



elmhurst conference

WALES

The Importance of Independence and Competence

Dr Hywel Davies OBE HonFCABE
Head of Technical Insights, CABE

So why are we here?



Energy Assessment



Building Regulations are
devolved throughout the UK





100

1124

1. *Journal of Management Studies*, 1997, 34, 103-117.
 2. *Journal of Management Studies*, 1997, 34, 119-133.

Building Regulations for England



- Building Regulations are now devolved – Wales has its own “Part L”
- We now have four Building Regulations regimes in the UK



Energy Assessment is not devolved in Wales

The Energy Assessment System



MHCLG

Energy Accreditation Schemes

Energy Assessors

Clients

The Energy Assessment System



MHCLG

Energy Accreditation Schemes

Independent

Energy Assessors

Competent

Clients

Competence of Energy Assessors



3. Competence of Prospective Members

3.1 The criteria for prospective members will be strand specific and Accreditation Schemes will ensure that:

- i. prospective members hold a qualification or are eligible under the Approved Prior Experiential Learning (APEL) standard for the strand they are applying for and
- ii. the identity of the prospective members can be verified.

3.2 Prospective members who do not meet the competence criteria will have their application for accreditation rejected, together with a reason and advice on the next steps where appropriate.

Continuing Professional Development



Appendix 4.2: Continuous Professional Development (CPD)

In order to maintain the quality, competency and compliance of all their Members within the industry, Accreditation Schemes shall require each Member to complete a minimum level of Continuous Professional Development (CPD).

1. Accreditation Schemes will require each member to undertake a minimum of 10 hours of CPD per year per strand. Where a member is accredited in more than one strand of EPBR, they shall undertake an additional 5 hours CPD per year for every additional strand, over and above the minimum 10 hours required.
2. Accreditation Schemes should ensure that a minimum of 50% of the CPD completed each year, is certified CPD, i.e. the number of hours can be validated by a certificate of attendance or completion.
3. Accreditation Schemes will require their members to keep up to date records of the CPD they have undertaken during a 12-month membership period.
4. As part of a membership renewal, schemes will require all members to submit their CPD record. Records will be stored against a member's contact record.

CPD – Changes in Requirements



Changes in Requirements

1. This relates to CPD requirements required for a member to maintain their competence to reflect changes in the way in which Energy Certificates are produced.
2. Accreditation Schemes will ensure that all their members have access to changes in requirements as soon as practical where there are changes in any of the following:
Software,
scheme requirements and
other changes which materially affect the way in which Energy Certificates are produced or members operate.
3. Accreditation Schemes will identify suitable training providers, implement checks that this training is undertaken, and where necessary check the competence of the member following the training.

Energy Assessors – Code of Conduct



1. Accreditation Schemes shall define and document a Code of Conduct, which will outline the minimum standards that will be expected from a member including, an obligation to:
 - only undertake an assessment for which the member is judged to be competent by their Accreditation Scheme(s);
 - declare any conflicts of interest and if appropriate decline work where existing relationships, commercial or personal could be perceived as jeopardising the objectivity of an assessment.
 - operate to an appropriate safety standard;
 - decline offers of gifts, hospitality or inducements that may be perceived as jeopardising the objectivity of an assessment;

Professionals



- Technical competence lacking at too many levels
- Professional competence of many involved questionable – but no-one checked whether this was the case when making appointment
- Failure of many to understand importance of working within limits of competence
- Accountability – lack of understanding boundaries of responsibility and unwillingness to be accountable for outcomes
- Over-reliance on building control to understand and assure compliance
- Failure to raise risks with clients
- Lack of systems thinking and capability
- Concern about performance of some professional bodies



Public Inquiry Report : Harley Facades



Report says Harley facades "bears **significant degree of responsibility**" and **"failed in many respects to meet the standards expected of a reasonably competent cladding contractor"**.



Regulation of building professions



“The Inquiry made detailed recommendations regarding regulation of certain high-risk professions to provide greater confidence in the competence, accountability and oversight of those performing safety-critical roles. The government remains committed to implementing these changes and will go further to deliver a comprehensive programme of reform.

We will work with key stakeholders, organisations and experts to introduce a new system of regulatory oversight and enforcement, which aligns with the proposals in this document to improve coherence and reduce fragmentation in how the sector is regulated. We are exploring options for the design, form and scope of this new framework as part of a new overarching strategy for building professions.”

Single Regulator Prospectus

Building Regulations

A system of functional regulation



The legal requirement is to demonstrate 'reasonable provision' against the 'functional requirements' set out in the Building Regulations (Technical Standards in Scotland)

Permits a wider range of solutions - but requires a higher level of competence to achieve compliance.

Requires designers to assess whether products will contribute to a compliant design – designers need to understand the performance of the products that they specify and how that performance contributes to a compliant design.

Designers need accurate, reliable, up to date information from product manufacturers and suppliers to enable them to discharge their duties.

Regulations and Guidance



Duty holders and Competence Regulations

Definitions



““**client**” means any person for whom a project is carried out;”

““**contractor**” means any person (including a client, but not a domestic client) who, in the course of a business, carries out, manages or controls any building work;”

““**design work**” means design of any building work;”

““**designer**” means any person (including a client, contractor or other person referred to in Part 2A of these Regulations) who in the course of a business —

(a) carries out any design work, or

(b) arranges for, or instructs, any person under their control to do so;”

“**domestic client**” means a client for whom a project is being carried out which is not in the course or furtherance of a business of that client;

Building Regulations Part 2A: Dutyholders and competence



Designer duties: *Duties of dutyholders*

General duty

11J.—(1) Any person carrying out any building work must ensure the work carried out by them (and by any workers under their control) is planned, managed and monitored so as to be in compliance with all relevant requirements.

(2) Any person carrying out any design work must take all reasonable steps to ensure the design work carried out by them (and by any workers under their control) is planned, managed and monitored so that the design is such that if the building work to which the design relates were built in accordance with that design the building work would be in compliance with all relevant requirements.

Building Regulations Part 2A: Dutyholders and competence



Additional duties of designers

11K.—(1) A designer must not start design work unless satisfied that the client is aware of the duties owed by the client for the building work to which the design relates under all relevant requirements.

(2) When carrying out design work the designer must take all reasonable steps to ensure that the design is such that if the building work to which the design relates were built in accordance with that design the building work would be in compliance with all relevant requirements.

Changes you could make

Questions

- Who is the designer?
- Who is responsible for building regulations compliance?
- Who carries the liability for the work?
- How will this all work in practice?



Energy Assessment in an “**Age of Electrotech**”

Nigel Banks, Octopus Energy

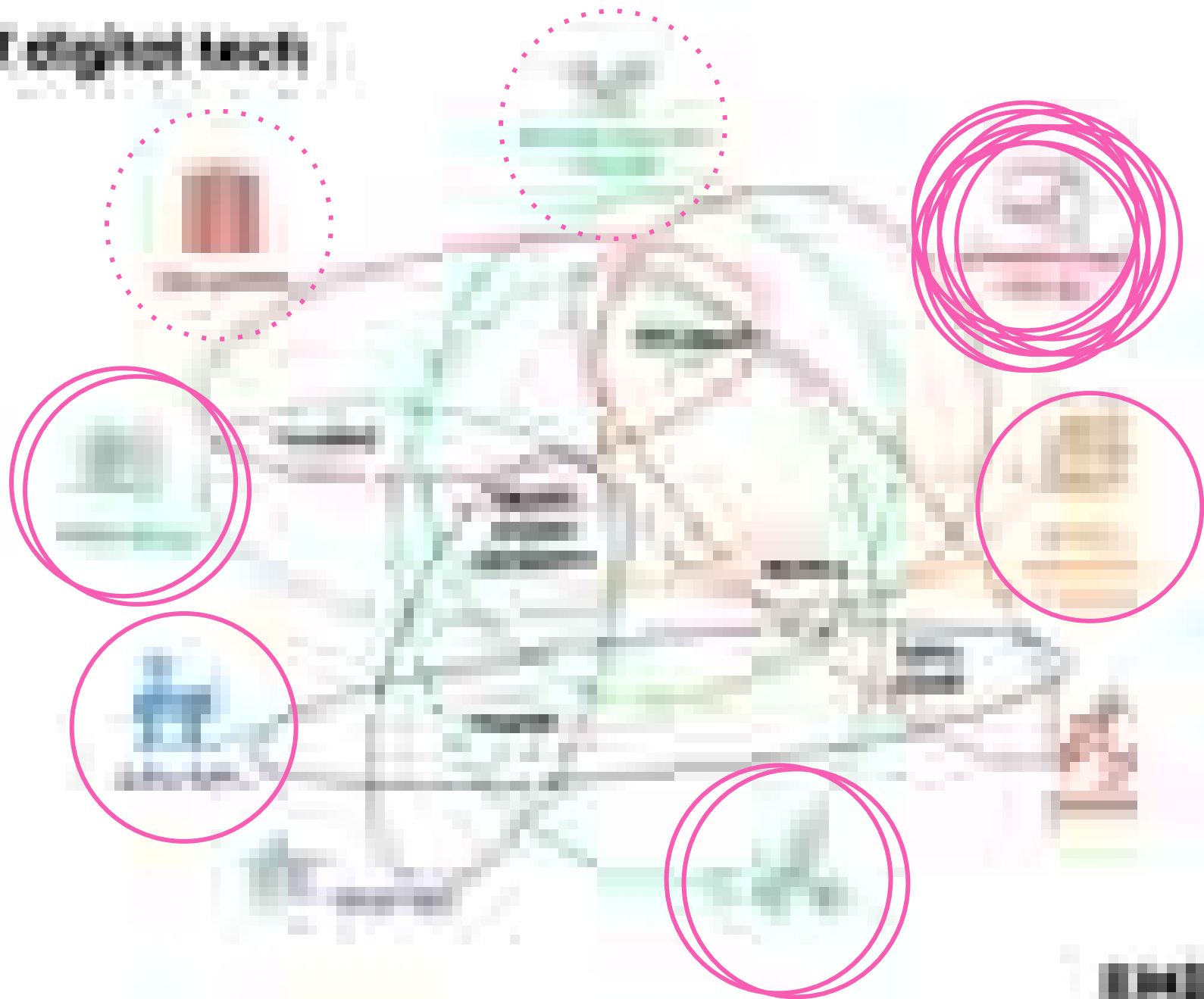


The Electro-tech Revolution



Electronics in the world of digital tech

Electronics have evolved in the world of digital tech, with the integration of various technologies and the development of new products and services.



Electronically Filing Business Change

Information on the new business change filing system



Electromechanical systems getting tighter

Industry data shows that manufacturers are taking steps to improve their energy efficiency

By
David
Hartley



The industry is seeing a significant increase in energy efficiency, with many manufacturers reporting a 50% improvement in energy efficiency over the last five years. This is due to a combination of factors, including the use of more efficient equipment, improved process control, and the implementation of energy management systems.

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Cosy Average
SPF 3.78



Electrotech is a rapidly growing market in the UK

Source: National Energy System Operator - Future Energy Scenarios, 2025; low case = 10-year forecast, high case = Electric Engagement scenario
Notes: enterprise value figures assume: 25% market share, 10% EBITDA margin and 10x EBITDA multiple



Heat Pumps

UK forecast annual installations



2035 market size =
£9-14bn

EV chargers

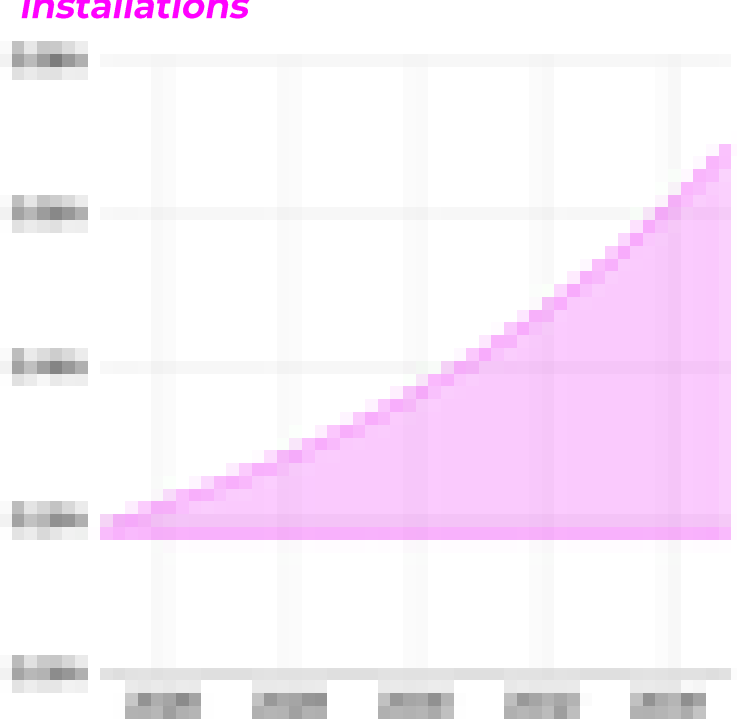
UK forecast annual installations



2035 market size =
£1.5-2.0bn

Solar & battery

UK forecast annual installations



2035 market size =
£3-10bn

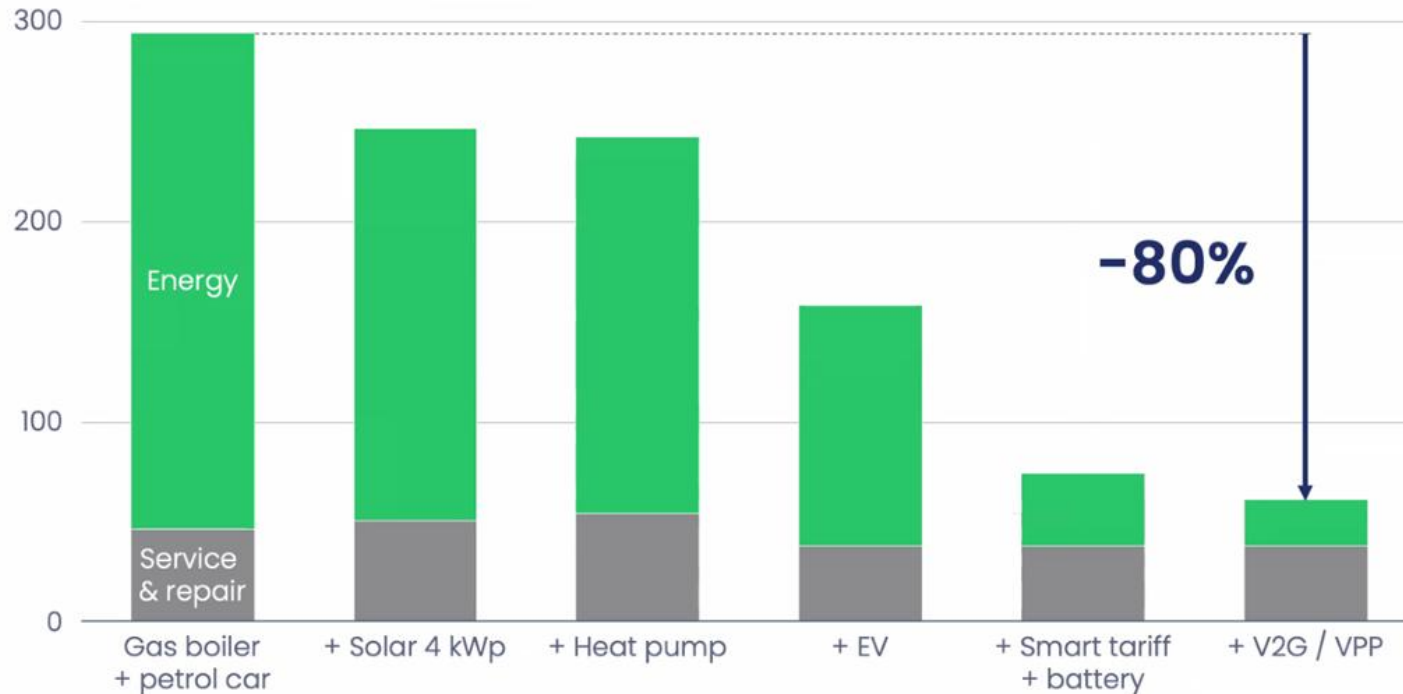
The dual revolution for households

New infotech and electrotech can drive down household bills by as much as 80%

Monthly energy-related bills for household in the UK

£ per month at 2026 UK prices

INDICATIVE



Other advantages

13%

of childhood asthma attributable to gas cooking in the US
Can be avoided with electric stoves

3 million

homes overheat with no way to cool in England
Heat pumps can heat and cool

75%

of charging happens at home or the workplace
So no more trips to the gas station needed

Three things impact energy costs...



Energy Demand
(kWh/yr)

Efficiency
(%)

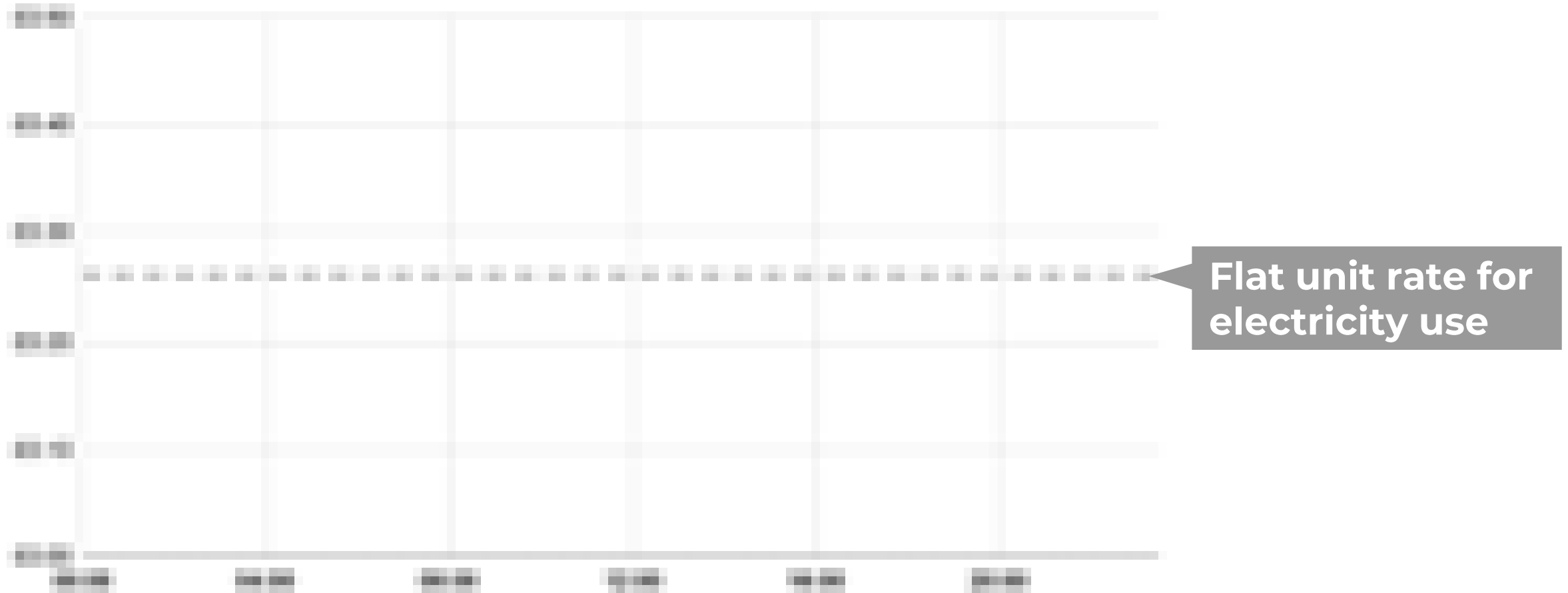
x

Tariff
(£/kWh)

=

Energy Cost
(£/yr)

Typically customers pay a flat rate for electricity regardless of when they use it



17,520

Octopus Agile reflects the spot price of electricity each half hour of each day



**30-minute
pricing that
changes from
day to day**



..delivers..

117% increase in charging

Example: Petrol vs EV vs smart EV



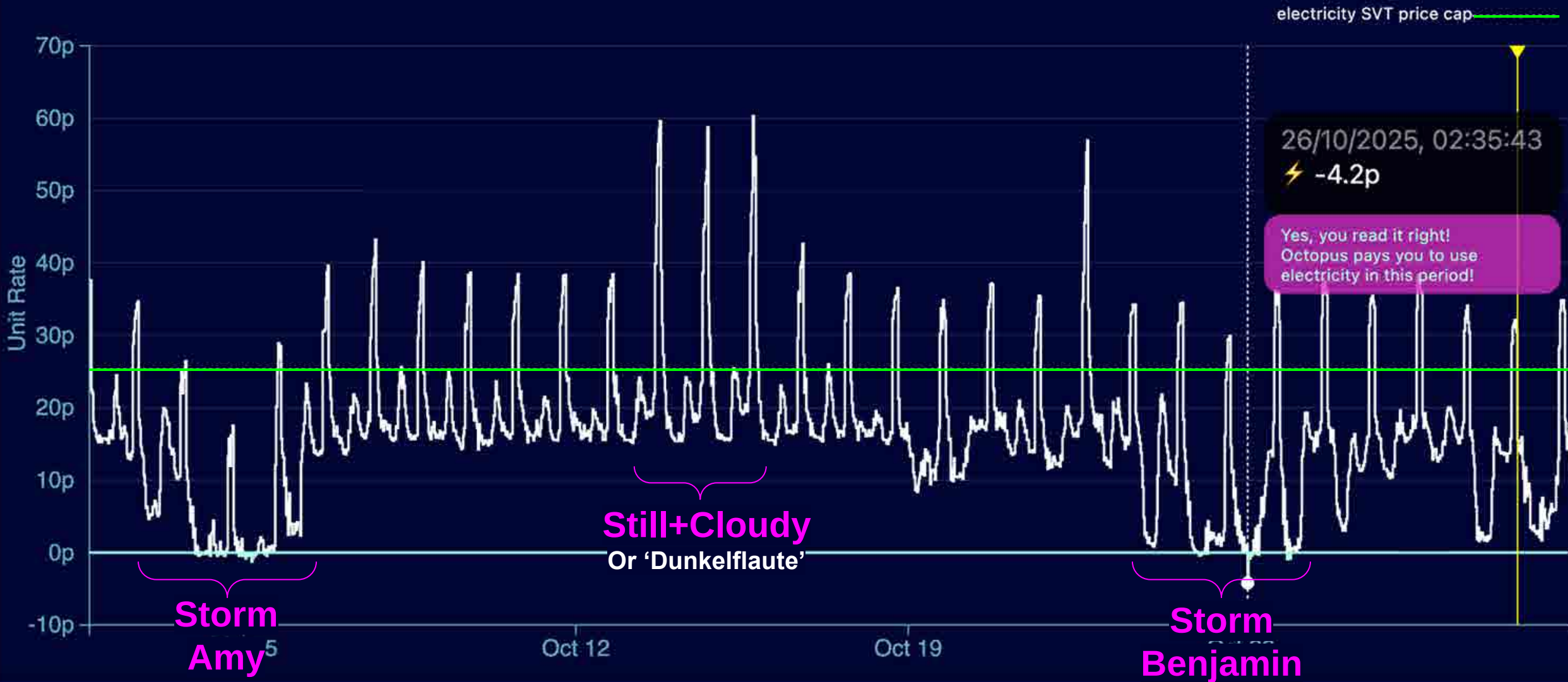
$$\frac{10,000 \text{ (miles/yr)}}{11 \text{ (miles/litre petrol = 50mpg)}} \times 1.40 \text{ (£/litre petrol)} = £1,273 \text{ (£/yr)}$$

$$\frac{10,000 \text{ (miles/yr)}}{4 \text{ (miles/kWh)}} \times 0.27 \text{ (£/kWh) Standard Tariff} = £675 \text{ (£/yr)}$$

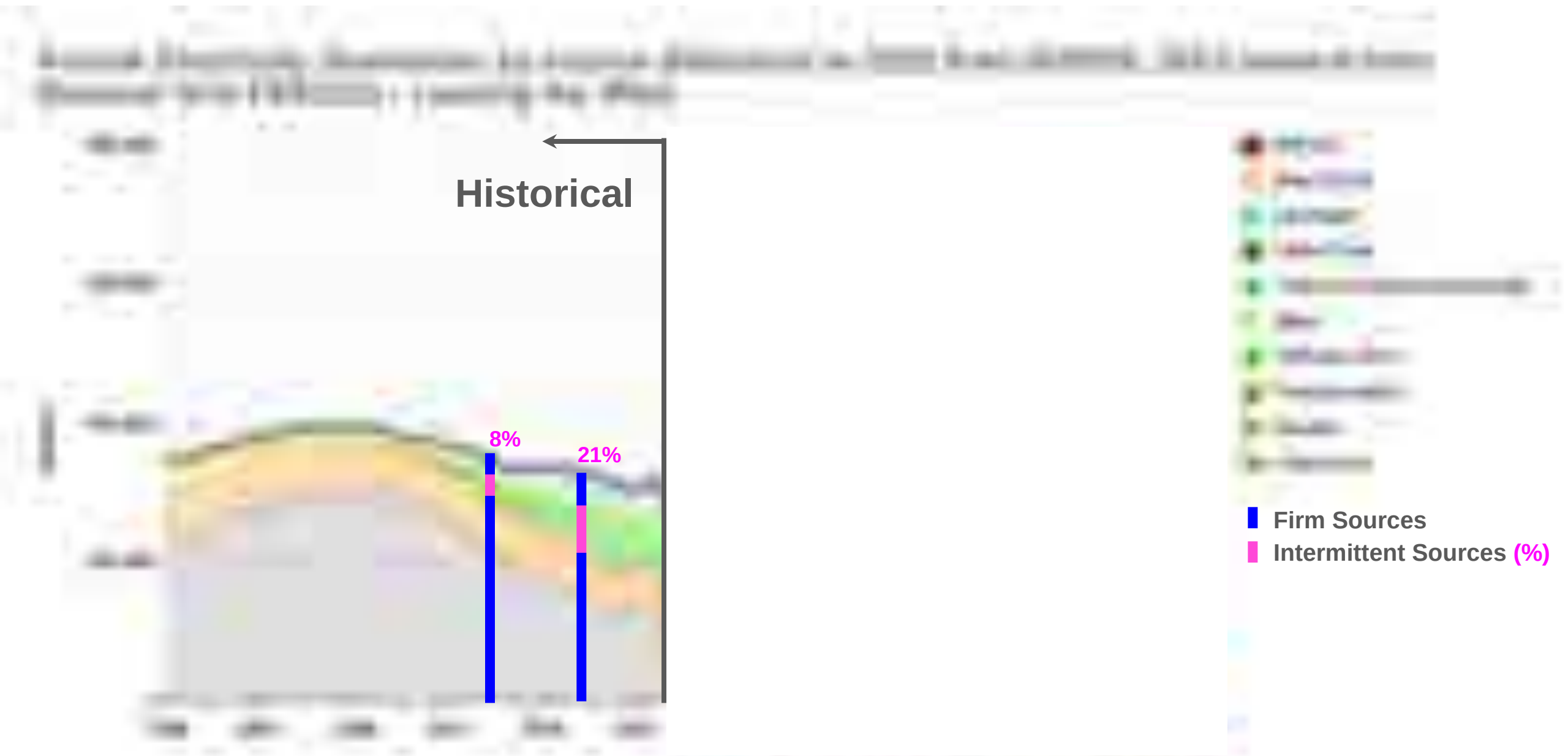


$$\frac{10,000 \text{ (miles/yr)}}{4 \text{ (miles/kWh)}} \times 0.075 \text{ (£/kWh) Intelligent Octopus Go} = £188 \text{ (£/yr)}$$

How the price of electricity changed through October 2025

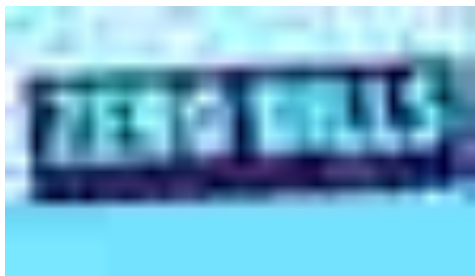
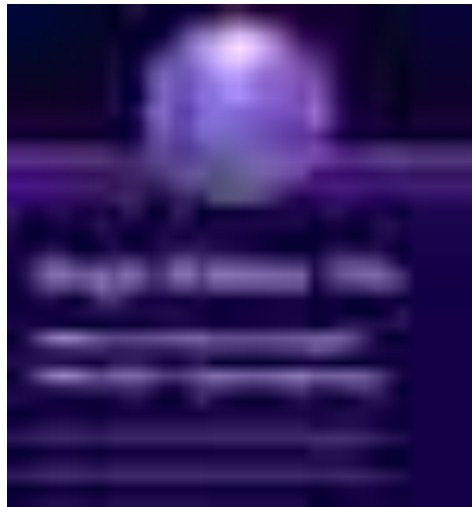
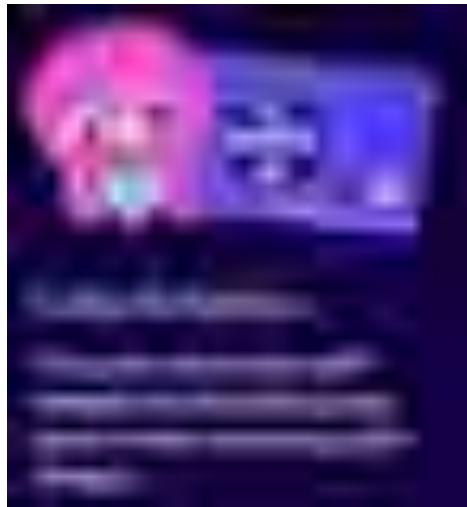
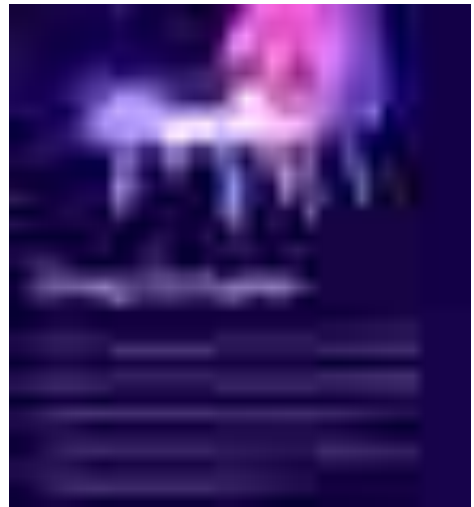
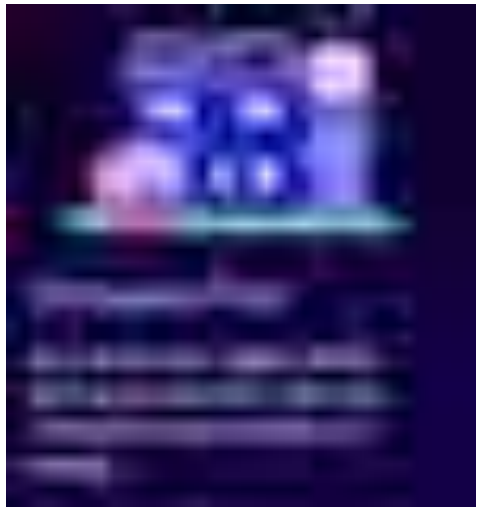


We are at a key transition point in the electricity grid...



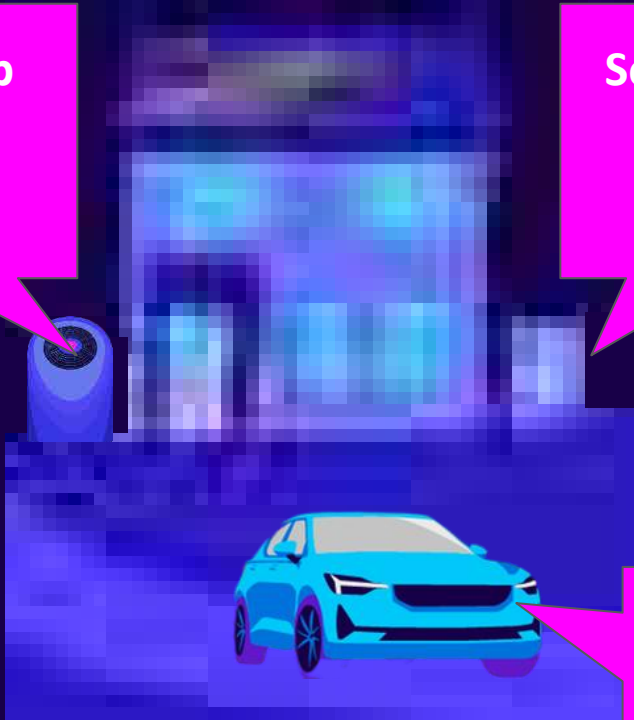
Free electricity
when there is an
excess of
renewables on
the grid





Annual savings (at current rates)

Heat Pump
(Cosy)
£368/yr



Solar + Battery
(IO Flux)
£824/yr

EV @home
(IO Go)
£315+/yr
(£1,000+/yr)

Sources:

<https://octopus.energy/blog/heat-pump-run-cost-savings/>

<https://octopus.energy/blog/solar-savings/>

<https://octopus.energy/blog/intelligent-go-faqs/#costsavings>



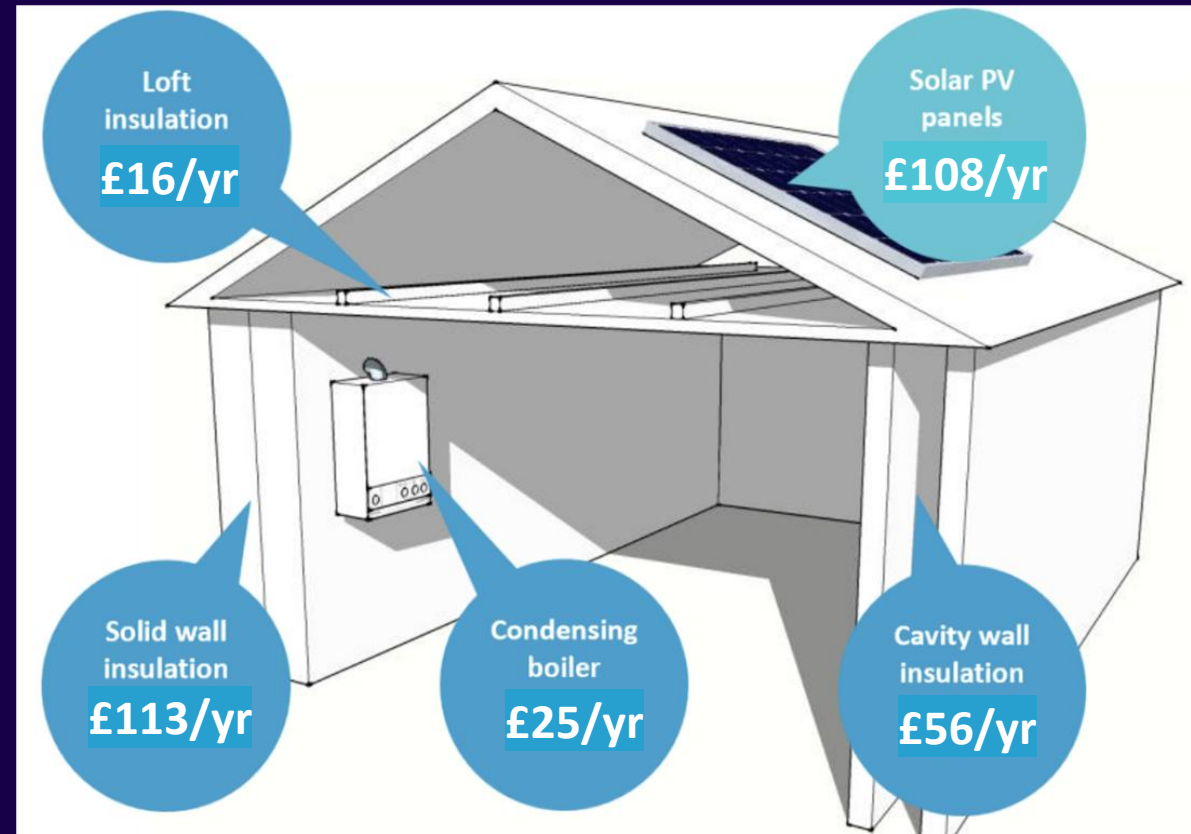
Department for
Energy Security
& Net Zero



National Energy Efficiency Data-Framework (NEED): Summary of Analysis, Great Britain, 2025

26 June 2025

Accredited Official Statistics



Source: <https://assets.publishing.service.gov.uk/media/685bf0d30433072fce0e1000/need-report-june-2025.pdf>

Energy bills in 2025 by EPC rating:



How it works...

We combine heat pump, battery, and solar to eliminate energy bills – offered in perpetuity, *guaranteed for at least 10 years*



Using our Kraken tech, we optimise the home energy system for a Zero Bill by:

- Optimising around **customer controls**
- Controlling the **heat pump**
- Controlling **solar and battery** systems
- Taking feed from **weather forecasts**
- Dynamically accounting for **market conditions**
- Providing **flexibility services** to the grid

We'll offer Zero Bills with a **Fair Use Allowance** set at **1.5x the average consumption**

EV charging is not included



Future Homes
Exemption



Heat pumps



Solar PV

ZERO BILLS



Heat pumps



100% more
solar PV



Battery

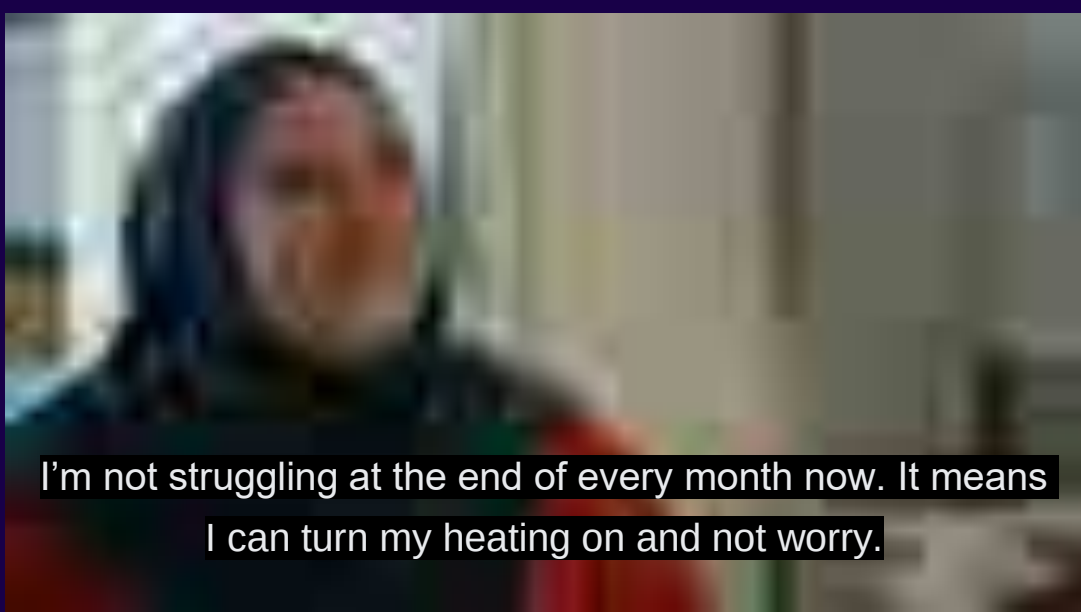






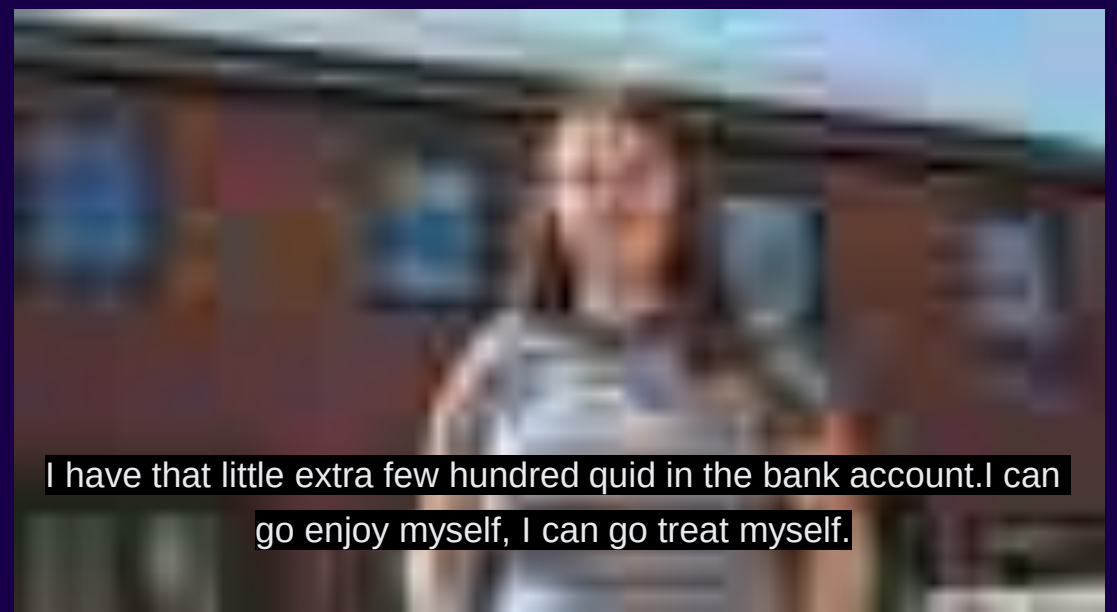


gs8



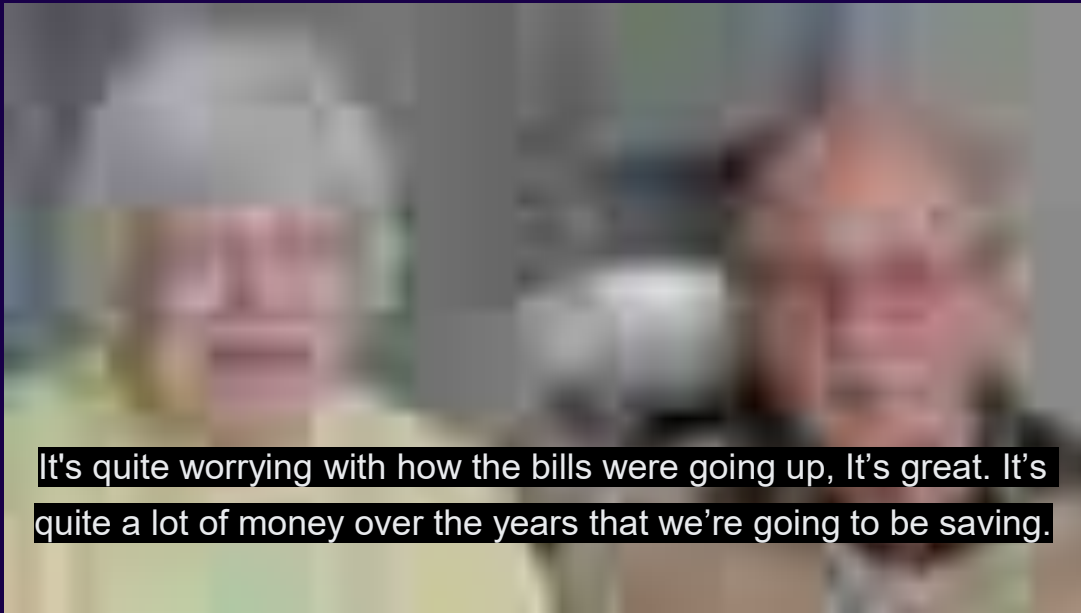
I'm not struggling at the end of every month now. It means
I can turn my heating on and not worry.

Essex, UK



I have that little extra few hundred quid in the bank account. I can
go enjoy myself, I can go treat myself.

Bristol, UK



It's quite worrying with how the bills were going up, It's great. It's
quite a lot of money over the years that we're going to be saving.

Sussex, UK



Very quickly we saw the advantages of joining the [Zero
Bills home] program.

Lille, France



Towards Healthier Homes: Behaviour-Informed Approaches to Damp, Mould and Ventilation

Dr Simon Lannon, and Dr Satish BK
Welsh School of Architecture, Cardiff University



Overview:

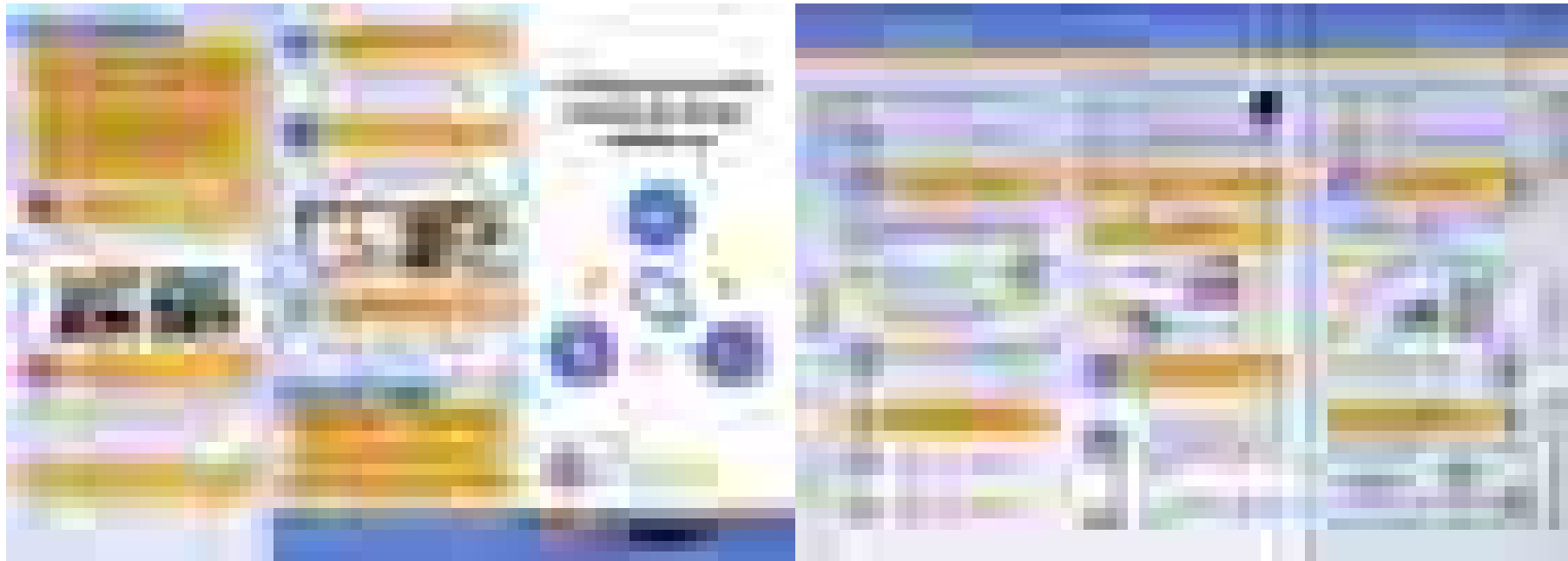
- Background research
- EPSRC –Impact Acceleration Account Project
 - Process
 - Workshops
- Good practice Framework



UKRI-IAA Project



Good practice guide to raise awareness of
indoor air quality
on the health and well-being of ethnic minorities



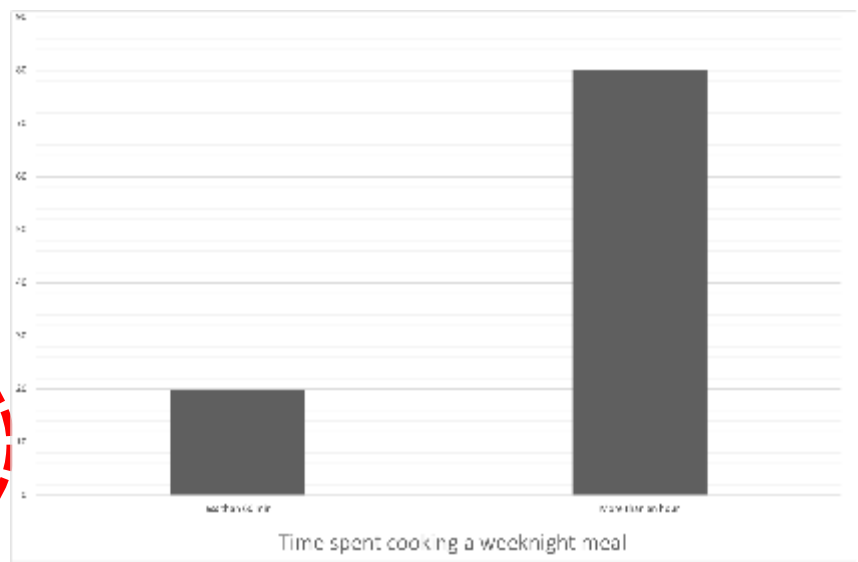
Good Practice Guide



Scan the code
For Further Information

Time spent cooking

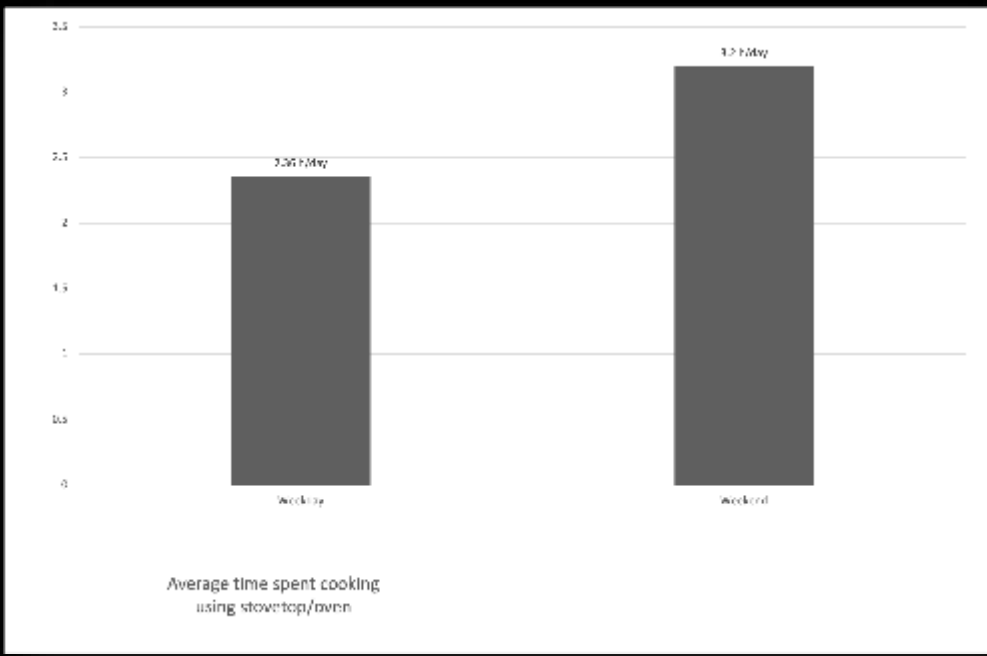
UK residents
(Statista, 2019)



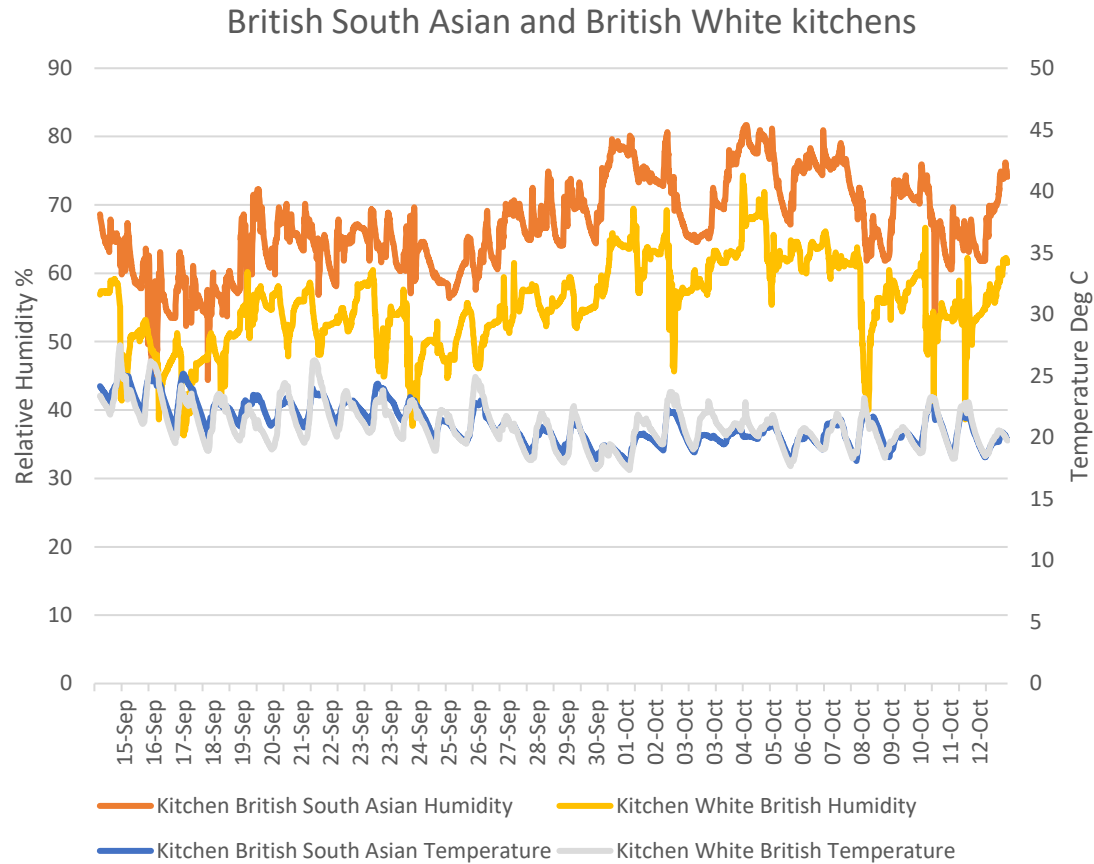
British Asian
households

On average, time spent
cooking a weeknight
meal ...

Survey conducted in Plymouth- June 2017]

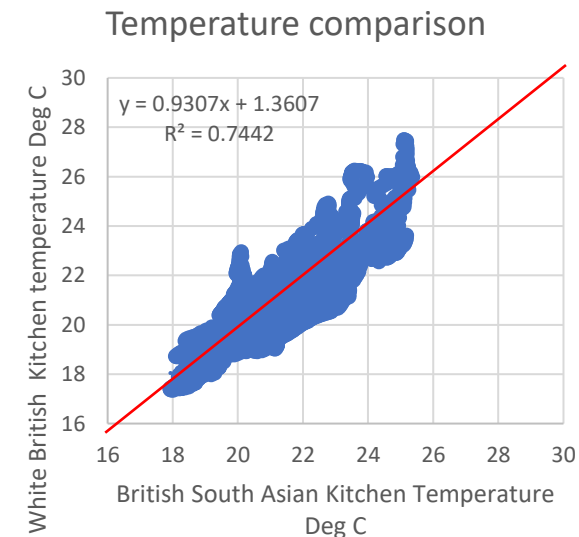
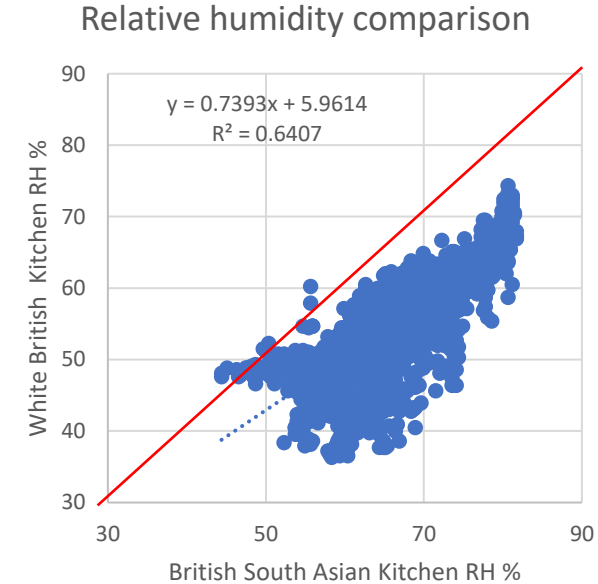


Temperature and Humidity in Kitchens



Humidity is consistently higher in the British South Asian Home,
than in the White British Home

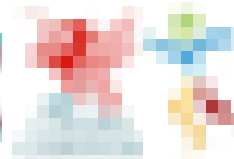
Temperature follows similar trend in both homes



EPSRC-IAA PROJECT VENTILATION MATTERS



Framework to Create Mould-Free, Healthier Homes
for Housing Associations and Third Sector



- To investigate how



- To develop *practical, evidence-based recommendations*



Framework to Create Mould-Free, Healthier Homes
for Housing Associations and Third Sector

Workshop 1 - Stakeholder diagnosis

- 1 Expose assumptions, power relations and technical/behavioural framings

Workshop 2 - Resident behavioural inquiry

- 2 Elicit lived experience, routines, comfort, moisture and tacit knowledge

Diary + loggers - Behaviour-data bridge

- 3 Link daily practices with temperature, RH, dew point and spatial experience

Preliminary analysis - Triangulation checkpoint

- 4 Test whether qualitative patterns correspond with measured conditions

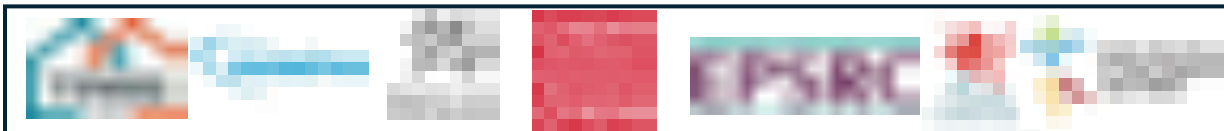
Technical site visit - Technical translation

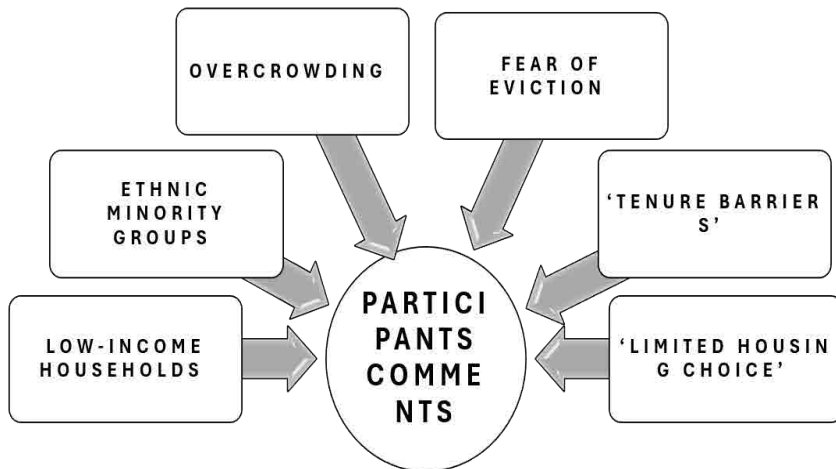
- 5 Interrogate ventilation performance and design assumptions

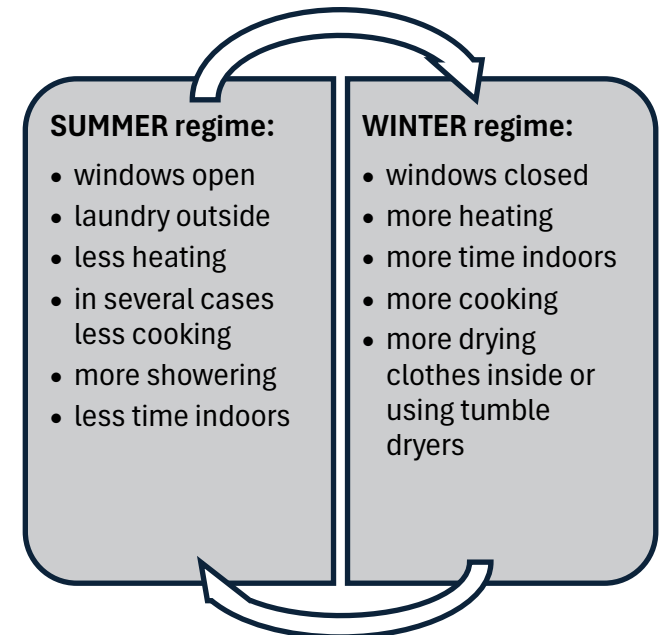
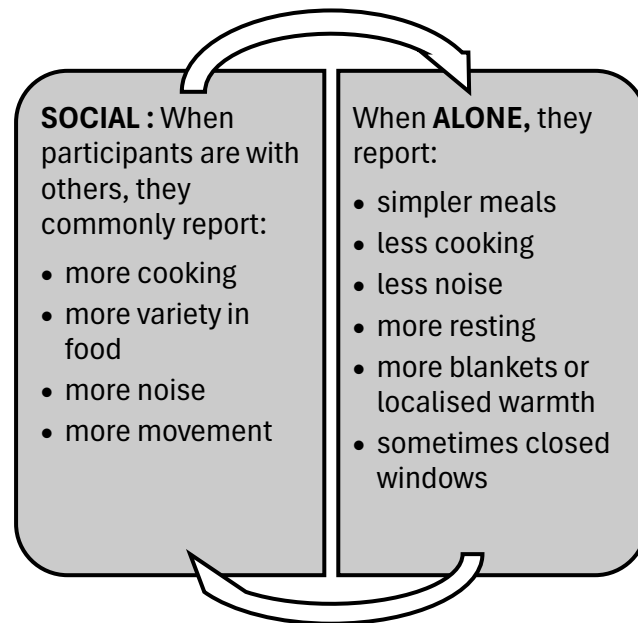
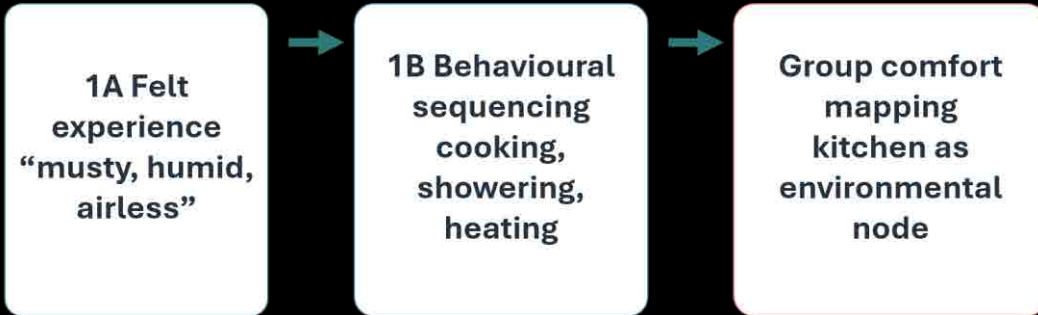
Workshop 3 - Co-creation + validation

- 6 Validate emerging themes and translate findings into critical areas

How each stage moved
the project forward







Participant
diary
activities +
feelings



Temporal
alignment
when + where



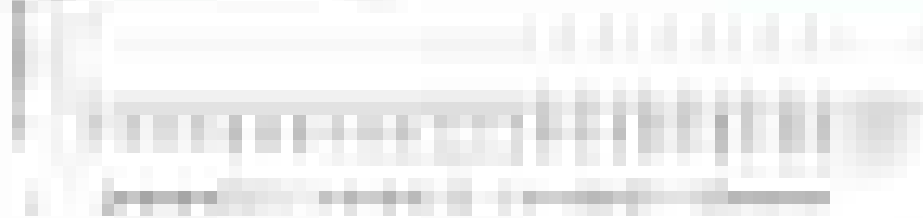
Sensor record
RH + temp + dew
point

LOGGER
INSTALLATIO
N AND
DIARY
KEEPING

The diary/loggers became an integrated methodological framework: a bridge between behavioural narratives, lived experience and measurable indoor environmental conditions.



Time	Temp	RH	Dew Point	Activity	Feelings
08:00	22.5	65%	16.5	Waking up	Fresh
09:00	23.0	68%	17.0	Getting dressed	Comfortable
10:00	23.5	70%	17.5	Breakfast	Happy
11:00	24.0	72%	18.0	Work	Focused
12:00	24.5	75%	18.5	Lunch	Satisfied
13:00	25.0	78%	19.0	Work	Relaxed
14:00	25.5	80%	19.5	Work	Content
15:00	26.0	82%	20.0	Work	Happy
16:00	26.5	85%	20.5	Work	Relaxed
17:00	27.0	88%	21.0	Work	Happy
18:00	27.5	90%	21.5	Work	Relaxed
19:00	28.0	92%	22.0	Work	Happy
20:00	28.5	95%	22.5	Work	Relaxed
21:00	29.0	98%	23.0	Work	Happy
22:00	29.5	100%	23.5	Work	Relaxed
23:00	30.0	100%	24.0	Work	Happy
00:00	30.5	100%	24.5	Work	Relaxed
01:00	31.0	100%	25.0	Work	Happy
02:00	31.5	100%	25.5	Work	Relaxed
03:00	32.0	100%	26.0	Work	Happy
04:00	32.5	100%	26.5	Work	Relaxed
05:00	33.0	100%	27.0	Work	Happy
06:00	33.5	100%	27.5	Work	Relaxed
07:00	34.0	100%	28.0	Work	Happy





Design assumptions

How systems are tested under controlled conditions

Real homes

How use, cost, noise, maintenance and occupancy reshape performance

System-user interaction

How residents understand, trust or override devices

Workshop 3 preparation

Which technical issues needed deeper collaborative exploration

TECHNICAL
SITE VISIT



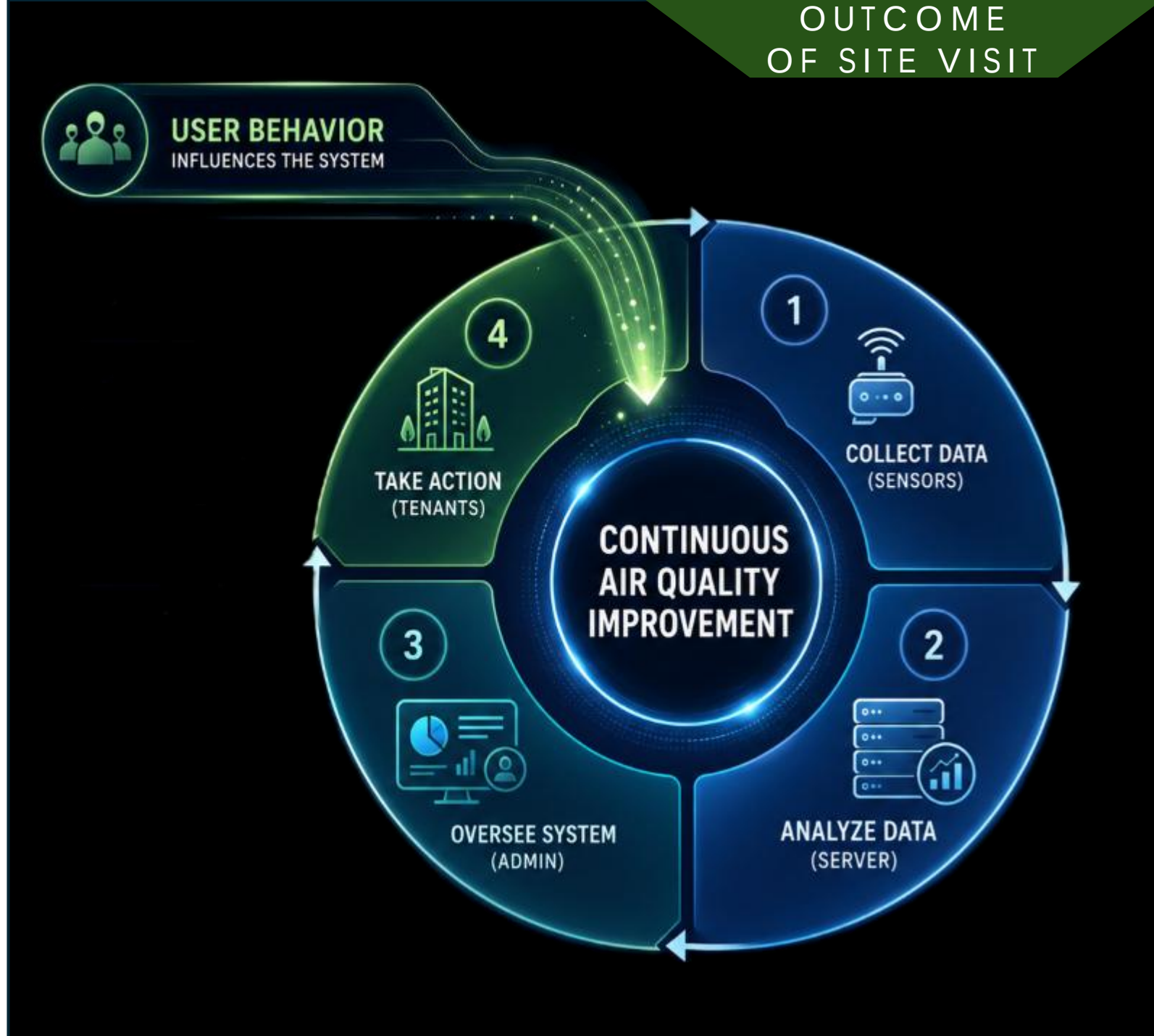
Technical lens

- airflow and pressure
- extraction rates
- humidity response
- system design
- installation
- maintenance
- regulations



Behavioural lens

- cooking intensity
- indoor drying
- window practices
- heating decisions
- safety and comfort
- trust and reporting





Confirm

Participants checked whether the findings reflected their lived experiences.



Challenge

Participants questioned interpretations and highlighted where they disagreed.

Eg: Tigger point : Wet mops – potential dampness – fix by : place a drying rack ... or hang the mop against the wall to dry.. , open windows to let out dampness



Prioritise

Participants identified which issues and insights mattered most.



Refine

Participants helped improve the wording, meaning and accuracy of the analysis.



Map Routines

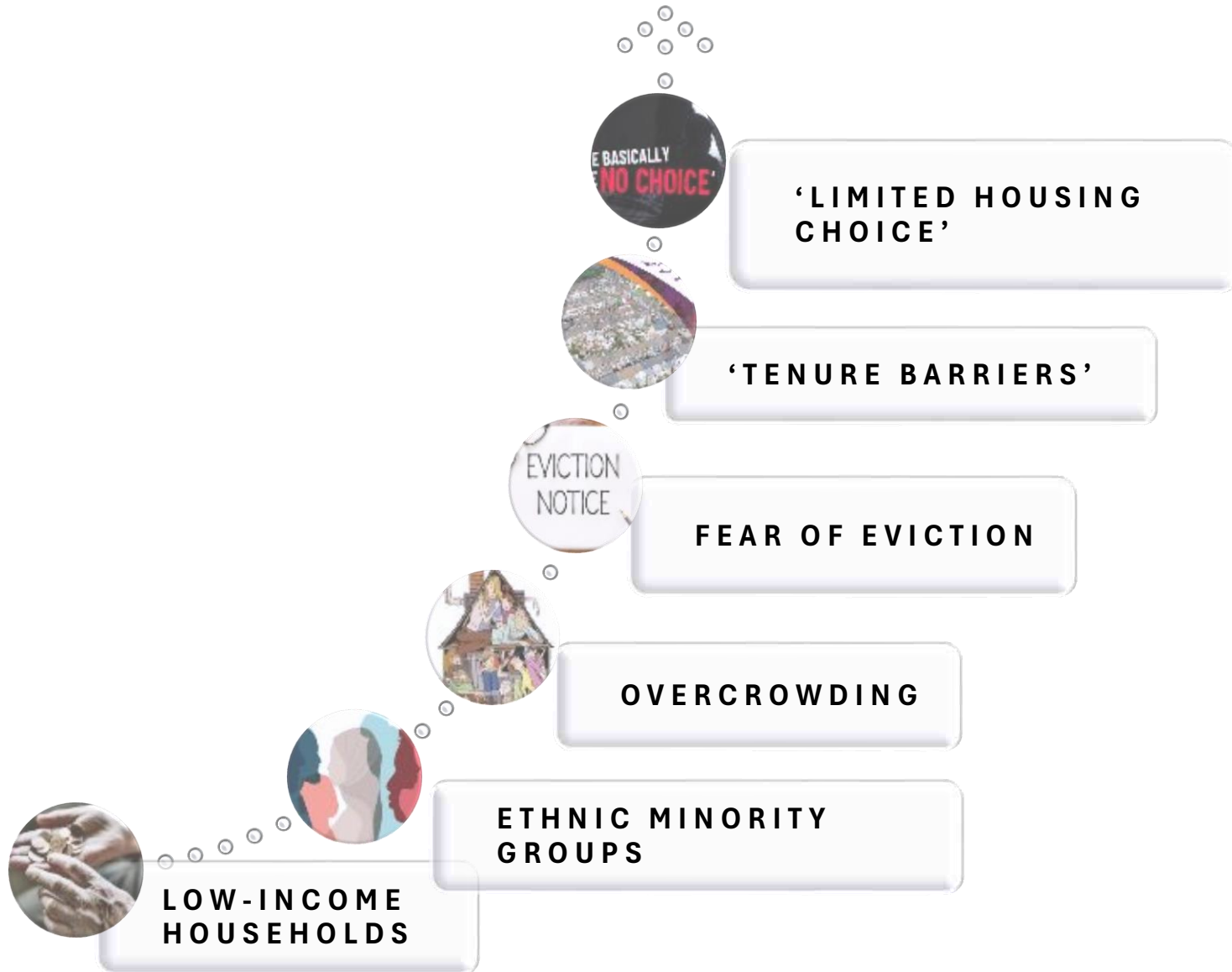
Participants mapped everyday household routines and behaviours.



Categorise Mould Factors

Participants grouped the factors linked to damp, mould and moisture.





THEMATIC ANALYSIS –
Participants repeatedly volunteered comments linking damp/mould exposure to these themes

FRAMEWORK OUTPUT



The six critical areas: the framework produced by the project



**Financial
constraint
and fuel poverty**



**Housing
infrastructure
and maintenance**



**Everyday
moisture-
generating
routines**



**Ventilation
knowledge,
access and
usability**



**Social,
household
and health
constraints**



**Tenant-centred
support,
communication
and trust**

FRAMEWORK FEEDBACK

Getting further feedback



FINAL FRAMEWORK



FINAL FRAMEWORK



Practical Implications of the Framework



Summary



[Project 1 - Cooking up good air quality for better wellbeing](#)

[Project 2 - A socio-technical investigation of damp, mould, and ventilation in UK housing](#)



Dr Simon Lannon lannon@cardiff.ac.uk

Dr Satish BK satish.bk@cardiff.ac.uk

Welsh School of Architecture
Cardiff University, UK



Damp & Mould

The Elmhurst Perspective

Simon Flint, Elmhurst Energy



Introduction



"Everyone deserves to live in a home free from
damp and mould"



Awaab Ishak



- 'Awaab's Law' named after two-year-old Awaab Ishak, who died in 2020 from a severe respiratory illness caused by prolonged exposure to the mould in his family's housing association flat in Rochdale, Greater Manchester.
- The poor conditions in his home were first reported in 2018



Awaab Ishak



- The toddler's death caused outrage and prompted the passage of 'Awaab's Law' in England with a requirement for landlords to investigate and fix reported hazards concerning damp & mould in social housing within strict timelines and re-home tenants in safe accommodation if necessary.
- The new law came into force in England in October 2025
- Scotland will adopt the legislation from Oct 2026

Legislation



- On 1st April 2026, Welsh Quality Housing Standard (WHQS) was updated to ensure social landlords 'take prompt action' on health hazards. The new requirements, introduced by the Welsh government mean social landlords are be expected to investigate and remediate hazards which pose a risk to tenants within specific timescales.
- The change follows a number of years in which the safety and condition of social housing has been under the spotlight, and where public concern about the risks associated with damp and mould has been growing.

Legislation



- Welsh Housing Quality Standard (WHQS)
- The Welsh Housing Quality Standard (WHQS) sets the benchmark for the quality of social housing in Wales, requiring homes to be:
 - in good repair;
 - safe and secure;
 - adequately heated, insulated and ventilated;
 - fitted with modern kitchens and bathrooms;
 - suited to the needs of the household, including disabled residents.
- clear timescales for investigating and remedying hazards, including those relating to damp and mould

Emergency or Significant



- Emergency: An emergency hazard is one that poses 'an imminent and significant risk of harm' to the health or safety of the occupier in the social home.
- Significant: A 'significant hazard' is one that poses a significant risk of harm to the health or safety of an occupier of the social home, but not an imminent risk.



Timescales: Emergency or Significant





Elmhurst's Damp & Mould Training & Assessor Competency Scheme



Training



- Elmhurst's Damp and Mould Assessor Training equips you with the practical skills to competently assess damp and mould hazards in domestic properties and produce clear, professional reports.
- Elmhurst's Damp and Mould Assessor Training is designed to build the practical competence needed to identify damp and mould risk, understand how ventilation and building performance contribute, and produce professional reports.



Training



- Duration: 1 Day
- Format: Remote online learning led by our expert trainers – study from your home or the office (can be delivered face to face)
- Competency Test: At the end of the course, you'll complete a 30-minute, multiple-choice competency assessment to confirm your understanding of the content.
- Suitable for: DEAs, surveyors, stock condition surveyors, retrofit professionals, housing practitioners, or professionals responsible for investigating moisture issues within properties

Competency Scheme

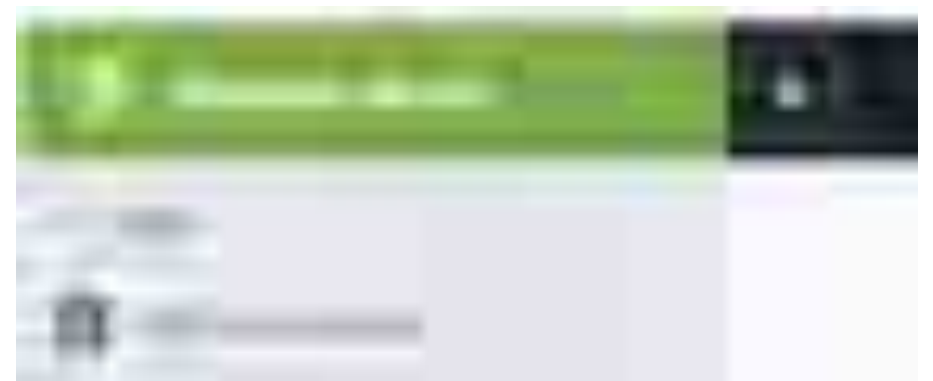


- After completing the training, you will be eligible to join Elmhurst's Damp and Mould Assessor scheme, one of the first of its kind in the industry, demonstrating your competence and professional standards. You will also gain access to our industry-leading software, technical support, our Find an Assessor directory and insurance cover for your work.
- Following our training, application and membership to the scheme is free for the first 12 months, a saving of over £360

Software



- Brand-new purpose-built desk-top software allows you to collect all the required data and photographs to create a professional, insured report for your client.
- New Elmhurst Member Portal
- Long term replacement for Access Elmhurst



Software



Software



Benefits of Damp & Mould Assessor



- Respond to increasing legislative demand
- Broaden your service offering
- Boost your earning potential
- Support healthier, safer homes



elmhurstenergy
APPROVED
DAMP AND MOULD ASSESSOR

Summary



- Legislative requirements concerning identification and treatment of damp & mould in rental properties.
- New training course available.
- New competency scheme for Damp & Mould Assessors.
- New opportunities for you to take charge and shape your future, offering this new product to your clients.



Measuring What Matters Energy Performance in Historic Buildings

Richard Jack, Build Test Solutions

The Core Problem



Why assessment is difficult in historic buildings

- EPCs rely on standardised assumptions
- Traditional buildings are highly individual
- Materials, form and alterations vary widely
- Assumptions can lead to:
 - inappropriate recommendations
 - misdirected retrofit funding
 - moisture and ventilation risk

Why Historic Buildings matter



Historic buildings expose the performance gap

- Greater construction variability than modern housing
- Assumptions are often wider of the mark
- Performance gap becomes visible
- Lessons are transferable to all buildings

The Demonstrator Project



Project overview

- 6 occupied historic dwellings (pre-1900)
- Range of sizes, forms, locations and fuels
- Traditionally constructed buildings
- Aim:
 - Compare RdSAP assumptions with measured performance
 - Understand impact on EPC outcomes



The Demonstrator Project



From Modelling to Measurement



What we measured

- Airtightness (Pulse testing)  EPC permitted
- In-situ wall U-values (Heat3D)  EPC permitted
- Whole-house heat loss (HTC)  EPC permitted
- Condition survey and occupant feedback

- Baseline RdSAP EPC
- EPC + measured airtightness
- EPC + measured wall U-values
- EPC + airtightness and U-values
- Comparison with measured HTC

- Baseline RdSAP EPC
- EPC + measured airtightness
- EPC + measured wall U-values
- EPC + airtightness and U-values
- Comparison with measured HTC

Headline Results



31%

Better
airtightness than
assumed

34%

Better wall U-values

45%

Lower whole-house
heat loss

Average difference from RdSAP default assumption

Airtightness



The only in-situ measurement EPCs allow

- RdSAP minimum infiltration often pessimistic
- Wide variation across historic housing stock
- ~70–80% of pre-1949 homes improve EPC if tested
- Measurement identifies both opportunity and risk



In-Situ U-Values



Walls that perform better than expected

- All six properties exceeded RdSAP assumptions
- Improvements ranged from 11%–58%
- Assumed fabric heat loss often overstated
- Insulation benefits may be exaggerated in models

Whole-House Heat Loss (HTC)



Cutting through complexity

- Captures fabric, infiltration and thermal bridges
- Provides true baseline building performance
- Effective screening and diagnostic metric
- Supports proportionate retrofit decisions



What Changed (and What Didn't)



EPCs became better calibrated

- Recommended measures largely unchanged
- But changes seen in:
 - priority
 - proportionality
 - technical suitability
- Better evidence leads to better decisions

Beyond Historic Buildings



Why this matters everywhere

- Performance gaps exist across housing stock
- Implications for retrofit programmes
- Critical for heat pump sizing and system design
- Measurement improves targeting of funding
- Enables “pay for performance” approaches

A Better Way Forward



Enhanced Technical Suitability Assessment

- EPC as baseline assessment
- Condition survey – mandatory
- Airtightness testing – mandatory
- HTC and U-values – targeted and proportionate
- Staged diagnostic approach

Final Reflections



Measure first. Intervene second.

- Historic buildings often perform better than assumed
- Measurement reduces risk and unnecessary intervention
- EPCs improve when informed by evidence
- Measurement-led thinking benefits all buildings



What is Overheating Competency?

Jason Hewins, Elmhurst Energy



Agenda



Why do homes overheat?

Part O - Wales

Elmhurst Overheating Competency Scheme

Conclusions

Why do Homes Overheat?



Increased fabric efficiency



Improved airtightness



Glazing design



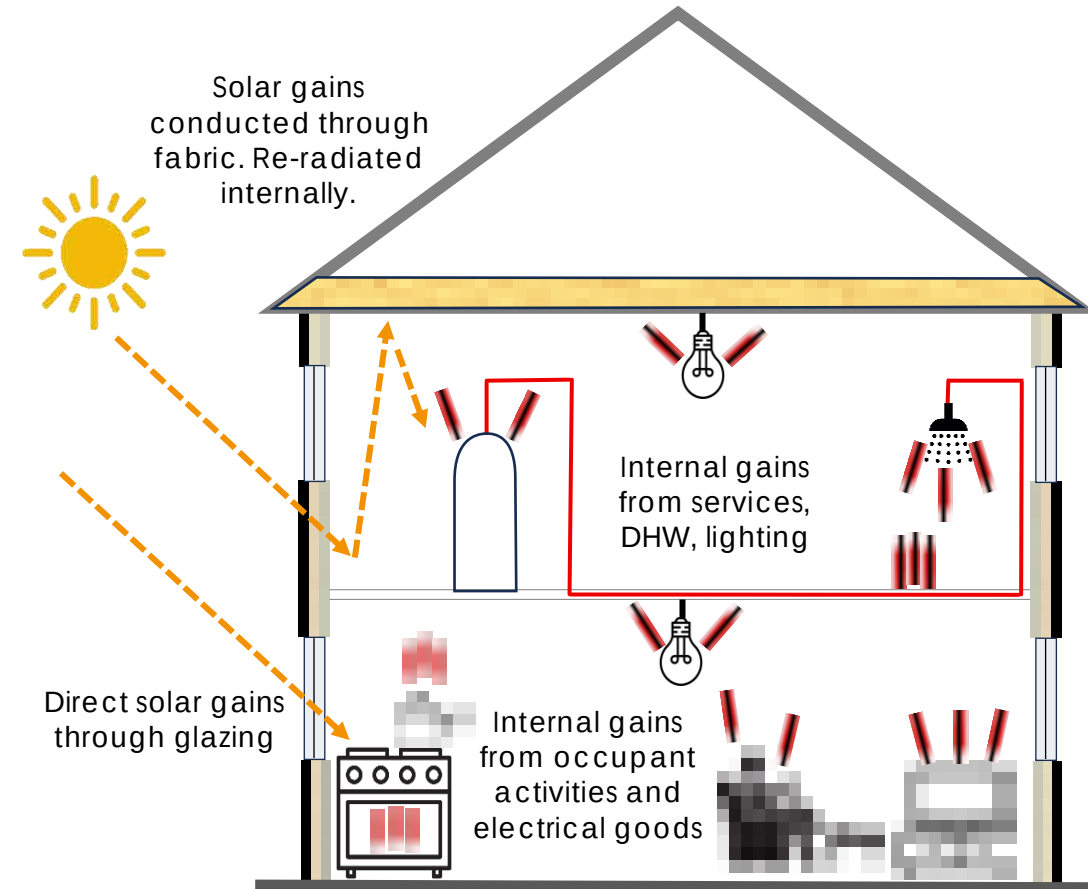
Increased internal gains



Heat from heat network pipework



Urban heat islands



The Human Cost of Overheating



Heat Stress & Rising Core Temperature

- When indoor temperatures become too high, the body's ability to regulate heat is overwhelmed.
- This increases cardiovascular strain and can lead to heat exhaustion or heat stroke.

Heart & Kidney Impacts

- Prolonged heat places additional stress on the heart and kidneys.
- Vulnerable individuals face increased risks of heart attacks, strokes and dehydration-related illness.

Sleep Disruption

- Overheated bedrooms reduce sleep quality and duration.
- Poor sleep contributes to fatigue, reduced concentration, lower productivity and weakened immunity.

Warming Wales: Why it Matters

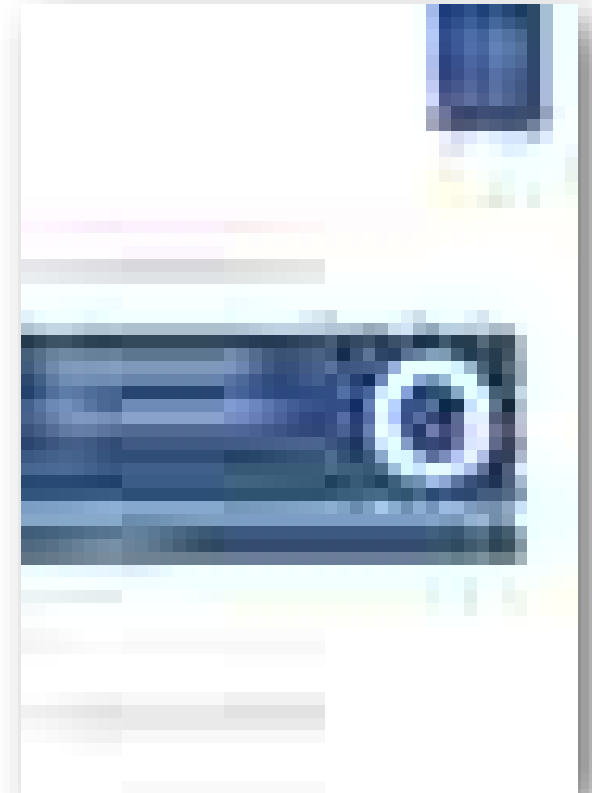


- Multiple heatwaves occurred during May, June and July 2026
- 35.9°C was recorded at Cardiff Bute Park on 25 June 2026
- Overnight temperatures reached 23.5°C, breaking the Welsh June record and limiting opportunities for homes to cool down.
- The Welsh Ambulance Service received more than 400 additional emergency calls per day.
- Increased demand was linked to dehydration, dizziness, fatigue, low blood pressure and falls.

Part O Wales



- Part O introduced to reduce the risk of summertime overheating through appropriate building design, solar gain control and ventilation strategies.
- The Welsh Government published Approved Document O: Overheating on 24th May 2022.
- Approved Document O commenced on 23rd November 2022.
- It applies to all new-build residential dwellings and other residential accommodation, including care homes, halls of residence and student accommodation.



Part O Compliance Routes



There are two methods of demonstrating compliance;

- The Simplified Method for limiting solar gains and a means of removing excess heat
- The Dynamic Thermal Modelling (DTM) method using CIBSE TM59

	Simplified Method	DTM
Complexity	Low; easy to apply - Prescribed list/tables of limiting factors	High; requires thermal modelling and simulations, CIBSE TM59 standard
Purpose	Quick assessments for simple buildings	Detailed, tailored assessment for complex buildings
Applicability	Smaller, straightforward buildings	Larger, complex, or unique buildings
Required Tools	No complex tools required	Thermal modelling software required

CIBSE TM59:2026 – Overheating Risk in Dwellings



- CIBSE TM59 is the industry-standard methodology used to assess overheating risk through Dynamic Thermal Modelling (DTM).
- July 2026 saw the first major update to TM59 since its original publication in 2017.
- The revision responds to growing concerns around climate change, rising summer temperatures and the need to design homes that are both energy efficient and resilient to overheating.
- As overheating becomes a greater risk across the UK housing stock, TM59:2026 aims to provide a more realistic assessment of occupant comfort and building performance.



Key Changes Introduced in TM59:2026

- New Bedroom Assessment Criteria
- New Three-Stage Assessment Process
 - Stage 1: Passive design measures only
 - Stage 2: Consider real-world constraints
 - Stage 3: Mechanical cooling where necessary
- Updated Climate Data
- Recognition of Passive Cooling Measures



Raising the Standard of Overheating Assessments



- The scale of the potential impact is significant due to the health implications linked to overheating.
- An overheating assessment can influence design decisions affecting occupants, building improvements and investment.
- Elmhurst believes there is a clear need for a more consistent framework governing who is competent to undertake this work.
- Those commissioning an assessment should therefore be able to have confidence that the individual undertaking it has the appropriate knowledge, training and competence to do so
- Work should be subject to effective and ongoing quality assurance.

Elmhurst Overheating Competency Scheme



- Dedicated competency scheme for individuals providing overheating risk reports for Part O.
- Dynamic method training routes with Designbuilder and IES.
- Promoting competency amongst industry stakeholders.
- Members subject to quality assurance to ensure ongoing competence.
- Increases confidence in work provided for Part O compliance.

Elmhurst Overheating Competency Scheme



- Scheme member benefits;
 - Industry recognition of competence to undertake Overheating Risk Assessments.
 - Addition to our list of competent Overheating Risk Assessors on our website.
 - Technical support to members on Overheating regulations and carrying out Overheating Risk Assessments.
 - Webinars, newsletters and technical bulletins on overheating.
 - Updates on future Building Regulation and technical standard changes.
 - Access to reporting template created in association with NHBC.



Conclusions



- Overheating is a significant risk in new build homes.
- Problem is likely to become worse as our climate warms.
- Part O introduced in 2022 to mitigate overheating.
- Elmhurst Overheating Competency scheme recognises competency of individuals completing compliance work.



Share Your Feedback

