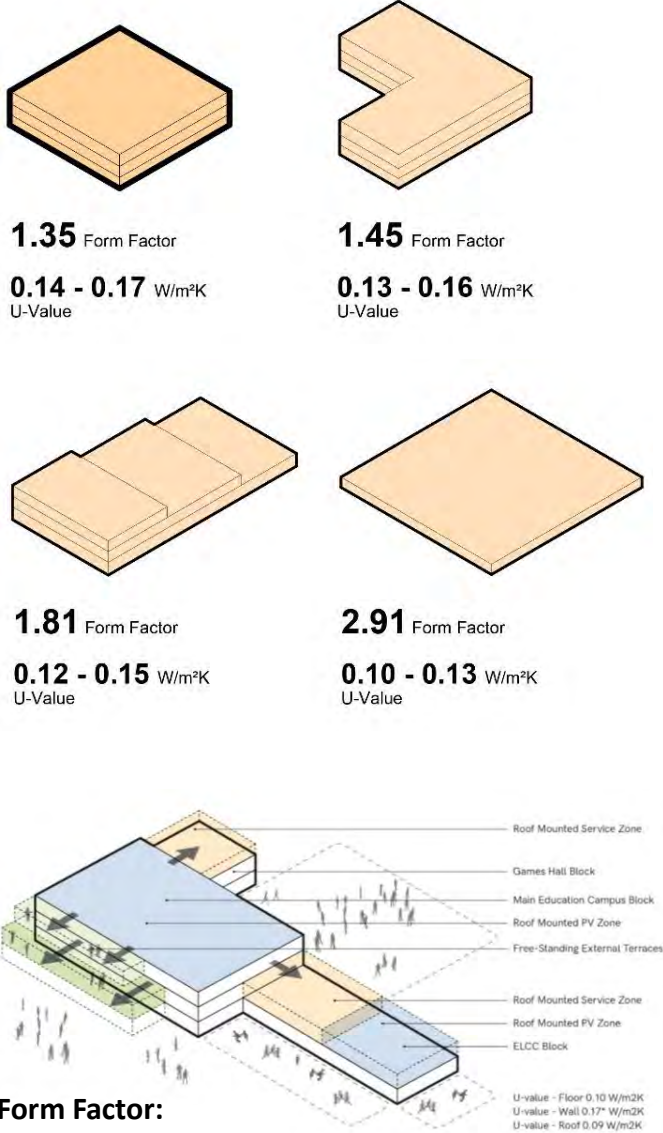
Design Process



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Level 00



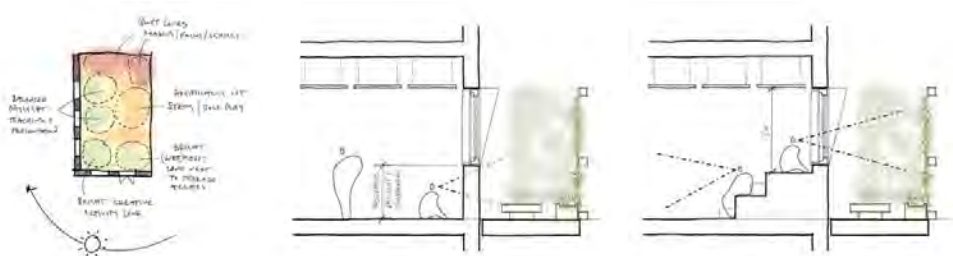


Level 02

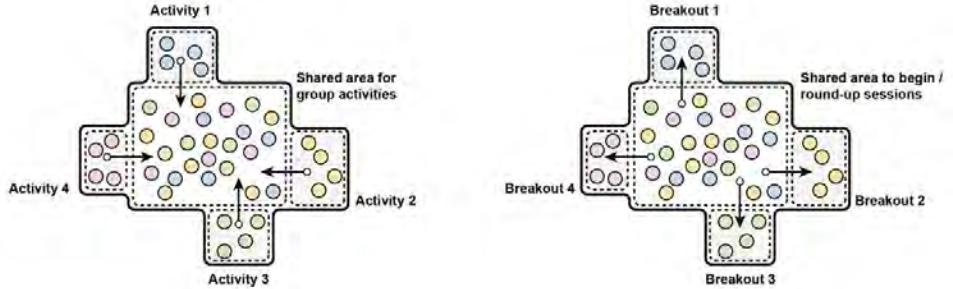
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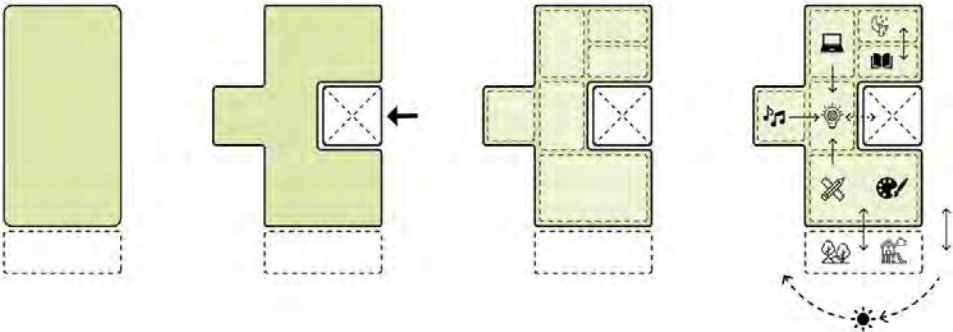
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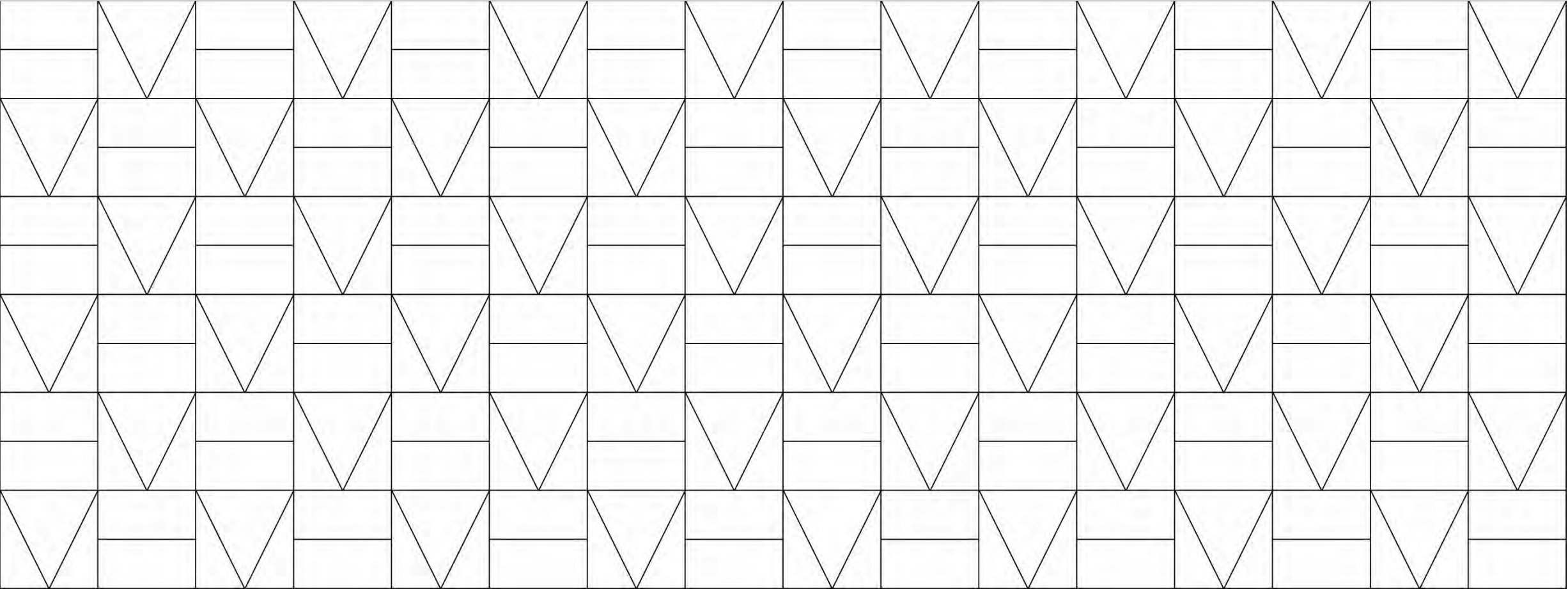


Environmental Benefits



Activity Based Learning





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Underslab Insulation Installation

Elaborate temporary formwork was developed and used for the installation of underslab and ground slab edge insulation ensures there are no gaps and boards would not open up when concrete slab is poured.



Karrier Panel Installation

The insulated karrier panel strategy has proved to be a massive benefit in construction speed and quality. Large areas of the thermal envelope are complete with proprietary product with focus given to joints and junction details.



Window Installation

Wraptite membrane is installed over the thermal envelope for a very robust airtight strategy that can be full inspected and reviewed before being covered up. External openings are fully sealed around the perimeter without detrimental impact to insulation.

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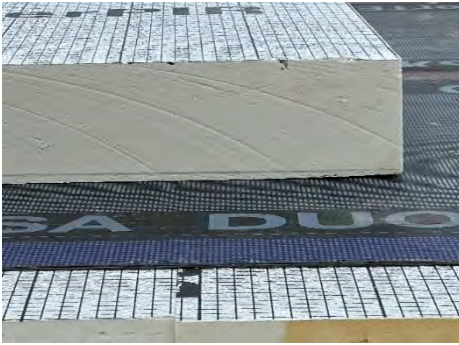
Window Installation

A big success at Faifley Campus has been the site quality and attention to detail on site. Following the full-scale mock-up, sub-contractor attitudes have shifted and are now taking more ownership and pride in their quality – evident in window taping following lessons learned from the test rig.



Roofing Installation

To ensure a high-quality installation of roof insulation, sheathing boards are installed onto the metal roof deck. This forms a very even and neat substrate for insulation boards and avoids risk of damage to the VCL during construction.



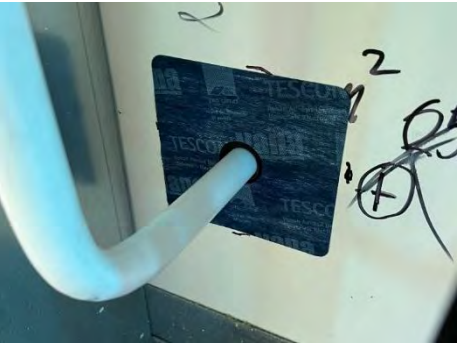
Roofing Installation

Despite a high quality of roof insulation install, these boards were inspected due to the seemingly irrelevant curve at the edge – a 5-10mm gap eventually discovered to be caused by overtightened wrapping for transport. This highlights the focus that comes with Passivhaus certification.



Service Penetrations

MEP penetrations are some of the most important aspects of the envelope design. Early design input from MEP contractors is important and a collaborative approach from all specialist sub-contractors (eg ventilation / cladding) is key.

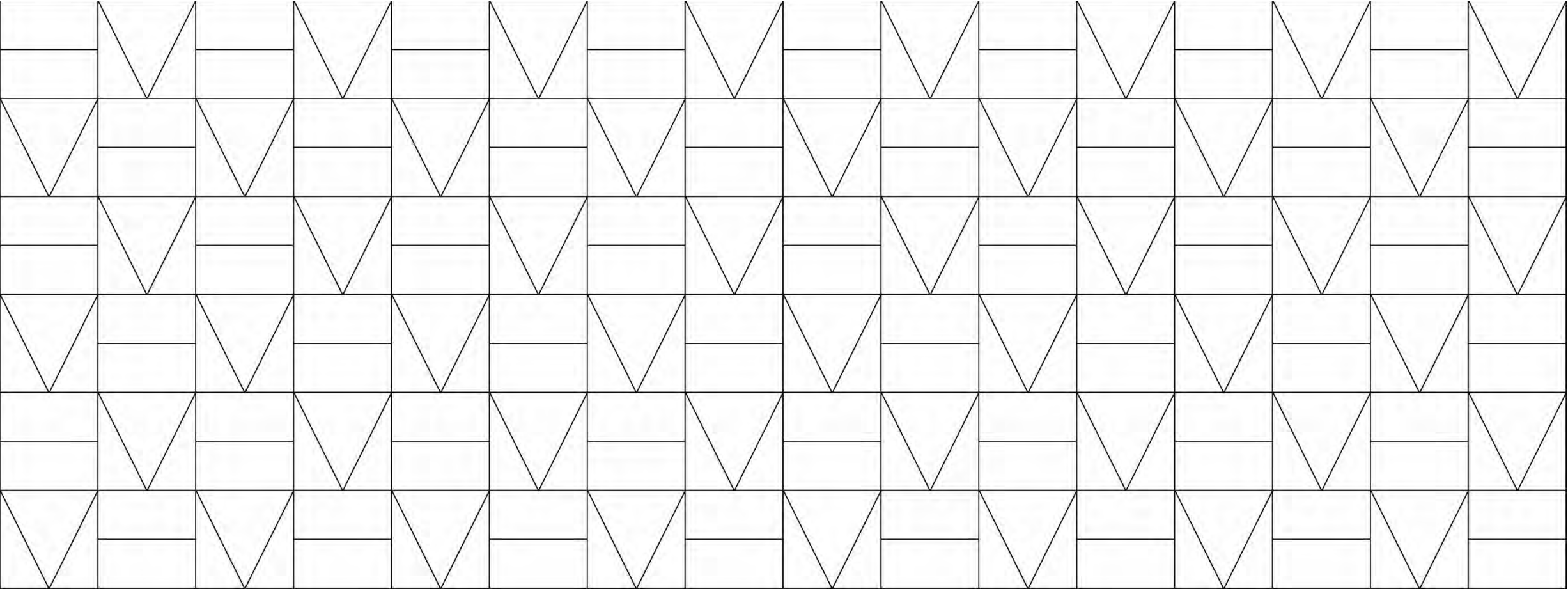


Airtightness

Service penetrations and window openings were both sealed to the front and rear for a robust airtightness strategy. Airtightness was identified as a key project risk as PH targets were far more onerous than Building Regs – however the robust approach and high site quality resulted in a successful interim airtightness value : 0.474 ACH.

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Thank you

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