Proposed New Development At:

CRABTREE ARENA, FIRS LANE, HOYLANDSWAINE, BARNSLEY, S36 7JG.

DESIGN AND ACCESS STATEMENT

J+J Bolchover Architects

October 2010

DOCUMENT CONTENT

1.0 INTRODUCTION

1.1 This Design and Access Statement has been prepared by J+J Bolchover Architects on behalf of Mrs Angela Pears in support of a Full Planning Application for new residential development at Crabtree Arena, Firs Lane, Hoylandswaine, Barnsley, South Yorkshire S36 7JG.

1.2 This Design and Access Statement is to be read in conjunction with the Planning Application drawings submitted for Crabtree Arena and other supporting information. Various extracts from the Planning Application have been included within this document.

1.3 The Statement covers all key criteria involved in the design process and the design principles on which the scheme is based. It is subdivided into the following eight sections:

1. Overview of the Development
2. Assessment of the Site
3. Site Topography
4. Design
5. Sustainability
6. Access
7. Summary of Benefit
8. Design Progress
9. Supplementary Information

1.4 The generalised description of the proposal is - Proposed New Residential Development at Crabtree Arena, Firs Lane, Hoylandswaine, Barnsley, S36 7JG.

2.0 OVERVIEW OF THE DEVELOPMENT

As recommended by the Barnsley Urban Renaissance Design Advisory Panel we sought the services of a Planning Consultant (Matthew Brooke, DDP) for the scheme. His report is below.

PROPOSED DEVELOPMENT

In short, the development proposes the removal of a number of existing buildings from the site, the majority of which take the form of low quality redundant agricultural buildings. These are to be removed from the site to allow for the erection of a single eco home located to the centre of the site and, which is to be partly created beneath ground level.

PLANNING ASSESSMENT

Paragraph 3.4 of PPG2 states that the construction of new buildings inside a Green Belt is inappropriate unless it is for the following purposes:

- ✓ Agriculture and forestry;
- ✓ Essential facilities for outdoor sport and outdoor recreation, for cemeteries, and for other uses of land which preserve the openness of the Green Belt and which do not conflict with the purposes of including land in it;
- ✓ Limited extension, alteration or replacement of existing dwellings;
- ✓ Limited infilling in existing villages and limited affordable housing for local community needs under development plan policies according with PPG3; or
- ✓ Limited infilling or redevelopment of major existing developed sites identified in adopted local plans, which meets the criteria in paragraph C3 or C4 of Annex C1.

By virtue of its omission from the criteria above, the proposal constitutes inappropriate development. Given the above, Paragraph 3.2 of PPG2 identifies that very special circumstances to justify inappropriate development

will not exist unless the harm by reason of inappropriateness, and any other harm, is clearly outweighed by other considerations.

We will deal with these under the following headings:

- ✓ Sustainability credentials;
- ✓ Positive learning and teaching outcomes;
- ✓ Benefits to the openness of the Green Belt; and
- ✓ Lack of harm to the purposes of including land within the Green Belt

We deal with each of these matters in turn below.

SUSTAINABILITY CREDENTIALS

Policy CSP2

A specific goal of the Barnsley Core Strategy is to achieve sustainable development not only in terms of location, but also in terms of sustainable construction and design. Policy CSP1 requires development to mitigate against the impact of growth on the environment and carbon emissions. Policy CSP2 further emphasises sustainable construction requirements by expecting all new development in the Borough to demonstrate how they minimise resource and energy consumption, compared to the minimum required under current Building Regulations legislation, and how they are located and designed to withstand the longer term impacts of climate change.

Policy CSP2 requires that all new dwellings will be expected to achieve at least a three star rating under the Code for Sustainable Homes or BREEAM standard 'very good' or equivalent. This requirement will rise over the plan period and by 2013 new dwellings will achieve at least a four star rating and six star rating by 2016.

The proposed development offers a Code for Sustainable Homes six star rating, which is a significant improvement on the policy requirement.

Policy CSP5

Policy CSP5 relates to renewable energy in developments of (either new build or conversion) 10 or more dwellings or 1000m2 of non-residential floor space and requires that development to incorporate decentralised, renewable or low carbon energy sources sufficient to reduce the development's carbon dioxide emissions by at least 15% for applications submitted up to 2015 rising to 20% for applications submitted thereafter. This application proposes a carbon neutral dwelling, and consequently the sustainable design credentials proposed are a significant improvement on this policy standard.

POSITIVE LEARNING AND TEACHING OUTCOMES

The applicants have entered into discussions with Barnsley College regarding the use and integration of the development as a learning tool for the Advanced Diploma Course for Sustainability and the Built Environment. Barnsley College are keen to 'team up' with an innovative construction project such as this where pupils can visit the site during the construction stages of the development as well as undertaking monitoring and analysis of the finished development over a number of years post completion. College students would be able to see how these innovative construction methods are used and applied in practice and would be able to follow through over a number of years by monitoring the performance and energy efficiency of these innovative building materials, in addition to other considerations such as their weathering ability and performance.

This development would therefore give students a unique and valuable learning experience into sustainable design and renewable energy which, such is the nature of this rapidly moving industry, is a rarity and distinctive opportunity in itself. This experience is unlikely to be replicated in the surrounding area in the view of the applicants.

It is anticipated that the studies of the development proposal would form a project or learning module in which students would prepare analytical reports based on the testing of materials and their performance against the manufacturer specification and criteria.

To ensure that this learning outcome is secured, the applicant intends to enter into an agreement under Section 106 of the Town and Country Planning Act (1990) with Barnsley Council, Barnsley College to ensure that this integration with Barnsley College is delivered and achieved.

In conclusion, we consider that the energy and sustainable credentials of the proposed dwelling combined with the unique and valuable learning opportunity which will be provided to local students amount to very special circumstances which justify the departure from Green Belt planning policy.

BENEFITS TO OPENESS OF THE GREEN BELT

There is a net reduction in the height of buildings on site. At its upper limit the height of the existing buildings is around 5.6m, compared to the maximum height of the proposed eco home which is approximately 4.35m in height.

Similarly, the developed footprint of buildings is substantially reduced as a result of the development proposal. The footprint of the existing buildings to be removed from the site as a result of the redevelopment is 1543m2. The footprint of the proposed eco dwelling is 199.6m2. The redevelopment of the site therefore results in a net decrease in the built footprint of 1343.4m2.

There is therefore a material decrease in both the height of buildings on the site, and the footprint of built form on the site. The redevelopment of the site will therefore result in a positive impact on the views both into and from the site. The combination of this reduced footprint and height means that the development proposal will not compromise the openness of the Green Belt. Furthermore, it will aid and enhance the openness of the Green Belt.

HARM TO THE PURPOSES OF INCLUDING LAND WITHIN THE GREEN BELT

The principal purpose of the Green Belt in this area is to prevent the radial growth of Penistone and maintain the division between Hoylandswaine and Penistone. This development proposal will not impinge on the ability of this area of the Green Belt to continue to perform these important functions.

In summary, the scheme will result in the sensitive redevelopment of an area of Green Belt land without prejudicing the purpose of the Green Belt in this location. No harm will be caused to the visual amenity of the Green Belt in this location as a result of the redevelopment – in fact the opposite can be said to be true.

SUMMARY OF GREEN BELT POLICY CONSIDERATIONS

It is therefore considered that the harm by reason of inappropriateness and any other harm caused to the Green Belt are outweighed by the very special circumstances which exist, namely the significant sustainable credentials of the dwelling combined with the unique learning and educational opportunity for local students over a significant period.

Substantial weight should, in the view of the Applicants, be given to these educational and learning benefits of the proposal. The proposal presents a significant opportunity to provide students with an excellent learning tool both through the construction phasing of the development but also to include monitoring of the proposal over the medium to longer terms.

For the aforementioned reasons, it is considered that the proposal complies with national guidance contained in PPG2: Green Belts.

Matthew Brooke, DPP

3.0 ASSESSMENT OF THE SITE

Fig 3.0 – Crabtree Arena in relation to Barnsley town centre.

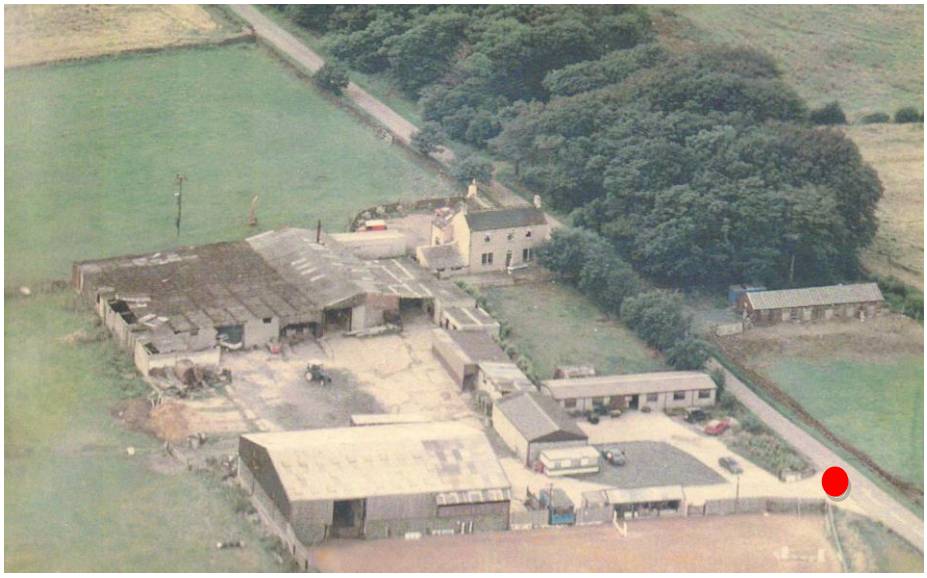


Fig 3.1 – Birds eye view of Crabtree Arena looking North/West.

3.1 CONTEXT

3.1.1 Location: The site for the proposed development is located within the ownership boundaries of Mr and Mrs Pears at Crabtree Arena. The site is located within a designated Green Belt area. Pedestrian and vehicular access is from Firs Lane (refer to Fig 3.1 showing existing site access and Fig 3.2 showing existing site plan). The proposed area for development lies at the south western part of the site.

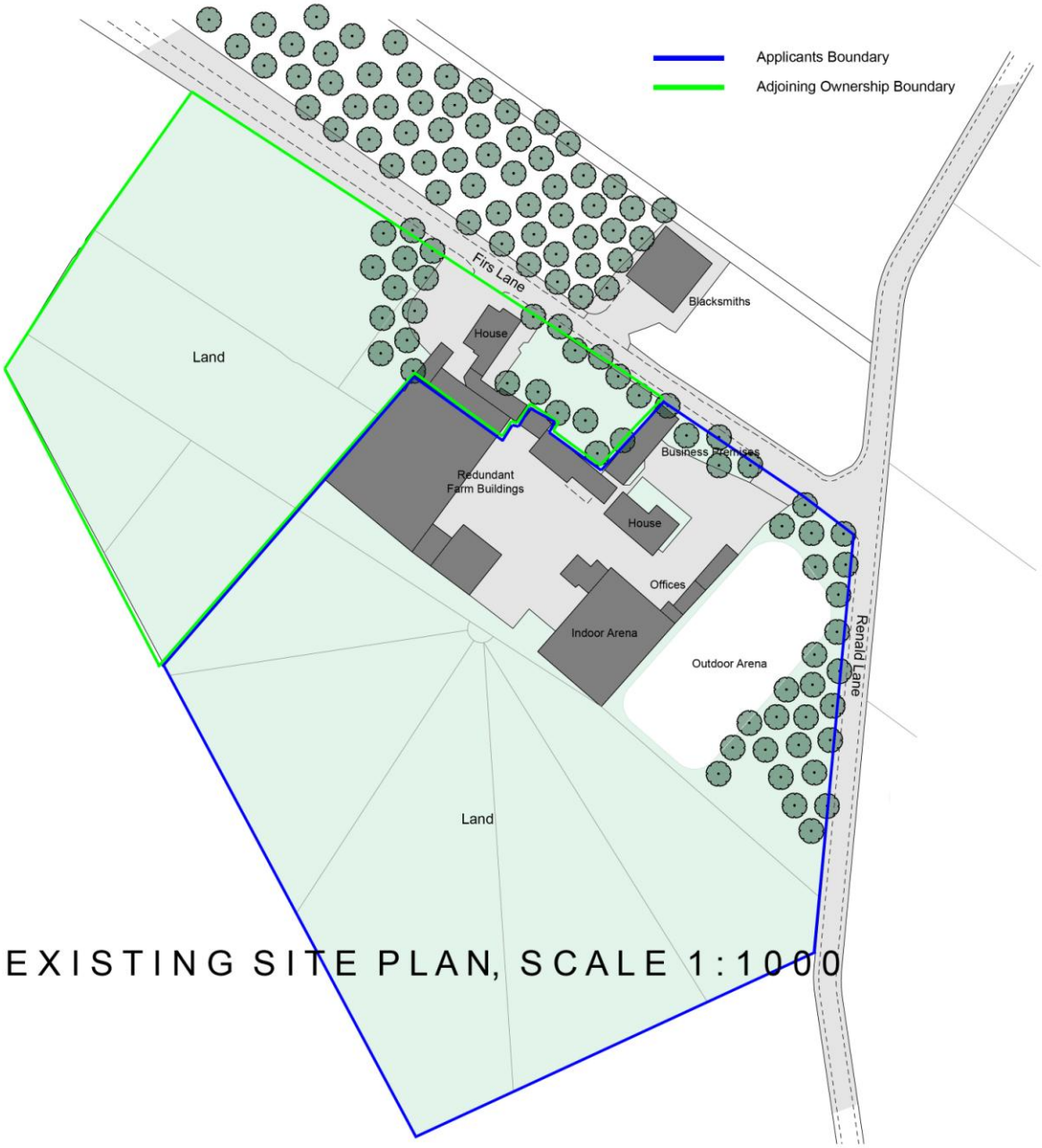


Fig 3.2 – Existing Site Plan of Crabtree Arena showing site boundaries.

3.1.2 Current Use: The development site contains an existing dwelling, redundant agricultural buildings that are in a state of disrepair and two existing business premises together with an internal and external equine arena. The original farm house with its own land and access off Firs Lane is located on the adjoining north western boundary.

3.1.3 Site Characteristics: The more recent buildings on the site are constructed in a traditional style using traditional building materials. The remaining buildings have varying styles and use a wide range of

differing building materials. Overall there is a distinct lack of consistency on the site. As stated above the agricultural buildings are in a state of disrepair and are no longer used (refer to Fig 3.3 and 3.4 showing various buildings within the site boundary). There are no real characteristics to follow within the site boundary or immediately beyond it. Overall the site has open fields to the South and North West and a small area of vegetation on the south eastern side of the arena adjoining Renald Lane.

Fig 3.3 – Existing appearance of various buildings.

Fig 3.4 – Existing appearance of various buildings.

3.1.4 Scale, Height and Massing: The farm layout has developed piecemeal over many years resulting in differing building styles and building materials. Therefore the site layout lacks cohesion whilst the buildings lack any consistent architectural style. Generally, the buildings are grouped around a principal courtyard with building heights being limited to one/two storeys. The agricultural buildings

have been continually extended over the years resulting in a large single building mass arranged around a rectangular square.

3.1.5 Appearance, Details and Materials: As previously stated, these are varied and require reference to the enclosed photographs within this document.

3.2 SOCIAL

3.2.1 The existing arrangement of buildings is consistent with a self contained farm and is typical of the upland farms in the region. This reflects a farming pattern containing a core domestic dwelling, a central working and multi-purpose yard surrounded by ancillary agricultural buildings. The original agricultural use has diminished over time leaving the majority of the ancillary buildings empty and unused. The remaining dwellings remain in use as independent residential homes.

3.2.2 The Applicant retains links with the original farm by continuing to live on site.

3.3 INVOLVEMENT

3.3.1 The proposed development area affects the adjoining ownership boundary. This is owned by Mr Pears with the property also occupied by him. This being the case it is anticipated that the necessary legal agreements are achievable.

3.4 EVALUATION

3.4.1 No physical obstacles have been found to prevent the proposed development from being procured and constructed. Sufficient working spaces exist to ease construction access and to allow continued occupation of the two adjoining properties without undue disruption.

Existing buildings requiring complete demolition can be cleared with the resulting new constructed area having a lower internal volume than the original buildings.

4.0 SITE TOPOGRAPHY

4.1 GENERAL TOPOGRAPHY

4.1.1 Generally the east/west courtyard cross section has minimal falls together with a south westerly gradient falling away from the development at right angles to Firs Lane to the boundary of approx 1.5m.

4.1.2 No accurate detailed site levels have been plotted at this stage of the development.

Fig 4.1 – View looking West towards some of the existing agricultural buildings that would be removed as part of the submitted proposal.

5.0 DESIGN

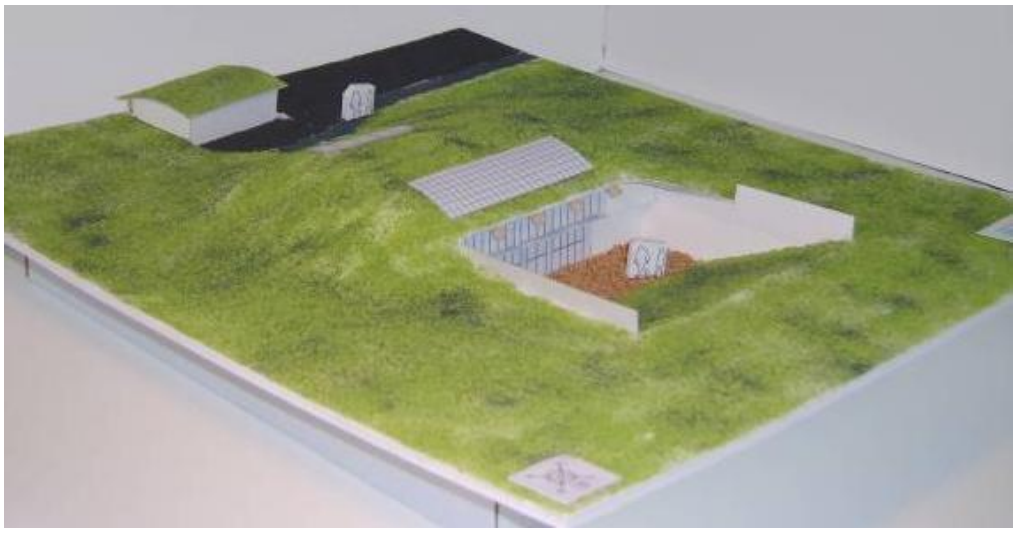


Fig 5.1 – An early schematic model of the earth sheltered development. The design has developed since this model was made however the main principles of earth sheltering and low impact remain.

5.1 DESIGN OBJECTIVES

5.1.1 Three principle design objectives form the basis of the project:

1. To provide a framework for any future development of the existing farm and to improve the overall visual quality of the existing building group.

   Design elements include:

   - ✓ Demolition of existing redundant farm buildings.
   - ✓ Provision of new access routes within the site.
   - ✓ Integrated site landscaping proposals.
   - ✓ Retention and re-defining of the principal working yard area.

2. To develop a new residential building of special character with low visual impact.

   Design elements include:

- ✓ Low visual impact.
- ✓ Carbon neutral thermal target performance
- ✓ Incorporation of traditional materials.

3. Integration with the activities of the Advanced Diploma Course at Barnsley College for Sustainability and the Built Environment (refer to supplementary information enclosed within this document).

   Design elements include:

   - ✓ Co-ordination into the 'Design and the Built Environment' Course.
   - ✓ Results monitoring and co-ordination into database archives.
   - ✓ Student site visits during construction.
   - ✓ Post completion studies.

5.1.2 The dwelling is positioned on a South West axis allowing the dwelling to be exposed with natural day lighting on both storeys. An overhanging roof as shown on the section drawing enclosed will keep solar glare to a minimum. The main living spaces are on the first floor level and can take advantage of the views outwards.

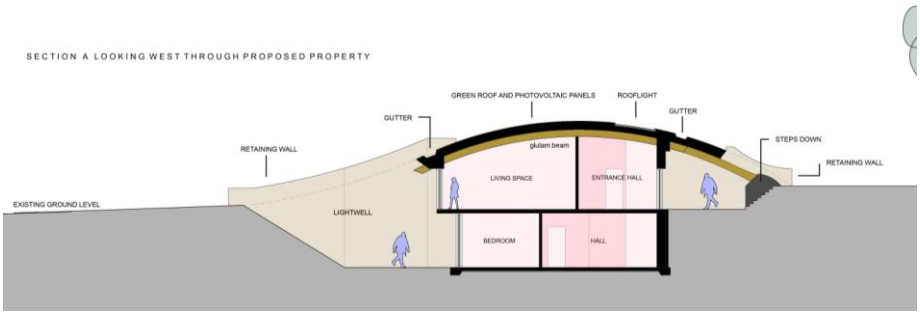


Fig 5.2 – Section through the proposed dwelling (looking west).

The remaining sides of the building are earth sheltered along with the roof as indicated on enclosed plans. The roof would be wildflower meadow roof (refer to separate landscape plan) and would complement the proposed landscaping around the dwelling as well as existing landscaping.

Three roof lights are proposed to allow further natural daylight to penetrate through to the first floor.

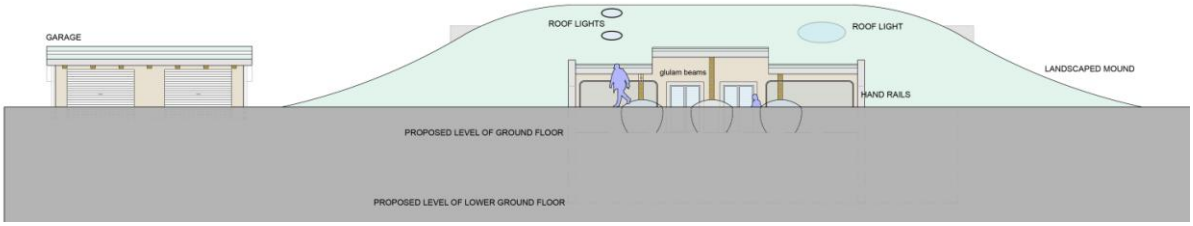


Fig 5.3 – Front elevation of the dwelling showing the garage.

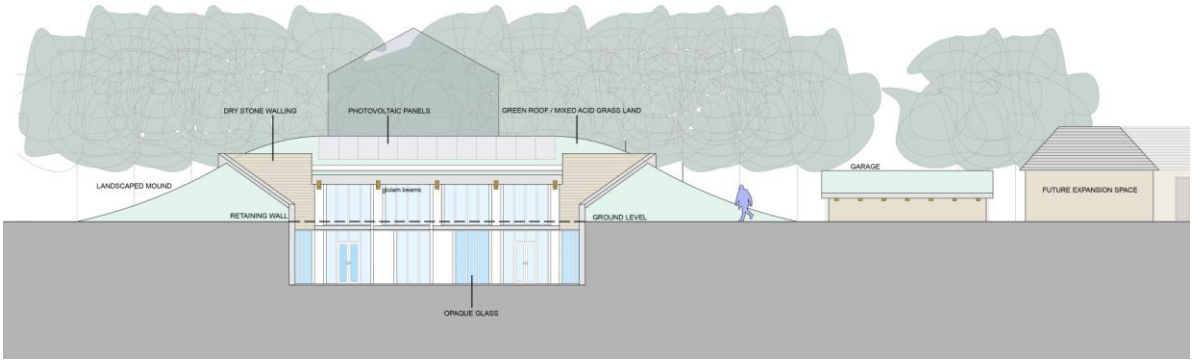


Fig 5.4 – Rear elevation of the dwelling showing the garage and the potential future stables that could make up part of the Equestrian Centre (separate application).

A number of Glulam (5.no) beams will be used to help further support the green roof as well as enhancing the appearance of the dwelling further. They would be left exposed on the inside of the dwelling for this reason.

5.1.3 Private parking including a double garage is provided on site at the end of the proposed driveway. The garage would be partially sunk into the ground to lower the visual impact.

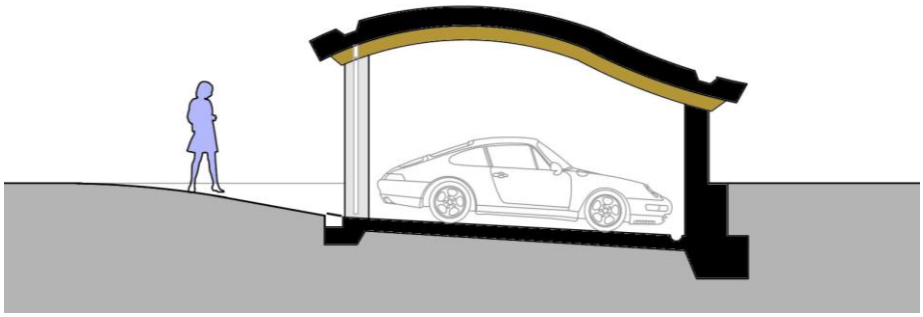


Fig 5.5 – Section through garage, partially sunk into the ground for minimal visual impact.

5.1.4 It is proposed to erect a single wind turbine and install photovoltaic panels as part of the landscape package for the site along with rainwater harvesting. (Indicative locations for the above can be seen on the landscape plan and site plan enclosed within this document and the submitted application).

5.1.5 The external appearance of the building is designed especially for low visual impact on the surrounding landscape. As stated previously there would be three roof lights in the building but these would only be partially visible from ground level. Retaining walls are required at both the front and rear of the building (as shown on the enclosed plans) and these will be fronted with dry stone walling to reflect the pallet of materials used in the surrounding area.

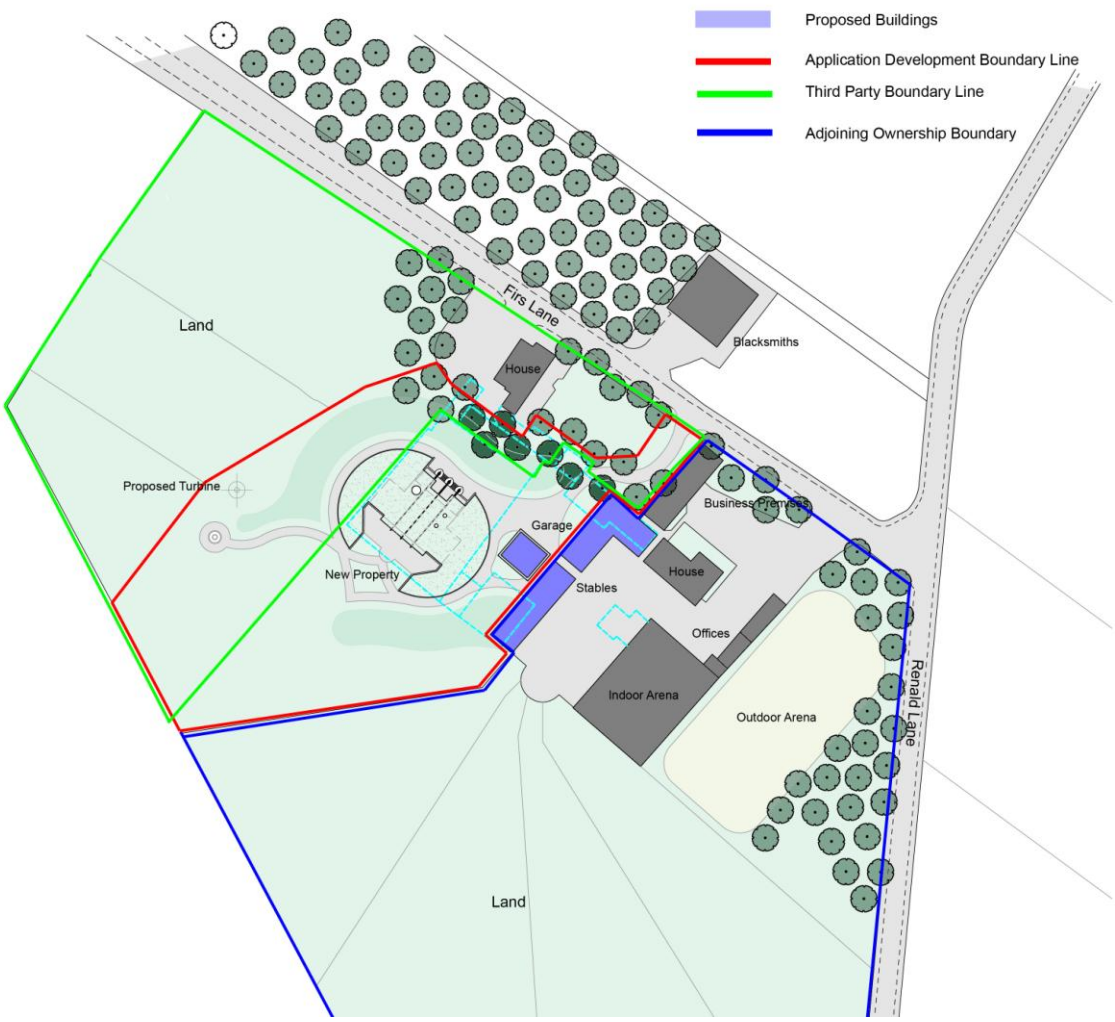


Fig 5.6 – Proposed site plan showing the new dwelling in relation to existing buildings and the possible for addition of new stables making up the Equestrian Centre

5.1.6 A new link to the proposed building from Firs Lane is including within the submitted proposals.

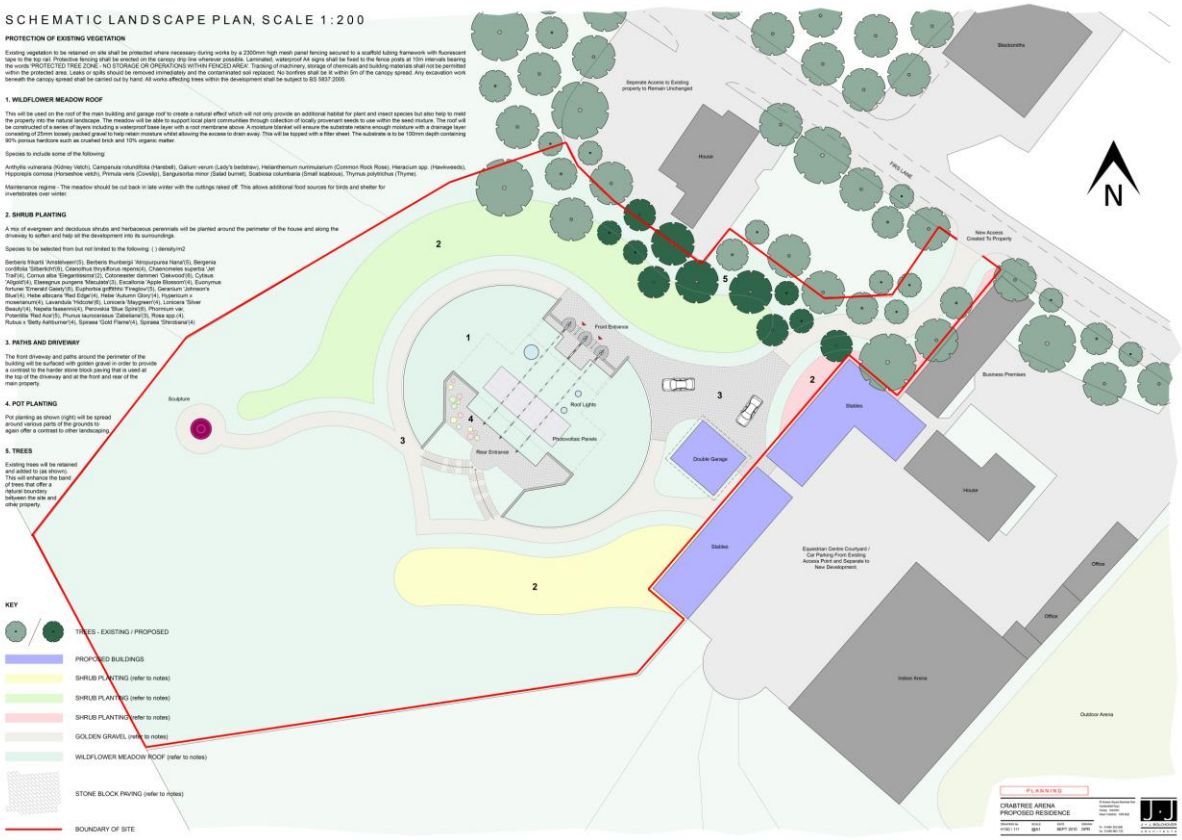


Fig 5.7 – The landscape plan for the site. A fully scaled A1 plan of the above is part of the submitted application.

5.2 BARNSLEY URBAN RENAISSANCE DESIGN ADVISORY PANEL

5.2.1 The initial scheme (pre-application stage) for the proposed development at Crabtree Arena was presented to the Barnsley Urban Renaissance Design Advisory Panel. We were advised to attend by a Barnsley Planning Officer.

The initial scheme was presented to several members including other architects, a landscape architect and members of Barnsley Development Agency. Other observers were also present.

We put forward our proposals for discussion and explained how we thought they would generally improve the existing farm and the wider area despite the proposal being in the green belt. We explained the

possible link that could be created with Barnsley College and how valuable it could be to students wishing to make site visits and observe the construction of what would be an earth sheltered Code 6 carbon neutral domestic dwelling. (A letter from Barnsley College is enclosed within this document, Section 10.0, Supplementary Information).

We discussed the key design principles that form the proposal (these have been previously stated within this document) such as the aim for low visual impact and the use of traditional locally sourced materials in order to further tie the building in with its natural surroundings.

Upon finishing the presentation we were thanked by the panel who expressed a view that the preliminary design of the dwelling itself may have much to recommend it.

However there were other points raised by the panel that they felt needed further attention. We took the design panels comments on board and we believe that we have now addressed these concerns. The design panels concerns are listed below along with our proposals for each concern:

- ✓ There are calls for any new dwelling in the green belt to provide 'the significant enhancement of its immediate setting and its sensitivity to the defining characteristics of the local area'

  We believe the proposal significantly enhances the overall appearance of the existing farm. The current appearance of the existing disused agricultural buildings is of no benefit to the farm working as an Equestrian Centre and only hinders its possible future development. Our proposals show how the site as a whole could work in future with the possible addition of new stable blocks as part of the Equestrian Centre. This is not part of the current Planning Application and would be subject to a future Planning Application. The possible future construction of the stables will re-define the existing courtyard

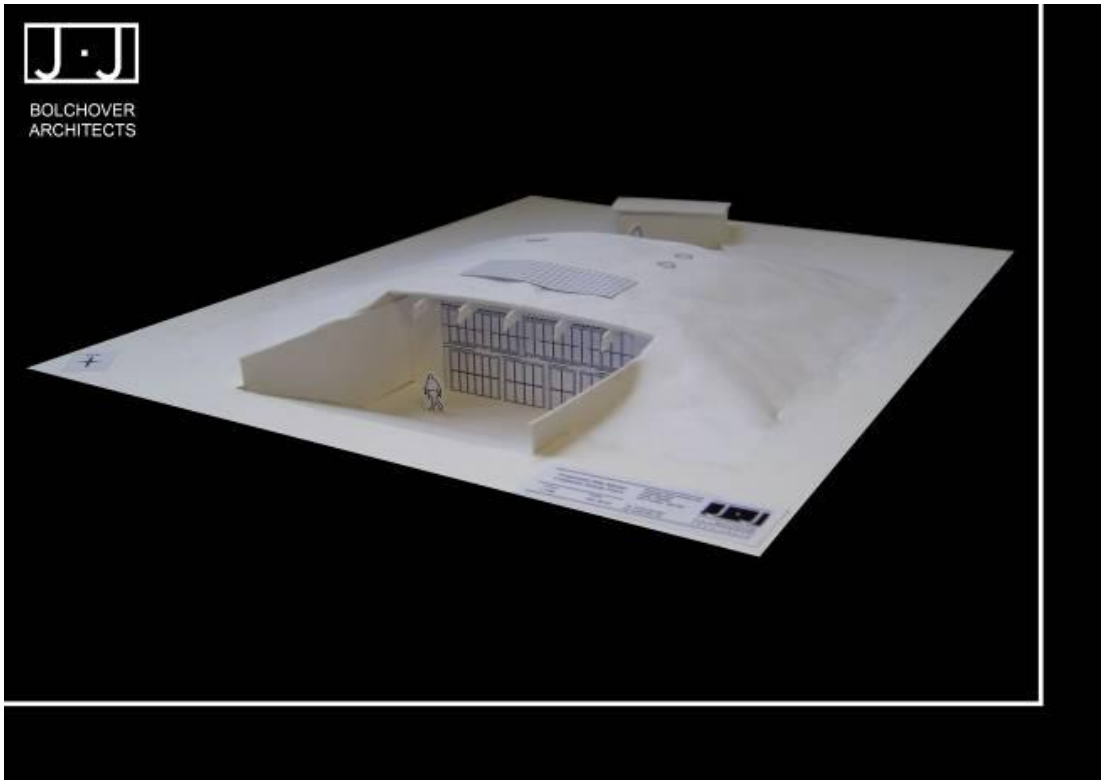
which we feel is an important part of the existing farms character and must be retained. The proposed dwelling uses materials that are traditional to and define the characteristics of the local area. The use of dry stone walling is something that resembles much of the local area. A landscape plan is included as part of the application and aims to reinforce the fact that upon completion the new dwelling will sit naturally within the site and enhance the visual quality of the whole farm.

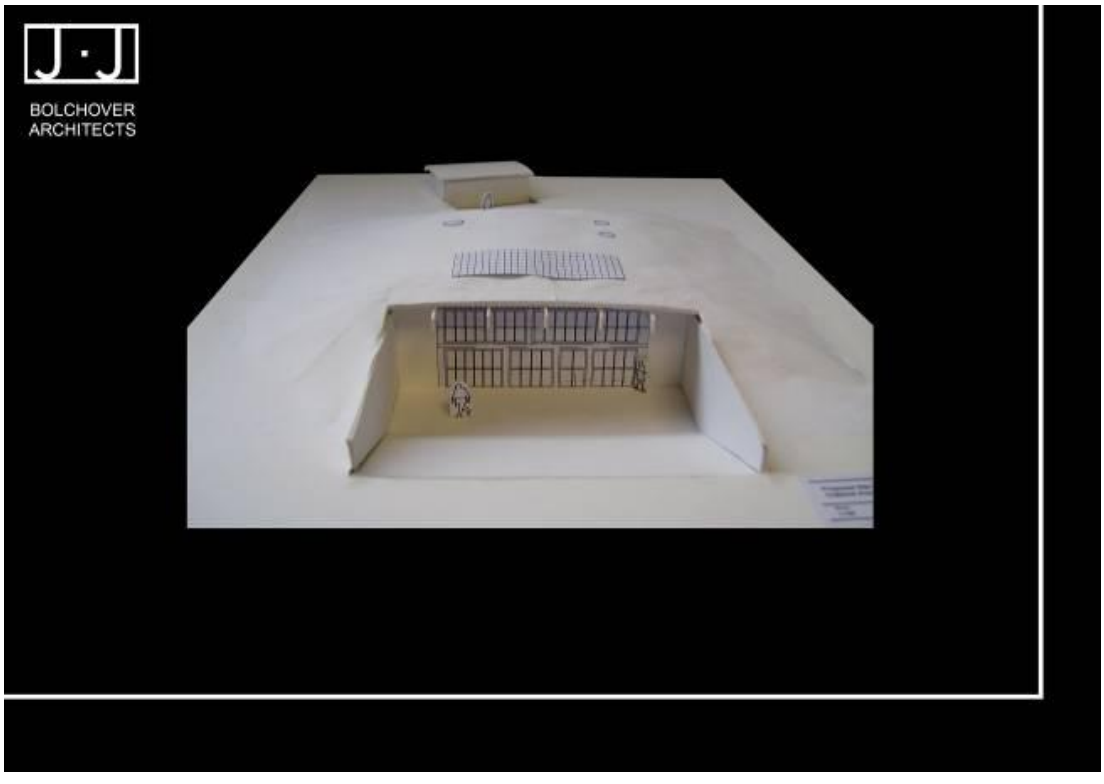
- ✓ The panel expressed the view that a whole site strategy and plan was required to provide the context for the proposal. There were questions as to whether the low impact development strategy was the right approach for this site.

  We feel the low impact development strategy for the site is the best approach for providing a much improved, consistent and cohesive group of buildings on the site. As stated under the previous point we have developed a whole site strategy with the aim of putting the proposal in context. We have shown the possible future buildings that would extend and enhance the Equestrian Centre and how the new dwelling will have a pedestrian link to the Equestrian Centre and office buildings that make up the farm. The intention is for the applicants' family to live in the new dwelling and work on the site in the previously mentioned offices. Whilst we agree that the whole site needs to work as one, we feel there is a need for the new dwelling to have its own private driveway providing access onto Firs Lane. We believe it would be the best option for the Equestrian Centre to retain its own access and only provide a pedestrian link between the two. This is clearly shown on enclosed plans within this document and as part of the submitted application. We listened to the advice of the design panel who recommended we sought the services of a planning consultant. This report can be read in section 2.0 'Overview of the Development' of this document. The dwelling if constructed would possibly be the first of its kind (Code 6 Carbon Neutral)

in Barnsley and the aim for Code for Sustainable Homes Level 6 is something that will be mandatory by 2016.

Images of an early development model.





6.0 SUSTAINABILITY

CODE FOR SUSTAINABLE HOMES LEVEL 6

It is widely appreciated that there is a need to move in a new direction of designing homes that minimises the use of energy and reduces carbon dioxide emissions. By 2016 it will be mandatory that all new domestic dwellings should achieve Code 6 meaning that they are carbon neutral. It is our aim to achieve level 6 with the proposal at Crabtree Arena.

As part of our proposal we have included a number of 'sustainability features' that will help to achieve our target. These are listed below and are also shown on the enclosed section (Fig 6.1) and as part of the submitted application drawings.

- ✓ The installation and use of a wind turbine would provide the electricity for the dwelling which would power a ground source heat pump to run the under floor heating system that would be installed.

- ✓ The dwelling would be super insulated but well ventilated.

- ✓ Passive solar gain would help the dwelling to be naturally heated during the summer and naturally lit during daylight hours.

- ✓ Rainwater Harvesting for use in flushing W.C.s and watering plants etc. There would be a number of collection tanks for this purpose.

- ✓ The use of photovoltaic and/or solar hot water panels will help provide all the hot water needs for the dwelling. Insulated hot water tanks will be installed to store the heated water.

- ✓ Low energy lighting and electrical goods to be powered by the PV panels and wind turbine.

- ✓ Materials such as natural stone and paving stones to be locally sourced where possible from recycled or sustainable sources.

The text above is by no means a complete and conclusive list of all the 'sustainability features' to be included in the proposed dwelling. The list is subject to change and/or alteration during any future detailed design stage.

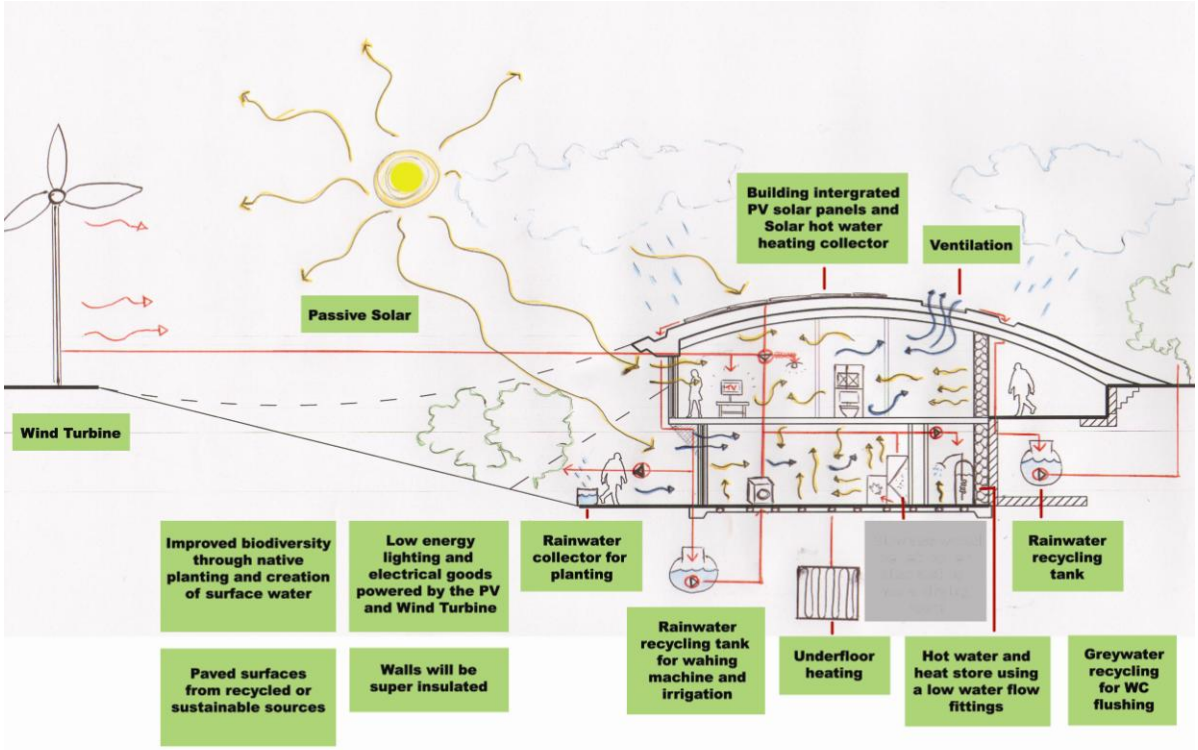


Fig 6.1 – Schematic section show various 'sustainability features' that may be incorporated into the proposed scheme.

7.0 ACCESS

Design Standards Followed:

- ✓ Approved Document M (2004):
- ✓ BS8300 (2001):

7.1 A new access for vehicles is to be formed from Firs Lane leading to the proposed dwelling's main entrance.

At present there is one pedestrian and vehicle route into the farm area which will remain unchanged.

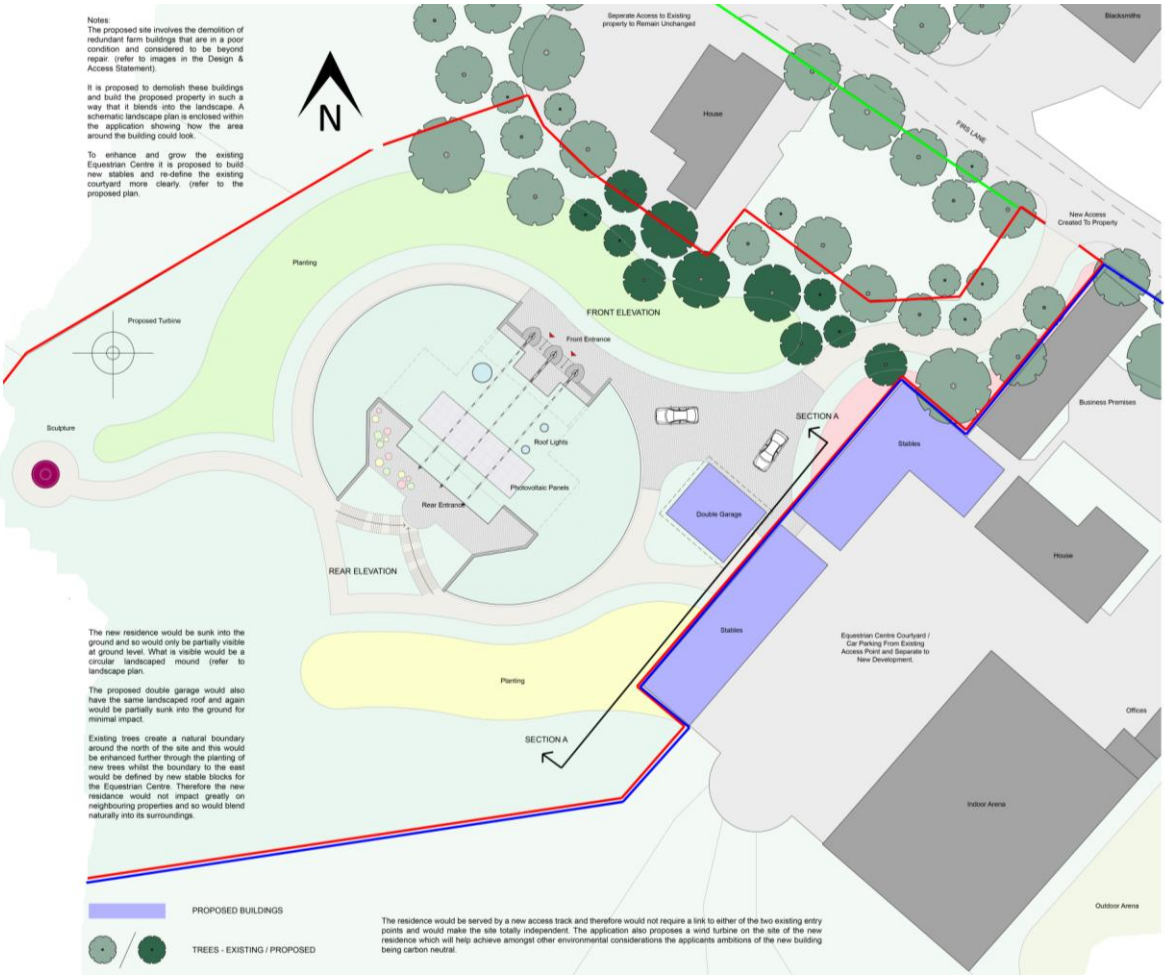
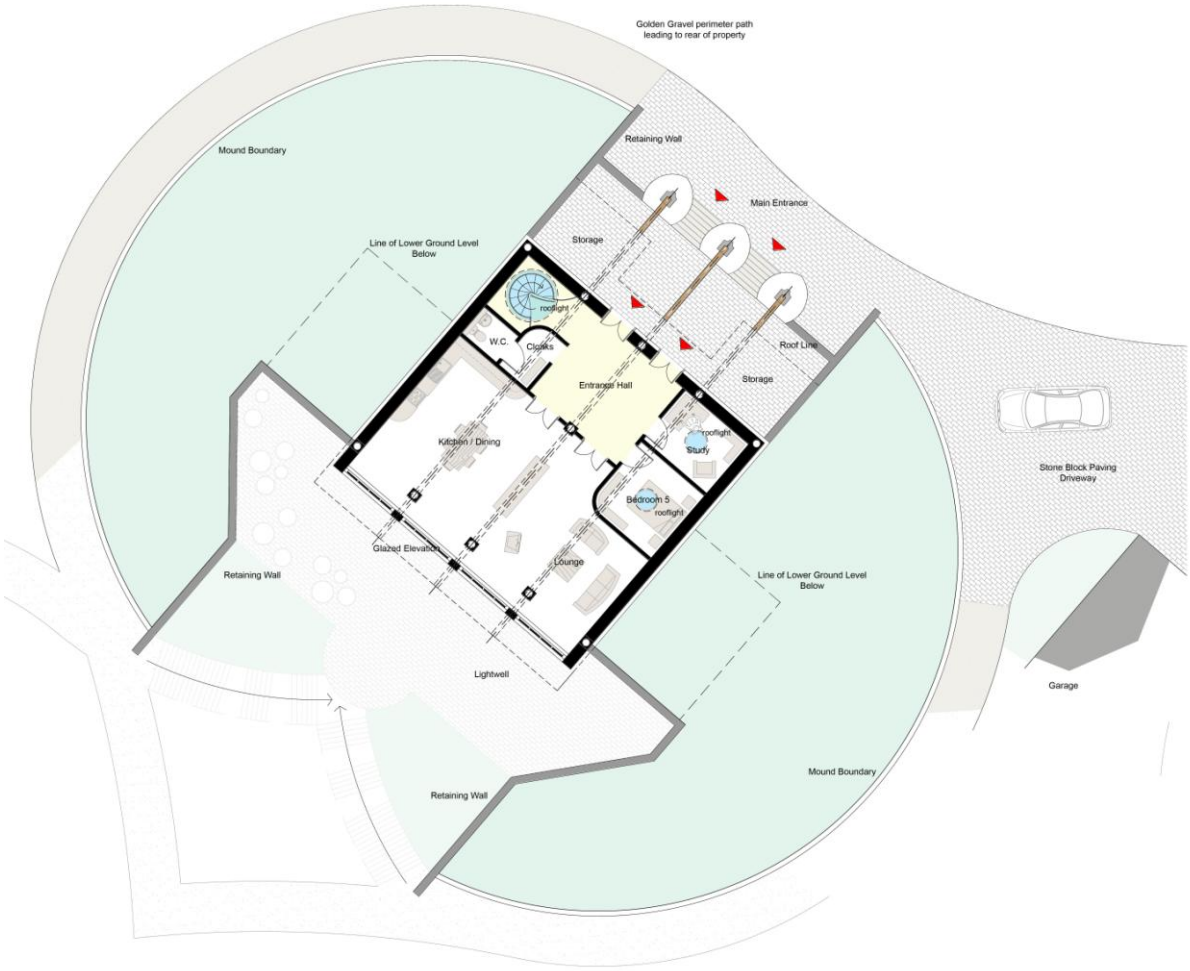
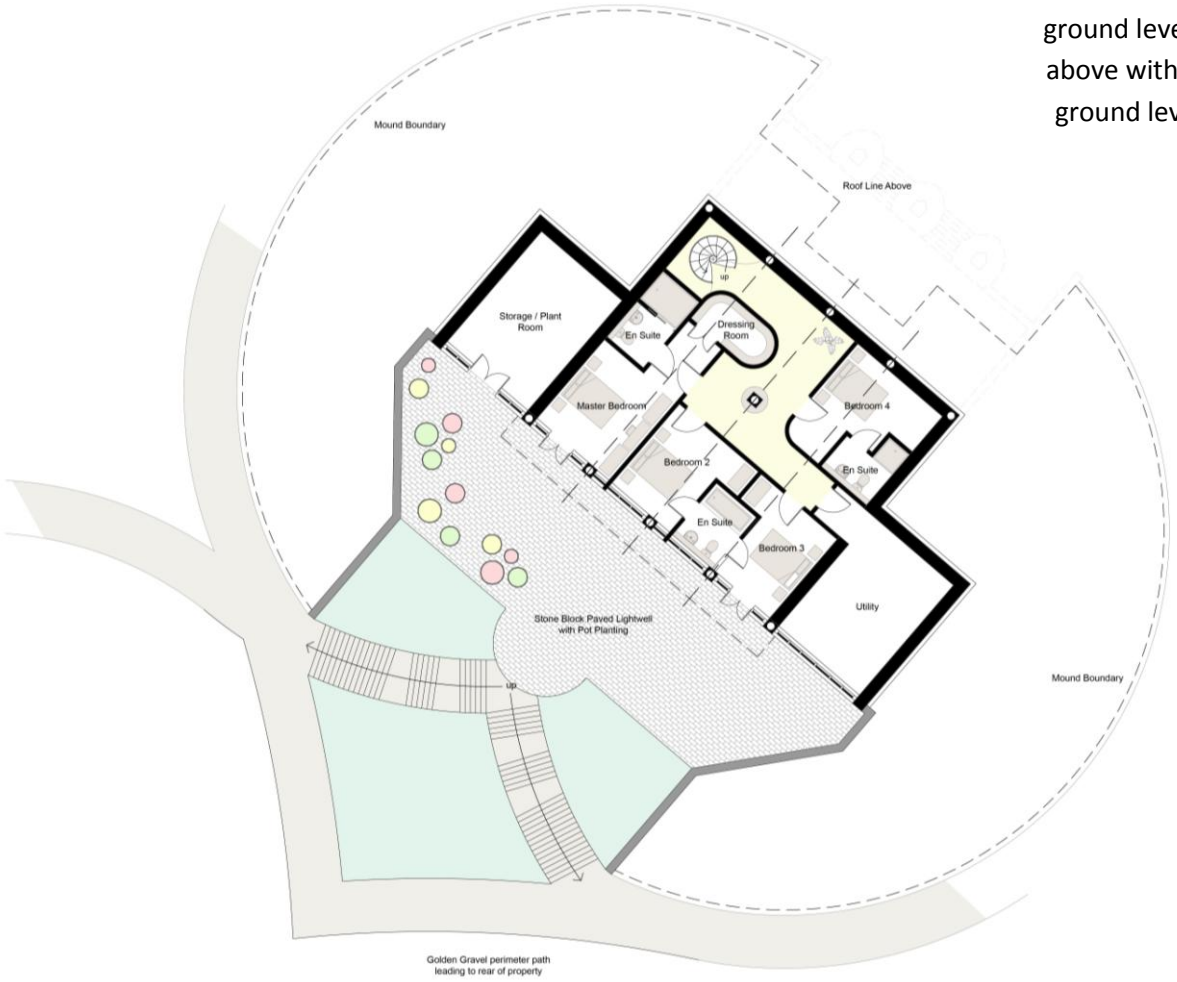


Fig 7.1 – Proposed site/roof plan showing the proposed new access from Firs Lane (top, right of the image) and a proposed pedestrian link through to the Equestrian Centre.

7.2 Access into the building is made with a level threshold entrance to the front and rear of the dwelling to comply with current Building Regulations.



The proposed floor plans for the dwelling. The ground level is shown above with the lower ground level below.



8.0 SUMMARY OF BENEFITS

8.1 Approval of the submitted application would result in a development that could provide a unique opportunity to develop a key education with local universities and colleges (Barnsley College) in order to monitor the construction of a carbon neutral dwelling.

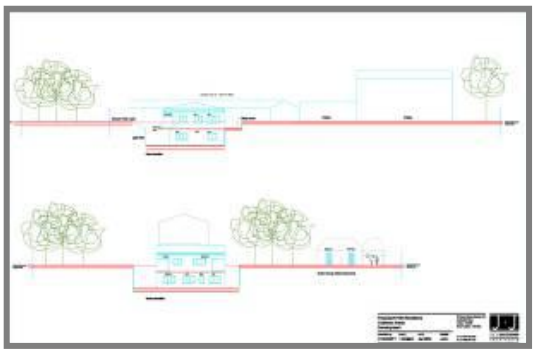
8.2 The proposed dwelling would form a valuable database in monitoring a Code 6 dwelling.

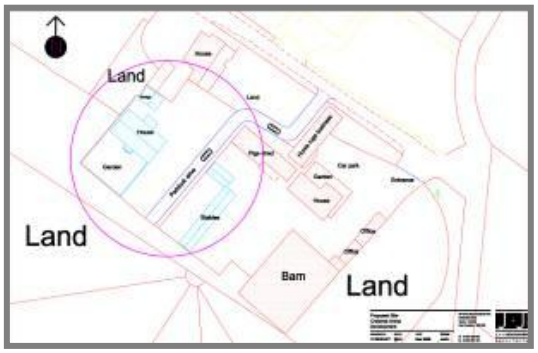
8.3 A sympathetic approach to the choice of colours, external finishes and other design features will enhance the overall design of the dwelling and provide an exciting and unique building for the site.

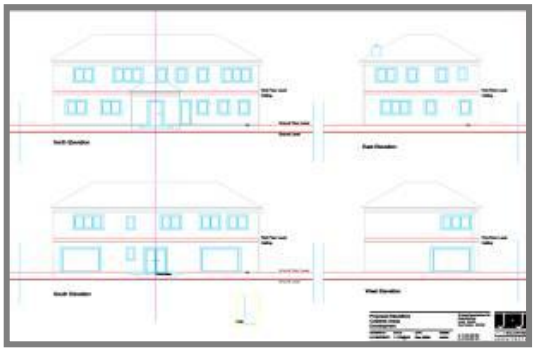
8.4 Many benefits for the proposed dwelling have been listed within this document and it remains our firm belief that this building would greatly improve the existing site at Crabtree Arena and create much needed consistency and cohesiveness in terms of building and architectural style. The dwelling and the possible future expansion of the Equestrian Centre as shown on the submitted plans shows that the whole site area has been planned from the start rather than the existing piecemeal approach.

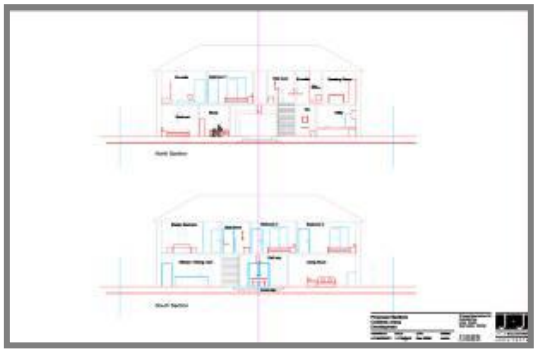
9.0 DESIGN PROGRESS

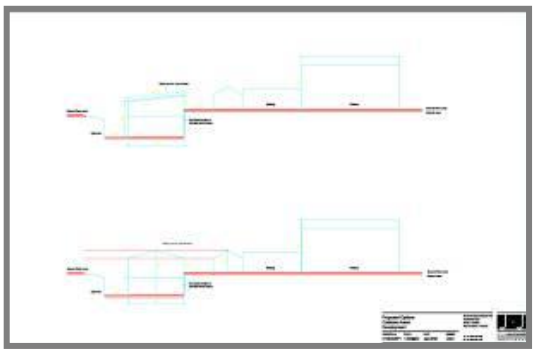
We have included below a number of drawings from the initial design stages which you find to be of interest.

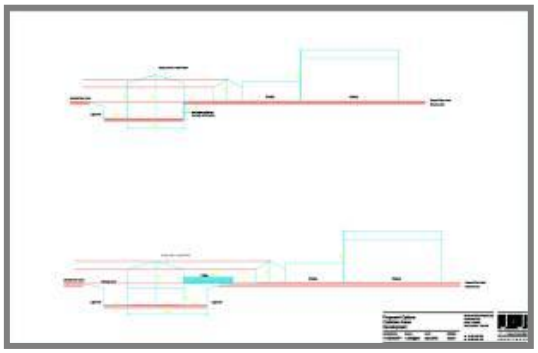












10.0 SUPPLEMENTARY INFORMATION

In this section there is additional information that does not fit into any of the above categories. Over the page there is the letter from Barnsley College that is referred to in section 5.0 ‘Design’.

Below is a schematic section showing in section how the dwelling could be detailed.