

Y Felin (*the mill*)

Design and Access Statement
to support a full planning application for a replacement
dwelling at Y Felin, Efail Rhyd, Llansilin

March 2024

Written by RRA Architecture Ltd



Project Details

Project Name: Y Felin

Project Address: Y Felin, Efail Rhyd, Llansilin, Powys

Applicants: Mike and Naomi Perks

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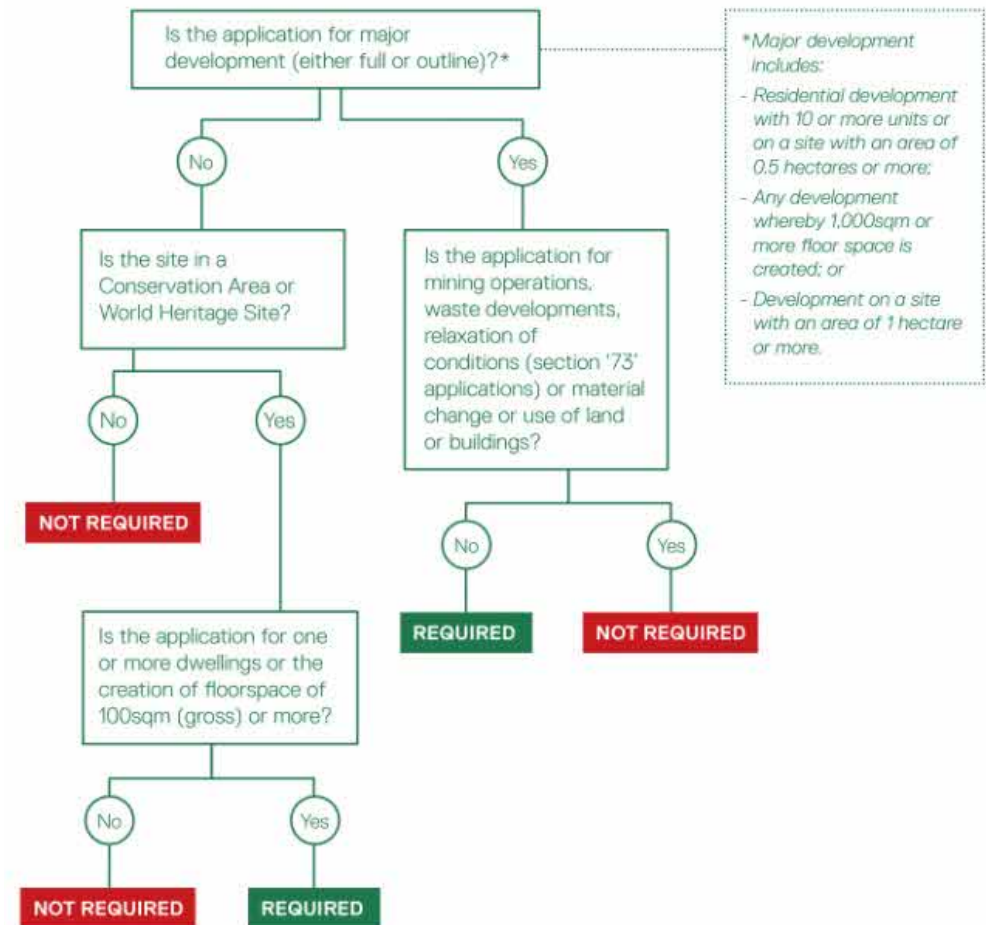
Overview

WHAT IS A DESIGN STATEMENT?

“It is a document that should address a key question: ‘why is it like that?’ By explaining how the design has responded to the site, context, brief, vision, relevant policy and objectives of good design. It is recommended that a DAS is concise and illustrated wherever possible to highlight the key information relating to design.”

Excerpt taken from the guidance document ‘Design Statements in Wales’ prepared for the Welsh Government by the Design Commission for Wales.

A Design Statement is not a mandatory requirement for this application, however the opportunity to explain the design decisions that have been made and how it addresses national and local design policy is useful to support the application.



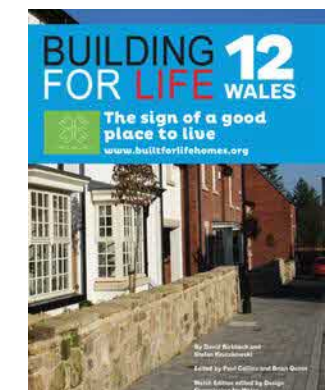
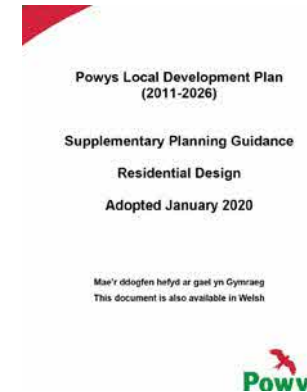
Policy, frameworks, and material guidance for the assessment of schemes in Wales.

There are a number of documents against which proposals can be assessed objectively. The list is not exhaustive and principally relates to this application, and specifically design.

An excerpt from each document is included below.

- Planning Policy Wales (PPW) - Edition 12 (published Feb 2024)
- Technical Advice Note (TAN) 12 - Design
- Powys Local Development Plan Policy
- Powys Supplementary Planning Guide (SPG) - Residential Design
- Building for Life 12 Wales
- Building with Nature - Green Infrastructure framework
- Design Quality Requirements (DQR) - Welsh Government
- Building Regulations - Approved Document Part L (Conservation of fuel and power) and Part O (Overheating) and Part M (Accessibility)

Welsh Government set up the **Design Commission for Wales** in 2002. It is a free review service should the assessment of design be required as part of a planning application determination, and their suggestions can be material to applications.



Planning Policy Wales Edition 12

Released in February 2024, one notable change is the requirement for all applications to submit a green infrastructure statement, and the priority for all schemes to respond to the climate crisis.

Energy Hierarchy for Planning

“Welsh Government planning policy recognises an energy hierarchy. The Welsh Government expects all new development to mitigate the causes of climate change in accordance with the energy hierarchy for planning...”

Green Infrastructure Statement

“This will be proportionate in scale and nature of the development proposed...in the case of minor development this will be a short description and should not be an onerous requirement for applicants...”

The green infrastructure statement will be an effective way of demonstrating positive multi-functional outcomes which are appropriate to the site in question....using the step-wise approach....

The **Building with Nature** standards represent good practice...”

*Excerpts taken from Planning Policy Wales Edition 12
Diagrams taken from Planning Policy Wales Edition 12*

Figure 12: Summary of the Step-Wise Approach

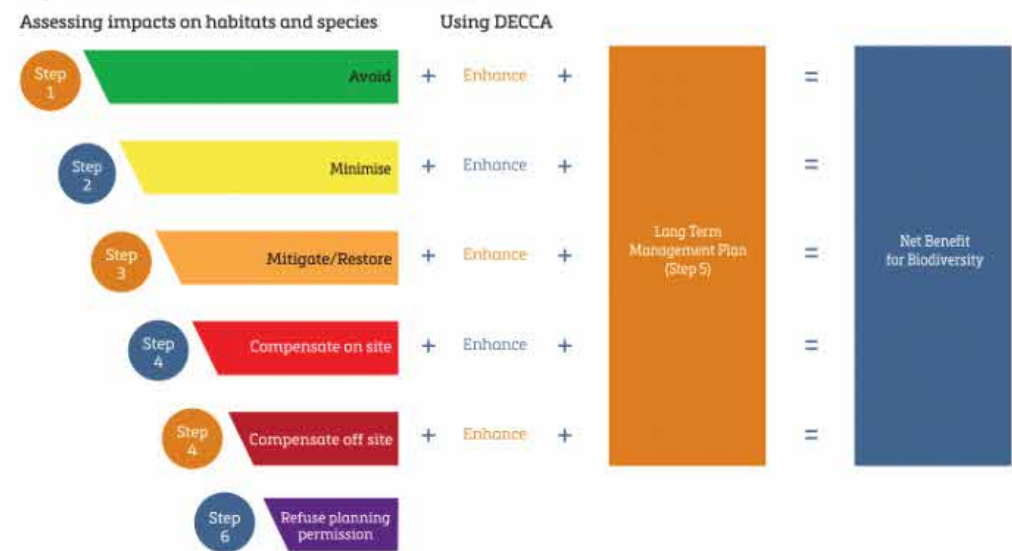
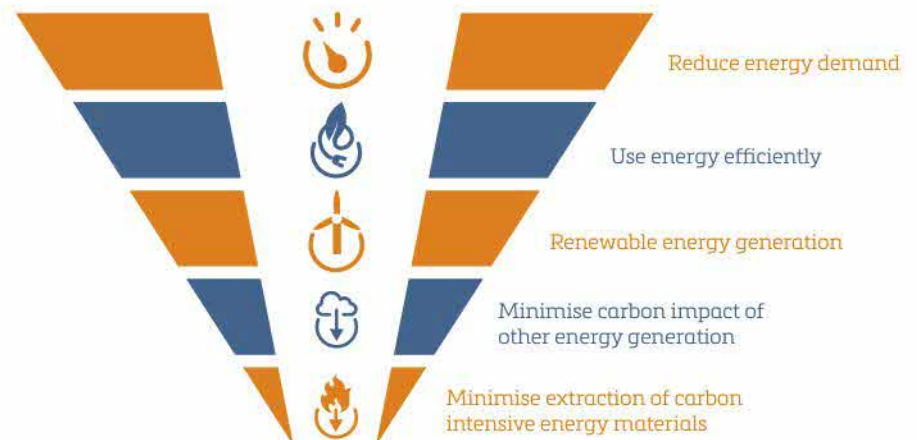


Figure 10: The Energy Hierarchy for Planning



Tan 12 Design and Building for Life 12 Standards

“A **holistic approach** to design requires a shift in emphasis away from total reliance on prescriptive standards, which can have the effect of stifling innovation and creativity. Instead, everyone involved in the design process should focus from the outset on meeting a series of **objectives** of good design.

This analysis and the vision for a scheme can be presented in a **design and access statement** where one is required.”

Excerpt from Tan 12 and Diagram from Tan 12 of Design Objectives

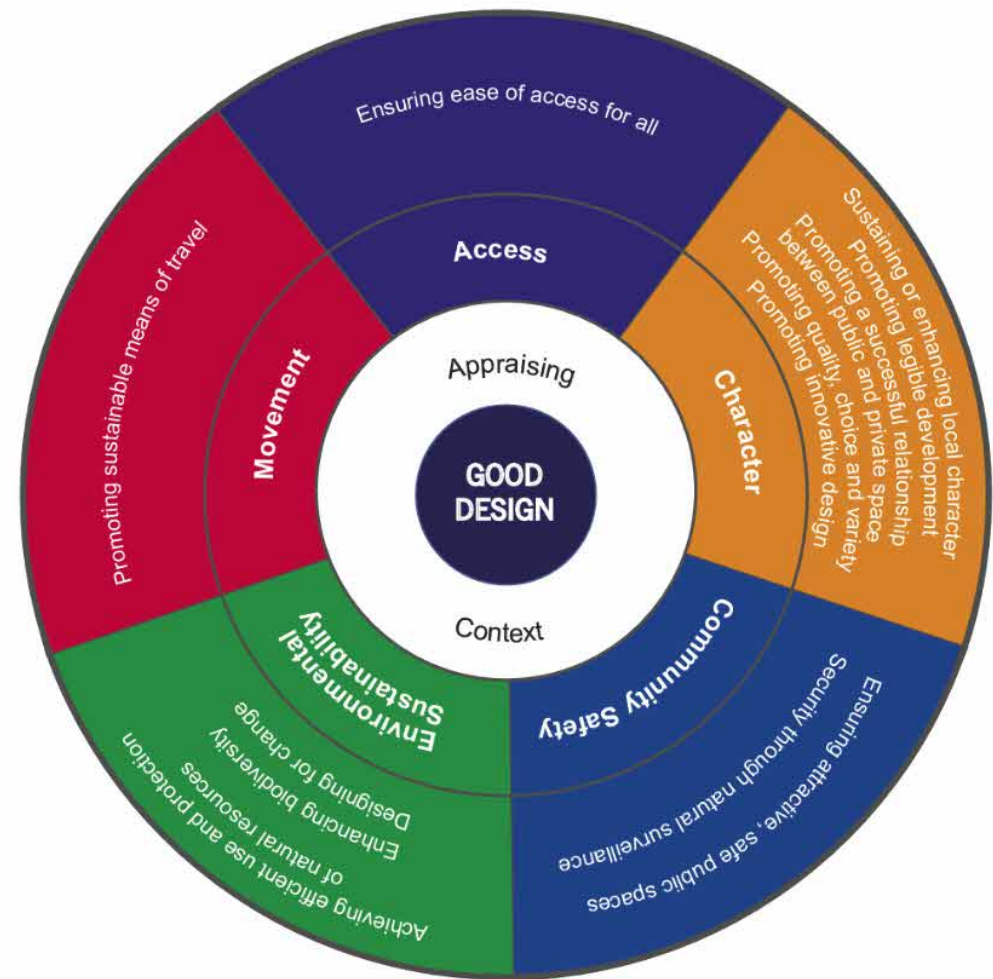
“BfL12 is also designed to help local planning authorities assess the quality of proposed and completed developments...”

There are 12 CORE PRINCIPLES..

Principle No. 5 Character. BfL12 suggests a framework for assessing the character of the proposals.

- **Identifying** whether there are any **architectural, landscape or other features, such as special materials** that give a place a distinctive sense of character as a starting point for design.
- **Exploring** what could be done to start to give a place a **locally inspired identity**.
- **Landscaping traditions** are often fundamental to character, especially boundary treatments. Introducing building styles, details and landscaping features that can be easily expressed to someone visiting the development for the first time.
- **Varying** the density, built form and appearance or style of development.
-

Excerpt from BfL 12 standards, Principle No 5 Character



Design Quality Requirements, Part M and Part L Building Regulations

The **Welsh Development Quality Requirements 2021** are minimum space standards for affordable housing. It is possible to assess the suitability of the existing house for modern day living standards against these requirements.

“Housing quality is as much about the value of the external spaces created as it is about the design of the homes. Homes and their environs should therefore focus on the role of placemaking, be **visually attractive and be both environmentally and ecologically sustainable** as a result of good design. They should be of **high quality and be healthy** to live in to meet community, family and individual needs.”

Excerpt and floor areas diagram taken from Welsh Development Quality Requirements

- Minimum floor to ceiling 2.3m for at least 75% of the Gross Internal Floor Area
-
- All houses to have a bath and shower
-
- Minimum gross internal floor area for 5 person 3 bedrooms = 93m²

Approved Document Part L - Conservation of Fuel and Power sets out minimum target fabric efficiency and thermal performance U Values for new and existing houses.

Minimum U Values for existing houses Part L building regulations

Approved Document Part M - Sets out minimum standards for accessibility including bathrooms and circulation within a house.

Floor Areas

Home Designation	Home Type	Gross Internal (floor) Area (GIA) m ²	General Storage m ² (included in GIA)
7P4B	2 Storey House	114	3
6P4B	2 Storey House	110	3
5P3B	2 Storey House	93	2.5
4P3B	2 Storey House	88	2.5
4P2B	2 Storey House	83	2.5
3P2B	2 Storey House	74	2
3P2B	Bungalow	58	2
3P2B	Flat – Walk up	65	2
3P2B	Flat – Common access	58	2
2P1B	Flat – Walk up	53	1.5
2P1B	Flat – Common access	50	1.5

Table 4.1 Worst acceptable fabric performance values

Element type	Maximum U-value W/(m ² .K) ¹	
	In new dwellings	In existing dwellings
Roofs ²	0.13	0.13 ³
Wall – Dwelling Houses	0.18	0.18
Wall – Flats	0.21	0.21
Floor	0.15	0.15 ^{3,4}
Party wall	0.20	0.20
Swimming pool basin ³	0.25	0.25
Window or roof window ^{4,5}	1.4	1.4 ¹¹ or minimum WER ⁸ Band B
Roof-light ^{6,7}	2.2	2.2
Doors: >60% internal face glazed	1.4	1.4 ¹² or minimum DER ⁹ Band C
All other doors	1.4	1.4 ^{8,12} or minimum DER ⁹ Band B
Air Permeability	8.0 m ³ /(h.m ²)@50Pa OR 1.57m ³ /(h.m ²)@4Pa	N/A

Notes:

1. Area-weighted average values (except for windows, doors, roof windows and rooflights in existing dwellings).
2. For dormer windows, 'roof' includes the roof parts of the windows, and 'wall' includes the wall parts (cheeks).
3. The U-value of a swimming pool basin (walls and floor) calculated according to **BS EN ISO 13370**.
4. If other performance needs (e.g. wind load, safety, security or acoustic attenuation) require thicker glass to be used, an equivalent window unit with standard thickness (6mm) glazing should be shown to meet the required standard.
5. Including roof windows and curtain walling

Building with Nature Framework

'Building with Nature' principles are recommended in PPW Edition 12 as a tool for developing the Green Infrastructure Statement. 'Building with Nature' principles are also endorsed by the SPG Powys Residential Design guide.

CORE Standards

- Standard 1** Optimises Multifunctionality and Connectivity
 - Standard 2** Positively Responds to the Climate Emergency
 - Standard 3** Maximises Environmental Net Gains
 - Standard 4** Champions a Context Driven Approach
 - Standard 5** Creates Distinctive Places
 - Standard 6** Secures Effective Place-keeping
-

WELLBEING Standards

- Standard 7** Brings Nature Closer to People
 - Standard 8** Supports Equitable and Inclusive Places
-

WATER Standards

- Standard 9** Delivers Climate Resilient Water Management
 - Standard 10** Brings Water Closer to People
-

WILDLIFE Standards

- Standard 11** Delivers Wildlife Enhancement
- Standard 12** Underpins Nature's Recovery

a. Summary of the proposal

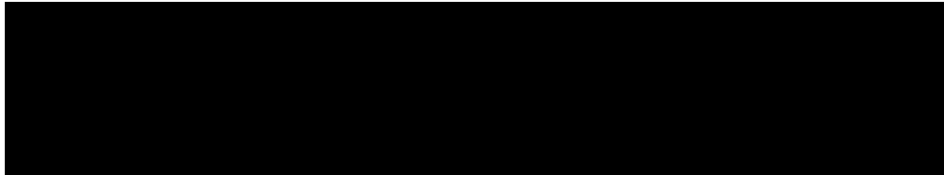
- i. The applicants, Mike and Naomi Perks seek approval for a replacement dwelling, and erection of an open carport on the footprint of the existing dwelling, and installation of a bio disc treatment plant to replace the existing septic tank.
- ii. The applicants purchased Y Felin in 2023 as a part-renovated house, habitable yet requiring extensive further work to make good.
- iii. 
- iv. They are passionate about wildlife conservation and reducing their environmental impact through the construction of a highly energy efficient home, this aligns with Welsh planning policies.
- v. The dwelling is not listed nor lies within a conservation area or adjacent to any other listed property.
- vi. The applicants approached builders, engineers and design professionals to ascertain the work and costs of completing the renovation to meet current building regulation standards as a minimum.
- vii. Additionally, the footprint of the existing dwelling lies within flood zone 2 and 3, which represents a risk to occupiers as well as reducing the open-market value of the property.
- viii. The conclusion was that it would be unviable and uneconomic to renovate the house, and the best solution would be to replace the dwelling.

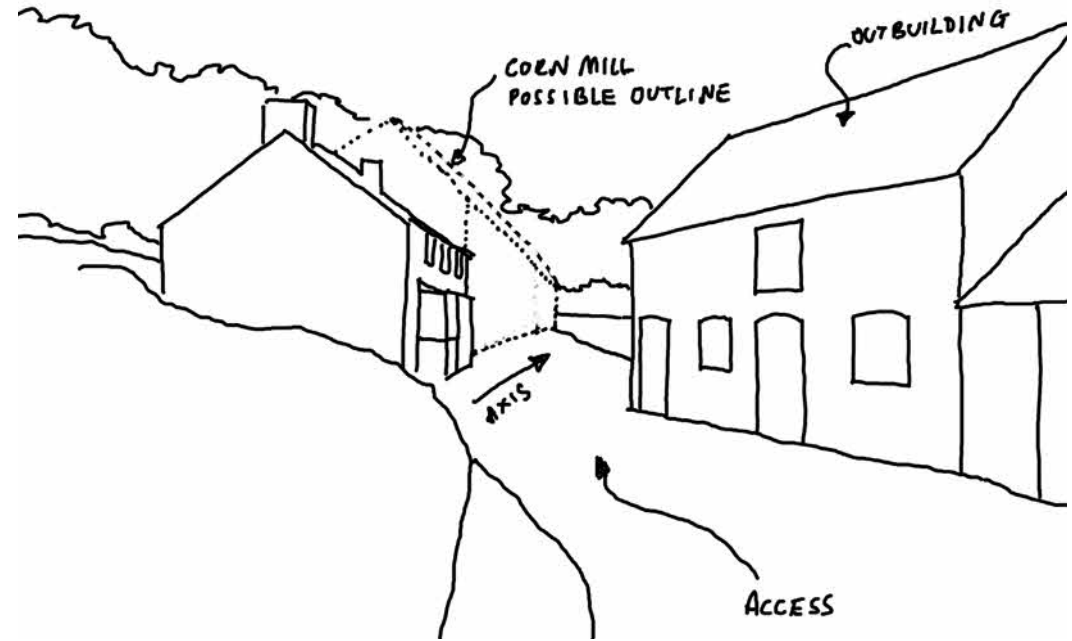


Photo of the existing house looking south-east to the main aspect from the site.

- ix. This design statement aims to demonstrate and evidence the above statement as well as describe the design process and proposals for the replacement dwelling.

b. The brief and vision

- i. **The brief** provided by the applicants was to design a home which is modest and built to create a comfortable, efficient, sustainable home that allows them to enjoy living, is practical for rural living, does not burden them with large debt, is achievable within a couple of years and is a responsible contribution to limiting their impact their nature and the climate. It will safeguard occupiers from flood risk.
- ii. **The vision** is to **enhance** the history of the site through a contemporary interpretation.
- iii. **This is to be achieved** by removing modern poor quality construction, retaining original / traditional aspects and respecting the form, shape, scale and character found on site
- iv. **The result** will be a replacement dwelling outside of the flood zone, responsive to the site environment and paying homage to its agrarian industrial history as the site of the old corn mill.



Melin Bompren, an example of a corn mill preserved at Saint Ffagans Museum, and typical of hundreds of mills in Wales built to convert corn to flour.

Y Felin - The buildings past and present

The existing house (left) and the existing outbuilding (right).

In the backdrop an outline of the possible building height and form of the corn-mill, utilising the footprint found on old maps and an example of a corn mill is Melin Bompren, typical from the 1800's, and can be seen at Saint Ffagans Museum

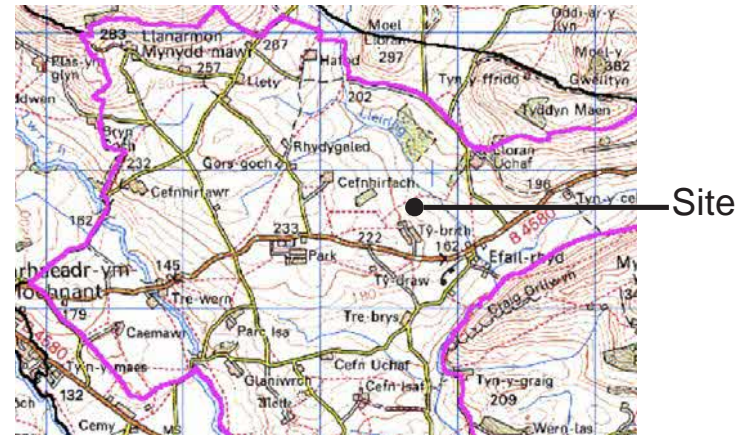
The **relationship** of these buildings as they are orientated on site contribute to the preservation of local distinctiveness and sense of place.

c. Site and context analysis

- i. The site is rural and typified by dispersed farms and small-holdings. Located between Llanrhaedr Ym Mochnant and Llansilin, Y Felin site was once a Corn Mill, although the original mill building is no longer there.
- ii. The location of the site is on an old turnpike, within a small settlement called Efail Rhyd, which likely established due to the turnpike. Historically there was the mill, the smithy and an inn at Efail Rhyd. Nowadays the settlement is comprised of private houses and classed as “open countryside”.
- iii. The existing house is located along the River Lleiriog and lies within Flood Zone 2 and 3, thus categorized as high risk to occupiers. However, the ground rises quickly around the flood zone area so that most of the site is elevated, with an alternative gated access to the main road.
- iv. There are no Public Right of Ways (PROW) through the site.



View of the valley looking west, the site lies at the bottom of this valley. Craig Orllwyn to the south, and the Lleiriog River a tributary off Mynydd Mawr to the north west.



Map extract from Clwyd Powys Archeological Trust (CPAT) Historic Landscape Characterisation 1004



View of the site as approached from Llansilin and of Efail Rhyd bridge, and from the T-Junction, once the old turnpike at Efail Rhyd.



View of the site from the road as approached from Llanrhaedr Ym Mochnant, with the alternative field gate access to the top left of photo, and main access to bottom left of photo.

Local inspiration

- i. The site has an outbuilding with strong character reference points, and is visible from the public highway. Locally there are examples of rural buildings with recognisable shapes and colours that draw on the themes of the outbuilding. We looked at the contrast of lightweight materials used in a simple manner and found examples where they are successfully offset against stone and brick buildings.



Existing and proposed materials palette



Existing outbuilding, Y Felin



Small house, Maengwynedd



New barn conversion, Llansilin



Cafe Cletwr, Mid Wales George & Tomos architects



Field barn, Pen Y Garnedd,



Dutch barn and red brick barn, Llansantffraid



Outbuildings to stone house Rural office architects, Mid-wales



Extension, Martin Edward architects, North Wales



Clog makers workshop, St Ffagans, Welsh history museum



Farm building, Cwm Nant, Y Foel



Farm building, Cwm Nant, Y Foel



Open outbuilding, Llangadfan, and stone walling

Vernacular architecture analysis

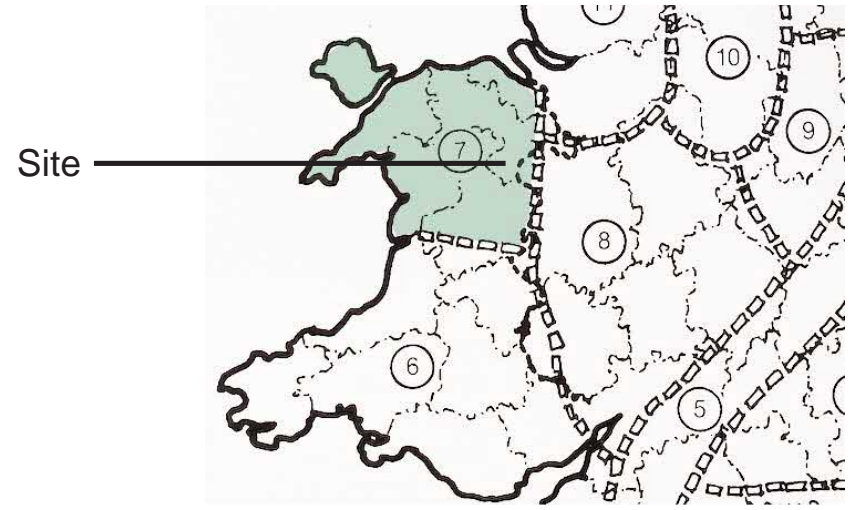
- i. The house is **not** of a local vernacular architecture or deemed to be of special interest.
- ii. The majority of the house is constructed from **modern concrete block and brick** with a cavity. **Modern concrete** floor with a damp proof membrane. **Modern timber stud work, floor joists and roof.**
- iii. In the book “Traditional Buildings of Britain” by Dr R.W.Brunskill, a leading authority on vernacular architecture in Britain, he splits the country into regional divisions of vernacular architecture.
- iv. The site is within **region 7 - North and East Wales** and very close to region 8 - West Midlands.
- v. Based on vernacular characteristics of both regions, it is not possible to identify characteristics of the existing house that show it is of a local vernacular. The house is principally not constructed using materials to hand or from traditional methods.
- vi. The stone gable to the south elevation and a central stone wall on ground floor are of a traditional construction, and could be original. The proposal will be to **retain** these small sections and enhance them.
- vii. 95% of the fabric of the house is modern and of poor quality construction, it has **interventions** such as a bay window and an open porch that bear no reference to vernacular architecture to the region or adjacent regions.



East elevation existing house



West elevation existing house



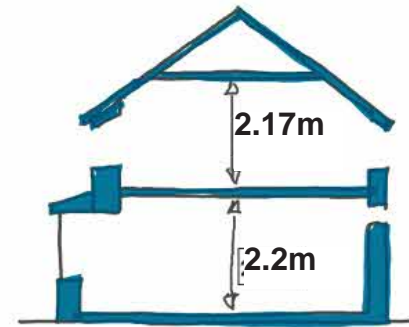
Map extract of Vernacular divisions in “Traditional Buildings of Britain” by R.W.Brunskill



Typical vernacular of region 7 - North & East Wales. Timber-frame and stone areas near the English borders.

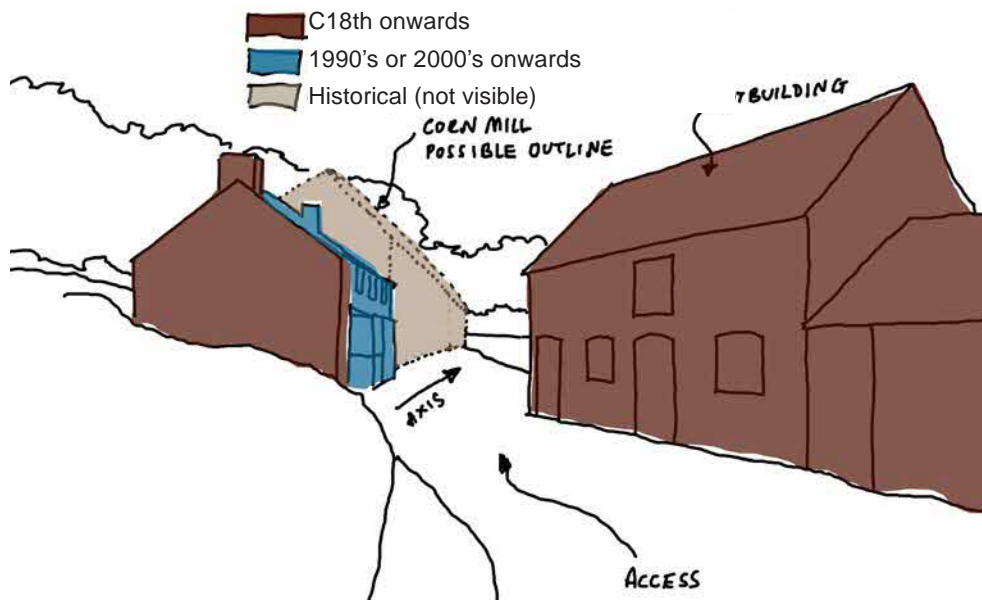
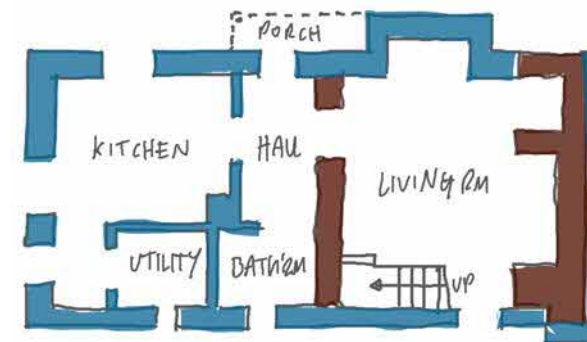
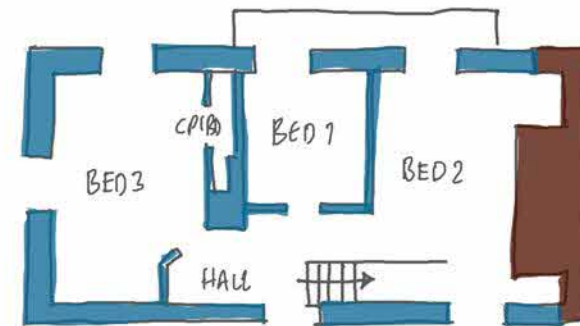
Existing house analysis

- i. The existing house has three bedrooms. Two double and one single, the sq/m of the bedrooms suitable to meet Welsh space standards set out in the Development Quality Requirements 2021 (DQR).
- ii. However, 100% of the floor area is below 2.2m head-height, which is not acceptable for healthy living conditions set out in the DQR.
- iii. To upgrade the house to meet current energy efficiency levels for 'existing dwellings' set out in Part L Building Regulations would result in drastic works, and the resultant floor area would be below 88m², the minimum acceptable gross internal floor area for a 3B5P house as set out in the DQR.
- iv. The floor plans and section below show that the most of the house is of a modern construction. The quality is poor and described in detail in the **Condition and structural report** by Egniol Engineers.



Key

- █ 1990-2023
- █ C18th onwards



Buildings on site and estimate construction period

Existing House construction periods

Existing house fabric



Brick and block cavity wall

Concrete plinth / attempt at underpinning?



modern softwood joists with gypsum plasterboard, no insulation.

Concrete block wall with exterior stone facing cement pointing.



modern softwood studwork and roof. Gypsum plasterboard



Concrete ground floor slab with no insulation



Stud work onto concrete block wall and gypsum plasterboard.



Modern joists and connections (hangers).

Pine stairs, located to back of living room. Not in an arrangement typical of vernacular architecture.



modern joists

South gable stone fireplace - to be retained.

modern tiles onto concrete floor



Concrete lintels to bay window opening.



South gable traditional stone work chimney breast patched up with concrete blocks and bricks.

modern softwood joists

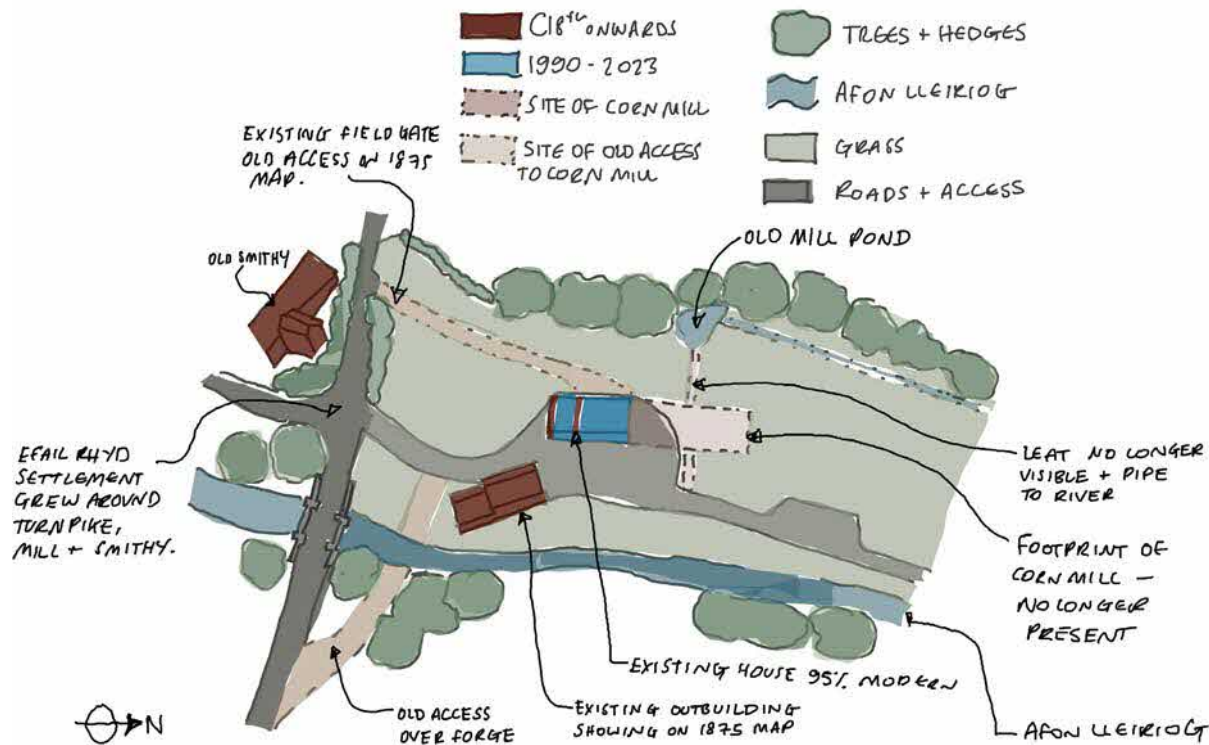
Relationship of buildings on the site and other buildings

- i. The interest of the site lies in the relationship of the buildings to each other and orientation, and the history of the site of the old corn mill.
- ii. The outbuilding is the building with the most notable character, and most visible from the main approach points.
- iii. The outbuilding has brick quoins and stone walls, with a slate roof, and black half doors to the west elevation facing the main access.

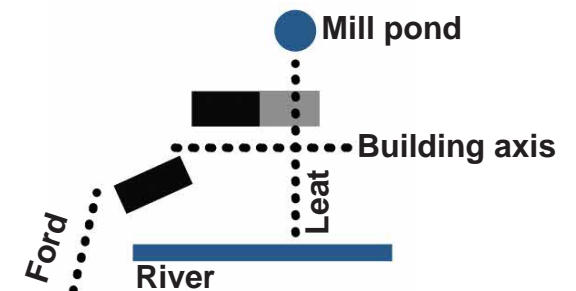


Materials and character

- iv. The buildings are approximately aligned with the River Lleiriog, the old mill pond and leat would have run on the west-east axis, with the mill building running south-north.
- v. At some point once the mill ceased to be in operation and the site was redeveloped to become a residential property.
- vi. The character of the site is defined by the axis of the buildings and the appearance of the outbuilding.



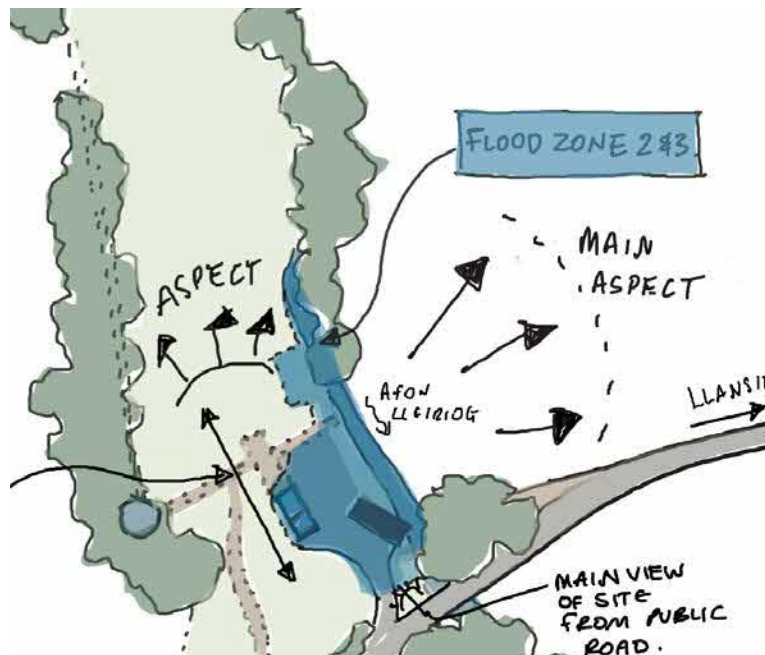
Site analysis



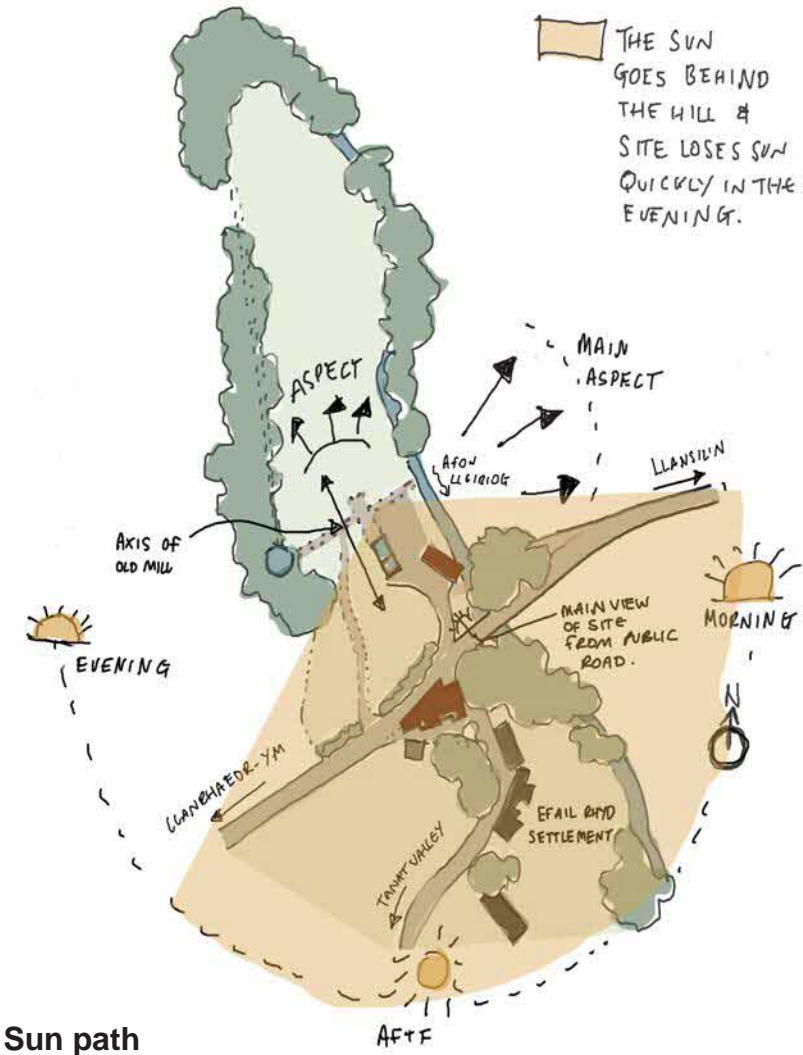
Historical reference points

Environment analysis of the site

- i. The main aspect from the site is to the east (morning sun) and down the valley.
- ii. The buildings are not orientated to achieve maximum solar gain, but align with the river and contours of the site.
- iii. The sun disappears early in the evening over the hill, therefore the main views from the site are the priority in terms of principal elevations, as well as maximising solar gain from the south where possible for the living areas.
- iv. The flood zone 2 and 3 is limited to the areas around the buildings and parking areas.



Flood zone



Sun path



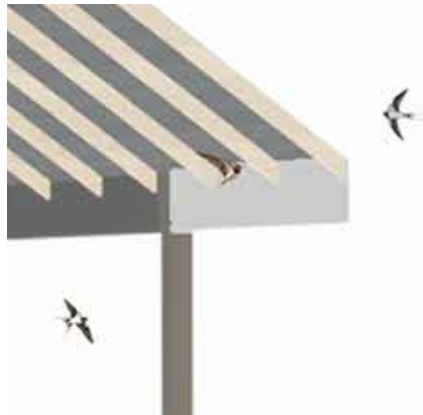
Main view from the site

d. Interpretation

- i. The site is wooded and discreet, nestled at the bottom of the valley. It has an interesting history, and the orientation of the buildings and their axis is one visual element that provides a narrative of the past.
- ii. The temptation is to design a mock attempt at what may have been there, an old mill, or the existing house that bears little resemblance to local vernacular or the original buildings historically on the site. Similarly, a new design could employ the use of heavy stone walls and brick quoins to mimic the outbuilding, but this would weaken the character of the outbuilding by making it hard to discern old from new.
- iii. Additionally, modern methods of stone facing to building walls rarely achieve the appearance of a traditional wall, and would not provide a story of evolution and change which is part of any site.
- iv. The south gable wall to the existing house and internal stone wall offer an opportunity to retain traditional /original walls, and by contrasting with lightweight materials that perch on the walls it would clearly delineate old from new.
- v. The interpretation is to complement and contrast with the outbuilding on the site and introduce the concept of a **new rural economy** of increasing biodiversity on land and buildings through design, whilst respecting the axis / orientation of the historical built forms.
- vi. The contrast of lightweight materials is used on new buildings, whilst **retaining** the shapes and roof pitch of the existing house. The stone reclaimed from the walls of the house will be used for landscaping only, as traditional stone wall provides character and local distinctiveness. A cock and hen style wall is common to the area, and gives opportunity for plants to grow along the tops.

Proposal - highlighting key interpretations

*BfL 12 standards, Principle No 5 Character: **Varying** the density, built form and appearance or style of development.*



Overhangs designed to provide opportunity for nesting birds and bat roosts, and reducing light spill.



Existing and proposed materials palette



Cock and Hen stone wall profile

e. Design Development

- i. Using the architectural theory presented by Christopher Alexander et Al in the “pattern language” we developed the concept. Designing out specific ‘stories and journeys’ that everyone might experience on a day to day basis. We sketched and modeled, testing our ideas over a period a three months.
- ii. The house needs to be compact to be affordable enough to build, with a highly energy efficient fabric. The garden and outdoors are key with a lower specification car port and wood storage area. The resulting footprint will be 30% more than the original house.
- iii. Day to day the applicants will be in the garden, it made sense to have the back door as the main functional entrance, with a ramped access from the parking area for accessibility, an open porch, boot room and access to the ground floor WC.
- iv. The kitchen, usually placed in the east corner is placed in the south west corner because it is the main access point and allows the living room to be located to the south east overlooking the main views from the site. The dining area is in the lightest place in the house, it is a key focal point.
- v. The study and snugs should be cooler spaces with less direct sunlight and to reduce glare and over heating, so are located on the north side, with peaceful immersive views of the garden and trees beyond.



Proposed Section

f. The proposal

. Character:

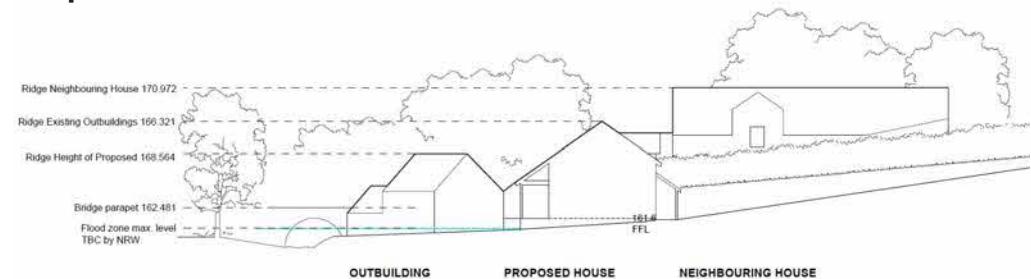
- A strong concept that celebrates the form of the existing house and character of the existing outbuilding, whilst paying homage to the historic relationships of buildings on the site.
- A design that arrives at a modest solution for cost-effectiveness at 150sq/m gross internal floor area, so as to also enable a highly energy efficient dwelling space and a functional carport and wood storage area, giving back ground to the flood zone whilst being able to retain two stone walls that enhance the narrative to the site.
- Design features that draw on local and traditional vernacular such as covered areas; breaking up the massing; post and beam; varying roof heights; and drawing on materials used in the local agrarian landscape.

. Access:

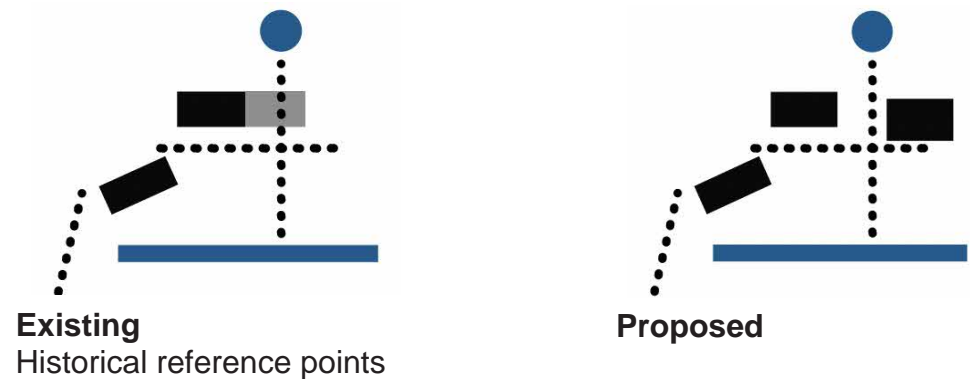
- Utilising existing hard-standing areas and retaining parking and turning areas, with level hard-standing and pathways to the main entrance. All with one level and easy to access toilet facilities.
- Using the existing access that has been there indefinitely.
- No increase in the amount of vehicles to the site.



Proposal



Street scene with relative building heights



f. The proposal

- **Movement and accessibility**
- Raising the high risk residential accommodation areas 700mm above the flood zone level, thus protecting occupants whilst still achieving a house bedded into the landscape.
- Designing a one and a half storey house so that the raise in finished floor level has less visual impact.
- Ensuring the house is easily accessible from parking areas with a ramped access and using red as visual markers to orientate users to entrance points on the site (car port, main door, porch).



f. The proposal

Environmental Sustainability

- All plans to be read alongside Oakwood Ecology report.
- All trees adjacent to the site to be retained and outside of the construction zone.
- Flood area reinstated by the demolition of the existing house, hardstanding (concrete floor) broken up and crushed for re-use of aggregate on site, thus also providing 50m² of drainage area for ground water in the flood zone.
- Foul water treatment on site improved by installation of bio-disc treatment plant to replace septic tank.
- Surface water attenuation through the creation on a new pond (see landscape plan).
- Increase to biodiversity through creation of pond and planting more trees.
- Enhancing opportunities for birds and bats with ample eaves and soffits designed to provide crevices. Overhangs to have traditional post and beam with dove-tail joints, and rafters bird-mouthed over to provide ledges for nesting birds such as swallows.
- Ensuring plenty of natural daylighting into the house, whilst overall reducing the potential light spill at night compared to a typical two-storey house.



f. The proposal

Community Safety

- The site will retain all access points and the house is set back from the roadside.
- Public access to the site will be as existing, with ample surveillance from the main house to the access points.
- Means of escape in case of flood is provided to the rear of the house through an existing field gate to the public highway.

Response to planners

- The pre-application advice was generally positive in that it supported the principle of a replacement dwelling; the proposed footprint location; scale; and increase to floor area.
- Moving the house outside the flood zone was considered beneficial.
- The pre-application advice was that there should be more stone introduced to the designs and to ensure the house was bedded into the land. We took on board these comments by changing the concept design so that the house would have a solid foundation and ground floor slab vs a suspended floor onto pads, thus limiting overall height.
- We introduced more stone features by retaining the existing gable to the existing house, as part of the proposed car port, and will reuse stone reclaimed locally or from the existing house for landscaping. So, that the site looks integrated but honest.
- In response to the comment to introduce a chimney, we considered this and overall it compromises the energy efficiency of the house and overall is too costly a feature in both construction and future heat loss (and fuel cost and carbon emissions). The aim is to design

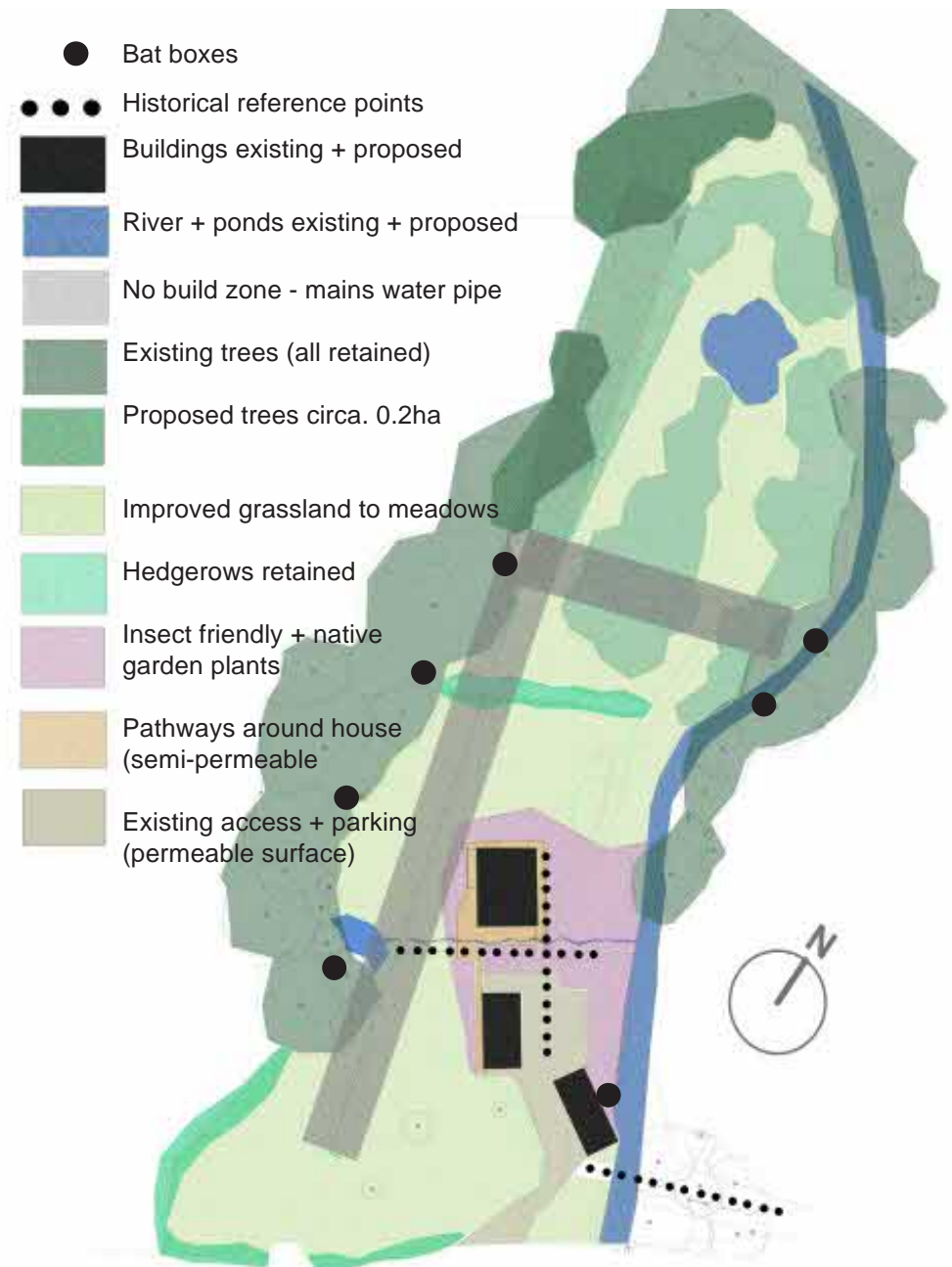
out all weak points to the fabric air-tightness.

- In response to the pre-application advice, further evidence has been provided concerning what constitutes local vernacular architecture, and evidence to show the house is not of special interest.
- In response to queries in the pre-application advice we have provided additional evidence as to the inviability of renovation, which are summarised below:
- The site lies within a flood zone, which as a residential property puts occupiers at high vulnerable risk area, and reduces the open-market value of property. Investing in renovation is uneconomic.
- To bring the existing house up to minimum building regulation standards would require drastic levels of work, including new ground floors for insulation, and external walls with min.190mm insulation and all structure to support, new windows and doors through out (the list is not exhaustive). Renovation will cost the same as new build per m2 (this information is widely available), but in this case with the added disadvantage of a reduced market value.
- The floor area once renovated would be 82m2, less than the minimum floor area considered acceptable by the Welsh Government Development Quality Requirements (DQR) for a three bed house.
- The bathroom has only space for a small shower, and does not meet a basic Part M accessibility standard. DQR requires a bath and shower.
- All of the usable floor area has a head-height of less than 2.2m which is below the acceptable minimum standard of 2.3m a per the DQR. There is no scope to raise the ceiling joists or roof and do so would constitute a complete rebuild.

g. Green infrastructure statement

A short statement of how the development will enhance biodiversity on site and connect people with nature.

Enhancement	Quantity	Net gain
Tree planting should comprise site-native species and would ideally follow a naturalistic planting pattern, i.e., thorny scrub surrounding areas of taller, canopy-forming trees.	0.2ha	Yes
At least one pond will be created on the site. It will have an irregular and shallow, sloping edge and could be combined with stone and log piles close by to provide refuges for amphibians.	50m2 approx.	Yes
The neutral grassland areas will be managed to promote site-native wildflowers. In the absence of any good quality seed sources nearby, this may involve over-seeding, plug planting, or strewing green hay from suitable donor sites.	0.3 hectares	Yes
All existing, and any newly planted hedgerows on the site will be allowed to grow up and produce fruit and seeds for wildlife. Roadside hedgerows can be trimmed on the road side annually.	90linear meters approx.	Yes
Install as many bat and bird boxes as can be afforded, both on the buildings and attached to trees. These should be sited in accordance with best practice guidance provided by the Bat Conservation Trust and the RSPB.	7 bat boxes Bird boxes Min. 10 bat soffit crevices	Bat boxes & roosts to mitigate &
Within the landscaping redefine the linear feature of the old leat (currently and underground pipe), and restore visual reference to the old ford with pruning of trees and landscaping.		Yes , new features to enhance historic features.



Proposed Site

g. Green infrastructure statement

	Building with Nature Core Standards	Response / proposals	Achieved
01	The green infrastructure optimises multifunctionality and connectivity within the boundary of the project and links with existing and planned for green infrastructure in the surrounding area.	<p>Oakwood Ecology identified gaps and opportunities in the local green infrastructure provision on site, and the proposals implement the recommendations showing how the site is graded from public to private, with landscaping around buildings designed for managed gardens, pathways and parking, and further from buildings that site becomes wilder and designed to encourage wildlife.</p> <p>The river and wooded areas around the banks create a wildlife corridor beyond the site and so enriching the site will benefit a network beyond the development boundary. In the future, surrounding land could be managed to increase biodiversity however this is outside the control of the applicants.</p>	Yes
02	The green infrastructure is designed to be climate resilient by incorporating mitigation and adaptations that respond to the impacts of climate change. The green infrastructure is designed to promote low carbon behaviours and contributes to achieving zero carbon development by optimising carbon sequestration and demonstrating low carbon approaches to design, construction and long-term maintenance.	<p>The key driver for replacing the existing dwelling is to move it outside of the Flood Zone 2 & 3, this is a mitigation and adaption towards being climate resilient.</p> <p>Planting new trees will positively contribute to carbon sequestration.</p> <p>The house will be construction to Passive House standards to reduce carbon emissions .</p> <p>Site waste materials such as blocks, bricks and concrete will be crushed for aggregate to be reused on site. Timbers from the existing roof will be reused to construct the carport roof. Any good slate will be stacked and sold for reuse.</p>	Yes
03	<p>The green infrastructure is designed to actively mitigate any unavoidable harmful environmental impacts of development on soil and air quality and to minimise light and noise pollution.</p> <p>In addition, it delivers environmental net gains, including improving air and water quality and wherever possible includes quiet spaces for people and wildlife.</p>	<p>The development has been sensitively designed with wildlife and people in mind. The interaction between the occupants and nature has been a core aspect to the brief.</p> <p>In particular the low canopy roof to the south east is designed to bring nature closer to people, with deep eaves to encourage birds to nest, and crevices in the deep soffits for bats to roost in. Allowing habitat and the opportunity for people to enjoy watching nature.</p> <p>The low roof canopy is designed to reduce light spill at night, with quiet spaces such as the study located overlooking the wilder areas of the site.</p> <p>The house will have mechanical ventilation for healthy air quality.</p>	Yes

g. Green infrastructure statement

	Building with Nature Core Standards	Response / proposals	Achieved
04	The green infrastructure positively responds to the local context, including the physical environment, such as landscape and urban character and social, economic and environmental priorities, including the evidenced needs and strengths of existing and future local communities.	<p>The occupants work locally and there is a shifting trend for people to work from home, this encourage the use of local facilities. For example, the applicants buy their weekly fruit, veg and meat from a local organic shop 4 miles from the site.</p> <p>The site has an interesting history and the brief and concept pivoted around this narrative. Within the development proposals the narrative of the site is interpreted to enhance the historical references.</p> <p>Environmental priorities in the rural context are at the forefront of Welsh government agendas with grants available to better agricultural ground. The new rural economy will be to increase biodiversity and reduce carbon emissions through energy efficient buildings. This will be core to this new economy. Every attempt has been made to positively contribute towards this agenda.</p>	Yes
05	The green infrastructure is integral to the project and is designed to reinforce local distinctiveness and/or create a distinctive sense of place.	All of the proposals for the development both built and natural draw direct references from the local character and distinctiveness. The design statement describes how this is achieved.	Yes
06	The green infrastructure is subject to management arrangements that demonstrate a commitment to effectively implement, establish and maintain features at all stages of the development process. This should include details of funding, governance, maintenance, monitoring, remediation and, where appropriate, community involvement and stewardship.	<p>At the heart of this project the applicants are passionate about reducing their impact on the environment. It formed a core part of their brief (see the design statement).</p> <p>This passion and commitment is the root of self-governance, the project will be self-funded and with both applicants playing active roles in their jobs as educators for the environment this adds another level of social accountability.</p> <p>Other aspects of the governance as legislative, such as the approval of an EPS license to demolish the existing house and monitoring of mitigation and compensation measures for bats put in place.</p> <p>Water quality and foul water treatment is monitored by Building Control.</p> <p>The planning authority have the ability to conditional approval developments and a landscaping plan with details of planting, management and maintenance will be provided, conditional approval is requested.</p>	Yes (conditional approval requested, landscape plan provided as condition of planning)