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# Design and Access Statement

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Passivhaus EnerPHit Refurbishment and Extension

Of

Dove Cottage, Farnley, Corbridge,  
Northumberland, NE45 5RP

## Contents

1.0	Introduction	1
2.0	Existing Site Analysis	1
3.0	Previous Planning History	2
4.0	Design	2
5.0	Layout	3
6.0	Access	3
7.0	Planning Policy	4
8.0	Conclusion	5

## 1.0 Introduction

1.1. We have been instructed by our client, Mr and Mrs Hindle, to submit a Householder planning application for the refurbishment and extension of Dove Cottage to the ultra-low energy Passivhaus EnerPHit standard. This statement and the accompanying documents listed below should be read in conjunction with the application:

- 501287 / 01 Existing House Floor Plans and Elevations
- 501287 / 02 Existing Garage Floor Plans and Elevations
- 501287 / 03 Proposed House Floor Plans and Elevations
- 501287 / 04 Proposed Garage Floor Plans and Elevations
- 501287 / 05 Existing and Proposed Site Plans
- 501287 / 06 Location Plan
- Ecology Risk Assessment
- Photographic Schedule

## 2.0 Existing Site Analysis

- 2.1. Dove Cottage is located within the hamlet of Farnley, approximately 1.5km south east of Corbridge village centre and 2.5km north west of Riding Mill village centre. The front elevation of the cottage faces approximately north.
- 2.2. The existing residential dwelling and detached garage sit within a site measuring approximately 0.32 acres that is made up of soft and hard landscaped areas, and a gravel driveway.
- 2.3. The cottage has brick masonry walls and a tiled roof covering, the original part of which were constructed in the late 1960's and has been refurbished, altered and extended a number of times during the 1980's, as detailed in in section 3.0 below. The internal parts of the property are now dated and not suitable for the clients living requirements.
- 2.4. The cottage has two immediate neighbours, East Lodge and High Lodge, that share boundary lines to the north, south and west of the property, with open grazing fields to the east and part of the south boundary.
- 2.5. The property is thermally inefficient with a EPC rating of D and solely relies on mains electric and gas as heating and energy provision.
- 2.6. An existing vehicular access is located to the north of the property with parking provided on the driveway and within the garage to the east side of the property.
- 2.7. According to the Gov.uk website, the property has a 'very low' flood risk meaning that this area has a chance of flooding of less than 0.1% each year.

## 3.0 Previous Planning History

- 3.1. The following planning applications have previously been submitted for the development of the subject property;
1. Ref. No: T/88/E/918 - Extension to dwelling.
  2. Ref. No: T/83/E/476 - Extension to provide lobby, cloakroom and utility room, enlargement of kitchen/dining room and erection of garage.
  3. Ref. No: T/83/E/127 - Proposed kitchen/dining room extension and erection of a garage.

## 4.0 Design

- 4.1. Please refer to the accompanying drawings for full details and extent of the proposed works.
- 4.2. It is proposed that the existing property is refurbished to the Passivhaus EnerPHit standard so to actively reduce energy consumption, carbon emissions, and maintenance costs; and also provide a healthier and more comfortable internal environment.
- 4.3. The location and orientation of the existing dwelling is well suited to the PassivHaus design concepts with man-made and natural shading to the east and west, and a long south elevation to benefit from solar heat gains during the winter and facilitate the capture of solar energy year round. Therefore, in consideration of minimising waste and carbon emissions, refurbishment and extension, rather than re-build of the existing building was a logical and environmentally driven decision.
- 4.4. The existing building footprint is circa.144sq.m. Under this proposal this will be increase to circa.162sq.m. These increase are due to the small rear extension at the south side and the external wall insulation.
- 4.5. So to achieve the necessary u-values and thermal bridge free construction for Passivehaus standard, significant improvements must be made to the existing building fabric. Therefore, it is proposed that the brick masonry walls be clad in external wall insulation and finished in a combination of pre-weathered larch and an off-white render. While the render is recognised in the vernacular of the locality, the pre-weathered larch, which will be silvery in appearance, will soften the overall appearance of the building within its setting and is also not uncommon within the area.
- 4.6. At the south elevation, flat roof canopies provide shading to limit solar gains during the summer months in accordance with Passivhaus design principles, and at the main entrance doors to the south east corner, also provide a covered external space that the client will utilise for dropping off their disabled son and as general protected outdoor space.

- 4.7. The redesign of the windows and doors has been done with Passivhaus standards and functionality of the property in mind allowing ease of access. Windows and doors have been carefully selected to maintain the thermal envelope and maximise their potential as sources of natural ventilation, daylight and views out. South facing windows will contribute to useful solar gain in the overall energy balance.
- 4.8. The landscaping will largely remain as existing, however, the large concrete paved area to the south side of the house will be broken out and replaced with soft landscaping which will significantly reduce surface water run-off into the main drains.
- 4.9. The services strategy will include a mechanical ventilation and heat recovery system with stove serviced post heater. The new chimney at the south elevation gable will allow for installation of the stove.
- 4.10. An electric car charging point would be provided inside the garage so to future proof the clients car use.
- 4.11. Solar voltaic panels will be installed to the south side of the main roof and a battery storage system utilised.
- 4.12. Bike storage and bin collection will be provided within the existing garage.

## 5.0 Layout

- 5.1. The building has been redesigned so to provide an open plan living space for ease of access for the client and their disabled son, with the principal habitable rooms located to the south side in order to benefit from natural light and solar gain.
- 5.2. The existing layout provides an entrance lobby, utility room, kitchen, living room, two bathrooms, small kitchen and four bedrooms.
- 5.3. The proposed layout provides an open plan living, dining and kitchen space; three bedrooms, en-suite and an accessible shower room.

## 6.0 Access

- 6.1. The property has been designed with long-term accessibility and functionality as key criteria for both the clients and their disabled son. The following measures have been included to facilitate this;
  - Level external access thresholds
  - Min. 900mm wide doors throughout
  - DDA compliant wet room with walk-in shower facility
  - Open plan living space minimising internal door access
  - External canopy for protection at principal entrance door
  - Level access throughout

## 7.0 Planning Policy

7.1. It is considered that the following planning policy statements support the application;

### Northumberland Local Plan 2016 – 2036

#### Climate change mitigation and adaptation

4.50 The National Planning Policy Framework (NPPF) is clear that the purpose of the planning system is to contribute to the achievement of the three dimensions of sustainable development – economic, social and environmental. The NPPF sets out a presumption in favour of sustainable development and the Local Plan seeks to encourage sustainable development through growing the economy, supporting healthy and vibrant communities and contributing to protecting and enhancing the natural, built, water and historic environment of Northumberland.

4.53 Local planning authorities are also importantly bound by the legal duty in Section 19 of the 2004 Planning and Compulsory Purchase Act (as amended) to ensure that, taken as a whole, local plan policies contribute to the mitigation of, and adaptation to, climate change.

4.54 Policy STP 4 sets out how development proposals should contribute to climate change mitigation and build resilience to the effects of climate change. Other policies throughout the plan set out more detailed policy requirements to mitigate and build resilience to climate change.

#### Optional technical standards

7.57 The Council seeks to ensure that all homes are accessible and flexible enough to meet the needs of current and future occupiers. National guidance allows local planning authorities, where justified by local needs and subject to viability testing, to adopt through Local Plan policy the Government's optional technical standards for housing. These relate to enhanced adaptability and accessibility, water efficiency and internal space standards (the Nationally Described Space Standard), and where adopted require new housing to be constructed so as to exceed the minimum standards required by Building Regulations.

#### Homes for older and vulnerable people

7.63 The Council recognises that most people who are able to do so prefer to remain living well in their own homes within inclusive communities for as long as possible, with or without support, while others require specialist accommodation to meet their specific needs on either a temporary or longer-term basis. The Council wants to ensure the provision of better housing choices for older people and vulnerable groups, whatever their requirements, including homes that are adaptable to residents' needs over their lifetime and set within accessible 'lifetime neighbourhoods' that are well-designed places suitable for all people regardless of their age or disability.

## Sustainable design and construction

8.25 The sustainable design and construction of new development has an important role to play in terms of ensuring prudent use of natural resources and responding proactively to climate change. Consideration of how to minimise demand on resources, such as energy and water, as part of the design process is important for reducing running costs and improving efficiency. Improving the sustainability of building construction and use, and supporting small scale renewable and low carbon energy generation provides an opportunity to deliver the objectives of addressing climate change and managing natural resources.

8.26 Whilst Building Regulations address technical standards in buildings, the Local Plan seeks to ensure that development is environmentally sustainable and as such applications will need to demonstrate that considerations set out in Policy QOP 5 have guided the design process. This includes consideration of opportunities to incorporate passive design measures, for example the potential for solar gain and natural ventilation through the siting, orientation and layout of a development. Other key considerations include the potential to connect to or incorporate district energy systems, renewable energy, water recycling and waste reduction.

8.27 The selection of materials, the type of construction and the layout of spaces can influence how efficiently resources are used and how much embodied carbon development contains. Prioritising the use of locally sourced, recycled and energy efficient building materials is one way in which development can reduce resource requirements and embodied carbon. Therefore, applicants should demonstrate within their Design and Access Statement that, wherever possible, they have given first consideration to materials that can be sourced closest to the development site, those which are recycled or constitute surplus/waste construction products and those which have high thermal or solar performance.

8.29 Another important way in which design can minimise resource use and carbon emissions is by ensuring that development can facilitate adaptation, conversion and extension in the future. The re-use and adaptation of existing buildings and spaces minimises the need for future rebuild or extensive alterations and therefore reduces the consumption of resources. In designing schemes, consideration should be given to aspects including: the layout, shape and dimensions of rooms and how these could support multi-functionality; the ease in which interior partitions could be altered or removed; and whether internal fittings and building services can be accessed and altered.

## **8.0 Conclusion**

- 8.1. The information submitted as part of this planning application clearly sets out the case for the proposed refurbishment and extension of Dove Cottage. In seeking to achieve the Passivhaus EnerPHit standard, the proposal aims to achieve an outstanding level of construction that will result in performance standards of the dwelling that far exceed building regulation standards and align with government sustainability drives and both national and local planning policy objectives.

- 8.2. It is clear that alterations are necessary to achieve the Passivhaus performance standard, although such alterations have been kept to a minimum so to ensure the site is not over developed. The material change in appearance of the external walls is considered to enhance the appearance of the existing property through its more contemporary design that provides a softened appearance in relation to the rugged stone built neighbouring properties.
- 8.3. The refurbishment will also ensure the dwelling provides a healthy internal environment with all the necessary accommodation and facilities for the clients and their dependants to live well even through possible future loss of mobility and with provision for care onsite if necessary.
- 8.4. On the basis of the above and associated plans and documentation that we seek the council planning officer's support in this application. Should any officer or other statutory authority wish to discuss any matter regarding the proposal, or require any further clarification or additional information, please do not hesitate to contact me.

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