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Design and Access Statement

**PLANNING APPLICATION FOR THE REPLACEMENT OF STABLES WITH A SINGLE
DETACHED DWELLING AT
GREENACRES, AKESMOOR LANE, BIDDULPH, ST8 6RT**



Photo courtesy of Google Earth

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Introduction/Context

This design and access statement has been prepared to accompany the application to replace a stable block and other associated outbuilding with a single detached dwelling at the site off Akesmoor Lane, Biddulph.

The site is located outside of the Biddulph settlement boundary and therefore considered as Greenbelt in the Staffordshire Moorlands Local Plan. The site is currently used for commercial equestrian stabling and grazing land and therefore considered to be previously developed land (Brownfield) within the Greenbelt.

The area to the west of the proposed development is a small skip-yard, separated to the application site by a tall earth bunding with established tree planting.

A previous application in 2020 was submitted, reference number SMD/2020/0544. Staffordshire Moorlands Council accepted that the site is considered to be previously developed land, and that a replacement of a similar appearance, and massing would not affect the openness of the Greenbelt. The application was refused, and an appeal also dismissed on the grounds that previous noise assessments did not fully assess the effects of the proposed living conditions of future occupiers of the dwelling. All other aspects of the proposal were deemed acceptable.

Proposal

The proposal is of a similar nature to the previous application, with some design and layout improvements being made to the new dwelling within the constraints of the site layout. The proposed dwelling will be designed and built to exacting standards for an energy efficient, air tight, highly insulated Passive house resulting in low energy bills, constant fresh air, superior internal comfort, and peaceful and quiet interior.

The existing linear stable block, a separate timber shed to the North end of the main building, and a similar hay store to the South end shall be removed to facilitate the construction of the new dwelling. Since the previous application was submitted, two additional livestock field shelters have been erected on the site and adjacent land. These are to be retained as they do not have any conflicts with the proposed development.

The new building will be a single level, two-bedroom dwelling of a linear design mimicking the original stable layout with a pitched roof over.

Use/Amount

The new use of the site shall be residential, from its current commercial use. The current driveway will remain the entrance to the site, the yard area will be the position for the new dwelling and the menage area shall become the residential curtilage. The remainder of the grazing pasture that surrounds the site shall be retained for that separate use.

Layout

The proposed layout of the proposed dwelling is linear to match the form of the existing building. Entering a hallway through a door in the centre of the building. The sleeping accommodation of two bedrooms and a bathroom are to the right-hand side. To the left is an open plan kitchen living and dining space. There is a separate plant room behind the main living space to house the renewable technology equipment. This is accessible only through an external door on the rear of the building.

The layout on site utilises the existing highway entrance which sweeps round to reveal the new dwelling, so it is concealed from view from the highway. Where the driveway ends, there is parking provision for two vehicles. Beyond this, the permeable surface continues around the new dwelling before a grassed garden curtilage. The South facing boundary to the North of the site shall have a ground mounted solar array erected.

Scale

The scale of the development is in keeping within the site as the massing is similar to that of the original buildings.

The combined footprint of the three buildings to be demolished is 90.2m². The footprint of the proposed dwelling, inclusive of the plant room is 116.3m². This is a percentage increase of 29% which would be seen as an acceptable increase in a rural location. The domestic style greenhouse present on the site, which is to be removed as part of the development, has not been included in the floor area calculations. A minimal increase in footprint from the proposal originally submitted is mainly due to the requirement for a plant room to house the renewable technologies. The wall thickness has increased to accommodate a more thermally efficient modern wall construction method, and the space about dwelling guidelines have been considered for the room sizes in a two-bedroom, single level dwelling.

Appearance

The appearance of the proposed dwelling shall reflect the design and form of the existing stable block. The proposed building will be linear in design with a single ridge line. Openings to the front elevation are simple in form and vernacular to reflect those found on a traditional stable block. Upon approach from the road, the end gable is blank, and the opposite end has glazed doors overlooking the garden curtilage. The addition of the plant room on the rear of the building is covered by a cat slide in the main roof which falls to a lower eaves height.

The main external material shall be a vertical timber cladding, with a dark finish, to reflect the existing stable block. The rear wall, because it is within close proximity to the boundary, needs to meet fire regulations and a combustible material, such as timber would not be acceptable. It is proposed the main length of the rear wall, nearest to the boundary shall be finished in a dark colour render. This will only be visible from the small gap between the building and the colour will deter discolouration and algae forming from the shrubbery behind. The roof shall be covered in dark slates to compliment the other materials used on the dwelling. The roof shall be finished with grey slates to compliment the wider material palette of the proposed building.

Landscaping

The current paddock to the South of the building shall be mown more routinely to create a domestic curtilage area within the parameters of the existing site boundaries. This is to retain the existing post and rail fencing, and trees.

The Northern boundary separating the site from the adjacent yard shall have a 2.2m high acoustic panel fence erected to protect the site from potential noises. This shall be painted in a neutral green tone to help it blend with the existing shrubbery behind, and planted with an informal native species hedge to further screen the acoustic fence. This shall extend behind the existing building, so the majority will be concealed from view, and across the top of the garden curtilage. This is denoted of the supplied site plans. In front of this, in the garden curtilage, a ground mounted solar array 20 Trina Vertex S panels, which are matt black monocrystalline panels, each measuring 1.134m by 1.762m, shall be erected to make advantage of the southern facing aspect at a 30 degree angle similar to a roof mounted system to reduce the new dwellings dependency on the grid. The panels would be arrayed in a single row, approx. 1.5m forward of the new hedgerow, allow maintenance to both hedge and solar panel. It shall be enclosed with a new post and rail fence in front, so it is not obscured.

Other boundaries shall retain the existing post and rail fences as existing. Any concrete block walls shall be removed and replaced with similar fencing where appropriate. A new mixed native species hedge shall be planted across the extent of the front of the proposed dwelling. This shall soften the view of the development and include a mixture of Hawthorn, Dog Rose, Hazel and Elder, which is a recommended hedge mix suitable of boundaries containing horses and livestock.

The area surrounding the dwelling shall have a permeable block paving, before the driveway turns to a tarmac surface, and the current surface by the roadside. The boundaries and hedgerow around the driveway shall be retained as existing.

Trees

An arboricultural impact assessment has been revised for the proposed development to assess the impact on surrounding trees.

As the building is largely constructed over the footprint of existing structure, the effect on the roots of the trees on the adjacent site is minimal. It is also noted that the trees are positioned on a higher ground level, behind a retaining wall towards the south end of the proposed building, so the effect on roots would not be sufficient.

The existing hedgerow in front of the proposed building shall be laid, to improve its fullness, and this shall be extended with new planting across the East boundary to the field. These works shall be carried out in months from September to February, inclusive, to avoid the nesting bird season and potential impacts. Similarly, a new hedge will be planted along the North boundary to screen the proposed 2.2m acoustic panel fencing. No trees are required to be removed as part of the development. G3 and G4 shall be retained as part of the garden curtilage of the proposed dwelling.

Ecology

An Ecology appraisal of the site has been produced to assess the ecological impacts of the proposed development.

Access & Parking

The proposed development shall utilise the existing highway entrance, of which the current surface material will be retained up to the point at which the entrance gates are located, approximately 3m back from the edge of the highway. The current surface material is a bound material with a natural grass strip between vehicle tracks which assimilates well with the surrounding rural location. Beyond the gates, the existing surface shall be re-laid with tarmac up to the point at which the dwelling is positioned.

Parking and turning space is in place to suit a minimum of two vehicles on a permeable block paving surface. The area to the North side of the dwelling has been designated for the recycling/waste storage.

Ground Investigations

Due to the narrow access to the site, mainly the area in front of the existing stable, it is not feasible for a ground investigation drilling rig to access the site until the existing building has been demolished. We hope the outstanding details regarding the coal mining risk assessment, can be conditioned as part of this application, for detailed findings to be submitted to the local Authority for assessment once the invasive surveys can take place.

Sustainability

The proposed dwelling is to be constructed to Passive House principles which will result in the dwelling being highly efficient both in its fabrication and day-to-day operating.

A fabric first approach shall be used in this dwelling's construction, so that the shell far exceeds current Building Regulation standards in terms of the thermal efficiency of the building elements. These include Weinberger clay blocks for the wall construction, high performance triple-glazed timber windows and doors, Fakro triple-glazed rooflights.

Renewable technologies shall be used throughout the dwelling in lieu of common fossil fuels powered sources. These include a Samsung split ASHPO with 250 litre water cylinder, buffer, pump unit and ancillary controls and a whole house MVHR system based upon a Salda Smarty 2X 1.1 unit which are to be located in the plant room. The dwelling shall have underfloor heating throughout using 17mm diameter pipe at 150mm centres and a reliance manifold with ESBY pump control unit and Heatmiser smart control pack.

Solar panel array will provide the majority to the dwellings energy requirements, having a battery bank in the plant room to utilise captured electricity into the evening.

Noise Impacts

An updated noise survey has been conducted on site by SBM Safety Solutions Ltd over a period of 7 days to establish the noise levels across the site, together with true sound recording to identify the noise source. The report its results and recommendations are detailed are supplied in the separate report pack. The findings of this outline that the specification for the construction, windows and ventilation is robust enough to mitigate for any increases in activity at the skip/farm yard.

For all habitable rooms, window fitted should be a minimum of 6/12/6 double glazing. The proposed windows are to be triple glazed which far exceeds this requirement. Windows are also to have alternative ventilation to standard trickle vents. This is satisfied with the specified whole house Mechanical Ventilation and heat recovery system. Windows are permitted to be openable as it is to the occupier's discretion is any external noises interfere with daily living in the dwelling. The alternative ventilation allows for acceptable living standards to be maintained if the occupier wishes to have the windows closed. This system will avoid overheating with the incorporation of cooling systems, coupled with the shading given along the front elevation of the stable-style roof overhang.

The site boundary to the adjacent yard, as well as having the earth bund providing some sound deadening, would also have an acoustic fence against the boundary 2.2m high, having a native species mixed informal hedge planted in front to mitigate any visual impact on the landscape.

Summary

An updated and prolonged noise survey carried out at the site, using monitoring equipment placed with a direct line to the adjacent skip yard, has indicated that a correctly constructed building having the recommended specification for the main elements of construction together with a mechanical ventilation system would be robust enough to mitigate against the current noise levels and for any increases in activity at the skip yard. Therefore, there would be no adverse harm to the amenity of future residents from the adjacent yard. The proposed mitigation using a hedge screened acoustic fence for noise levels affecting the enjoyment of the garden area would not harm the character and appearance of the countryside.

The design of an air tight, highly insulated Passive house would result acceptable levels of internal and external noise can be achieved through design, layout, and mitigation, whilst maintaining ventilation to the properties. This is achieved through the use of Mechanical Ventilation Heat Recovery (MVHR) which is also a fundamental part of the passive house design that is envisaged for the development, which is a tried and tested design approach which demonstrates that acceptable living conditions can be achieved with MVHR, and windows closed. A passive house design offers a number of benefits to future occupiers, including increased energy efficiency than that of a standard construction home and lower energy costs and doesn't rely on opening windows to control overheating. Airtightness is a critical part of passive house design and therefore when windows are open the effectiveness of the heating and cooling system of the building are compromised. A property designed to Passive house standards would by its own merit generate a sustainable development as seen in many developments in the UK.