



FmK ECOHomes

Low Energy...
Low Cost...
Design & Build...



The Affordable Low Energy Home

An Introduction to FmK **ECO**Homes

The FmK ECOHomes Range are designed to suit every client's need, for any site, on any location. FmK ECOHomes are specialists in the Design and Build of Low Energy and Passive Homes to the highest standards. We provide a range of Pre-designed and Pre-costed homes for a low build-cost with the option of bespoke design to tailor to your own specification.

We can also upgrade your existing plans to our ECOHomes standard to ensure the highest performance possible from your new home. Due to our low-energy design technology, FmK ECOHomes will stand to save you £1000's in energy saving over their lifespan and with the optional eco-extras, it can stand to save even more!

The FmK ECOHome can also be tailored to include additional features to suit your individual needs. The FmK ECO-Range is the future in Self-Building, delivering a comfortable family home at an affordable cost.

We can take you through the entire building process; from obtaining planning permission on your plot, to painting and furnishing your new ECOHome! Whatever level of service your desire, we deliver.



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What is an ECOHome?

What makes them different?

MECHANICAL VENTILATION SYSTEM
WITH HEAT RECOVERY

SUPER INSULATED ROOF/CEILINGS

SERVICE VOID TO ALL CEILINGS

ADVANCED THERMAL DETAILING
AT ROOF/WALL JUNCTION

CONTINUOUS AIR TIGHTNESS LAYER

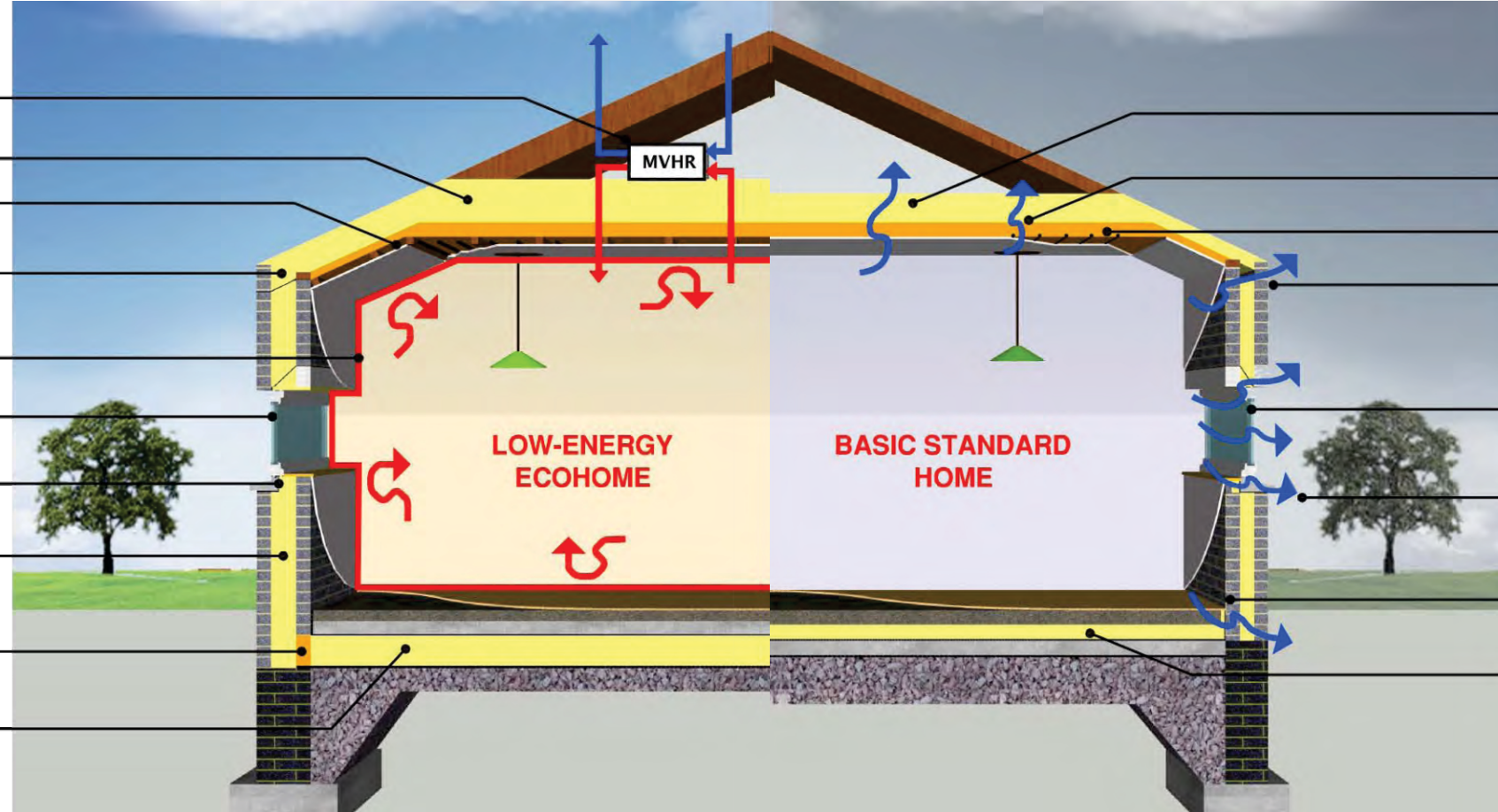
HIGH PERFORMING TRIPLE GLAZED
WINDOW SYSTEM

ADVANCED THERMAL DETAILING
AROUND OPENINGS

SUPER WIDE FULLY INSULATED
CAVITY WALL SYSTEM

CONTINUOUS INSULATED LAYER
AT FLOOR JUNCTION

SUPER INSULATED FLOOR SLAB



BASIC INSULATION IN ROOF/CEILINGS

AIR LEAKAGE THROUGH CEILINGS

SERVICES IN CEILINGS CAUSING AIR
LEAKAGE

COLD BRIDGING, WEAKNESS IN
INSULATION & POSSIBLE MOULD
GROWTH AT ROOF/WALL JUNCTION

BASIC WINDOWS WITH TRICKLE
VENTS/ MORE HEAT LOSS

COLD BRIDGING & AIR LEAKAGE
AROUND OPENINGS

COLD BRIDGE AT FLOOR JUNCTION &
INCREASED AIR LEAKAGE

BASIC INSULATION IN FLOORS

ECOHome Type 1

The Gate House



HTI : THE GATE HOUSE
882sqft / 82m²

Floor Plan OPTION A

Kitchen/Dining	5.6x3.3m / 18'4"x10'10"
Lounge	4.2x5.6m / 13'9"x18'4"
Bedroom 1	3.4x3.3m / 11'3"x10'9"
Bedroom 2	3.5x3.0m / 11'6"x10'
Bathroom	2.2x2.5m / 7'3"x8'2"
Hotpress	1.2x1.2m / 3'11"x3'11"
Hall	1.2x5.8m / 3'11"x19'

Floor Plan OPTION B

Kitchen/Dining	3.8x3.4m / 12'6"x11'2"
Lounge	4.2x5.6m / 13'9"x18'4"
Bedroom 1	3.4x3.3m / 11'3"x10'9"
Bedroom 2	3.5x3.0m / 11'6"x10'
Bathroom	2.2x2.5m / 7'3"x8'2"
Utility	1.7x3.3m / 5'6"x10'8"
Hotpress	1.2x1.2m / 3'11"x3'11"
Hall	1.2x5.8m / 3'11"x19'

The Gate House is a compact 882sqft, 2-Bed, starter home or ideal for downsizing. It boasts a large openplan kitchen/dining/living space, with glass doors to the garden and a wood burning stove as a central feature. There are 2 large double bedrooms with a large, family sized bathroom placed conveniently between, acting as an ensuite to the main bedroom. Choice of floorplans available eg: with utility room



FLOOR PLAN OPTION A



FLOOR PLAN OPTION B

ECOHome Type 2

The Cottage



The Cottage is a 3 bed, 1075sqft family home aimed towards those requiring a bit more space and bedroom accommodation. A spacious, open-plan kitchen/dining/living space is provided with glass doors to the garden and a wood burning stove as a central feature.

Ideally suited family home with 2 large double bedrooms and master bedroom complete with an ensuite and also a large, family sized bathroom.

Choice of floorplans available eg: with utility room, attic conversion

Ht2 : THE COTTAGE
1075sqft / 100m²



Floor Plan OPTION A

Kitchen/Dining	5.7x3.35m / 18'8"x 11'
Lounge	4.28x5.05 / 14'1"x16'6"
Bedroom 1	3.6x3.35m / 11'9"x10'11"
Ensuite	0.9x3.35m / 3"x10'11"
Bedroom 2	3.6x3.0m / 11'9"x10'
Bedroom 3	3.0x3.0m / 10'x10'
Bathroom	2x2.m / 6'6"x6'6"
Hotpress	1.4x0.64m / 4'6"x2'1"
Hall	1.325x4.48m / 4'1"x14'7"



FLOOR PLAN
OPTION A

Floor Plan OPTION B

Kitchen/Dining	3.8x3.4m / 12'6"x11'2"
Lounge	4.2x5.6m / 13'9"x18'4"
Bedroom 1	3.4x3.3m / 11'3"x10'9"
Bedroom 2	3.5x3.0m / 11'6"x10'
Bathroom	2.2x2.5m / 7'3"x8'2"
Utility	1.7x3.3m / 5'6"x10'8"
Hotpress	1.2x1.2m / 3'11"x3'11"
Hall	1.2x5.8m / 3'11"x19'



FLOOR PLAN
OPTION B

ECOHome Type 3

The Chalet



This is a one and a half storey, 1551 sqft, 4 bed family home. This housetype provides all the benefits of a large 4 bed home but with a low-rise compact design to suit sites with height restrictions. It boasts an open-plan kitchen/dining/living space, complete with glass doors to the garden and a separate front lounge with feature wood burning stove. The first floor with gallery landing overlooking the entrance hall, has 3 large bedrooms with family sized bathroom, and master bedroom with ensuite and space for fitted wardrobes. The Chalet delivers a large family home, even on restricted low-rise sites!

HT3 : THE CHALET
1551sqft / 144m²



Ground Floor

Kitchen / Dining	5.75x3.0m / 18'11"x9'10"
Living	3.65x3.5m / 12'x11'6"
Lounge	3.9x6.6m / 12'10"x21'8"
Utility Room	1.6x3.0m / 5'3"x9'10"
Hall	2.75x3.5m / 9'1"x11'6"
WC	0.9x2.3m / 3'x7'7"



EPMSLB
 QMMPNJ?L

First Floor

Masterbed	3.65x3.65m / 12'x12'
Ensuite	1.15x2.9m / 3'9"x9'6"
Bedroom 2	3.66x3.0m / 12'x9'11"
Bedroom 3	3.65x3.5m / 12'x11'6"
Bedroom 4	3.65x2.85m / 12'x9'4"
Bathroom	2.75x3.0m / 3'9"x6'11"
HP/Store	1.15x2.1m / 3'9"x6'11"



DBQRQMMP
 NJ?L

ECOHome Type 4

The Lodge



HT4 : THE LODGE
1551sqft / 144m²



The Lodge is the top of the ECO-Range, Luxury, 4-Bed, family home. This 1551sqft, 2-Storey dwelling has everything a spacious family home requires. It boasts an open-plan kitchen-dining opening into the living space. The separate front lounge as the main reception area. The first floor with gallery landing overlooking the entrance hall, has 3 large double bedrooms with family sized bathroom. The master bedroom enjoys its own ensuite and ample space for fitted wardrobes. A modern, spacious home for everyone, at an affordable cost and with a hint of luxury.

Ground Floor

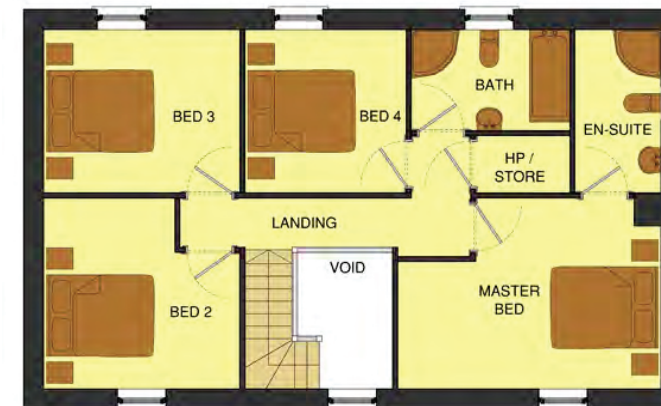
Kitchen / Dining	5.75x3.0m / 18'11"x9'10"
Living	3.65x3.5m / 12'x11'6"
Lounge	3.9x6.6m / 12'10"x21'8"
Utility Room	1.65x3.0m / 5'5"x9'11"
Hall Area	2.75x3.5m / 9'1"x11'6"
WC	0.9x2.3m / 3'x7'7"



EPMSLB
 QMMPNJ?L

First Floor

Masterbed	4.9x3.5m / 16'1"x11'6"
Ensuite	1.6x3m / 5'3"x9'11"
Bedroom 2	3.65x3.5m / 12'x11'6"
Bedroom 3	3.65x3m / 12'x9'1"
Bedroom 4	3x3m / 9'11"x9'11"
Bathroom	2.95x1.85m / 5'9"x3'6"
HP/Store	1.75x1.05m / 5'9"x3'6"



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 NJ?L

Customise your ECOHome

If you would like to add your own personal touch, you can customise your ECOHome.

Some of the Upgrade options you can add to enhance your ECOHome further:

INTERNAL UPGRADES

- Enlarged Floorplans / Additional Rooms
- Internal Layouts Reconfigured
- Heating System / Renewables
- Underfloor Heating / Towel Radiators
- Feature Lighting / Increased lighting
- Back Boiler System to Stoves
- Feature Fireplaces / Feature Stoves
- Joinery Items / Doors / Stairs
- Door Bells / Alarm Systems
- Full Turn-Key Options

EXTERNAL UPGRADES

- Enlarged Windows / Different Colours
- Feature Front Doors / Patio Doors
- Bay Windows / Sunrooms / Roof Lights
- Coloured Exterior Render Finish
- Slates / Thin-edge Tiles
- Front Porch / Stone Porch
- Feature Stonework
- Balconies / Covered Terraces / Patios
- Landscaping / Site Works / Paths



Upgrade your Plans to an ECOHome

Already had your house plans designed and have obtained Planning Permission?

Don't want to build to a basic standard, but do want to reduce your energy usage and future bills?

Don't Worry!! FmKECOHomes can still help you!

With our in house expertise and experience, we can upgrade your basic plans to the ECOHomes Ultra Low-Energy Standard.

Simply arrange a Free office consultation, with your current plans and we will take you through the ECOHomes Ultra Low-Energy Standard and what is included in the quotation.

Upgrading to the ECOHomes Ultra Low-Energy Standard includes all the same techniques and detailing that have been developed for our EcoHome Range and include things like high levels of insulation, MVHR Systems, our unique ECOHomes Thermal Detailing and Full Air-tightness to eliminate unwanted draughts through the external fabric of the building envelope.

We also advise on renewable energies, energy saving technologies and ECO Products.

How do I Upgrade to the **ECO**Homes Standard?

Upgrading to the ECOHome Ultra Low Energy Standard is a simple, hassle free process from beginning to end in 5 simple steps:

1. Arrange a FREE office consultation to discuss the ECOHome Standard and how it can benefit your home build. See mock up examples of ECOHome Advanced Detailing in critical areas of a house design.
2. Existing approved plans are assessed and modified to incorporate the ECOHome Standard Advanced Details.
3. Statutory Approvals renewed (if required)
4. Our FmK ECOHomes Team provide your Design & Build cost.
5. Start date confirmed - FmK ECOHomes then builds your new home!

5 Steps to Upgrade to the **ECO**Homes Standard



CONSULTATION



MODIFICATION



APPROVALS



COSTING



CONSTRUCTION

FmK Bespoke ECOHomes

If a pre-designed ECOHome is not for you, we can also offer a Bespoke ECOHome Design & Build Service. With FmK's extensive knowledge of low energy design and with ongoing research and development, we can also create your own bespoke home with all the attributes of the ECOHomes Standard included.

Our bespoke designs incorporate all the same technology and advanced detailing we have developed for our ECOHomes Range, into a tailored design to your specific brief, resulting in a design that will not be repeated. This will ensure that you will have the house design you always dreamed of, but with exceptional thermal performance that will set your house apart from the basic build standard.

Within this option, the level of performance you require can be increased as much as you prefer; from ECOHomes Standard, to Passive House Standard.

FmK Director Ronan McKee completed this Self-Build Ultra Low-Energy Home on the family farm back in 2015. This dwelling features good levels of insulation & thermal-detailing, excellent air-tightness & ventilation system, optimum orientation & areas of glazing, efficient renewable heating system in the form of a Ground Source Heat Pump (GSHP) and a small PV Solar Array system. This home received an unbelievable SAP rating of 98/100 and Environmental rating of 99/100!

An FmK Bespoke ECOHome near Toomebridge



Factsheet

2380sqft; 3people, 4bedrooms dwelling
is providing all needs for around

- > Heating & Hot Water - **£250/year;**
(approx. £20/month or 70p/day)
- > Overall electric bills (including H & HW) - **£700/year**
(approx. £58/month or £1.92/day)
- > Earns approx. £600/year from Solar PV

Passive ECOHomes

"making Passive House affordable.."

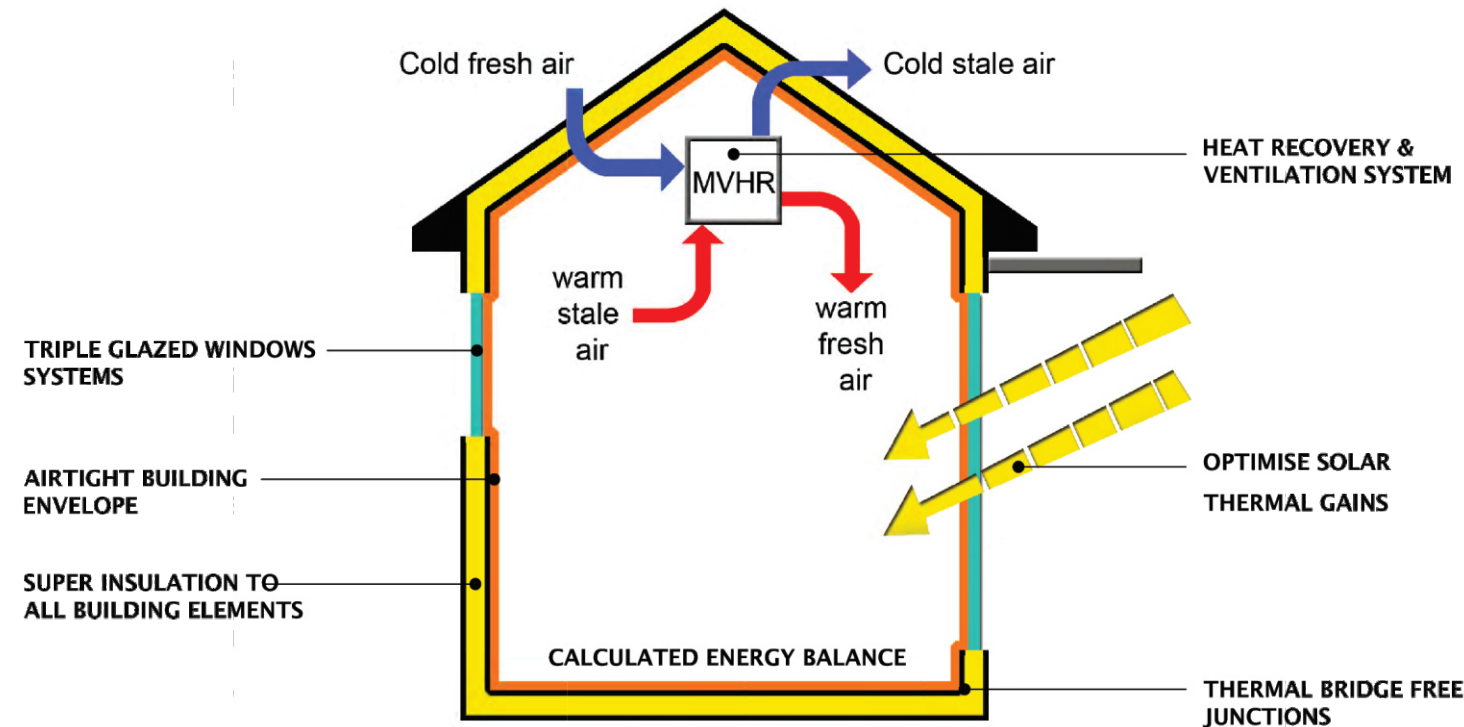
What is a Passive House?

Passive House is a building standard that is truly energy efficient, comfortable, affordable and ecological at the same time, without using the normal high levels of conventional heating associated with a normal house. Passive Houses allow for heating and cooling related energy savings of up to 90% compared with typical building stock. In terms of heating oil, Passive Houses use less than 1.5 litres per square meter of living space per year – far less than typical buildings.

Passive Houses have high levels of comfort, using energy sources inside the building such as the body heat from the residents or solar heat entering the building – making heating a lot easier. The main focus of the Passive House is the 'fabric first' approach. The vast energy savings in Passive Houses are achieved by using especially energy efficient building components and a quality ventilation system: but not cutting back on comfort. The house itself needs minimal energy to begin with!

As with our Low Energy ECOHomes, we believe that Passive Homes can be delivered in a affordable way at the time of the build but with the cost savings over a short period of years, the Passive House pays for itself in no time.

Passive housing is effective for any building that uses energy - residential housing, offices, schools, supermarkets and factories.



The 7 Principles of the Passive House Standard

The ECOHomes Store

The ECOHomes Store provides low-energy & ECO Products, such as Air and Wind Tightness materials; CompacFoam/AlmaTherm for door thresholds and Blowerproof/Varafluid, a paint on Air-Tightness layer.

Why Build an Air-Tight Building?

Airtightness is the control of air leakage, or elimination of unwanted draughts through the external fabric of the building envelope. Airtightness and Windtightness is essential to an energy-efficient design to reduce unnecessary heat loss through the building fabric. Buildings can lose as much as half of all the energy used to heat them through unwanted draughts and air leakage across the building fabric.

Why use a Mechanical Ventilation System?

Mechanical Ventilation with Heat Recovery (or MVHR) systems help prevent condensation issues and mould growth and also ensure a high quality of air in buildings. MVHR also conserves energy in buildings by recovering heat from extracted air and transferring it to the incoming air; this is an essential element in ultra low energy buildings.

Why consider Thermal Detailing / Thermal-Bridge Free Construction?

A Cold-Bridge is when heat makes its way from the heated space towards the outside, through a building detail weakness. A Cold-Bridge causes a decrease in interior surface temperatures and can lead to mildew or mould growth; while also causing increased heat losses. A Thermal bridge free design leads to durability of the construction and reduced heat loss, therefore energy is saved.

Visit our store: www.EcoHomesStore.co.uk



Completed ECOHomes



HT1 STANDARD



HT2 STANDARD



HT3 CUSTOMISED



HT4 CUSTOMISED

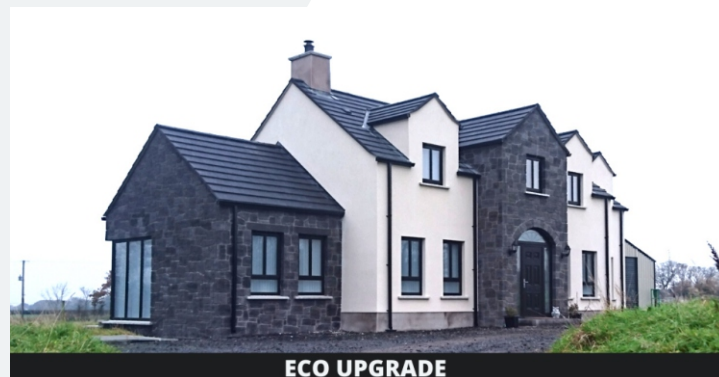
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The FmK ECOHomes Range



House Type 1



House Type 2



House Type 3



House Type 4

