

## Reference: Land west of the Old Barn, Westwater, West Linton 22/01739/FUL and 23/00012/RREF

It should be clear to anyone reading NPF4 that the strategy is a significant departure from previous NPF's. NPF4 is ambitious in reflecting fundamental Scottish Government policy in relation to the climate and ecological emergency.

*The world is changing, and so are Scotland's places. This strategy sets out how we will work together in the coming years to improve people's lives by making sustainable, liveable and productive places.*

From NPF4 Ministerial Forward, Tom Arthur MSP, Minister for Public Finance, Planning and Community Wealth.

Planning is absolutely central to Scotland setting an example in addressing its international obligations. NPF4 therefore sets how we address matters including Scotland's path to net zero by way of a regenerative circular economy.

In Europe the built environment is responsible for 40% of greenhouse warming potential due to the way the built-environment is designed, made, operated and decommissioned. The extractive economic model of; take, make, use and discard, needs to be urgently replaced by circular economic, renewable nature based approaches and methods.

This change represents a huge challenge and opportunity, but clearly only if we can significantly alter our approach. Individual development projects, such as new homes, need to reflect the spirit and intentions contained in this strategy.

We believe this proposal for a dwellinghouse at Westwater, West Linton is a necessary step in this direction. The proposal aims to address in particular the following principles as set out in NPF4 Part 1 – Spatial principles:

- Just transition – fair and inclusive transition to net zero.
- Conserving and recycling assets – building a circular economy.
- Rural revitalisation – Grow and support sustainable development of rural communities.

In terms of applying these principles in practice we believe this proposal under review supports the delivery of:

- **Sustainable places**, where we reduce emissions, restore and better connect biodiversity;
- **Liveable places**, where we can all live better, healthier lives;
- **Productive places**, where we have a greener, fairer and more inclusive wellbeing economy.

Additionally, we believe the proposal relates to and supports the following NPF4 policies:

**Policy 1 Tacking the climate and nature crisis.**

The proposal under review is net zero in relation to embodied carbon or 'up-front' carbon. This means the carbon expenditure in relation to the whole life cycle delivery of the dwelling has been balanced against the sum sequestration of carbon stored in the timber and other natural materials within the dwelling. This has been verified arithmetically using ECCOlab software.

Biodiversity will be greatly enhanced due to the establishment of several hundred native and other trees within the wider site boundary. Many of these have been planted earlier in 2023.

**Policy 2 Climate mitigation and adaption.**

This ultra-low energy dwellinghouse would exemplify climate mitigation by following the principle of Passivhaus design and delivery.

Future overheating has been considered by way of thermally dense cellulose insulation to the external fabric; walls and roof, resulting in a cool house in Summer and warm in Winter.

**Policy 3. Biodiversity.**

The overall 3.2 acre site under the control of the applicant will be managed to increase and enhance biodiversity. This ambition is already underway with the protection of the mature trees wherever possible and active establishment of further trees, hedges and other habitat. Enhancement to support insect pollinators is of particular strategic interest.

**Policy 6. Forestry, woodland and trees.**

The site of the proposal under review has mature trees to its eastern boundary. Due to the proposed position of the dwelling and garage none of these trees would be effected, they will be safeguarded. Two trees would be effected; a Lime felled to allow access from the existing lane serving the building group, and a Sitka spruce which is both out of keeping with the tree group, and would significantly reduce sunlight in future years if left to reach botanical maturity. The trees on the site have been inspected by SBC tree officer, Simon Wilkinson. Both the single Lime and Sitka spruce have been recommended for removal by Simon Wilkinson.

Compensatory planting in the form of over 100 native trees has been undertaken during the Winter of 2023. This is the start of a comprehensive landscape and biodiversity enhancement proposal prepared by Stephen Ogilvie Consultants of Edinburgh.

The principle of woodland expansion to a target 25% across Scotland has been a long standing Scottish Government policy. In addition to the many environmental, social and nature recovery benefits of forestry and woodland are the economic benefits. All of the timber utilised for the proposed house would be sourced from Scottish sources. This intention is not theoretical, but one of the central values and purpose of the company responsible for delivering this new house.

Scottish Borders Council where the first local authority in Scotland to publish supplementary planning guidance on the use of local timber in construction. This proposal exemplifies this approach.

**Policy 12. Zero Waste.**

In Scotland 50% of all material commodities are utilised in construction and 50% of all waste is generated by construction – source Zero Waste Scotland.

The need for waste reduction strategies and alternative methods to address this situation are gaining traction. The role of Off-site Manufacture and Modern Methods of Construction (MMC) are widely recognised as central to these innovative approaches.

The proposal under review would be delivered by these methods. Large panelised ‘sub-assemblies’ complete with windows & doors, external cladding, and insulation manufactured in Scotland, would be delivered to the site for rapid assembly. As the building elements are fabricated in workshop conditions, waste minimalization strategies are employed in the design and manufacture process.

As none of the timber materials would have chemical treatments, relying alternatively on moisture management techniques and natural durability, the long term utilisation of material resources meets circular economic criterion.

Due to the *Design for Manufacture and Assembly and Disassembly* approach proposed, very little to no on-site waste would be generated.

#### **Policy 14. Design, quality and place.**

To encourage, promote and facilitate well designed development that makes successful places by taking a design led approach and applying the Place Principle.

Design relates to aspiration, what is it we are trying to do and why. If we are serious about the delivery of net zero homes in rural Scotland and we recognise that the way in which homes are currently delivered contributes to Global Warming Potential, then we are required to change the design and delivery method. If a buildings honest expression in an architectural sense is a product of its construction type and method, then net zero homes will require to appear visually different from ‘traditional’ homes.

A contemporary vernacular would be the sum total of; available materials, labour methods, technical and aspirational ambitions of any age. An example of this relevant to this proposal is the use of Larch cladding sourced from Scottish forests. By employing waste reducing resource efficient Off-site and MMC approaches, ‘dry’ timber carbon efficient materials are required. Using these methods timber external cladding is workshop fitted thereby reducing on-site operations and associated time and other carbon inefficient impacts, including negative externalities such as concrete blocks and increased material miles etc.

In short, if we desire a different outcome we are required to alter the method - the means defines the ends.

We believe the scale, form and proportions of the proposed house are distinctive and honest. They are not arbitrary but carefully considered, reflective of a deep desire for positive change as exemplified and articulated in NPF4.

As for the Six qualities of successful places – Annex D to NPF4 we have the following brief interpretation:

1. Healthy – contributing to a healthy place, environment and economy.
2. Pleasant – supportive of an attractive house, site and building group.
3. Connected – responsive to existing road & lane networks.
4. Distinctive – Innovative, honest and contemporary architectural expression.
5. Sustainable – exemplifying the very state of the art of sustainable housing.

6. Adaptable – fundamentally adaptive, maintainable & repair responsive.

### **Policy 16. Quality homes.**

**The policy intent:** to encourage, promote and facilitate the delivery of more high quality, affordable and sustainable homes.....

**Policy outcomes:** Good quality homes are the heart of great places and contribute to strengthening the health and wellbeing of communities.

More energy efficient, net zero emissions homes, supporting a greener, fairer and more inclusive wellbeing economy and community wealth building.....

In order to construct a dwelling in Scotland a Building Warrant is required. This is obtained by submitting detailed technical information which is verified against the legal standards as published in the Building Standards Technical Handbook.

The Quality in technical terms is not arbitrary but rather defined within the Building Standards. Compliance with the regulations can be enhanced voluntarily by pursuing an exemplary standard, as is the case with the proposal.

### **Section 7 – Level of Sustainability The Scottish Building Standards Technical Handbook**

This proposal under review aims to comply with and partially exceed specified level 'Gold'. This is the highest option available in current practice and until 'Platinum' has been further defined by the Building Standards.

In order to meet this criteria and having met the functional Standards in Sections 1 – 6 that apply to a dwelling house compliance requires the following quality and performance targets:

**Aspect Gold Level 1. Carbon dioxide emissions.** The Dwelling Emission Rate to be 27% lower than the Target Emission Rate set by the 2015 Standards.

**Aspect Gold Level 2. Energy for space heating.** Maximum annual demand for useful energy for space heating to be – 30 kWh/SqM.

**Aspect Gold Level 3. Energy for water heating.** At least 50% of the dwelling's annual energy demand for water heating to be from renewable sources with no associated fuel costs. In addition a display showing the performance of the primary renewable source, in this case PV panels, will be made available.

**Aspect Gold Level 4. Water use efficiency.** Enhanced products will be provided as follows:

- WC's of average flush volume of no more than 3.5 litres.
- Wash hand basin taps of flow rate not more than 4 l/m, and to kitchen and utility of not more than 6 l/m.
- Shower heads with maximum flow rate of 6 l/m.

**Aspect Gold Level 5. Optimising Performance.** Addition within the completed dwell of:

- Quick start guide label.
- Real time resource use display.

**Aspect Gold Level 6. Flexibility and adaptability.**

- Home office space.
- Mobility space provided for an electric wheelchair and bicycle.
- Enhanced storage provision.

**Aspect Gold Level 7. Well-being and security.**

- Enhanced noise separation between rooms and between the ground and upper floor by way of acoustic insulation.
- Enhanced natural lighting to kitchen and living/dining/study using the appropriate calculation.
- Security – door-sets and windows certified as meeting a recognised security standard.
- Outdoor space – an accessible private garden.

**Aspect Gold Level 8. Material use and waste.**

- A dedicated internal space of at least 120 litres and no dimension less than 450mm.
- Design for de-construction. Demonstrate the key principles of demountable construction detailing has been followed. In this case this will follow the reverse of the Assembly sequence as required for off-site manufacture sub-assembly manufactured elements as part of the Modern Methods of Construction (MMC) construction approach.

**Policy 17. Rural homes.**

To encourage, promote and facilitate the delivery of more high quality, affordable and sustainable rural homes in the right locations.

The principle for a dwellinghouse on the site was established in 2021. A Planning in Principle application was made by Mr Charles Bruce for the site early in 2021, reference 21/00285/PPP. This application was allocated to planner Randal Dods. The delegated Report of the 23<sup>rd</sup> April 2021 made a recommendation of refusal which was upheld.

The decision was appealed, reference 21/00010/RREF, to the Local Review Body (LRB) later the same year and the decision was reversed and signed off on the 19<sup>th</sup> November 2021. The principle of development on the site has been accepted on this basis.

NPF4 Policy recognises the importance of supporting vibrant sustainable rural communities. We believe the proposal under review is consistent with the spirit of this policy in terms of the enhancement and renewed purpose of this site within an established building group.

**Policy 19. Heat and cooling.**

To encourage, promote and facilitate development that supports decarbonised solutions to heat and cooling demand and ensure adaptation to more extreme temperatures.

The first priority in relation to this policy is to reduce energy demand for heat and cooling by design. This has been undertaken by way of a combination of cellulose insulation which is dense to store energy thereby moderating for a cool home in Summer and warm home in Winter. This combined with the following measures represents the very highest level of sustainable construction:

- very airtight fabric.
- minimal thermal bridges.
- very high performance doors and windows.
- Mechanical Ventilation Heat Recovery (MVHR) ventilation system.

The proposed roof overhangs also undertake important functions with regard to heating and cooling. In the Winter when the sun is low, direct solar gain will be experienced helping with the ambient internal temperature. In Summer than the sun is at its height, the roof overhangs will shield the glazed areas to internal temperature increase.

**Policy 26. Business and industry.**

Scotland’s Just transition to a low carbon economy requires new approaches and ways of working which support the development of supply chains based on renewable resources. A future green industry sector will require close collaboration between businesses active in the built-environment sector with the forestry and timber processing sector.

The proposal under review is directly supportive of the transition required, in order to reskill and train the future workforce in Scotland to jobs and careers supportive of climate action. Construction is changing in support of the climate and biodiversity crisis towards digitally enabled bio-economic alternatives. Innovation in this area is being driven by one-off custom homes and not volume built houses. The future for high quality homes is undoubtedly a design for manufacture and assembly model.

As such proposals of this nature are entirely supported by the strategic emphasis represented by NPF4.

**Policy 29. Rural development.**

**Policy Intent:** To encourage rural economic activity, innovation and diversification whilst ensuring that the distinctive character of the rural area and the service function of small towns, natural assets and cultural heritage are safeguarded and enhanced.

**Policy Outcomes:** Rural places are vibrant and sustainable and rural communities and businesses are supported.

Rural communities are on the frontline of the NPF4 strategy. The Just Transition to a low carbon economy, net zero by way of an innovative and local supply chain connected built-environment, are examples of rural opportunity and pathway to future vibrancy. Sourcing energy and carbon intensive materials from overseas, such as slate, concrete, steel and plastics does not fit with a progressive home-grown regenerative strategy for our future built-environment.

Locally sourced, processed and added value timber, used for everything from structure & cladding finishes, Insulation and furnishings are rightfully supported in principle throughout the NPF4 strategy.