CONTRACTORS: ARE YOU READY FOR PAS 2035?
FREE RETROFIT COORDINATION AND RISK MANAGEMENT COURSE

- Become a fully qualified Retrofit Coordinator to deliver PAS 2035 compliant projects
- Be able to deliver retrofit projects covered by the Each Home Counts Quality Mark
- First pilot courses 100% funded
- Six days of intensive learning
- Successful graduates will gain the Open College Network West Midlands Level 5 Diploma in Retrofit Coordination and Risk Management

Eligibility

Target audience: Site Manager, Contract Managers, Assistant Contract Managers and others employed by contracting firms involved in domestic refurbishment work.

Pilot Course Dates

7th-8th November

28th–29th November

3rd–4th December

Venue: Federation of Master Builders, London

To apply for your FREE place, complete the attached Learner Application Form and return no later than 31st August 2018 to:

david@osmosisconsult.com

QUALIFICATION OVERVIEW

Module 1: Introduction to Domestic Retrofit

Unit 1.1: Background and Context

The twin challenges of climate change and fuel poverty | UK Domestic sector greenhouse gas emissions | The UK domestic building stock | Typical domestic energy use and emissions | Domestic retrofit targets and standards | Retrofit trigger points | Incremental and whole-house approaches | The fabric first approach

Unit 1.2: Quality Assurance and Risk Management

The retrofit process | Common retrofit failures | Concentrate on the interfaces | The Measures Interaction Matrix | The *Each Home Counts* review | The Quality Mark, the Code of Conduct and the Customer Charter | The BSI retrofit standards framework | PAS 2035 and PAS 2030 | The MCS standards | The roles of the Retrofit Project Manager and the Retrofit Coordinator

Module 2: Building Physics

Unit 2.1: Thermal Efficiency

Heat transfer | Fabric heat losses | Thermal conductivity | Thermal transmittance (U value) | Thermal bridging | Thermal by-pass | Ventilation heat loss | Heat gains | Thermal capacity | Heat balance | The Passive House EnerPHit principles for achieving energy efficiency in retrofit

Unit 2.2: Managing Moisture Risk

Moisture states | Mechanisms of moisture transfer | Sources of moisture in buildings | Hygrothermal properties of building materials | Vapour balanced construction | Managing moisture risk in buildings | Moisture analysis methods | Standards and techniques for moisture control | Analysing complex moisture interactions

Module 3: Assessing Dwellings for Retrofit

Unit 3.1: Assessing Existing Dwellings

The scope of whole-house dwelling assessments | Planning and heritage constraints | Local context | Identifying vulnerable households and individuals | Identifying vulnerable buildings | Assessing the building envelope | Assessing the building services | Assessing existing ventilation | Assessing occupancy

| Identifying pre-retrofit repairs | Identifying inappropriate improvements | Methods for assessing energy performance: SAP and PHPP | Reporting assessments | Training and qualifications for assessors

Unit 3.2. Improvement Option Evaluation and Medium-Term Retrofit Plans

Evaluating improvement options: simple payback and carbon cost effectiveness | Interactions between measures | Using SAP and PHPP for improvement option evaluation | Ranking and prioritising measures | Identifying compatible and incompatible measures | The Measures Interaction Matrix | Identifying critical ventilation upgrades | Identifying relevant retrofit funding schemes | Establishing medium-term whole-house improvement plans | Preserving future improvement options | Reporting improvement option evaluation.

Module 4: Improving the Building Fabric

Unit 4.1: Floors and Roofs

Planning and heritage considerations when insulating floors and roofs | Floor and roof insulation materials and products | Improving the insulation and air tightness of solid and suspended floors | Emerging techniques for insulating suspended floors | Improving the

insulation and air tightness of pitched roofs | Improving the insulation and air tightness of flat roofs | Identifying, modelling and minimising thermal bridges | Eliminating thermal by-pass | Managing moisture risk | Identifying and specifying critical construction details

Unit 4.2: Walls and Windows

Planning and heritage considerations when insulating walls | Technical constraints, advantages and disadvantages of wall insulation options | Wall insulation materials and products | Cavity wall insulation (CWI) | Dealing with 'hard to treat' cavity walls | Internal solid wall insulation (IWI) | External solid wall insulation (EWI) | Secondary glazing | Window replacement | Identifying, modelling and minimising thermal bridges | Eliminating thermal by-pass | Managing moisture risk | Identifying and specifying critical construction details

Module 5: Improving Air-tightness and Ventilation

The critical role of ventilation | Build tight, ventilate right | The effects of age and construction type on air-tightness | common air leakage paths | Indoor air pollutants | Fresh air requirements | Maintaining internal air quality | Overheating mechanisms and mitigation techniques | Existing ventilation systems | Ventilation options for retrofit | Emerging ventilation techniques | The PAS 2035 ventilation assessment | The PAS 2035 minimum ventilation requirements

Module 6: Improving Building Services

Unit 6.1: Heating, Hot Water, Lighting and Power

Considerations for improving existing heating and hot water systems or installing new systems | Efficiency and responsiveness | Comparison of pay-back from heating and fabric measures | Comparison of costs and performance of heating and hot water options | Gas-fired central heating and controls | Combi boilers | Thermal stores | Flue gas heat recovery | Electric heating | Ground- and air-source heat pumps | Wood-fired heating | Lighting | Energy efficient appliances

Unit 6.2: Renewable Energy Systems

Integrating renewable energy systems using the fabric first approach | Using renewable technologies to 'top up' performance to meet emissions targets | Solar photovoltaic systems | Solar thermal systems | Wind power | Micro-CHP | The Feed-in Tariff | The Renewable Heat Incentive

Module 7: Post-Retrofit Testing, Monitoring and Evaluation

The value of monitoring and evaluation | Feeding-back to improve standards, materials, products and processes | Pre- and post-completion test: fan pressurisation testing and thermography | Post-construction reviews | Post-occupancy evaluation | Basic monitoring of fuel use and internal conditions | Advanced monitoring | Permanent monitoring systems: smart meters and smart heating controllers | Analysing and presenting monitored performance data.

LEARNER APPLICATION FORM

Full Name of Learner	
Name of Employer	
Company Size (No of Employees)	
Does your employer pay the CITB Levy?	☐ Yes ☐ No ☐ Uncertain
What is the nature of your business? (e.g. contractor, architect, energy assessment, local authority etc.)	
Are you a member / affiliated to of any of the following?	☐ Retrofit Works ☐ FMB ☐ GLA RENEW Framework
Email Address	
Telephone	
Postal Address	Line 1 Line 2 Town/City Postal Code
Company Registration Number	
What professional qualifications do you hold? Note, this is purely for research purposes, and does not form part of the application process.	
Will you commit to attending all the course dates as listed on the cover page?	☐ Yes ☐ No (list dates you cannot attend below)
Will you commit to providing detailed feedback on the course to help with the piloting process?	☐ Yes ☐ No
Have you obtained all necessary permissions to attend the courses?	☐ Yes ☐ No

Please complete and return one form for each learner to david@osmosisconsult.com no later than 31st August. Places will be allocated based on eligibility and date submitted.