

ARCHITYPE

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Gellideg Foundation
Wellbeing Centre
Design and Access Statement
Planning

REF / 7695
September 2016

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1 Introduction

1.1 Summary

The Gellideg Foundation Wellbeing Centre will be a contemporary community facility in the heart of the estate. It will provide 21st century facilities for the people on the Gellideg estate and support the Foundation's 'wellbeing' agenda.

Recent research into wellbeing chimes with the Foundations lived experience of delivering community services and making a difference in an area of deprivation. Wellbeing is achieved, for the individual and for the community, when people, give and connect, are more active and learn. Children also require an additional element to achieve wellbeing - to have the chance to be creative and play. We have an opportunity to create a sustainable Centre which will be the focal hub of community activity for the middle of Merthyr Tydfil.

The Wellbeing Centre is designed to Passivhaus standard in order to deliver a highly energy efficient building with optimum user comfort levels.

The proposals takes a holistic approach to design, incorporating a comprehensive landscaping scheme that has been devised to create usable and valuable public space on the estate.

This building will be owned by the community and be a space where people can come together to volunteer, learn, exercise, be creative, connect and develop emotional resilience.

1.2 Executive Summary

The purpose of this document is to support and accompany the planning application for a new community building on the Gellideg Estate, providing a written description of the application, detailing the design thinking and demonstrating a sensitive response to the local context.

- › The Design and Access sections of this statement separately detail aspirations and compliance to key strategies and best practice guidance.
- › The design statement demonstrates how the physical characteristics of the proposal have been informed by a response to physical, social, economic and policy context.
- › In describing the design and decision making process, we will be referring to the five objectives of good design, as set out by Technical Advice Note (TAN) 12:Design.

- › The following sections discuss:

site location

planning policy

key principles and aspirations

site analysis

design proposals

community safety

environmental sustainability

movement to, from and within the development

The access statement is a statement of inclusive access and demonstrates how anyone can enter and utilise the accommodation.

2. Site Location

2.1 Physical and social context

Merthyr Tydfil is situated approximately 23 miles North of Cardiff in South Wales. Gellideg is a social housing estate which lies to the North East of Merthyr town centre. The estate has suffered with the decline of manufacturing in the area and currently experiences high levels of unemployment and social exclusion.

The site is situated in the heart of the estate, on a slope which overlooks the Brecon Beacons to the North and East.

The site was originally occupied by a community centre, the Gellideg Working Mans Club, which burnt down some years ago. The site is adjacent to a row of shops along Hoel Tai Mawr (which is a bus route). It is also bounded by Lansbury Road to the East, a ball court and a community church to the South and a disused car park to the West.

The site has a slope from West to East of approximately three metres, and is currently grassed over the fill above the foundations of the former building. The aspect is relatively open on all sides apart from the West. There is some parking in a lay-by on Lansbury Road and the potential for more on the disused car park to the West.



2. Site Location

2.2 Context Analysis

Architectural

The Gellideg Estate is a typical postwar council estate, built to house workers from the old mining and manufacturing industries. Homes are arranged around greens or along narrow roads with grass verges.

Generally, the buildings are rendered brickwork and are in poor condition. The areas around them are also rundown and many of the landscape features have been vandalised.

Facilities

There are a small number of facilities on the estate. There is a row of small shops which include a newsagent and a chip shop. There is also a school and a church which currently doubles as a community hall.

Generally however, the estate feels cut off and its setting, on a hill above Merthyr Tydfil, adds to its sense of isolation. There is one bus service that passes through the estate on its route to Merthyr Tydfil town centre.

Economic

There are high levels of unemployment on the estate and a heavy dependency on benefits.

Unemployment rates on the estate are 25% higher than the national average and 34% of people living on the estate have no educational qualifications.

Community

The Gellideg Estate does however, have a strong sense of community and it is out of this community that the Gellideg Foundation Group emerged in 1998 as a response to worsening social economic conditions. It is now a focal point of the estate, strengthening community ties and providing jobs, training and work experience.



Typical 1950's houses on the estate



Flats currently occupied by the Foundation



Row of shops along Heol Tai Mawr



Back of flats occupied by the Foundation



St. Luke's Church



Rear view of shops

3 Planning Policy

3.1 Policy Context

The proposals for the new Wellbeing Centre on the Gellideg Estate has been developed in line with Planning Policy Wales as well as the following Technical Advice Notes (TAN)

TAN 8 - Planning for Renewable Energy

TAN 12 - Design

TAN 18 - Transport

TAN21 - Waste

TAN22 - Sustainable Buildings

Local Development Plan

During the design of the Wellbeing Centre, close attention was paid to the policies in the LDP. We have identified the following policies as being relevant to the scheme and believe that the proposals support and promote the principles behind them:

BW1 - Development Strategy - Primary Development Area

BW7 - Sustainable Design and place making

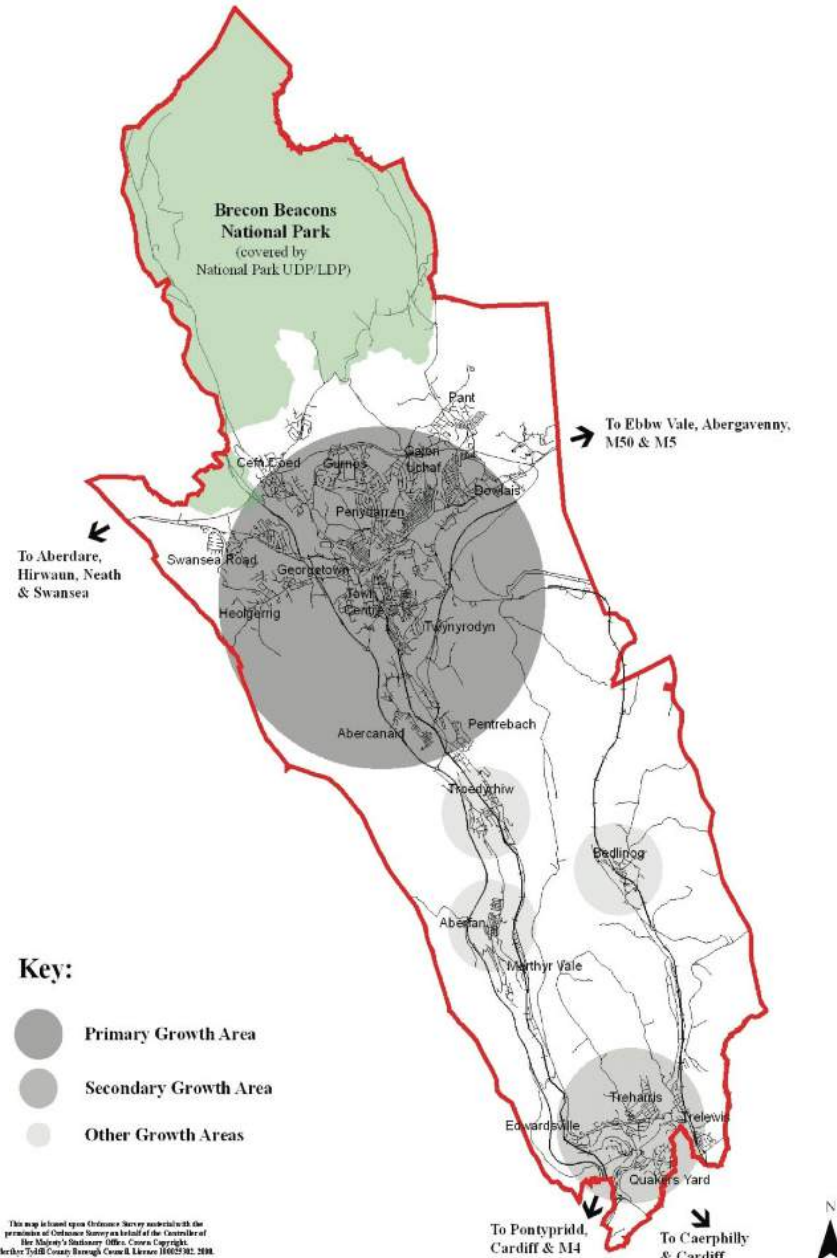
BW8 - Development and the water environment

BW12 - Development proposals and transport

Policy BW1: Development Strategy - Primary Development Area

'The LDP targets the majority of new development towards the main Merthyr Tydfil settlement, which is classed as a Primary Growth Area.'

Our scheme contributes to the regeneration of this area by developing a brown field site in the heart of the primary development area.



Plan showing the development areas

3 Planning Policy

Policy BW7: Sustainable design and place making

The Council will support good quality sustainable design and require new development to:

- be appropriate to its local context in terms of scale, height, massing, elevational treatment, materials and detailing, layout, form, mix and density;
- integrate effectively with adjacent spaces and the public realm to enhance the general street scene and create good quality townscape;
- not result in unacceptable impact on local amenity in terms of visual impact, loss of light or privacy, disturbance and traffic movements;
- incorporate a good standard of landscape design;
- sensitively relate to existing settlement patterns and take account of natural heritage and the historic environment on site and in terms of potential impact on neighbouring areas of importance;
- foster 'inclusive design' by ensuring the development allows access for the widest range of people possible;
- contribute to the provision of usable open and outdoor play space, ensuring its accessibility and connectivity to other green infrastructure, footpaths and cycleways;
- incorporate resource efficient/adaptable buildings and layouts using sustainable design and construction techniques, including the re-use and recycling of construction and demolition waste on site, and energy and water conservation/ efficiency measures;
- minimise the demand for energy and, where appropriate, utilises the renewable energy resource through appropriate layout, orientation, mix of uses, density of development, landscaping, optimal use of local topography and incorporation of renewable energy technologies;
- incorporate facilities for the segregation, recovery and recycling of waste; and
- provide a safe environment by addressing issues of security, crime prevention, and the fear of crime in the design of buildings and the space and routes around them.

In response to this policy:

- The building uses the topography of the site to present a smaller form and reduced mass to the main road, in keeping with the adjacent domestic scale buildings. The three storey element is visible from Lansbury Road where taller flats are currently situated. Materials will be natural and locally sourced where possible.
- We have enhanced the street scene by creating a public courtyard which relates to the main road and the area in front of the shops. This will provide the community with a valuable new amenity space.
- The location of the building around a courtyard allows the scheme to maintain the areas sense of openness and connection with the far reaching views.
- The landscape design will use high quality materials for surfaces and furniture and will enhance the area with well chosen planting and small trees.
- The site was the former location of the Gellideg Working Man's Club. The Wellbeing Centre will reinstate this site as a community and amenity facility.
- The scheme has been designed to incorporate level access to all public areas of the building and surrounding landscape. The building has been designed to promote inclusive access for all members of the community.
- We will be including a nursery garden in the scheme as well as areas for play and social interaction in the public courtyard.
- We will be designing the building to passivhaus standard to maximise the internal comfort for users and dramatically reduce the buildings energy demands.
- Recycling stores and waste stores have been located outside the building.
- Community safety has been an important aspect of the scheme development. The courtyard is well observed from the surrounding roads and houses and good lighting and CCTV coverage will be utilised to ensure the building and its surroundings are well used and remain safe places to be.

BW8: Development and the water environment.

Proposals for built development will only be permitted where:

- they avoid identified river flood plains in order that these areas continue to fulfil their flood flow and water storage functions;
- they do not have adverse effects on the quality and/or quantity of surface waters or groundwater resources, and where opportunities exist, they incorporate measures to improve existing water quality; and
- adequate water and sewerage systems exist, or are reasonably accessible, or are capable of being provided prior to the development becoming operational without placing unacceptable pressure on existing capacity or causing unacceptable environmental harm.

The scheme will accommodate rainwater attenuation which will be located under the courtyard area. All parking areas and the area of landscaping at the lower Lansbury Road level will all be permeable surfaces.

BW12: Development proposals and transport

Where appropriate, the Council will expect all development proposals to demonstrate how they will:

- help reduce the need to travel
- encourage the use of transport other than the private car
- avoid increasing traffic to unacceptable levels
- avoid causing or exacerbating highway safety problems

The proposal includes cycle parking outside the community entrance and is located adjacent to two main roads through the estate. There is a bus stop along the Northern boundary of the site which links with the centre of Merthyr Tydfil. Car parking provision will be maintained at existing levels with 4 additional disabled spaces provided, 2 of which are at the lower Lansbury road level.

4 Brief Analysis

4.1 Key principles and aspirations

The initial brief from the Gellideg Foundation calls for a new landmark and low energy building to better house their existing functions and to provide much needed additional facilities for the community.

The Gellideg Foundation aims:

- To provide facilities for social enterprises operating from the estate
- To provide facilities and training to enable the community to engage with 21st century technology.
- To improve links with the local community & provide an active and inviting social frontage.
- To provide community facilities including an early years facility, training spaces and a range of youth facilities
- The proposed building should be of the highest, practicable sustainable standard employing the ethos of 'eco minimalism'.



Initial Brief & Vision

The current facilities for the Gellideg Foundation are housed in disused flats on the estate. They are in poor condition, are difficult to heat and their sub-divided nature doesn't lend itself to the functions within. The new building will be a focus for the local community, enhancing the wide range of facilities and services currently offered by the Gellideg Foundation.

Client aspirations

- The design must be welcoming and inviting
- The building should be secure and defensible
- The design should seek to change mind-sets give people a sense of worth
- The design should be of a timeless quality and striking enough to be proud of.
- The interior design should be flexible enough to adapt to different uses, possibly through the incorporation of moveable partitions/walls
- The public spaces need to be uncluttered, light, uplifting and with a sense of tranquillity
- Community spaces should be easily accessible through a controlled access point
- Achieve a demonstrable high level of sustainable design and energy efficiency
- Good solar access, day lighting and openness to surrounding views is desirable
- The materials and construction techniques used need to be of a human scale so trainees from the estate have the opportunity to get involved in building
- Incorporate affordable building techniques
- Have minimal running and maintenance costs with efficient energy usage and minimal environmental emissions

Main Accommodation Requirements:

- Foyer /Gathering Space : A multi purpose entrance space
- Conference Room: sufficient for both community and public events of up to 35 people
- Training Room: a versatile space for a range of community activities. To accommodate a domestic kitchen and teaching space.
- IT Facilities: accessible computer and wifi facilities for community use

- Interview Room: private space sufficient for a minimum of 3 people seated at a table
- Offices: private office space for up to 15 staff members and volunteers at the Foundation
- Pre-School: facilities to accommodate 24 children between 2 and 4 years
- A community hall: to accommodate dance classes, jazz band and other local groups
- A chill out area: for youth with small kitchen area
- Courtyard/outdoor space
- Toilets/Plant Room/Stores: sized to suit building occupancy



5 Site Analysis

5.1 Advantages and Constraints of the site

The site is located at the heart of the Gellideg Estate and has a strong presence in an elevated position on the main approach road into the estate. It is adjacent to a bus stop and a row of shops along Heol Tai Mawr, and looks out towards the Brecon Beacons to the North and East.

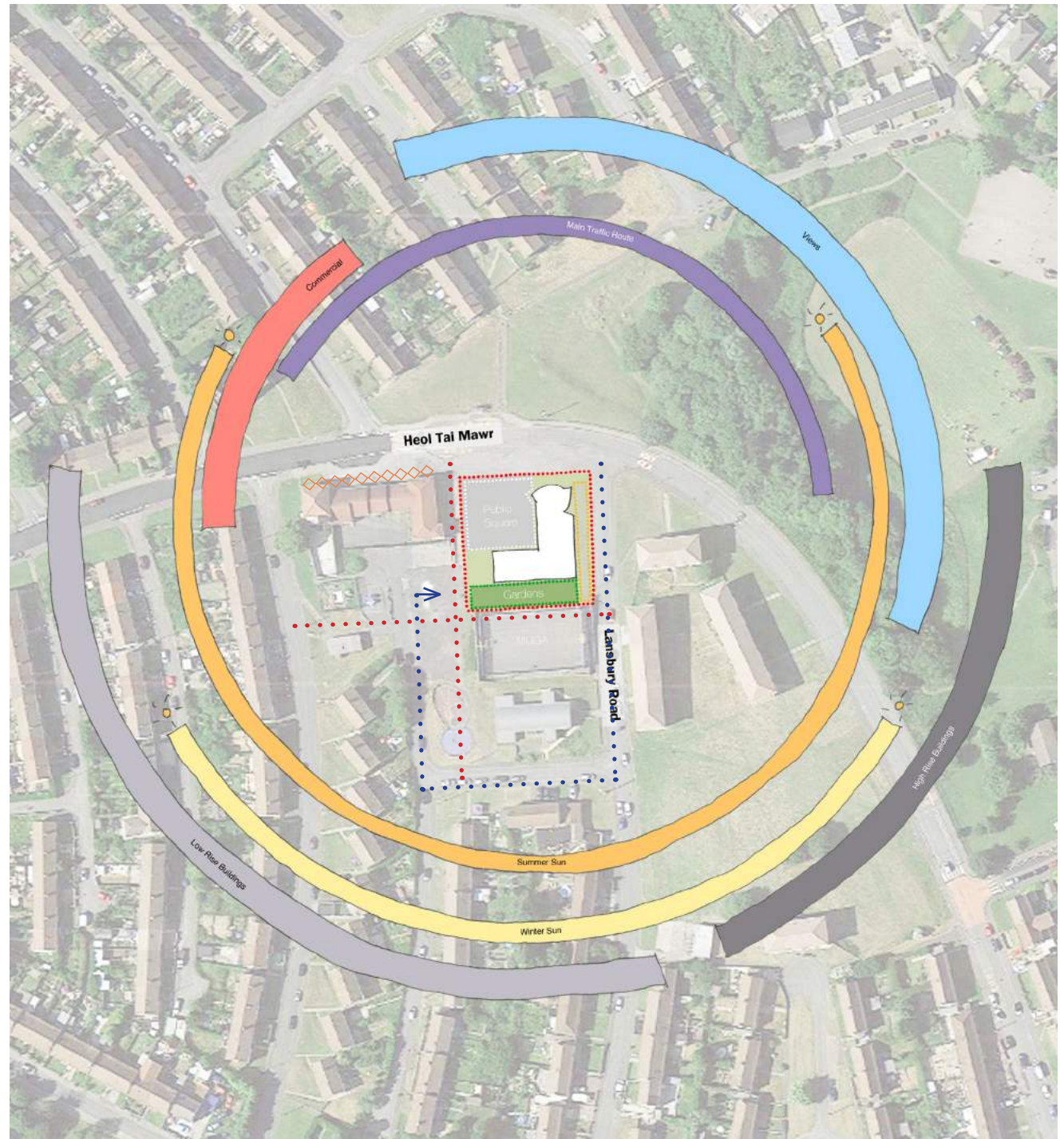
The close proximity of the shops and the bus stops to the site means that there is a steady flow of people through the area and good potential for passive surveillance of the site.

There is opportunity to reinstate a disused car park to the West of the site, behind the neighbouring shops. This area is accessed via Heol Bryn-Y-Gwyddyl, off Lansbury Road.

The main functional constraint to the site is the topography which makes achieving level access difficult, but contributes greatly to the character and richness of the site, providing fantastic, elevated views to the North and East.

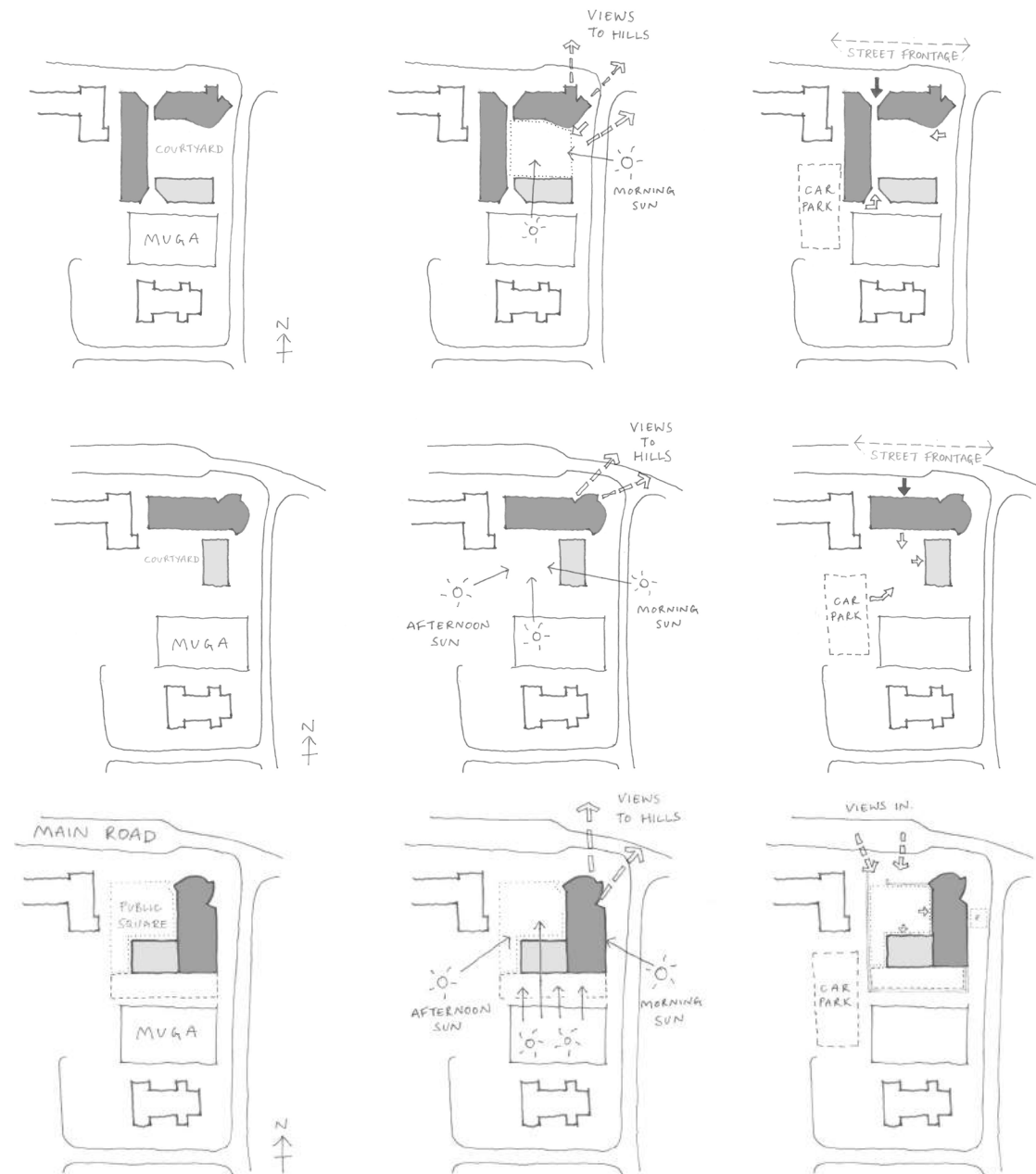
The area immediately surrounding the site has been neglected and is mainly used as a meeting place for local youths and as a cut through across the estate.

The area around the back of the shops to the West is particularly unsightly. Access will need to be maintained for delivery vehicles to the back of the shops so landscaping will need to be used to screen this area from view.



5 Site Analysis

5.2 Site Strategy



Layout Option 1

- › This scheme creates a private courtyard surrounded by two storey blocks to the North and West and a single storey block to the South.
- › The courtyard is elevated above the Lansbury Road level and looks out to the views in the East.
- › There is greater potential for anti social behaviour to occur in the courtyard unobserved.
- › The building is very spread out and management and security of the different wings is potentially difficult.

Layout Option 2

- › This options looks at creating a partially 3 storey element to the North of the site and another two storey element along the East, with entrances at both the lower Lansbury Road level and the higher courtyard level.
- › The creates a South facing courtyard.
- › The courtyard is unobserved from the main road and the community felt the building was turning its back to them.

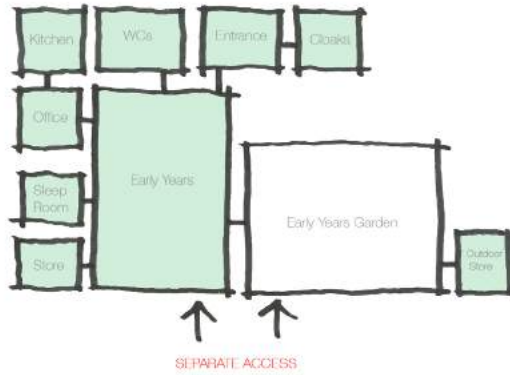
Layout Option 3 - Developed Option

- › This option locates a 3 storey block along the West side of the site, and a single storey block at the higher courtyard level along the Southern boundary.
- › The building partially surrounds a publicly accessible courtyard to the North.
- › This courtyard maintains strong visual links with the main road for passive surveillance.
- › The wing located to the South of the site is single storey in order to maximise the amount of sunlight able to enter the square.
- › A smaller private garden is created to the South of the single storey wing for use by the Early Years unit.

6 Design Process

6.1 Spatial Connections

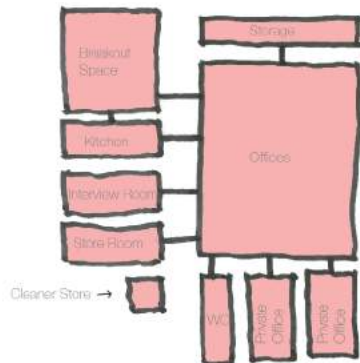
Early Years



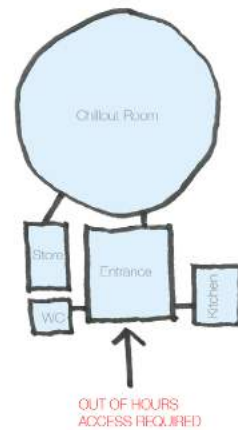
Community Services



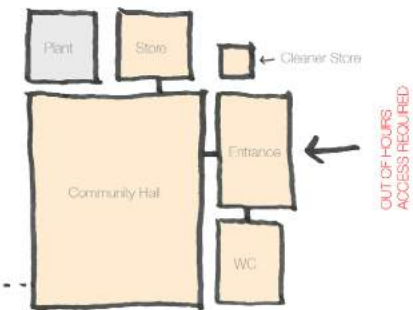
Private Offices



Youth Provisions



Community Hall



6 Design Process

6.2 Development

Consultation

The brief was developed and informed through consultation with the Gellideg Foundation staff and volunteers.

Consultation engagement was conducted in a series of meetings and observations with the staff and volunteers at the centre and more focused strategic reviews with the management staff and trustees. Aspirations for the new building, and facilities required to best promote the Gellideg Foundation were explored and discussed. Feedback and comments were recorded, interpreted and fed back into the brief development.

Once scheme drawings had been developed, further consultation was carried out with the Foundation staff and with the wider public and statutory consultees.

Key Themes and Objectives

Much consideration and discussion has been given to the question of security. The building needs to be highly secure and impenetrable out of hours, at the same time being a friendly and welcoming community building at the heart of the estate.

The building must have the ability to be zoned for use of the separate areas out of hours. This will also aid in any future need for parts of the building to be let out or sold to different users. This flexibility has been another key consideration in the design development. The activities and services that the foundation delivers within the community are always changing and the building will need to adapt to these changes in the future.

The building must also be low energy and easy to manage and maintain. It will take maximum advantage of passive solar gains for heating and good natural day lighting to reduce reliance on artificial lighting, while also minimising overheating in summer.

Design Concept

During the early design stages, we explored several enclosed courtyard schemes which created a defensible outer shell to the building, and a softer inner courtyard area.

However it was strongly felt by local residents as well as the Foundation staff, that any enclosed space would present a challenge and an invitation for people to break in and undertake anti social behaviour unseen.

Instead it was felt that if this courtyard space welcomed people in at all hours of the day and night, and if it was easily visible from surrounding streets and houses, then it would be much more likely to be maintained as a safe place.

The building itself will become the secure line and will 'shut down' with the use of integrated shutters out of hours.

By using the existing topography of the site, we have been able to create level entrances at both the lower Lansbury Road level and the upper courtyard level. This has enabled the creation of clearly and easily zoned areas of the building for separate out of hours use.

Layout

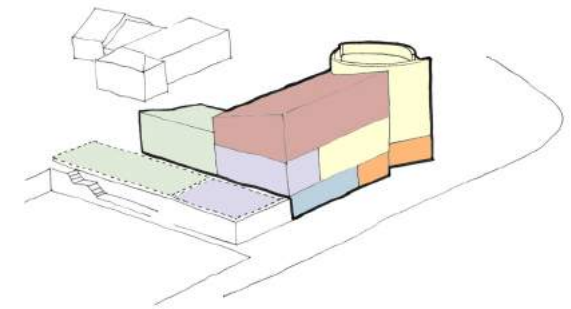
The basic layout principles are as follows:

The main entrance and associated public facilities are located at the courtyard level (upper ground floor). These include the reception, conference facilities and training room.

There is an access controlled stair and lift up to the private offices at first floor level.

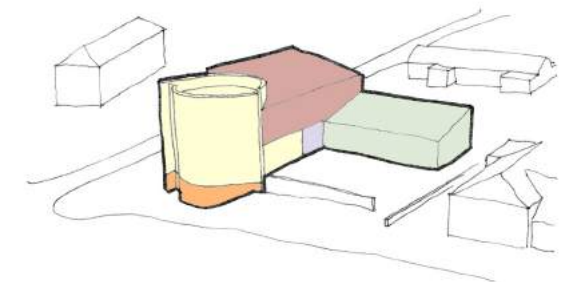
There is a separate access from the courtyard into the Early Years facility. This area has its own private outdoor spaces to the South.

At the lower Lansbury Road level there are two further entrances, one into the community hall and the other into the youth facilities area. These can be used out of hours by restricting access to the vertical circulation in the building.



Massing View 1

- › The Youth Provision and Community Hall are located at the lower Lansbury Road level to allow these areas to be accessed directly out of hours.
- › The publicly accessible areas, such as the conference room and training facilities are located on the upper ground floor level - accessed through the courtyard.
- › The private offices are located at first floor level with views towards the hills in the East.

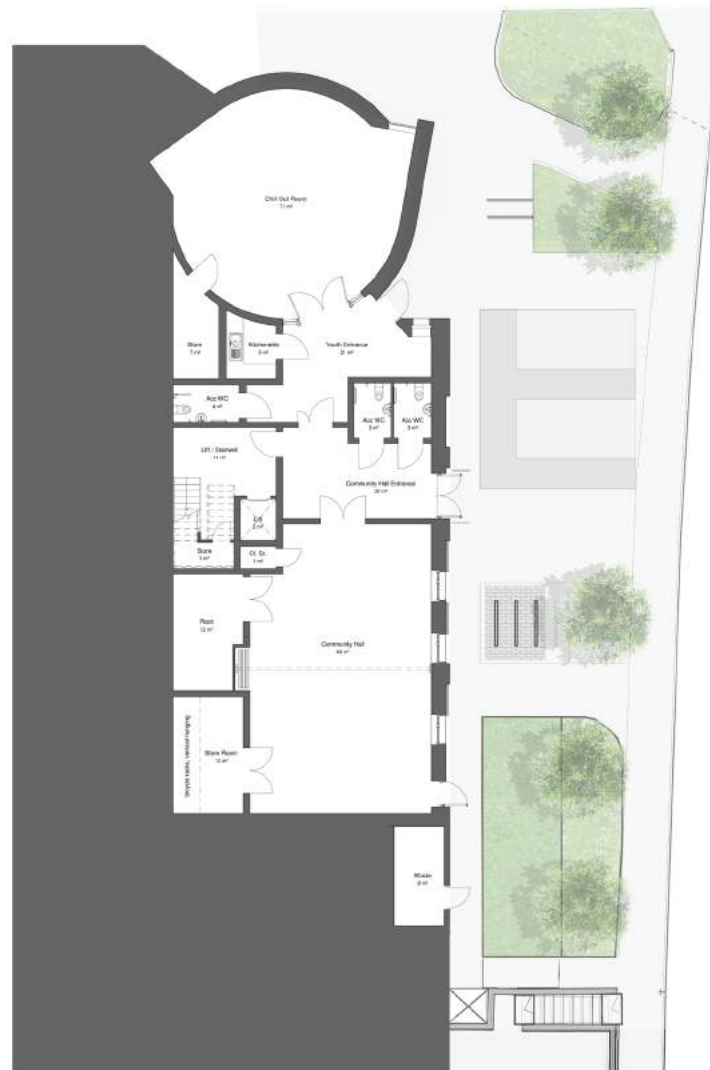


Massing View 2

- › The main conference room is located within the tower as a double height space on the corner of the site.
- › The Early Years provision is located in the single storey Southern wing. This can have its own entrance off the courtyard and its own private garden to the South.

6 Design Proposal

6.3 Building Layouts

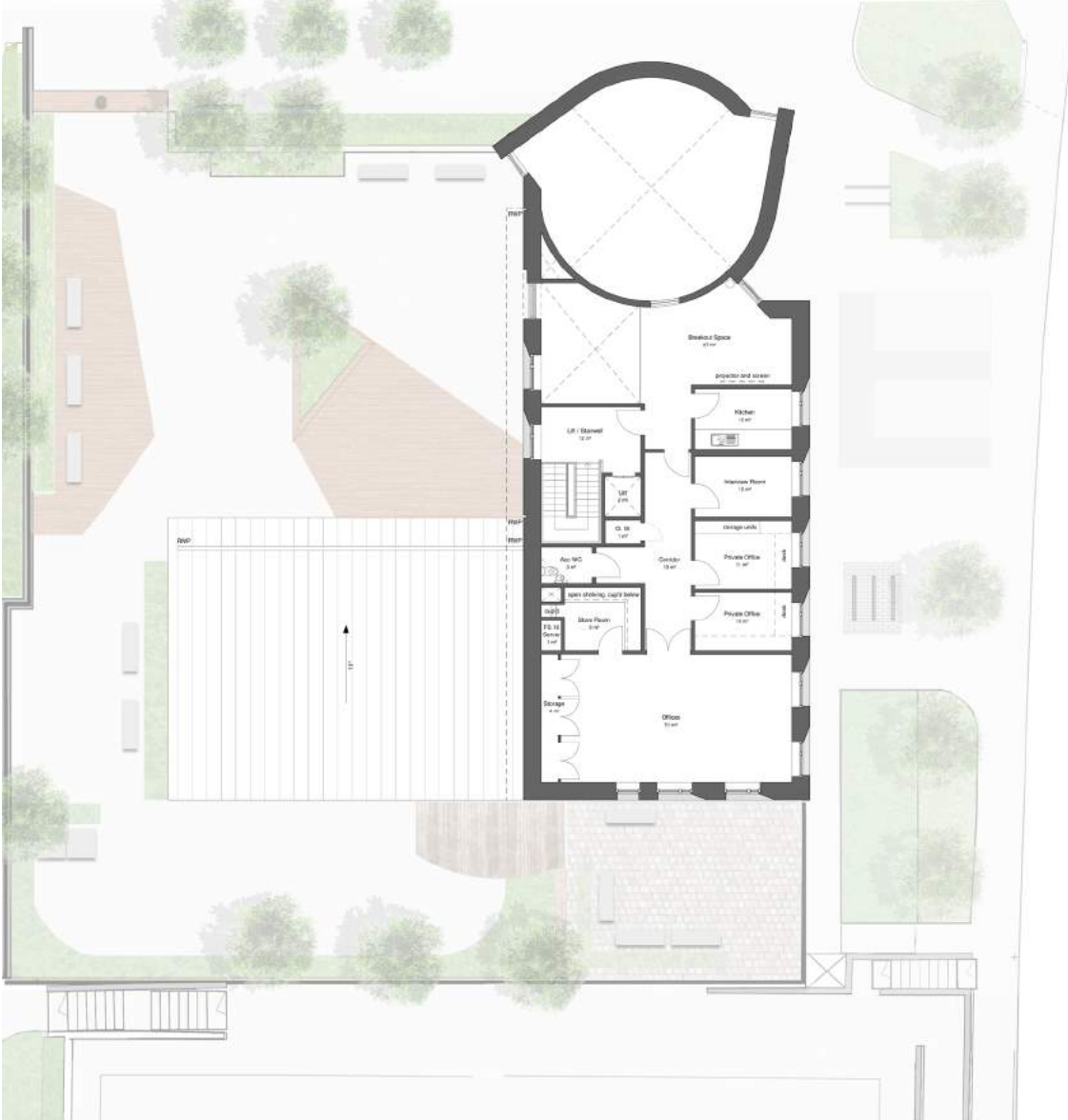


Lower Ground Floor Plan

- › Entrance to community hall and waiting area
- › Separate, but easily connected Youth Facilities
- › Chill out area with kitchenette
- › Large community hall with associated storage and toilets - this area can be hired out to various community groups out of hours.

6 Design Proposal

6.3 Building Layouts



First Floor Plan

- › Private staff areas
- › Open plan office space with associated storage areas
- › Private offices
- › Meeting area
- › Kitchen
- › Breakout area with views over foyer and courtyard as well as to the distant hills in the East.

7 Materials and Context

7.1 Appearance

The detailing, materials and language of the architecture are intended to deliver a contemporary building, which is designed specifically for its purpose and to fit comfortably within its context, creating a unique and exiting community facility. We have carefully considered the location of the building on site and how it relates to the landscape, access, boundaries and neighbours. Combined with good quality day lighting and ventilation, these goals help create a healthy, vibrant and humane environment that supports and enhances the delivery of community services. Our aim is a high quality design that the Gellideg Foundation and wider community can be really proud of, appropriate for both community use today and into the future.

The detailing of the building will be clean and calm, balanced and well resolved but also with a playful aspect. The materials and form of the single and three storey elements distinguishes function and breaks down the overall scale, allowing the building to present a different aspect and character with each elevation, while a continuous approach to detailing unifies the scheme.

The mono-pitched roofs have generous overhangs, giving the building an open welcoming feeling and helping to prevent easy access onto the roofs.

Large areas of glazing at ground floor level, will also give an open and welcoming impression to visitors, while movable screens will allow these areas to be protected at night. All rooms have smaller opening windows for summer ventilation and secure grills for night-time ventilation.

A simple and robust palette of external materials will include metal standing seam and EPDM roofing, and aluminium clad timber windows and doors. Cladding materials will be robust and make reference to the areas industrial history. These materials will include Roman brick cladding and perforated metal security screens. Maintenance, durability, fire protection, weathering, sustainability and surrounding character are all factors we have considered in arriving at this material palette.

The primary structure will be timber. We have chosen to

work with timber for its sustainability credentials (low embodied energy and locks up CO2) and for the warm and friendly atmosphere that can be created with timber architecture. The building has been designed to be a highly energy efficient, low energy, low water use, naturally ventilated, well day-lit, healthy and comfortable community facility.

Internally, a soft yet durable palette of natural materials will be specified, to include timber screens and fittings, natural linoleum and rubber flooring, and organic paints and stains. Main public areas such as the conference room and the foyer may incorporate exposed brickwork walls to create a more impressive, tactile environment linking to the external appearance.

Lightweight, retractable, canopies along the south elevation provide covered teaching and play space immediately adjacent to the Early Years unit. These will help maximise penetration of natural light into the classrooms beyond while providing shading in the summer months.



Perforated metal shutters



Roman brick



Vertical solar shading fins



Brick bond patterns



Metal standing seam roof



8 Community Safety

8.1 Secure by Design

Safety and security for both the building users and the wider community have been a careful consideration throughout the design process. We have consulted extensively with the staff, volunteers and the public as well as the local Architectural Liaison Officer from South Wales Police.

The building is a community facility and as such is required to open up to and welcome the local community in. It must also be defensible, robust and easily secured out of hours.

Passive surveillance from surrounding roads is an important tool for keeping the area safe. The public courtyard, which also forms the main access route into the building, opens up to the main road and the busiest area of the estate in front of the shops. There are also lines of sight maintained from residential units to the South and West.

The courtyard is not fully enclosed but the boundaries are clearly defined with retaining walls, vertical post fencing and changes in ground surface. This ensures that a 'sense of place' is created to this courtyard which can become a focus for community activity and make a unique contribution to the public realm of the estate.

Lighting

External lighting will be installed in the car park area and around the building at both the lower Lansbury Road level and the courtyard level. Lights will be vandal resistant and where possible, positioned in elevated positions.

The lighting will be controlled by time switches and will compliment and enhance existing CCTV on the site.

Building Shell

Materials have been selected for their durability, robustness and ease of maintenance. Integrated shutters will secure the lower levels of the building out of hours.

Hidden areas have been designed out as well as features that would aid climbing or scaling.

Landscaping

The planting will be kept to a low level to enable unobstructed lines of sight to be maintained towards the entrance.

All external furniture will be fixed to the ground, made off solid and robust materials and positioned in such a way as to avoid them being used as climbing aids.

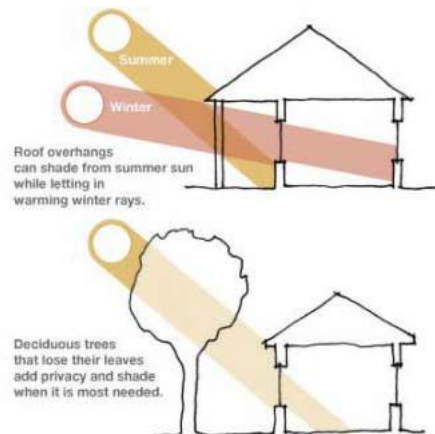
9 Sustainability

9.1 Sustainability and environmental strategies

The building is designed to a high level of sustainability in order to achieve both BREEAM Very Good rating and Passivhaus accreditation. The approach will be to build sustainability into the design from first principles, to reduce energy consumption, therefore reducing carbon emissions, rather than rely on add-on micro-renewables to offset carbon emitted by an inefficient building.

Additionally, the proposed building is designed with regard to sustainability of the materials used in the construction: any concrete used will seek to incorporate high recycled content (GGBS), engineered timber frame; recycled newspaper cellulose insulation; UK sourced brick cladding.

The building has generous amounts of carefully designed glazing, providing natural daylight and useful solar gain. These windows are designed to help keep the use of artificial lighting to a minimum, whilst making the most of the far reaching views. Shading to large areas of glazing is provided by means of fixed vertical fins on the East and West elevations and from an additional canopy on the South elevation.



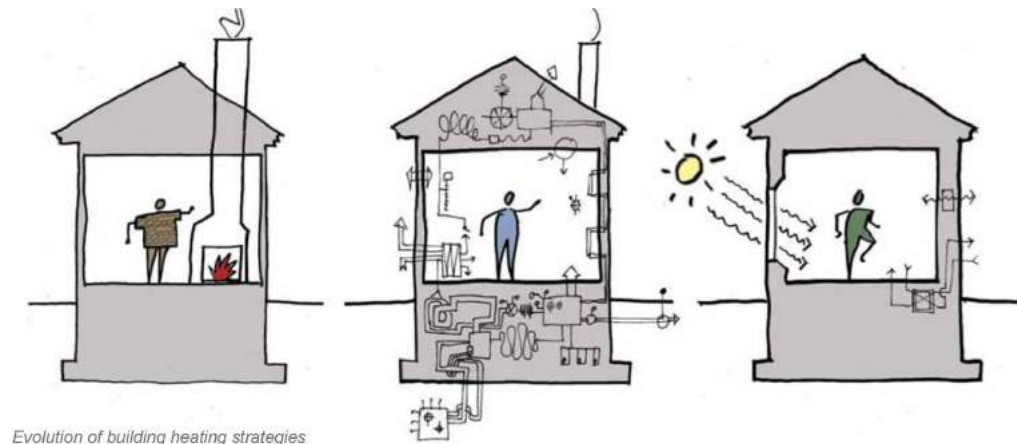
Passivhaus

In the UK the emphasis is on offsetting carbon emissions with renewables, whereas Archtype believe it is better to reduce carbon emissions by simply using less energy. Passivhaus is a rigorous energy standard that achieves significant reduction in energy consumption, over and above UK building regulations.

What is passivhaus?

Passivhaus was developed in Germany through a number of research projects carried out between 1988 and 1990 by a physicist Wolfgang Feist, in response to concern that buildings were not performing as predicted by thermal modelling.

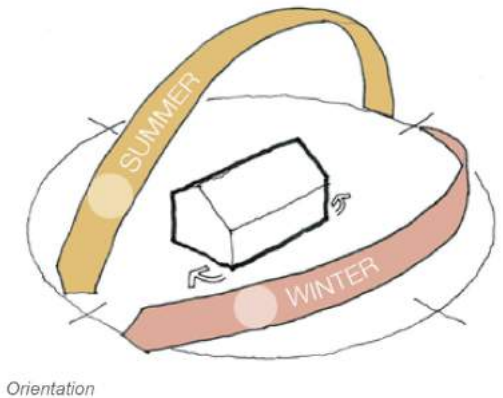
The Passivhaus Institut was then founded in 1996 to promote and control the standard through certification and there are now around 15,000 buildings completed and certified to this standard, mainly in Germany and Austria. It is not imposed from above by central Government but was developed through individual projects and real life experience of it actually working and delivering. A wide variety of houses, flats, offices, schools and other buildings have been developed to this standard and it is now being adopted by many local authorities as the standard for all public projects in their area.



How do you achieve Passivhaus?

To achieve passivhaus you have to:

- comply with a set of basic rules and standards (see following page)
- demonstrate that you achieve the energy standard by modelling the building using 'PHPP' (passivhaus planning package)
- monitor construction
- supply PHPP modelling, evidence from air test, and proof of supply of certain products to Passivhaus Institute
- Passivhaus Institut assess compliance and issue certificate



9 Sustainability

9.2 Basic Principles of Passivhaus

Passivhaus is essentially all about achieving energy reduction by good design, rather than relying on technical fixes or add-on technologies. This is robust and longlasting. Key principles are to:

- get the orientation and form working together to maximise and control solar gain, improve daylighting and enable natural ventilation
- improve the fabric - eliminate thermal bridging, increase insulation, airtightness and window specification
- use mechanical heat recovery ventilation to allow sufficient ventilation whilst avoiding loss of heat in winter, and use passive ventilation for night cooling in summer
- make heating efficient and eliminate need for cooling
- use PHPP to model and test - achieve heating of 15kWh/sqm and total primary energy of 120kWh/sqm and notional carbon reduction
- enable easy and intuitive controls of passive systems
- keep things simple

In other words, Passivhaus is about making the basic architecture and building do all the hard work in reducing energy consumption.

U-Values

U-Values are a measure of the amount of heat loss through the fabric of the building, therefore the lower the value the more efficient. Increasing insulation levels from standard practice and using triple (as opposed to double) glazing reduces heat lost through the building fabric.

Air Tightness

Airtightness is a measure of how much air movement there is through the building fabric. In a traditional building this would be noticed as drafts. Passivhaus construction increases air-tightness, reducing drafts so less heat can escape.

Thermal Bridging

Thermal bridges are areas in the external fabric where a material with a higher ability to conduct heat 'bridges' the duvet of insulation, this allows heat to be lost. In the passivhaus method these are systematically designed out making sure that the insulation forms an unbroken

line around building's shell, like an uninterrupted duvet.

Form

The form of a building must maintain a good surface area to internal volume ratio to avoid having a disproportionately large heat loss area. This is the opposite of the concept of an elephants ears: the more compact the form, the less heat is lost.

Orientation

The orientation of a building has a significant impact on how efficiently that building operates. The ideal orientation has the prime glazed frontage facing south. There is no restriction which way this facade faces in Passivhaus, but overheating can be more effectively controlled if it is within 30° east or west. For example: placing the majority of windows on the west facade of a building risks summer overheating. Low level, evening sunlight could penetrate the building in an uncontrolled manner. With the higher levels of insulation and airtightness associated with Passivhaus construction, this heat would have to be ejected to maintain a reasonable temperature internally.

Ventilation

In the uk, background ventilation is created by 'trickle vents' which are uninsulated holes that break the thermal line of the building. This causes heat loss and cold draughts. In passivhaus a variety of methods are used depending on the season. In the winter a mechanical ventilation heat recovery system (MVHR) is used. This heats fresh air with outgoing stale air, increasing O2 levels and reducing heat loss. In the summer the MVHR can continue running with a heat bypass (so heat isn't retained anymore) Alternatively natural ventilation can be used such as cross ventilation or stack ventilation by just opening windows.

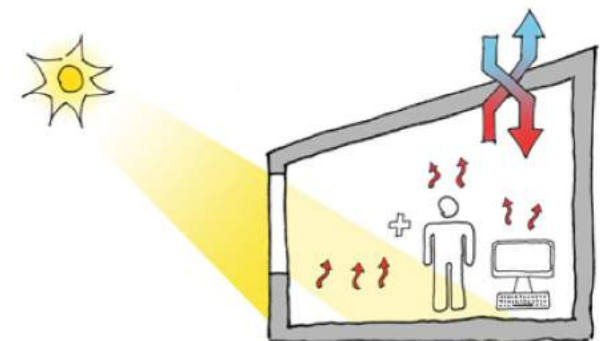
Capital cost

There are extra costs for increased insulation, higher performance windows, achieving airtightness and mechanical ventilation, but reduced costs through smaller heating system, eliminating underfloor heating, simpler controls and no requirement for renewables.

Experience is that Passivhaus costs are around 5% more than basic standards. This capital is generally repaid by energy savings in around 10 years. UK experience is that achieving BREEAM 'Very Good' costs up to 5% more and that 'Excellent' costs around 5 - 8% more than basic standards. BREEAM however, does not achieve the same energy savings and therefore does not have a payback.

Running Costs

The reduced running costs can be comparatively substantial: a recently completed Passivhaus Primary School in Wolverhampton, of circa 2000m², has reported annual space heating costs of £5,000. This is compared to a nearby school of similar size and occupation that reports annual space heating costs of circa £45,000. The second school was completed to Building Regulations & was handed over at roughly the same time as the PH school did. In the current funding model for schools, this is all money that can go back into the school's budget allowing significant investment elsewhere.



Passivhaus strategy

10 Landscaping

10.1 Landscape Design

Lying within an elevated area of community housing at 240m AOD, the 'site' comprises:

- a steeply sloping area (+238-242m) that housed a community building which has been demolished, grassed over, and partially fenced off
- adjacent footpath and mown grass slope alongside the chip shop
- an informal chippings surface used for occasional parking

In addition to housing and a small row of shops, the south boundary is defined by a Multi-Use Games Area (with a fenced play area that has been vandalised and the blank side elevation of St Lukes Church beyond). The built environment setting for the Centre is poor and mostly outside the control of the Foundation.

The context to the east is proposed for development, with demolition of two former flats to enable construction of a new office building and car parking for Merthyr Valley Homes which is also part of this application.

Existing vegetation in the north east corner is mainly scrub growth and will not be retained within the scheme (refer to Tree Survey by Mackley Davies).

Panorama photos show the key views. The site is elevated, with long distance views to the north and east, and exposed with little protection from planting or buildings.

The sloping site presents an opportunity to use retaining walls to define and provide shelter within the square, but presents a more difficult boundary to resolve with the adjacent MUGA.

The approach to planting is to use a simple palette of trees and hedges with robust areas of evergreen shrub planting (avoiding the use of thorny shrubs which will collect litter) to provide much needed shelter and visual softening of existing buildings and structures. The planting is designed for ease of maintenance and respects the open character of trees and grass associated with social housing of the post-war period.

Hedge planting will need to be maintained to the height indicated on the plans to enable natural surveillance of parking areas.

Sewer easements and potential for shrinkable clay are both significant constraints on the location and species for tree planting. Tree species have been selected for the space available.

Feedback from public consultation on planting within the square was to provide colour, this will be achieved through the use of bulb planting for seasonal interest and is an aspect that can be developed and easily changed over time by the Foundation.

Landscape proposals for the square will provide a welcoming, sheltered but robustly designed amenity for public use, using walls, planting and railings to:

- semi-enclose the space
- create some comfort from the north winds
- maintain views to the hills to the north
- soften views to the blank elevation of the adjacent shops
- stop views 'leaking out' to the main road (Heol Tai Mawr)

The square lies above the boundary with Heol Tai Mawr, but below the boundary with the shops. An inward looking square has been designed that is fully open to public access and provides modern style simple clean lines in seating, planting and surfacing.

Retaining walls in brick to match the building elevations are proposed, slightly raised above adjacent levels to reduce ingress of litter, and topped with vertical painted railing. A short section of freestanding wall in the north east corner acts as a wing wall from the building and will provide a sheltered area for seating in the sun, with planting on the Heol Tai Mawr side to soften the wall height.

The square is kept open to enable the Foundation to run community events, with planting and seating around the edges. Planting is at ground level, protected by

10 Landscaping

conservation kerbs with modern block-style seating. A raised planted triangle and semi-mature tree provides a quality focal point at the centre and can be used as informal additional seating.

Surfaces in the square are gently sloping to the north west entrance, there are no abrupt level changes, providing access for all. Rectangular concrete paving slabs in a neutral colour define the main routes to reception and the pre-school nursery, with highlight strips that could incorporate tile or brick artwork from the community. Smaller set-sized paving provides contrast and defines the seating areas at the edges of the square in a warm colour that will blend with the building brick. The paving is deliberately off-set from the building angles to add visual interest.

The boundary with Lansbury Road provides additional parking for disabled use, and screened storage for waste. Tree planting and low evergreen mass shrub planting will soften the building elevation, with species to match the MVH Office car park frontage to visually blend the two schemes. The wall to the east end of the terrace (mostly retaining levels) will be around 3.7m, new planting and the existing MUGA steps will help visually reduce the wall height.

The boundary with the MUGA has been designed to provide security for the new 5m wide terrace without the amenity area feeling hemmed in by fencing. The MUGA boundary with the pre-school garden has an increased railing height for added child protection. The retaining wall height is around 1.2m and has been extended a further 0.7m above the terrace, topped off with a vertical painted railing. This is a long section of wall that will be brick-faced, a brick pattern or texture will be used to break up the elevation.

Surfaces, planting, seating provided on the terrace will not be visible from public view except from the top of the MUGA steps to the west and have been designed to provide play space for the pre-school area with a range of surface textures, and separate amenity break-out space for the training rooms.

Planting to the south facing terrace is restricted to the

training break-out area, with evergreen robust species in planters (including 'roof garden' planters above the lower ground floor rooms). The Foundation has requested no planting for the pre-school garden to enable this area to be developed by the users, for example provision of planters for growing food and open access to the fenced boundary for art work.

The main car park formalises an existing area of chippings. Surfacing will be permeable tarmac, with a new tarmac footpath link to the square (widening the existing path from 1 to 1.8m). Planting of trees and hedges is provided where sight lines allow including around the unattractive rear elevations of the shops.

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10.2 Landscape panoramas



P1. Proposed car park & footpath link to the square



P2. Proposed entrance to the square



P3. View out from the square looking north west

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10 Landscaping



P4. View from junction of Lansbury Road with Heol Tai Mawr - building marked will be demolished & replaced with MVH Office and car park



P5. View from MUGA to side elevation of St Lukes Church



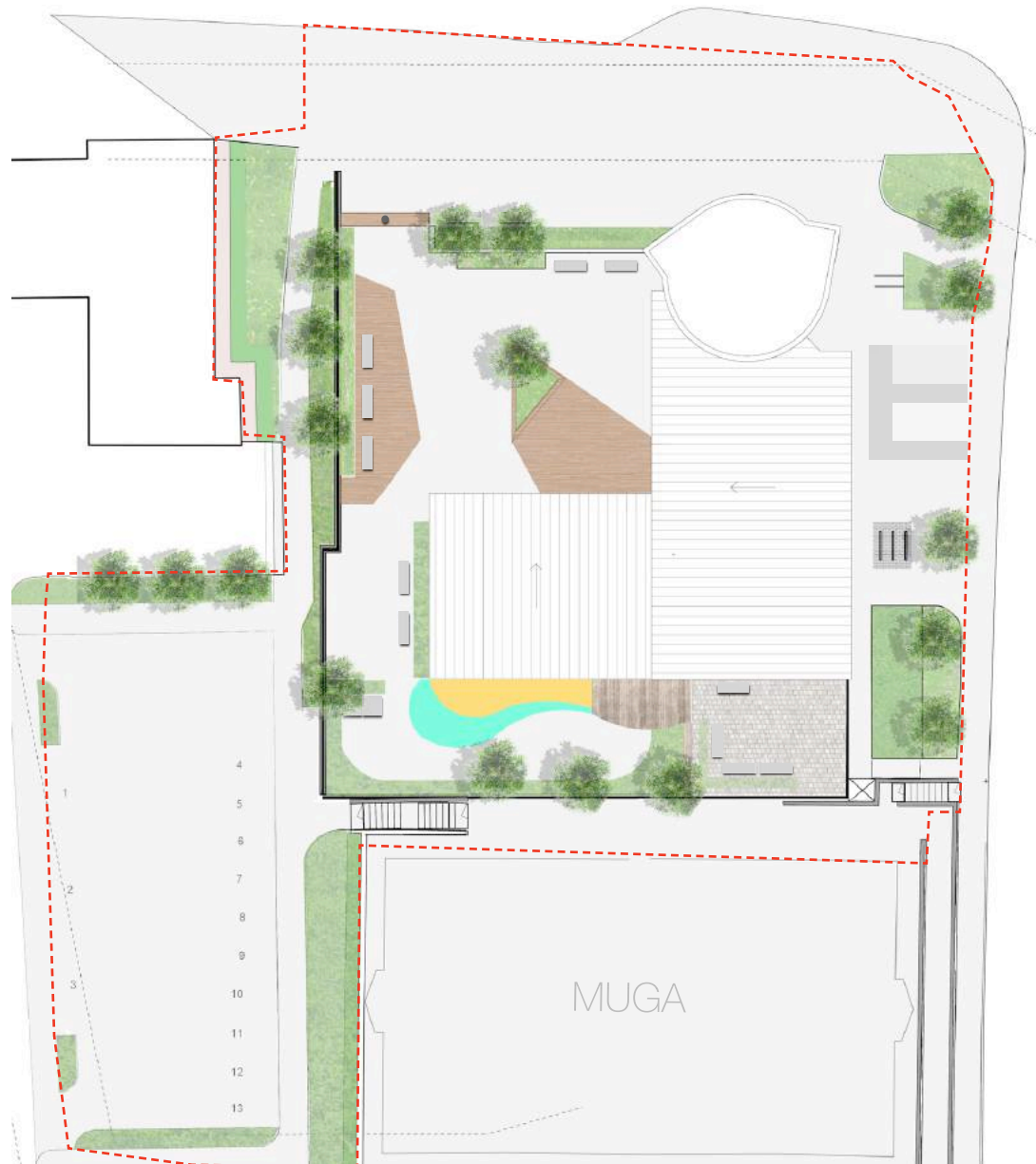
P6. View from path along the MUGA - boundary will be defined by the proposed elevated terrace

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GELLIDEG WELLBEING CENTRE - EXISTING VIEWS

11 Movement

11.1 Site Layout



Movement in and around the site

Parking for the Wellbeing Centre will be provided on the former carpark to the West of the site, behind the row of shops. This will provide 13 parking spaces and two disabled bays. A widened footpath will be created from this area, down past the side of the shops and into the courtyard; thus enabling level access from the parking area right to the main entrance.

The public courtyard is accessed from the North West corner of the site, adjacent to the row of existing shops. The surface of the courtyard slopes gently upwards towards the main entrance on the East side of the courtyard and the Nursery entrance on the South.

The boundary wall along the West side of the courtyard rises up to act as a retaining wall to the bank that slopes up to the car park behind. The wall along the Northern boundary also forms a retaining wall as the pavement falls away down to the lower Lansbury Road level.

At this lower level, there are two separate level pedestrian entrances, one to the Youth Provision and one to the Community Hall. There are also two disabled parking spaces at this level, as well as areas of planting and a line of trees which will reflect similar planting in the scheme proposed for the opposite side of the road.

The private garden to the South will be divided into two distinct and separate areas. There will be the nursery garden, which will consist of a variety of tactile surfaces, and the training kitchen garden, which will consist of hard landscaping with raised planters and benching.

The path and steps between the site and the existing MUGA will be maintained and improved. This is currently used as a short cut through the estate and will also provide the quickest route from the new MVH Offices to the shops.

12 Access Statement

12.1 Inclusive Design

Objectives

It has been a priority throughout the design process to ensure this building adopts inclusive design principles to enable all members of the community to access and benefit from the facilities.

The building will also be subject to and required to comply with the appropriate building regulations covering accessibility, movement and navigation throughout the building and external landscape. This statement demonstrates strategies adopted from 'best practice' guidance documents throughout the design process.

Entrance & Threshold:

All pedestrian routes onto the site are level with the surrounding highways pavements, and will have suitable signage, visual contrast and associated change of surface texture to signify entrance. All pedestrian routes will be 1800mm minimum width, with a cross gradient no greater than 1:40 and a running gradient no greater than 1:20. All routes will be clearly defined, and the material language will highlight separation of pedestrian and vehicular areas.

All entrances provide a level threshold and any protruding up stand greater than 5mm will be chamfered or rounded, any subsequent level change greater than 15mm will be clearly visually marked.

The glazed elements will display manifestations and visual contrast strips for clarification of presence.

All entrance and threshold treatments to comply with Approved Document M.

Upon entry into the building a transition space with appropriate lighting enables acclimatisation and orientation to the internal building layout. The reception is immediately visible within the entrance lobby, which also incorporates a waiting area and publicly accessible internet and phone points.

Level Access to WC

Accessible WC's are provided at all levels.

There is also an accessible shower and changing area located in the Health Suite on the lower ground floor level.

Lighting

Lighting throughout the building will be designed to help orientate the building users. Colour and luminance contrasts will be used to separate elements of the building such as steps, handrails etc. as well as wall, floor and ceiling finishes.

Lights will be positioned where they do not cause glare, reflection, shadows or pools of light and dark.

Landscaping

There will be level access to all entrances and between entrances via the surrounding pavements. There will also be level access from parking spaces at both levels to entrances in accordance with Approved Document M of the Building Regulations.

Emergency Services Access

Emergency vehicles will be able to access the courtyard by lowering the bollard positioned at the entrance. This will allow emergency vehicles access to the main entrance of the building across the courtyard.

There is also access to the three storey East elevation from the lower Lansbury Road.

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