ARTFORM ARCHITECTS

Design & Access Statement

Wellbank, Bootle

December 2022

Contents

1 Introduction & Background

This Design & access Statement has been prepared by Artform Architects in support of a planning application for the re-development of the former MoD site at Wellbank, Bootle.

The proposed mixed-use development seeks to create 27 custom build house plots, 8 new holiday homes and a Community Hub building. These are arranged across a masterplan for the site that also includes new landscaping, roadways, attenuation lakes and parking.

This document outlines the various aspects of the design, explaining how and why they have been developed in the way they have. This includes the evolution of the masterplan as a whole, as well as the design of the individual buildings themselves.

This Design & Access Statement should be read in conjunction with all architectural drawings and supporting information submitted with the application.

2 Project Overview

Application site

The proposed scheme is intended to establish a new community at Wellbank and cultivate the 4.4ha site into a high quality, vibrant development that has people, landscape and sustainability at it's heart. Located just outside the village of Bootle and close to both Bottle Station and Hycemoor, the site presents a unique opportunity to reinvent the former MoD camp site into a well-connected, low carbon scheme that benefits not only the local residents but also the wider region. The design has been carefully developed to work with the existing topography of the site and to reference the local context and rural character of the surrounding area.

This submission follows a previous planning application for the site that was approved by Lake District National Park (LDNP) in August 2018 (ref. 7/2015/4083). This was a hybrid application for mixed-use development that included full consent for 18 dwellings and outline consent for a further 32 dwellings, a 40 bedroom hotel and 6 business units.

The 2018 consent for the 18 dwellings ('Phase 1') has since been amended with a Section 73 application submitted in November 2021. The new planning application described in this Design and Access Statement therefore covers the remainder of the site outside Phase 1.

3 Site Analysis

3.1 Location

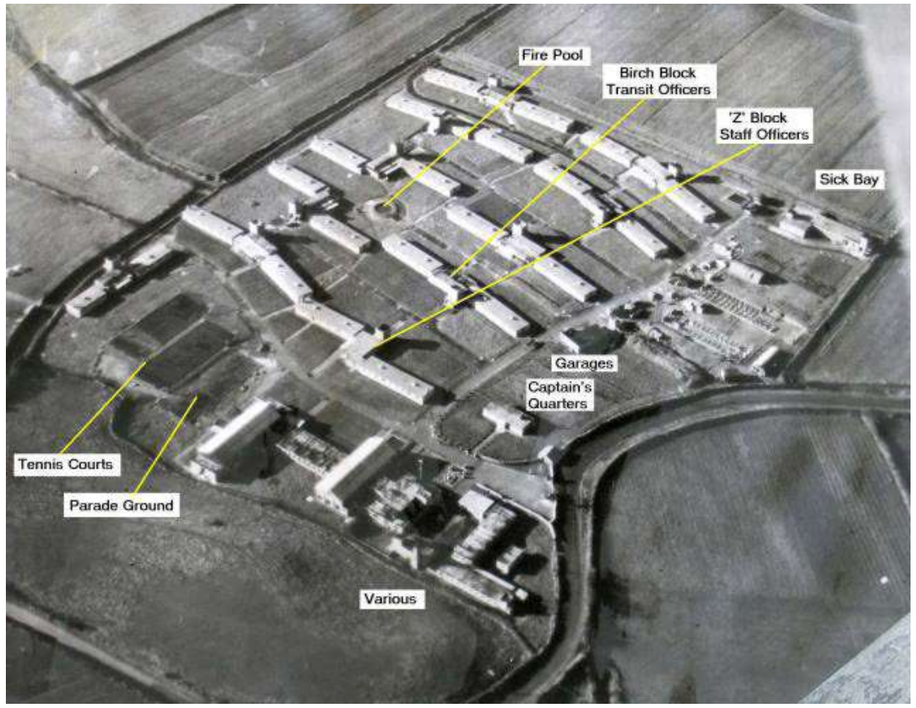
The Wellbank site is located in south-west Cumbria and within the boundary of the Lake District National Park. It is situated within the borough of Copeland, half a mile outside the village of Bootle. Whilst formerly the location of MoD barracks dating from 1942, the military buildings have since been demolished and more recently the site has become derelict and overgrown.

The surrounding context is largely agricultural with farm buildings and sheds scattered across the landscape. The largest feature on the skyline is Black Combe, a 1,970ft fell located 3.1 miles to the south east. The Irish Sea coastline lies 1.5m to the west.

3.2 Existing Site

The site boundary to the north runs along Church Road and there are two existing entry points here, one of which was the main entrance into the former MoD site. Since the closure of the MoD barracks, the site became an area of overgrown grassland with hedgerows forming the majority of the boundary treatment where it meets agricultural land to east, south and west. A small copse of trees was located at the site's southern edge. The natural topography of the site falls from the north west corner down to the south east corner, with a total change in level of around 6m.

Since the infrastructure works have commenced to Phase 1, the ground has been excavated and scraped to varying extents with roads being formed and below ground drainage installed. Consequently the site now appears as a construction site, with associated fencing, plant and cabins as well as a marketing pod.



Historical Aerial Photo of MoD Barracks

Map of Wellbank Barracks

Historical Photo of the Site

3.3 Site History

Built in 1941-42, the original 'Wellbank Hostel' was commissioned by the Ministry of Supply to house 500 workers engaged in the construction of the Royal Ordnance Factory at Hycemoor. The site was then transferred to the Admiralty in November 1943 when it was adapted to operate as a transit camp for newly qualified pilots who had returned to the UK after completing their training in Canada. During this time it was know as HMS MACAW.

Pilots continued to arrived at Wellbank Hostel for many months following the end of WWII and it was not closed until 13th September 1946 when it was returned to the Ministry of Supply.

As can be seen on the adjacent historic photograph, the site was arranged as a series of linear barracks oriented north-south with access between. Larger ancillary buildings were located along the eastern edge of the site and adjacent the entrance off Church Lane.

Note: Information above obtained from:
www.royalnavyresearcharchive.org.uk.

3.4 Existing Site Photos and Context

The existing site was previously an overgrown area of grassland and shubbery. More recently it has become a construction site with the start of Phase 1.

01 View looking North East

02 View looking South East

3.5 Area Character

Images Clockwise from top left

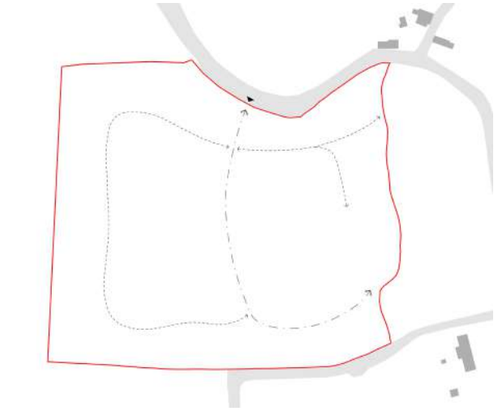
01 View of Wellbank Cottage
02 Church Lane Street View
03 St Michaels Church, Bootle
04 Example local farm building
05 Example local farm building
06 Example local farm building

The site at Wellbank has a distinctly rural feel, being surrounded on all sides by agricultural fields and farmland and with the backdrop of Black Combe fell in the distance. It benefits from long-ranging views across the surrounding landscape. The closest buildings that are visible are those at Wellbank Cottage just to the north east of the site at the Church Lane junction. These comprise two residential dwellings of stone and render along with a series of outbuildings that incorporate vertical timber cladding and metal roofing.

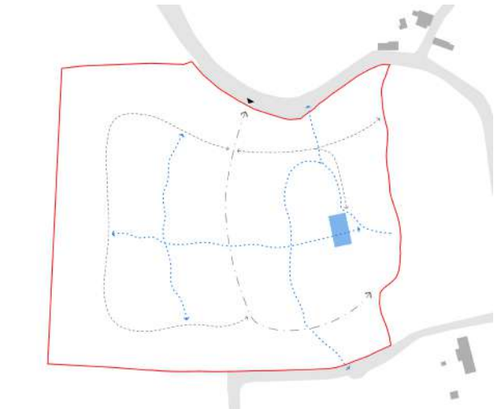
Church Lane is characterised by high hedgerows on either side with no pavement and is a winding, undulating country lane typical of the wider area. It connects the site to Bootle village where the area character changes as it becomes more built-up with a predominantly residential feel. The majority of the housing stock in the village dates from the mid-20th Century and constitutes terraces, semi-detached and bungalows, largely with white/pale render and pebble dash facades. The more historic, older buildings in the village are located along Main Street including a school founded in 1830 and the grade II listed St Michael's church which originates from the Medieval era but was significantly restored in the mid 19th Century. Most of the buildings along Main Street continue the palette of render or pebble dash however some of the older properties are characterised by rubble stone walls, as are many of the boundary walls forming the edges to roads and pavements.

The wider area surrounding the application site is characterised by agricultural farmland bounded by hedgerows and stone walls. Farms and agricultural buildings are scattered across the landscape comprising of older stone barns as well as more modern sheds and outbuildings, generally with some form of concrete or stone base, vertical cladding and metal roofing.

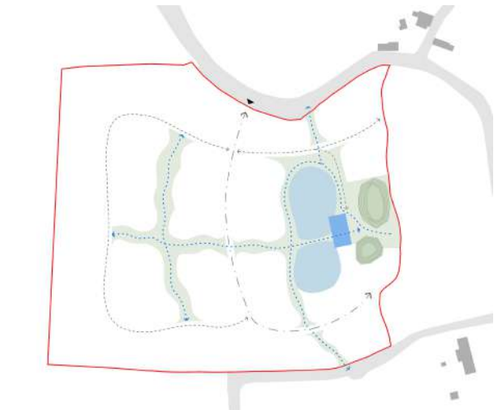
Early Concept Diagrams



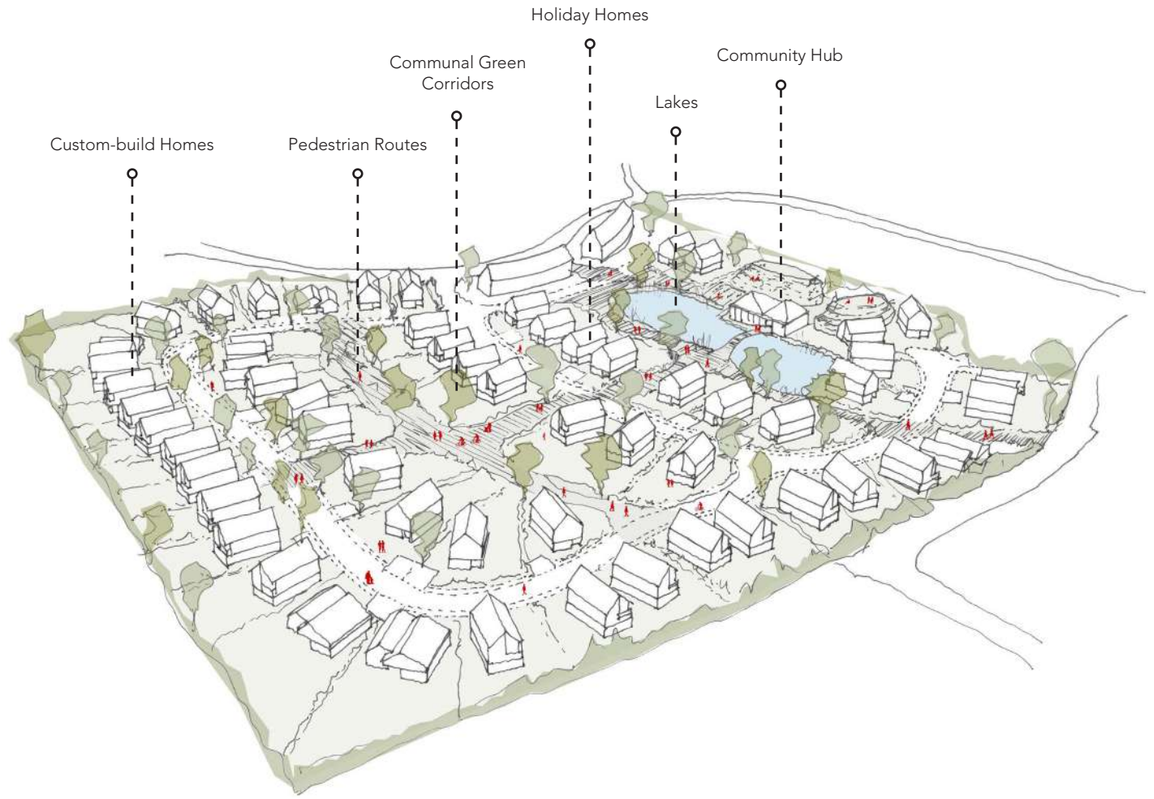
Vehicular Access



Pedestrian Routes & Community Hub



Communal Landscaping & Lake



Early Concept Sketch

4 Design Proposals

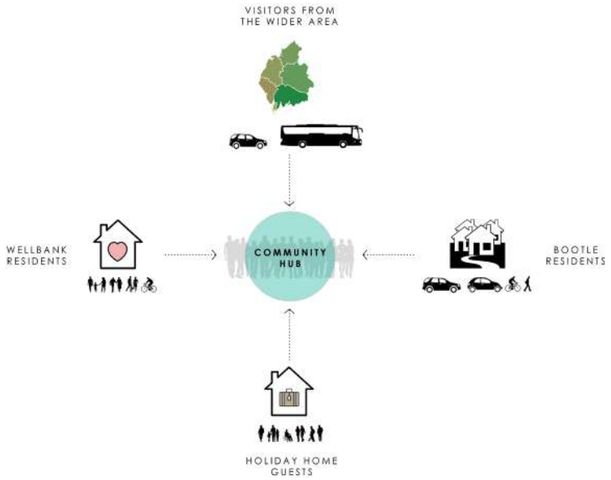
4.1 Masterplan I

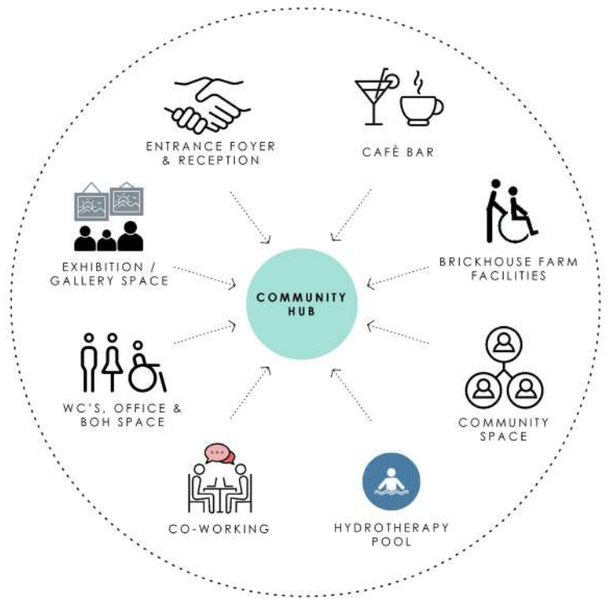
Following the planning consent granted in 2018 the viability and delivery of the scheme was re-assessed. It was concluded that to align with market demands and conditions, a different approach for the site was needed if it was ever to be realised and become a success. The new masterplan would still need to provide a residential-led, mixed use development but offer homeowners something different to the usual volume house-builder model of houses arranged around cul-de-sacs. In addition the hotel and business units included in the original consent would need to be reconsidered with more community-driven uses established instead.

The diagram for the new masterplan is therefore centred around three key points - community, connectivity and landscape. It was felt important to establish a pedestrian and cycle friendly layout that would be simple and easy to navigate around and that was not dominated by cars or by dead-end streets of replica housing. The aspiration was for naturally landscaped communal spaces to drive the layout and place the community uses at the heart of the development, with a direct link to the landscape beyond.

The principle of the proposed new masterplan involves a central, gently curving spine road running north/south from the access point off Church Lane. A loop road is taken off this to feed the western half of the site, which is devoted to residential use and includes the initial Phase 1 plots. Similarly a secondary feeder road serves the eastern portion of the site, which primarily includes the non-residential use of a Community Hub and holiday homes.

Proposed Masterplan Sketch





4.1 Masterplan II

Running through the core of the development are a series of landscaped pedestrian corridors. These act as car free, green linkages connecting residents to one another and bedding the scheme into it's rural context. These are designed to be flexible spaces that can accommodate a variety of uses such as gathering spaces, meeting points, relaxation and contemplative spaces as well as opportunities for BBQ zones, seating and children's play areas.

The east/west corridor leads to the two attenuation lakes which are a key component of the scheme both environmentally and visually. They are an integral part of the overall SuDS strategy which runs across the whole site to manage surface water drainage and flood prevention whilst minimising the impact on the environment. The lakes also provide a focal point for residents as well as a significant contributor to the overall ecology of the site encouraging a variety of wildlife to the site. Consequently, the new Community Hub building is located along the edge of the water on the eastern side of the lakes, with the east/west pedestrian corridor terminating at the entrance to the building.

This Community Hub is a fundamental part of the overall masterplan. It acts as a focal point for the site and a provides a series of spaces that can host a variety of different uses for both the Wellbank residents and the wider community of Bootle. The car parking is largely retained to the rear meaning the building overlooks the lakes with a wholly pedestrianised area in front, connecting the building to the landscape.

Proposed Masterplan

4.1 Masterplan III

The eight holiday homes are arranged in a series of semi-detached houses accessed off the central spine road with views to the rear across the lakes. As the operator (Brickhouse Farm Cottages) is a provider of wheelchair friendly accommodation, it was imperative that these would have level, car free access from the plots onto the pedestrian pathways which circulate around the lakes to the Community Hub. The landscaping therefore uses the natural topography of the site to avoid any stepped access.

The residential plots are all designed to be for Custom Build housing, with plots sold to homeowners who wish to build their own home. These plots have been arranged to accommodate different footprints and configurations, with the agreed Design Code for Phase 1 being applied to the remaining plots. Incorporating this approach into the masterplan provides an opportunity for variety and visual interest in the architecture, all within a set framework to define key parameters.

The naturally sloping site presents views in every direction, however the fells to the south east give the most picturesque backdrop when viewed from inside the site. This aspect also benefits from morning sunlight so orientating the majority of houses in a east/west axis front to back not only provides strong views from primary living spaces but also brings in both morning and afternoon sunlight into the interiors.

The orientation and layout of the roads, pedestrian corridors and building plots are intended to generate a feeling of inclusivity and social cohesion, with the green landscaping being the core infrastructure that binds the various phases together to creates a natural, holistic development that integrates seamlessly with the surrounding context.

Proposed Site Plan

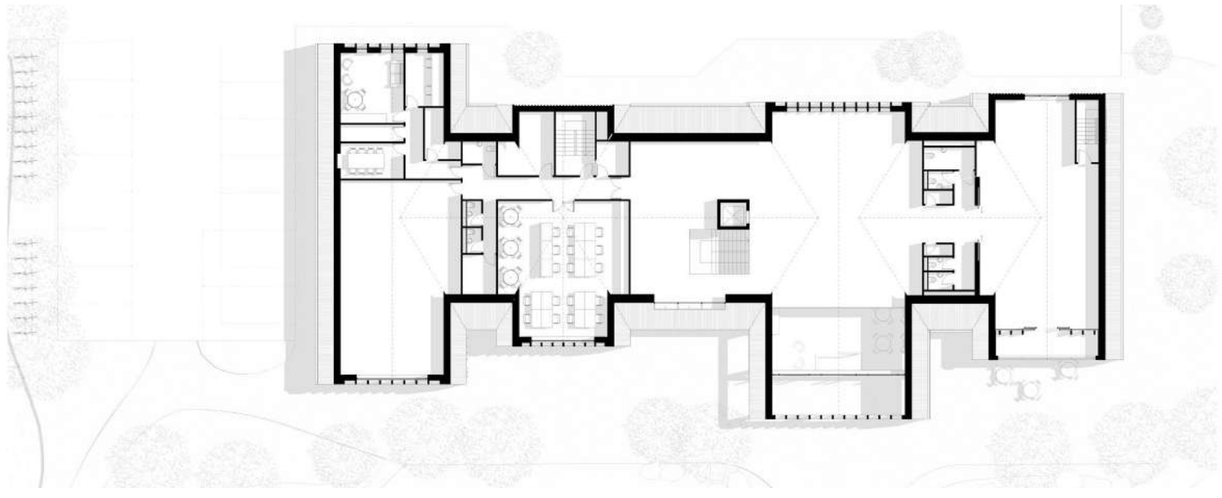
4.2.1 Layout

The building is located to the east of the attenuation lakes and is arranged as a linear block running in a north-south direction. It's primary elevation faces west, fronting onto the lakes and landscaping with the main building entrance aligned with the pedestrian corridor that runs across the middle of the site. Acting as a focal point for the scheme, it is the main landmark building of the development.

To the rear of the building along the eastern site boundary is the parking area which also wraps around the building to the north and is fed by a road leading back to the main site entrance. The rear of the building also has a service yard area.

The internal accommodation is arranged in a way that provides most light and views to the primary public areas, with main spaces articulated externally as a series of four pitched-roof gable ends facing across the water. These vary in size and height dependant on the use they each contain and the subsequent space requirements. Organising both the internal spaces and external massing in this way helps to give the building a clear legibility and rationale, allowing it to sit comfortability in its setting.

Proposed Ground Floor Plan



Proposed First Floor Plan

4.2.2 Layout II

The accommodation is arranged across two floors and is intended to house a variety of different uses under one roof. At ground floor, the main entrance leads into a partially double height space with a reception area / foyer which leads into a cafe space with servery and kitchen. The cafe spreads across into the southern end of the building and spills out to an external south facing terrace with glazed walls and external doors which open up to the outside.

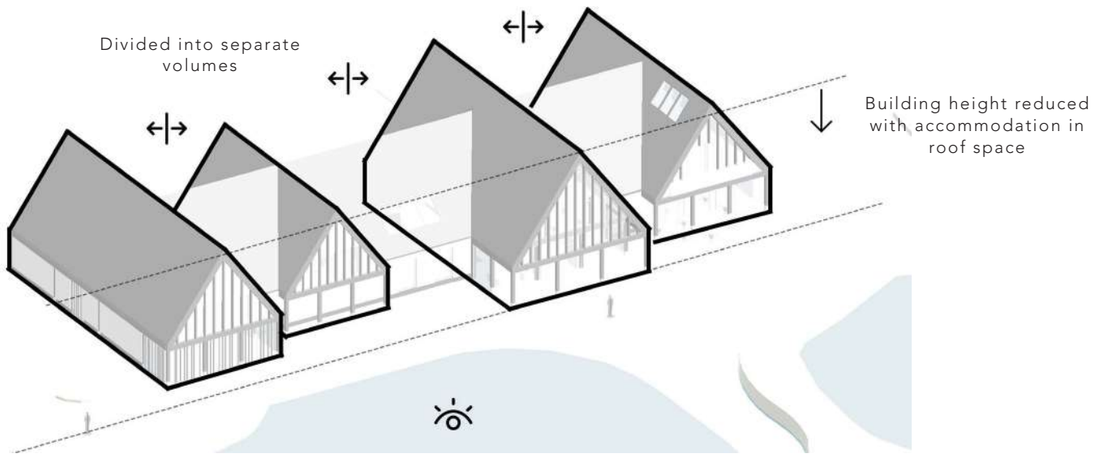
A central feature stair adjacent the reception desk leads up to first floor along with a lift. Around the bottom of these are located a series of meeting pods and a workspace area.

The northern end of the ground floor accommodates a swimming pool and hydrotherapy pool along with associated changing areas, toilets, plant rooms, store rooms and a secondary escape stair.

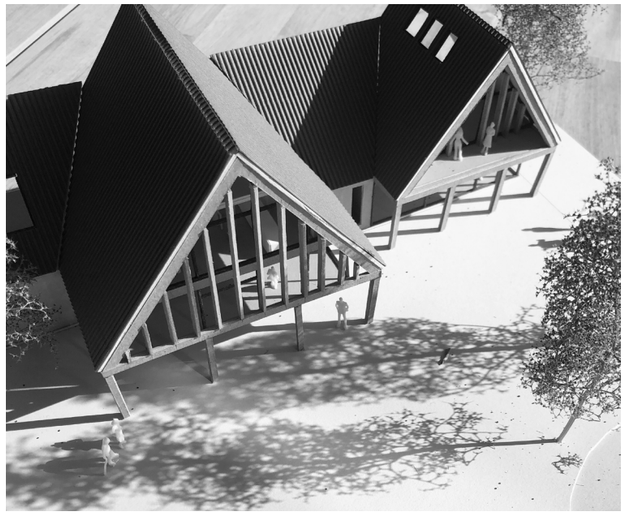
At first floor level are open-plan multi-purpose spaces which could accommodate exhibitions,, gallery space, events, or other community uses. They are designed to be flexible areas that can be adapted to various requirements. These overlook the double height entrance void at the front of the building and benefit from views out across the lakes and landscaping to the west. The southern most space also has an external balcony/terrace.

The northern end of the ground floor contains a co-working space, gym, sensory room for wheelchair users, staff facilities and additional plant/store rooms.

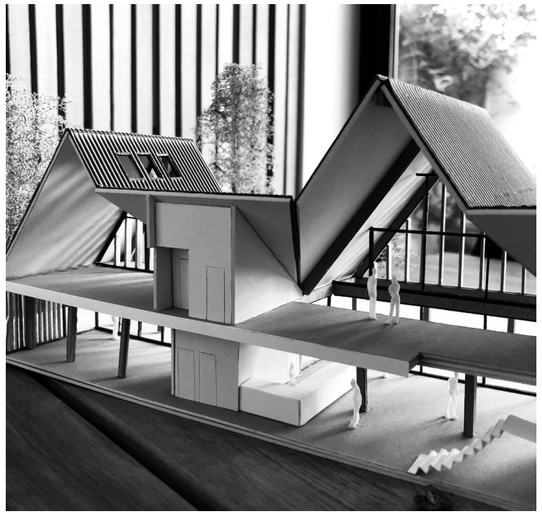
The majority of the glazing is to the west elevation which benefits from the best views and allows the main public spaces to have high levels of natural light. The east elevation has more limited glazing which is where most of the secondary ancillary space is located.



Massing Strategy Diagram



Proposed Physical Model



4.2 Community Hub

4.2.3 Amount / Massing

The gross internal floor area of the Community Hub is as follows:

Ground Floor: 880 m^2
First Floor: 660 m^2

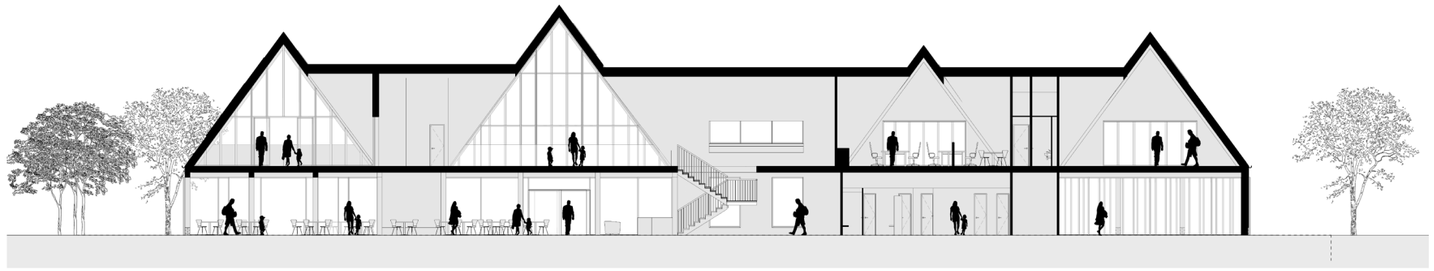
Total: 1540 m^2

There are 37 parking spaces provided, 4 of which are disabled bays. Cycle racks are provided alongside the parking area for up to 16 bikes. The total footprint of the building on the site is

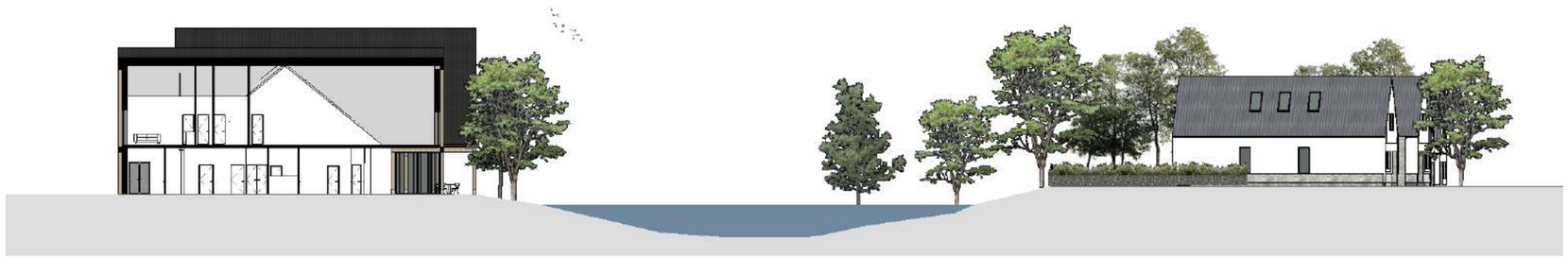
The massing of the building has been designed to provide a distinctive yet contextual backdrop to the landscaping and lakes which sit in front. One of the key design principles was to try and mitigate against the overall size of the building by breaking up the volume into a series of smaller, interconnected forms. These pitched roof gables create a series of distinctive triangular shapes along the main elevation, each expressed with an exposed glulam timber frame which forms the primary structural solution for the building.

Furthermore the first floor spaces are set within the roof volume, meaning the building can sit lower in the site compared to a typical two storey building with a pitched roof above.

This simple diagram for the building form helps to create a massing that grounds the buildings into the site and avoids it becoming overly dominant or large. The pitched roof form is reminiscent of agricultural sheds or barns and ties the building into it's rural context.



Proposed Long Section looking West



Proposed Site Section looking South

4.2.4 Scale

The proposed Community Hub has been carefully designed to ensure that the scale is proportionate to the site, surrounding context and other adjacent buildings.

Whilst the building contains a variety of different uses and houses a range of accommodation, this is arranged so as to avoid a confusing and sprawling layout. The rationale behind the floorplans is articulated externally so the overall scale feels comfortable alongside the lakes and fits into the overall spacial diagram of the masterplan.

As the Community Hub is the main focal point of the proposed development and the largest building on the site, it was important to provide a certain sense of scale and height in order to draw people in and ensure the building is clearly visible from various points across the site.

The overall height and roof pitch is designed to achieve this whilst accommodating the uses at first floor and providing suitable head height under the eaves. In addition the roof has also been designed to provide the optimum angle required for glulam timber frames which span across large areas.

The scale of the space around the Community Hub is just as important as the overall height and volume of the building itself. The size of the two attenuation lakes and the generous amount of landscaped space in front of main facade means the scale feels appropriate to it's setting and there is plenty of breathing space around it. Due to the configuration of the masterplan, the Community Hub is adequately spaced from any surrounding buildings and neither the holiday homes nor the custom build house plots feel impacted by it's size or form.

Proposed 3D View facing West

Proposed East Elevation

4.2 Community Hub

4.2.5 Appearance

The design of the Community Hub has been developed to respond positively to the site and location and provide a contemporary yet contextual piece of architecture. The overall appearance is a result of a number of different factors which include the specific requirements of the brief and the environmental performance of the building. However one of the key factors was to develop a design that works in harmony with the landscape and provides the development with a distinctive focal point where the community can come together.

The primary frame of the building will be a glulam timber frame which has much lower embodied carbon compared to steel or concrete and is therefore a much more environmentally responsible choice. It also provides the building with a soft, natural aesthetic and this is expressed externally along the west façade where the timber framework articulates the four gable ends facing the lakes. This creates a rhythm along the elevation with triangular first floor roof sections sat atop timber columns at ground level, establishing a clear diagram for the building.

The main entrance to the building and the secondary entrance to the café are further defined by projecting canopies, where the roof plane oversails the building line. This provides areas sof helter at ground level and offers the opportunity for people to pause, gather and meet as well as cover for external café tables. The oversailing roofs also provide solar shading to these largely glazed facades.

A limited material palette for the cladding avoids the façade from becoming too cluttered and fussy. The facades are largely clad with vertical timber boarding with a stone brick plinth running around the bottom to help ground the building into the site and reference the local vernacular of stone built boundary walls and cottages. Combined with the exposed glulam timber frame, this gives the building a very natural feel, allowing it to sit well against the backdrop of a rural landscape.

The roof material is black profiled metal sheeting which reflects the agricultural aesthetic so predominant in the surrounding area and feels an appropriate choice for a large building such as this. The dark colour is to partly reference Black Combe, the fell which backdrops the site and is named after it's dark-coloured glacial corrie on the slopes. And partly because black as a colour is always less visually dominant than lighter tones so the scale of the roof should be somewhat diminished.

Proposed East Elevation

Proposed West Elevation

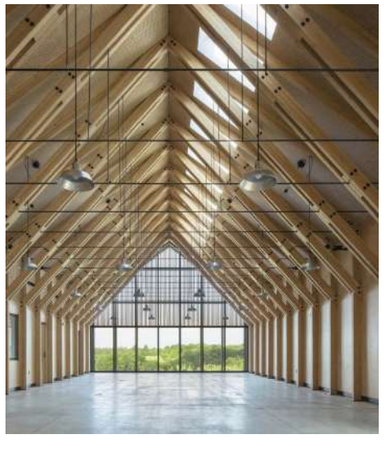
4.2 Community Hub

4.2.6 Materiality

The main facade materials for the proposed Community Hub are as follows:

01. Vertical timber cladding
02. Stone
03. Glulam timber frame
04. Black profiled metal roofing
05. Black aluminium framed glazing

This material palette is a response to setting, context and the local agricultural aesthetic.



4.2.7 Precedent Studies

Precedent studies were carried out during the design development process to explore similar schemes that we felt were successful in achieving the overall look and feel for the building that would be appropriate for Wellbank. This includes bother structural solution as well as the aesthetic of the cladding and materials.

Some of these examples are shown opposite and reflect the aspiration for a high-quality, well-crafted building that has it's own character and identity.

Proposed West Elevation **Phase 1**

Proposed West Elevation **Phase 2**

4.2 Community Hub

4.2.8 Phasing

The proposed Community Hub building will be constructed in two phases. Phase 1 will include the majority of the internal accommodation and include the pools, co-working space, gym, staff areas, multi-purpose space and a café. Phase 2 will be an extension of the building to the south and include the 4th gable end volume described above.. This will provide expansion space for the café/bar at ground floor and further multi-purpose space at first floor with additional toilet provision and a second escape stair.

The ground floor layout at the southern end of the building will be modified slightly in Phase 2 to create a larger kitchen and servery space however the layouts of both phases have been designed to minimise disruption as much as possible. It is the intention that certain elements of Phase 1 will be re-used in Phase 2 such as glazing and cladding on the south elevation. The timber frame of Phase 2 will effectively be a 'bolt-on' structure that is future-proofed in the design of the initial build.

Phasing the construction in this way allows the building to grow once market conditions and development financing allow and means the building can adapt to future needs and requirements.

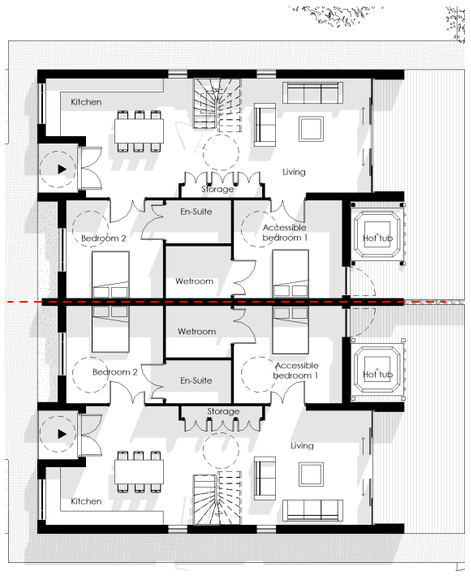
Proposed 3D View

4.3.1 Layout

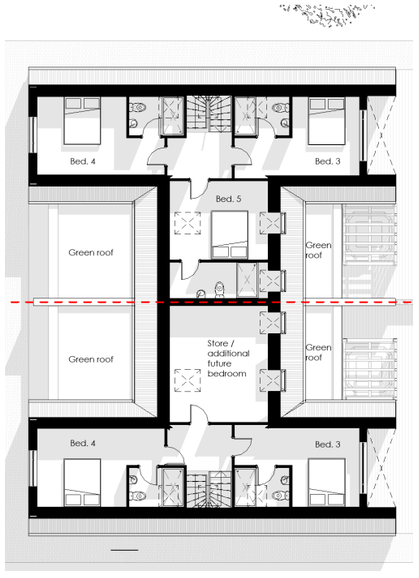
The buildings for Brickhouse Farm Cottages are organised as four pairs of semi-detached houses which are located along the eastern edge of the central spine road. The front elevations therefore face the road and contain the main front door entrance. Each house has a double driveway for off-street parking on this side also. To the rear of the properties are gardens which run down to link into the public footpaths which circulate the lakes. The rear west-facing elevation is more glazed to provide views across the lakes and landscaping.

This east/west alignment mean the properties have easy vehicular access from the central spine road yet full pedestrianised, car-free access out to the lakes and across to the Community Hub building. The alignment of each pair of semis is a response to both curvature of the central spine road and the optimum views over the lakes and the Community Hub beyond.

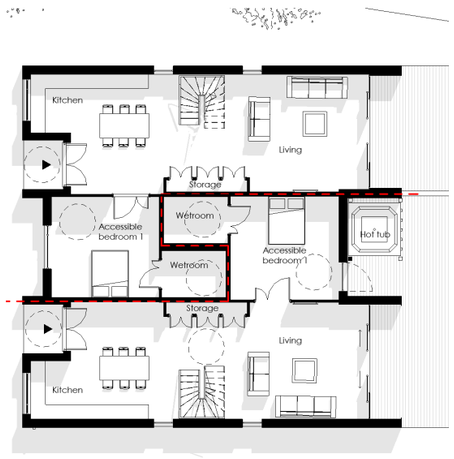
The buildings also mark the point at which the uses on the site change from wholly residential dwellings to the west, to a mixture of holiday homes, community, leisure, and workplace to the west.



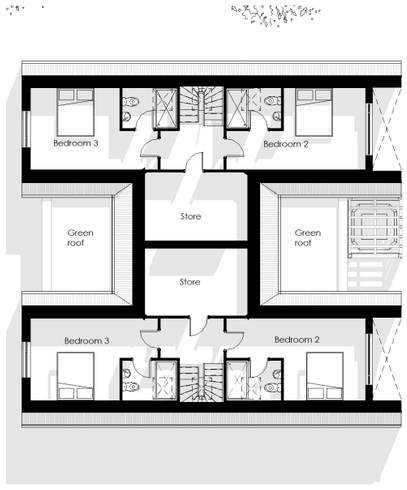
Proposed Ground Floor Plan
BH1-BH4



Proposed First Floor Plan
BH1-BH4



Proposed Ground Floor Plan
BH5-BH8



Proposed First Floor Plan
BH5-BH8

4.3 Brickhouse Farm Cottages

4.3.2 Layout II

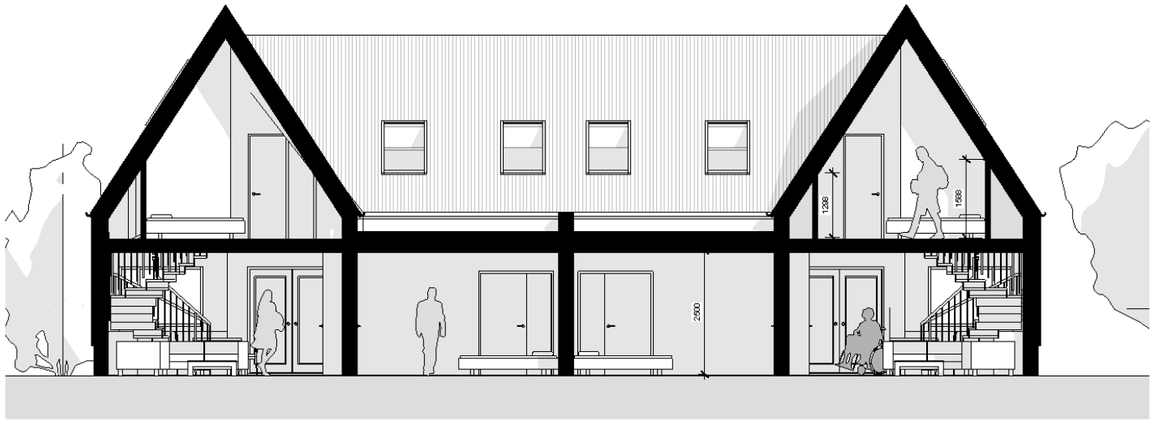
There two are different house types proposed for the eight properties; the first is 4/5 bed house, the second is a slightly smaller 3 bed house. The accommodation in each property is arranged across two floors and is designed to specifically to meet the needs of the operator and their residents.

The 4/5 bed property has an open plan kitchen/dining/living space which runs front to back. The living space is located to the rear adjacent a large, glazed elevation with sliding doors leading out to a decked area and garden. Located off this main open-plan space are two bedrooms, each with an en-suite bathroom. One of these is designed to be a dedicated accessible room for wheelchair users with a larger wet room. A hoist system will be installed above to assist in moving wheelchair users from the bedroom into the bathroom.

At first floor there are three additional bedrooms (two in the 4 bed option), each with en-suites as well as storage space.

The 3 bed property is arranged in a similar way but with only one bedroom at ground floor, also designed to be an accessible room for wheelchair users. At first floor are two bedrooms, each with en-suite. Storage space is also provided which could become an additional bedroom in the future if required.

Proposed Cross Section - 3 Bed Property



Proposed Cross Section - 4/5 Bed Property

4.3.3 Amount / Massing

The gross internal floor area of the properties are as follows:

4/5 bed house (BHF 1 – 4)
Ground Floor: 110 m^2
First Floor: 61.5 m^2

Total: 161.5 m^2

3 bed house (BHF 5 – 8)
Ground Floor: 88.5 m^2
First Floor: 56.5 m^2

Total: 145 m^2

The total footprint on the site of all eight properties is

The massing of these properties has been designed to relate to the domestic scale of the residential dwellings on the other half of the site whilst also referencing the Community Hub which faces them across the lake. The properties have relatively large footprints due to the requirement for accessible ground floor bedrooms and bathrooms and as such it was important to avoid a massing that was overly dominant or large. The first floor spaces are therefore set within the roof volume, meaning the building can sit lower in the site compared to a similar sized two storey building with a pitched roof above. This in turn relates to the arrangement and form of the Community Hub which helps ties these buildings together as a cluster around the edges of the lakes.

The volume of the properties is articulated with a series of setbacks and recesses to help given definition and relief across the front and rear elevations. The front door entrance is recessed to provide shelter and at the rear the main pitched roof oversails the building line to cover the decked area outside the sliding glass doors. This overhang also wraps down the sides to frame this part of the façade and help give the houses their own identity.

Proposed Lake Elevation

Proposed Street Elevation

4.3.4 Scale

The proposed Brickhouse Farm Cottages have been carefully designed to ensure that the scale is proportionate to their location on the site and the adjacent buildings that surround them. They have a domestic, residential feel which sits well opposite the housing on the other side of the road but is also well-suited to their use and the requirements of the operator.

The eaves are set at a low level with the first floor accommodation in the roof space, allowing the buildings to have a comfortable, low-lying scale that fits well in the landscaped setting. The steep pitched roofs give the buildings their own identity and offer a distinction from the other residential dwellings on the site whilst still avoiding an overly high ridge line. This visual point of difference means the building's use as holiday homes is made clear and there is a change of aesthetic from the residential dwellings.

Proposed West Elevation- 4/5 Bed Property

Proposed 3D View facing South West

4.3 Brickhouse Farm Cottages

4.3.5 Appearance

The design of the Brickhouse Farm Cottages aims to create a series of holiday homes that reference the local vernacular and materiality but in a modern, contemporary way that aligns with the overall aspirations of the Wellbank development. As the exact design of the residential dwellings across the site is unknown due to the custom-build approach, the Design Code for Phase 1 provides an approved list of materials which has informed the overall look and appearance of the holiday homes.

It was felt important to keep to a similar pallete of materials for the external facades so there is consistency across the development. Consequently the elevations are clad in a combination of white roughcast render, vertical timber cladding and stone. Combined with the black aluminium framed glazing and the overall form of the houses, they have a distinctly contemporary appearance but one that still relates to the local context.

The stone cladding is used as a plinth which runs around the base of the properties and helps ground them into the plots, tying in with the garden boundary treatment and the wider landscaping design.

Proposed West Elevation

Proposed East Elevation

4.3 Brickhouse Farm Cottages

4.3.6 Materiality

The main materials for the proposed holiday homes are as follows:

01. Vertical timber cladding
02. Stone
03. Grey profiled metal roofing
04. Black aluminium framed glazing

This material palette is a response to setting and context as well as continuing the approved lost of materials in the Phase 1 Design Code. The material choice also echoes the aesthetic of the Community Hub opposite, allowing them to reads as a coherent family of buildings gathered around the lakes.

4.3.7 Precedent Studies

Precedent studies were carried out during the design development process to explore similar schemes that we felt were successful in achieving the overall look and feel for the buildings that would be appropriate for Wellbank.

Some of these examples are shown opposite and reflect the aspiration for attractive, well-crafted holiday homes that have their own architectural identity yet still retain a familiar domestic scale and quality.

Sketch View of Communal Green Corridors

4.4 Landscape I

The proposed landscape design for the site has been developed around the key principles of the masterplan and aims to promote a pedestrian-friendly, easily accessible environment, low carbon environment which reflects the rural context.

The main landscape corridors that run through the residential part of the site are characterised by winding pathways which undulate with the natural topography. These are bounded by areas of soft landscape with hedgerows, native planting and trees. The soft landscape provides a green, natural setting for residents to enjoy whilst also providing boundary treatment and privacy to gardens where needed. The green corridors help promote well being, clean air and a sense of rural tranquillity at the heart of the development. They also provide attractive views from the rear windows and gardens of the house that back onto them.

In addition to the pathways and planting, a key element of the landscape design is the network of swales which run throughout the development. These are located on the lower side of the roads and through the green corridors. They channel surface water runoff to the attenuation lakes and ultimately off the site. They are a fundamental aspect of the SuDS (sustainable drainage systems) strategy which will be adopted at Wellbank, which is in turn a key aspect of the environmental approach for the wider scheme.

SuDS solutions provide an alternative to the traditional use of below-ground pipes and sewers that channel surface water to nearby watercourses. Instead, SuDS aim to channel water at ground level utilising the natural topography of a site and implementing natural features such as swales and attenuation lakes/basins to control the flow. This approach helps to minimise the effects of flooding, manage runoff volumes and protect or enhance water quality. The swales also provide attractive natural features in the designed landscape.

Proposed Masterplan

4.4 Landscape II

Where the east-west corridor runs across to the eastern half of the site, the space opens up and the two attenuation lakes become key feature of the landscape design. These offer a water-side setting for the buildings and will attract a variety of natural wildlife and habitats. The pathways circulate around the lakes and the hard landscape continues up to the Community Hub. The lake sizes and shapes have been carefully modelled to provide adequate surface water attenuation in the event of a 1 in 1000 year flood event at the site. The proposed landscape around the lake edges will see a combination of boulders, stones and paving along with water based planting such as reeds. The aim is to create a natural feel that references the local context and is reminiscent of other LDNP lakes, ponds and water courses.

Around the Community Hub and ponds, a combination of resin-bound gravel and appropriate local stone paving will give a distinctive feel. There will be marginal/aquatic planting to all sides of the ponds, with a soft margin to the western boundaries and paved edges to the eastern side adjacent the community hub. The soft margins will be formed from gentle slopes and a 'wet bench' terrace at normal water level, which is both a safety feature and an excellent habitat for water's edge (marginal) planting.

The aim of the landscape design is to present an interesting and playful setting to the Community Hub. Locally-sourced boulders combine with stone terraces to provide multiple opportunities for seating and play. For both the northern and southern ponds, long ramps provide inclusive access to the lower terrace, so that no one is excluded from the space, or the experience of being near the water. Due to the southern pond being 1m lower than the northern pond, the southern terraces have greater vertical intervals (200mm) as compared with the northern terraces (100mm).

Aerial Sketch View

4.4 Landscape III

The ponds form part of the site's SuDS system and provide a balancing function. Consequently they can rise from normal levels of 13.4m (north) and 12.4m (south) to 13.7m and 12.7m respectively during storm peaks. This variable level makes the water's edge design challenging. For the northern pond, the lowest terrace (13.6m) will be temporarily below water in a large storm. For the southern pond, the water will normally be 400m lower than the lowest terrace (12.8m), and 100mm lower during a storm peak.

The roads are proposed to be a combination of natural-colour asphalt / tarmac for the finished roadway, with contrasting highlights for the raised table, parking bays and footpath/ swale crossings. Service strips will be mown grass easements on the upper side of the road with swales on the lower side of the road. The development adopts a shared surface approach to the roads in order to promote a more pedestrian friendly environment and avoid a streetscape dominated by cars. Trees are required to be planted in all front gardens behind the service strip / swale line, providing a softened frontage and integrated appearance to all of the houses.

Access & Refuse Masterplan Strategy

5 Access & Refuse

The main point of access into the site is off Church Lane along the northern boundary. This mimics the original entry point from when the site was an operating MoD barracks. From here there is a central spine road which runs north-south to feed residential dwelling and the holiday homes. To the western half of the masterplan, a loop road circulates around the site to feed the majority of the other dwellings. To the western half, a shorter feeder road runs around the northern end of the lake and provides access to the Community Hub car park.

With regards to pedestrian access around the site, there is a network of dedicated car-free pathways which circulate through a series of landscaped corridors. Some of the house plots access these directly from the rear gardens. The pathways provide easy pedestrian access around the site and feed across to the Community Hub. They are designed to be wheelchair and bike friendly.

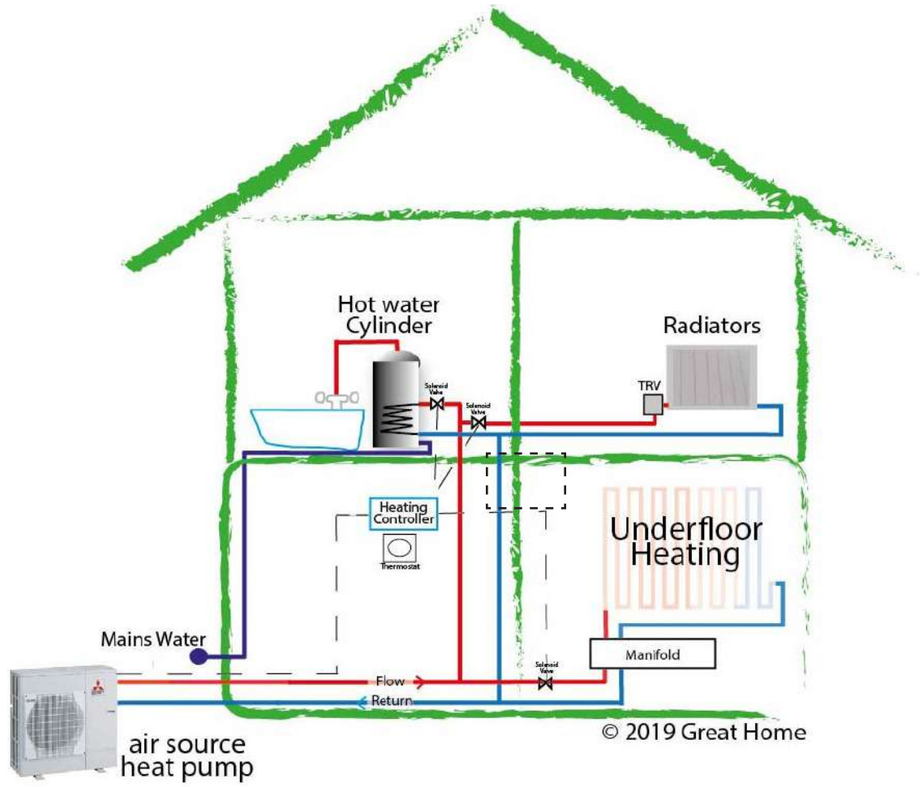
The site is fully wheelchair accessible and gradients in the landscaping and pathways are designed to avoid the need for steps or ramps. Level access is provided to all the holiday homes and the Community Hub. This aspect of inclusivity for all is an important part of the overall ethos of the Wellbank development, especially when considering the operator of the holiday homes and their focus on providing accessible accommodation to wheelchair users.

With regards to the refuse strategy, there are dedicated bins store provided within the curtilage of the holiday home plots. These are located along the side elevations of the properties to avoid cluttering the streetscape. Each property will have the full arrangement of recycling bins and will essentially operate like any other residential dwelling with refuse collection at the road edge.

The Community Hub has a dedicated bin store located off the car park area which will be sized to contain the full array of recycling bins required. The proposed strategy is for refuse lorries to reverse a small way down into the car park area where the operatives can then access the bin store on collection days.

The custom-build house plots will have dedicated bins tore with the curtilage of each plot as outlined in the approved Design Code.

Timber Frame



Air Source Heat Pump System for Space and Water Heating

One of the key aspirations for the proposed development at Wellbank is to create a low-carbon, environmentally conscious scheme that enhances the natural setting and promotes well-being for residents and visitors alike.

As previously mentioned, the drainage strategy for the scheme adopts a highly sustainable approach through the uses of swales, attenuation lakes and basins. This not only manages surface water runoff without the need for a network of below ground pipework, but also reduces the risk of flooding locally as well as further along the water course. The features of SuDS can also enhance biodiversity on the site and provide attractive areas of communal amenity space.

The Community Hub building adopts a low carbon approach in both it's construction and operation. Primarily it will be constructed from a glulam timber frame. Timber is a highly sustainable building material because it captures, removes and stores carbon from the earth's atmosphere. It is carbon negative from cradle to the grave, meaning that from the timber leaving the forest to it's transportation and installation on site, there is less carbon dioxide emitted than what has been absorbed. The timber frame design of the Community Hub therefore greatly reduces the embodied carbon of the building compared to an equivalent steel or concrete structure.

In terms of operational carbon, the Community Hub has a series of solar PV panels mounted to the south-facing parts of the roof which provide a renewable source of energy for the building. A district heating system will be adopted on the site which will provide heat to the Community Hub through a network of insulated pipes, with the energy generated by either a ground source or air source heat pump (or both). This will provide a much more sustainable and efficient approach compared to traditional fossil fuel heating systems. The aim is for the building to be extremely energy efficient, with high levels of insulation and air tightness. Large areas of glazing in the façade means the main spaces are naturally lit which will reduce the need for artificial lighting, whilst solar shading has been incorporated into the building's facade hrough the use of canopies and vertical louvres, in order to mitigate against overheating. The construction of the pools are likely to adopt a innovative product to avoid the use of too much concrete and reduce the heating demand for the water. It is likely the building will adopt an MVHR system for cooling, alongside operable windows for natural ventilation. These approaches will offer a pleasant internal environment that promotes clean air and well-being.

Solar Panels

Landscape

The holiday homes will take a similar approach and will also utilise a timber frame for the primary structure where possible. They will be connected to the district heating system and also have solar PVs, generous glazed facades, solar shading and be energy efficient in their construction.

The cladding materials of these buildings will be carefully selected and specified to reduce embodied carbon as much as possible, with locally sourced materials used where they can be. The extensive use of timber cladding on the Community Hub means there is further carbon sequestration in addition to timber frame, further adding to the building's sustainable credentials. All timber used across the development will be FSC approved.

The custom build houses on the site will all have a high energy efficiency rating c.EPC rated A. They will incorporate solar PV panels on the roofs as well as air source heat pumps. The Design Code stipulates that renewable energy technologies must deliver a minimum of 30% of the house's requirements. The houses will also use mechanical ventilation systems with heat exchangers. Homeowners will be encouraged to utilise timber as the primary structure rather than traditional masonry and the house types provided to them by the developer are all from a timber frame supplier.

Whilst it is recognised that due to the site's location car access will be needed for all buildings on site, the masterplan encourages walking and cycling across the development through the inclusion of safe, car-free landscaped corridors and pathways. The aspiration is to minimise vehicle movement on site as much as possible and promote more sustainable means of getting around. This will further enhance well-being and reduce the carbon emissions.

7 Summary

The proposed Wellbank scheme has the potential to transform a disused, former MoD site into a vibrant, mixed-use development with community and sustainability at its heart. The proposals will complement the local context and rural landscape whilst bringing much-needed housing, employment use and community facilities to the area.

The proposed masterplan creates a highly landscaped, pedestrian-friendly environment with a substantial amount of blue and green amenity space for residents to use. The green corridors offer an alternative to traditional layouts typically seen in volume housebuilder developments and promotes social cohesion, well-being and improved biodiversity as well as a highly sustainable approach to the drainage strategy.

By taking a custom build approach to the housing, the proposed scheme offers residents the ability to build their own home in a stunning location which will only encourage people to settle on site for the longer term. The Design Code ensures the house designs will afford a level of consistency, all arranged around a high quality public realm and streetscape.

Creating a Community Hub building as the focal point of the scheme means there will be a variety of on-site facilities all housed under one roof. The building has the potential to be a highly sustainable, low-carbon addition to the site which is designed as a contemporary yet contextual response to the rural setting. The architectural response to the brief and site gives the development a distinctive identity that is appropriate in scale, appearance and form.

In addition the holiday homes follow a similar theme and create a cluster of high quality properties that are specifically designed to meet the needs of the operator. These buildings work in harmony with the landscape design which surrounds them, allowing the overall development to feel cohesive, well-connected and with a real sense of place.

We therefore consider this an appropriate scheme that enhances and celebrates the site and should be supported by the local authority as a way of demonstrating how rural sites such as this can be delivered in a sensitive and sustainable way without having a detrimental impact on the context, natural environment or wider community.