

DESIGN & ACCESS STATEMENT

PROPOSED CHANGE OF USE OF RESERVIOR -

CONVERSION TO A SINGLE DWELLING

AT

WHITE ACRE

TROUGHSTONES ROAD

BIDDULPH

STAFFORDSHIRE



FOR

Mr Y Heald

Dated February 2021

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1.0 INTRODUCTION

- 1.1 This Planning Design and Access Statement has been prepared on behalf of Mr Y Heald by DESIGN21 architecture to support a full planning application for the change of use of former reservoir and conversion to a single dwelling.
- 1.2 The proposed new development is for:
Conversion of former reservoir with an approximate floor area of 447m² to form a single new four-bedroom dwelling.
- 1.3 This statement sets out details in relation to the proposed development of the site. it should be read in conjunction with the following supporting documentation and technical reports:
- Application Form and Certificates
 - Site Location Plan
 - Existing Site Plan – Sections - Floor Plans
 - Proposed Site Plan – Site Sections – Floor Plans
 - Proposed Perspective Images
 - Design & Access Statement
 - Planning Statement
 - Structural Engineers Report
 - Topographical Survey
 - Tree Survey, Schedule – Arboricultural Impact Assessment
 - Phase One Ecology – Habitat Survey Report

2.0 APPLICATION SITE AND SETTING

THE APPLICATION SITE

- 2.1 The application site is located on the former Severn Trent Reservoir and is accessed off Troughstones Road. The development site, as containing the existing reservoir structure, is in the order of 0.64 acres (0.25 hectares) with the overall site area extending to a total of 1.14 acres (0.40 hectares)
- 2.2 The site is bound by Troughstones Road to the north east, a mature woodland coppice to the west and Moorhouse farm to the south and east. The existing semi submerged reservoir structure is situated towards the top north west corner of the site and adjacent to the established site access off Troughstones Road. The site levels fall away sharply to the south, with an existing small single storey pump house building located towards the bottom south west corner.
A large group of mature trees surround the reservoir to the immediate south and east with the remainder of the site extending into an adjacent open paddock field to the east aligning with Troughstones Road.
- 2.3 Vehicular access to the site is afforded from an established principal site entrance leading from Troughstones Road.



SURROUNDING AREA

- 2.5 The proposed development site is situated approximately 2.2 miles to the north east of Biddulph town centre and 4.3 miles south west of Congelton town centre. The former reservoir site is located towards the north west end of Troughstones Road and in the order of 75 meters leading from the junction of Biddulph Park Road.

The surrounding area is generally populated by agricultural farmland and farm holdings with a small settlement group of residential dwellings and the Biddulph Park Methodist Church at the junction of Biddulph Park Road and Troughstones Road. Biddulph Hall is due west of the site with the Talbot public house 0.8 miles by road and 0.6 miles on foot.

The development site as containing the existing semi submerged reservoir structure is in the order of 0.64 acres and is in an elevated position, (contour height of + 250.00), which gives broken views of the surrounding countryside, towards the south, through the dense mature woodland as surrounding the site.



Site entrance viewed towards Biddulph Park Road
DESIGN21 architecture

Development site – top of reservoir towards south

3.0 POLICY CONTEXT

Please refer to the submitted Planning Statement.

4.0 PLANNING HISTORY

Please refer to the submitted Planning Statement

5.0 PROPOSED DEVELOPMENT

USE

- 5.1 The reservoir structure was understood to have been owned and operated by Severn Trent Water to provide gravity fed water supply to the surrounding district. Following its closure, the Utilities company released the site to the open market for disposal with the acquisition by the applicant in January – February 2020.

Unlike more common redundant agricultural structures such as barns, ancillary buildings, farmhouses etc semi submerged, covered reservoirs do not easily lend themselves for conventional re-use. The costs associated with restoration and refurbishment economically preclude use for more commercial employment lead operations more appropriate to supporting a rural location and the local economy.

Residential conversion, however, provides an effective and efficient opportunity for sustainable re-use to ensure that the environmental enhancement of the surroundings can be both implemented and maintained over the longer term.

- 5.2 This application seeks permission for the change of use of a former redundant, semi submerged reservoir structure to form a new single, four bedroomed dwelling. The proposed development represents a unique and innovative solution to the re-use of a non-traditional building within the countryside.



Reservoir structure viewed from Troughstones Road - and towards to existing site entrance

- 5.3 Internally the tank measures approximately 21 metres square with a regular grid of concrete columns and exposed beams running left to right. The floor is set to falls with an approximate floor to ceiling height in the order of 2.6 metres.

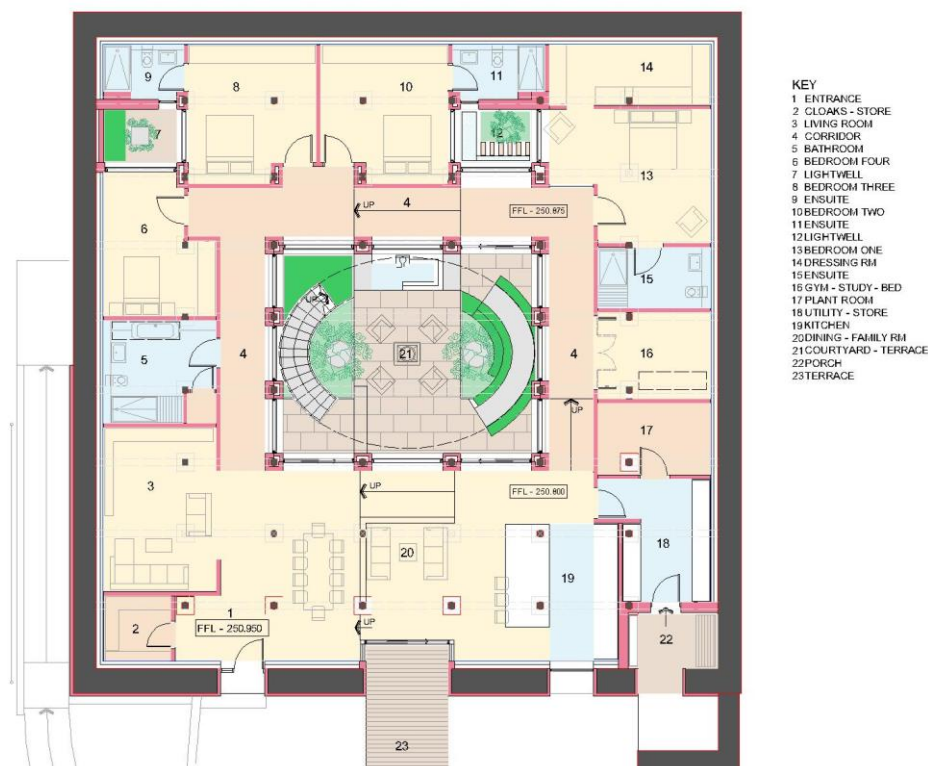
- 5.4 The structural survey of the existing reservoir has concluded that the existing structure is generally in a robust condition and showing no signs of adverse structural movement. As denoted within the report, it is understood that the existing roof structure was previously covered over and has subsequently been removed, to enable a full structural – condition survey of the existing form. It is proposed that the existing roof would be waterproofed, insulated and overlaid with a green roof system. The walls are predominately below the natural ground levels and will generally remain so, with only the south façade to be uncovered and exposed, to form the primary entrance and connectivity with a small external amenity area located immediately adjacent the end wall of the reservoir structure.
- 5.5 The report concluded that the proposed conversion would have an overall effect of reducing loads to the structure. Whilst there is some minor maintenance required this should not affect the continued good performance of the structure. The design would need to reflect the structural layout to create access and lightwells. The existing structure is in a stable condition and would be fit for conversion to a new dwelling.



Proposed Section through the Reservoir tank and surrounding site

LAYOUT

- 5.5 The proposals fundamentally comprise of the reuse of an extant structure. Internally the tank measures approximately 21 metres square with a regular grid of concrete columns and exposed beams running left to right. The floor is set to falls with an approximate floor to ceiling height in the order of 2.6 metres.
- 5.6 The proposed layout has been set out and designed to retain the prevailing structural grid form. The floor plan comprises of a central open courtyard with an elliptical lightwell opening at the roof level. The walls to the perimeter of the internal courtyard are predominately glazed to maximise natural light deep into the plan form. The south façade is to be uncovered and exposed, to form the primary entrance and connectivity with a small external amenity area located immediately adjacent the end wall of the reservoir structure.
- 5.7 Internally an open plan living, dining, family room and kitchen aligns with the principal entrance and the south façade. A circulation corridor mirrors the internal courtyard with the bathroom, gym / study utility and the four bedrooms extending the corridor link. The bedrooms are orientated around smaller open light wells to capture natural light and ventilation to the habitable rooms.
- 5.8 No extensions to the reservoir are proposed, consequently the only other change to the site proposed is to partially expose the south façade elevation to form a footpath access down to the principal building entrance and a small external recessed amenity terrace space in the order of 70sqm extending from the south elevation of the structure.



Proposed Floor Plan of Reservoir Conversion and Refurbishment

APPEARANCE

- 5.9 The proposals fundamentally comprise of the reuse of an extant structure. The arrangement of the development form and landscaping are essentially derived from the existing building and that of the development curtilage.

The original reservoir complex comprises of a GIFA 447 sqm structure (21.0 metres x 21.3 metres) and is located towards the top north west corner of the development site. The site levels fall away sharply to the south, with an existing small single storey pump house building located towards the bottom south west corner.

The design rationale to minimise the visual impact of the proposed development whilst providing a unique, attractive, and environmentally efficient dwelling.

- 5.10 Externally the existing ground conditions as extending to the north, north east and north west would fundamentally remain unchanged with the perimeter walls of the existing structure remaining largely submerged. It proposed is to partially expose the south façade elevation to form a sloping footpath access into the principal building entrance and a small external recessed amenity terrace space in the order of 70sqm extending from the south elevation of the structure. The remainder of the site, extending to the south would also remain largely unchanged with the landscape managed and enhanced with native bio-diverse planting. It is proposed that the existing roof would be waterproofed, insulated and overlaid with a green roof, as described within the Landscape and Bio- diversity section.

- 5.11 Finalised details of the materials to be used in expressed elevations and curtilage will be agreed in consultation with the Local Authority at post application stages however, as an indicator of the design direction initial proposals are summarised as follows.



South Elevation – exposed façade

Approved colour – sized locally sourced natural stone facings.

Doors and Windows

Thermally enhanced double-glazed powder coated aluminium windows, doors and screens

Green Roof System

Existing concrete roof structure to receive approved tanked water proofing system overlaid with insulation and approved bio-diverse green roof system.

ACCESS

- 5.12 Considerations of access relate to public transport, private transport, and pedestrian access to and in and around the site.

Owing to the limited number of facilities along Biddulph Park Road and Troughstones Road the area is not directly served by public transport. The nearest public transport facilities are generally located nearer to the Biddulph town centre.

As a function of the site location, it is anticipated that most visitors would reach the site by private transport. Highway access to the site is afforded by an established site access directly leading off Troughstones Road. Within the site there is a gravelled hard standing area immediately adjacent the north west corner of the existing reservoir structure. It is understood that historically, this area of the site comprised of an unmade vehicle track, leading from the gated site access to the head of the steps as leading down to the pumping station building enabling the utilities maintenance and services vehicles to access the reservoir and pumping station.

The gravel hardstanding would afford parking for four vehicles with the formation of a small turning head adjacent the site access, enabling vehicles to leave site in a forward motion.

There is no public footpath along Biddulph Park Road or Troughstones Road, however the Biddulph Town 91 public footpath runs along the southern boundary of the site and connecting to the Biddulph Town 90, leading to Overton Road and Grange Road and Biddulph Grange Country Park, affording access to the outdoor surroundings, without the requirement to travel.

To accord with the best practice documents '*inclusion by design*' and '*the principles of inclusive design*' have provided the practical basis for the design of the external approach and external space ensuring that there are no sudden changes in level ensuring there are no barriers for movement into the dwelling for the residents and visitors.

LANDSCAPING

- 5.13 The existing landscape within the site has principally been the result of naturalisation and successional growth rather than by conscious design. Since the abandonment of the Reservoir the withdrawal of the maintenance programme had blurred the divisions between the original perimeter tree lined surrounding and, what is believed to have been a clear grassed area surrounding the existing Reservoir structure itself.

Today the mature tree bands surrounding the site are generally considered to be in a fair condition, as an absence of land management has allowed dense ruderal and successional growth to invade the site and compete with the trees for light and nutrient resources.

- 5.14 In overview the landscape treatment to the site would comprises of four principal elements.

1. The existing curtilage of the development site would be restored and the retained trees maintained to provide a managed woodland habitat commensurate with the setting of the property.
2. The roof of the Reservoir building will be formed from a green roof set with native meadow species to further enhance and improve biodiversity of the site and to compliment the surrounding vegetation.
3. The landscape design intent would promote the habitat bio-diversity enhancement comprising of the following outline measures.

Removal of rhododendron and other noxious non-natives and management of dense bramble scrub and bracken and ivy ground layers. Re-planting of appropriate native trees and shrub hedgerows to contribute to both the sustainability of the development and to accord with the NPPF and conservation of biodiversity.

4. The new pathways, terracing and parking areas would be finished in approved semi porous and permeable surfacing. The use of no-dig construction techniques and geo-textile membranes to be employed in the formation of the new drainage networks where within the vicinity of the existing tree root protection areas and under the tree canopies.

The existing boundary treatments would largely remain unaltered subject to the further assessment of the short-term impact associated with the bio-diversity measures to be adopted. The design intent would focus on the establishment of native hedgerows.

BIODIVERSITY

- 5.15 The Preliminary Ecological Appraisal as prepared by Elite Ecology concluded that there were no designated sites revealed from the Ecological Data Set on the site or directly adjacent the site.

No habitats of conservation concern are located on the site and therefore the proposed works would not impact any rare or valuable habitats.

5.16 Bats and Artificial Lighting

Due to the impacts of lighting, mitigation and sensitive lighting design schemes are required for projects where bats are present. These should include bat friendly lighting plans that should aim to avoid light spill wherever possible. Where this is not possible then the minimisation of any lighting impacts is required by adopting the following measures.

- Introduction of lighting curfews and use of PIR sensors.
- To consider no external lighting solutions wherever possible.
- To use only high-pressure sodium or warm white LED lamps where possible.
- Minimise the spread of light
- To avoid reflective surfaces below lights.

5.17 Site Enhancements

For the proposed development works the following site enhancement measures could be incorporated into the site post development. These measures are considered optional but are bespoke to the site surveyed for the enhancement of biodiversity.

Flora

At present the site is not considered to have a diverse range of flora. Therefore, the report Recommendations that the green roof be converted to a 'wild meadow' that utilises native Wildflower seed mixes.

Invertebrates

At present the site is not considered to be of any importance to local invertebrate populations. In conjunction with the wildflower planting, it is recommended that a Bumblebee Box, a Bug Hotel and Hedgehog Nest Boxes are included and positioned in appropriate locations around the site.

5.18 BIODIVERSITY NET GAIN

Biodiversity Net Gain needs to be ensured within the scheme of works and this would be devised once the desktop study has arrived. This will allow measures to be targeted towards species known to be in the area.

CLIMATE CONTROL MITIGATION

- 5.19 The proposed conversion will be constructed to an elevated standard with high levels of thermal insulation and utilisation of energy efficient and environmentally sustainable materials. It is intended that the use of renewable energy sources will be introduced where practicable and feasible.

6.0 SUMMARY AND CONCLUSION

6.1 This Planning Statement has been prepared on behalf of Mr Y Heald in support of a full application for: *'Change of Use of former Reservoir and conversion to a single dwelling '*

6.2 The proposed re-use, conversion and restoration of the existing Reservoir proves a unique opportunity to deliver an innovative, high quality, energy efficient development and prove an exemplar of best practice and sustainable use of an extant structure and biodiverse enhancement of the surroundings.

1. The existing reservoir structure is of permanent and substantial construction. It would have had to be of robust construction to have stored a large volume of water for so many years. The structural report concluded that the existing structure is in a stable condition and would be suitable and fit for conversion to a new dwelling.

As the building is of permanent and substantial construction its conversion represents an appropriate and sustainable form of development within the Green Belt.

2. The landscape character of the site is predominately defined by the mature woodland, undulating fields and openness and the site reflect the intrinsic character and makes a positive contribution to the character of the area. In design terms the proposed development does not involve an increase to the existing built form. The green roof covering to the existing roof structure would serve to expand and integrate the natural habitat and maintain the openness of the site when viewed from the passing highway. The partial exposure of the south elevation façade and adjacent amenity area would remain enveloped by the existing site topography and with minimal landscape screening would remain principally obscured from the Public Footpath level as extending along the southern most boundary of the site.

The proposed development would therefore continue to compliant the character and appearance of the landscape and surrounding countryside.

3. The NPPF supports the re-use of a redundant structure or disused building that would lead to the enhancement of the surrounding area and contributing to a low carbon future and to that of the local habitat, biodiversity, and nature conservation.

6.3 The proposal would represent a sustainable development and low carbon future sought by the NPPF. The proposed development would not lead to a harmful effect upon the openness of the surrounding Green Belt. The development will not lead to a detrimental impact upon the neighbouring residential amenity. Furthermore, it is considered that the proposals are acceptable from an amenity and design perspective and would not give rise to any adverse impacts because of other technical considerations.