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The Old Ironworks Retreat
Millom

Design & Access statement (A)

2020-05

Preface

This document outlines the proposal to develop the identified site at the Old Ironworks on Devonshire Road in Millom as a residential Retreat / Sanctuary as described in the accompanying Planning Statements.

The proposal is a revised design of a previously submitted and conditionally approved scheme from 2016 (approved 2018) reference number: 4/16/2340/0F1

This document has been prepared by IDK on behalf of As If By Magic Ltd. (AIBM)

Details

SITE ADDRESS
Old Ironworks Site, Devonshire Road, Millom

COORDINATES
54.208179, -3.254015

SPECIAL DESIGNATIONS
Site of specific scientific interest
Brownfield

Directory

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The Plug, Furnace No.1. IDK. 2018.

1.0 Introduction

1.1 As If By Magic ltd.

‘A group of people engaging in work with people who care.

The group name came from the French expression ‘mine de rien’ meaning something good happened without me seeing it coming.

The company has been developing in a holistic fashion over the last few years, with high hopes and aspirations that are now starting to become a reality. We have and continue to put a lot of thought, time and energy into achieving an engaging and sustainable future for our Group and all those that come into contact with us.

Based in the Western Lakes with engagements in Cartmel Fell, Ulverston, Broughton, Lady Hall and Millom and Haverigg. The As If By Magic Limited Group Directors are old family friends, with a shared outlook on health, nature, business and development. Working with the local community as well as groups from further afield we are keen to ensure the best teams are working on each project and are committed to ensuring we deliver on our promise to positively engage, nurture, develop.

Heritage, history, architecture, ecology, community, food, health and wellbeing, accessibility and sustainability are at the heart of each project we engage with.

At the forefront of this aspiration is a multi million pound investment into the Millom and Haverigg area. Developing and furthering the legacy of the Old Iron Works Site in Millom, once the heart beat of the town’s industry now a redundant industrial estate sitting alongside a Site of Specific Scientific Interest. The As If By Magic Group Ltd are honouring the legacy of this area by creating a new life source for the town encouraging sustainable business and tourism creating jobs and training opportunities.

The project will incorporate accommodation for 58 people as well as offering fully accessible restaurant and community facilities in the old gate house, a communal space in the form of the Octagon that not only is seeking and on track for the highly sought after BREEAM Outstanding Award but has no rival in design or footprint throughout Europe.

Committed to bringing change in the present that will last well into the future, we are proud and happy to be able to be engaged in so many wonderful projects with such great people.’

1.2 IDK

Based in Paris and London, IDK works in the field of architecture, education and research.

The three founding partners possess over a decade’s experience from world-leading design firms and have built a broad body of international experience in the design and delivery of large public projects.

Emerging from the Royal College of Art - the studio was established with an aim to create design through an earnest collaboration with clients, makers and stakeholders in recognition that architectural production is a perpetually collective act.

1.3 Site History

The site is located at the corner of the Old Ironworks on the North shore of the Duddon Estuary in the Borough of Copeland on the western coastline of the Lake District. Opened in 1865, then closed 1968, the Ironworks site has since been reclaimed by nature, and now sits on the corner of a designated Nature Reserve.

Originally built on land reclaimed from salt marsh, close to the small communities of Borwick Rails, Rottington and Salthouse, the Ironworks supported the rapid growth and development of Millom in the second half of the 19th Century. High quality Cumbrian iron ore was in great demand with Millom ideally placed next to natural resources with both good rail links and coastal access. At its peak the town boomed to reach a population of 10,000. However, like many mining communities in the North of England, when the Ironworks closed in 1968 the loss of the areas prime economic foundation was a huge blow to the people of Millom and neighboring towns.

Apart from the slag bank, the only obvious evidence left of the site's industrial heritage, is the Millway building on the South Eastern corner of the site and the 'plug' or 'bloom'. This artefact of solidified molten iron is all that remains of the last blast furnace in operation here. Known as No.1 furnace, it had only started working in 1960, 8 years before the site was closed.

Millom Ironworks. Credit / Date unknown


Old Ironworks
Retreat Site
Borwick Rails
Parking site
Borwick Rails
Warehouse Site

2.0 Proposal

The proposed development scheme looks to revitalise the area by creating a spiritual sanctuary and residential retreat within the historic nurturing landscape of the site.

The Retreat will provide reflective training space for the practice of spiritual healing techniques, learning and self development, offering residential and communal services for guests and residents of Millom alike.

Formed of a central gathering space (The Octagon), a community focused restaurant-cafe and lounge space in the restored Millway building (Millway), a range of accommodation units and a series of sculptural installations - the diverse nature of the site will create a unique environment. The Retreat will be managed from Millway with the site itself remaining open and accessible to all in line with the development principles that are central to the philosophy of the site. The site is supported by a proposed new warehouse structure on the Borwick Rails site.

2.1 Masterplan

IDK have worked with AIBM to refine the program for the masterplan of the Retreat site. The presented strategy sets out the holistic framework for the unified delivery of the project.

The overall brief is to create a small earth village where each architectural intervention in the landscape offers a unique, restorative experience. The network of structures across the site work in harmony to create a rhythmic experience with moments of both density and isolation as the various buildings and programs offer opportunities for collective unity and individual reflection. These moments are arrayed along a meandering path that winds its way across the site taking visitors on a journey that ebbs and flows, turns and evolves. It begins with the welcome at Millway and culminates in the Octagon.

Founded in principles of spiritual and sacred geometry and informed by an understanding of energetic forms, the serpentine path branches into smaller tributaries to provide access to accommodation or ancillary services.

The path orients itself and its attendant structures to the natural landscapes and wide skies that open up to the north of the site. The planted boundary to Devonshire Road creates an acoustic separation from the rest of the open site.

The landscape design and ecological strategy has been closely considered to ensure the development has a net positive impact on the ecology of the site with a light touch approach at its core. A site wide low energy network will be created through the implementation of low carbon and renewable heat and electrical energy production.

2.2 Area Schedule

	Sqm
Gross site area: Old Ironworks / Devonshire Road	26,155
Gross site area: Parking / Borwick Rails	1,725
Gross site area: Warehouse / Borwick Rails	662
GEA: Octagon	400
GEA: Ancillary 1	145
GEA: Millway	625
GEA: Residence	112
GEA: Residence Accessible	80
GEA: Sensory Experience - Womb	35
GEA: Sensory Experience - Triple Burner	45
GEA: Rotunda	150
GEA: Rotunda - Existing (Luna)	30
GEA: Vardo Wagon (estimate average)	48
GEA: Airstream Caravan (estimate average)	216
GEA: Borwick Rails Storage Warehouse	637
GEA: Ancillary 2	50
GEA Subtotal:	**2,573**
Sculptures (footprint)	
Liver	18
Lungs	15
Spleen	15
Kidney	35
Heart	23

Concept Visual: The Octagon / Approach & Entrance. IDK. 2020

2.2.1 The Octagon

Central to the site, the Octagon represents the culmination of the spiritual journey. At its core, the space provides a space for gathering for the practice of a broad range of martial, spiritual and creative art forms.

The octagonal form of the building is derived from the eight-sided gates of the Bagua - a chinese philosophical system.

Running throughout is the principle notion of balance and harmony and through extensive dialogue over 3 years with AIBM, IDK have delivered an architectural proposal that harnesses this balance between the energetic, spatial,human and ecological functions of the site.

Internally, a single domed space graduates from the spiritual eight sided form to the universal and heavenly symbol of the circle. The singular interior space culminates in a circular skylight, flooding the interior with natural light.

Externally, the pitched roof rests on top of the grounded base of local sandstone. The hewn and textured surface of the stone sits in contrast with the smooth zinc roof, simultaneously grounding and rising up.The roof's faceted surface will absorb the many hues of the ranging coastal sky, subtly integrating the volume within the wider landscape. Large format samples of both the stone cladding and the zinc roof material are available for review on site.

The ambition of the Octagon Building is to achieve a BREEAM rating of outstanding.

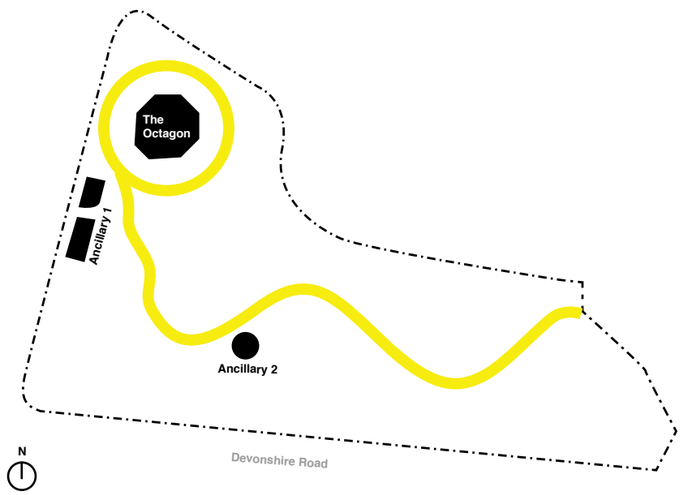
2.2.2 Ancillary Buildings

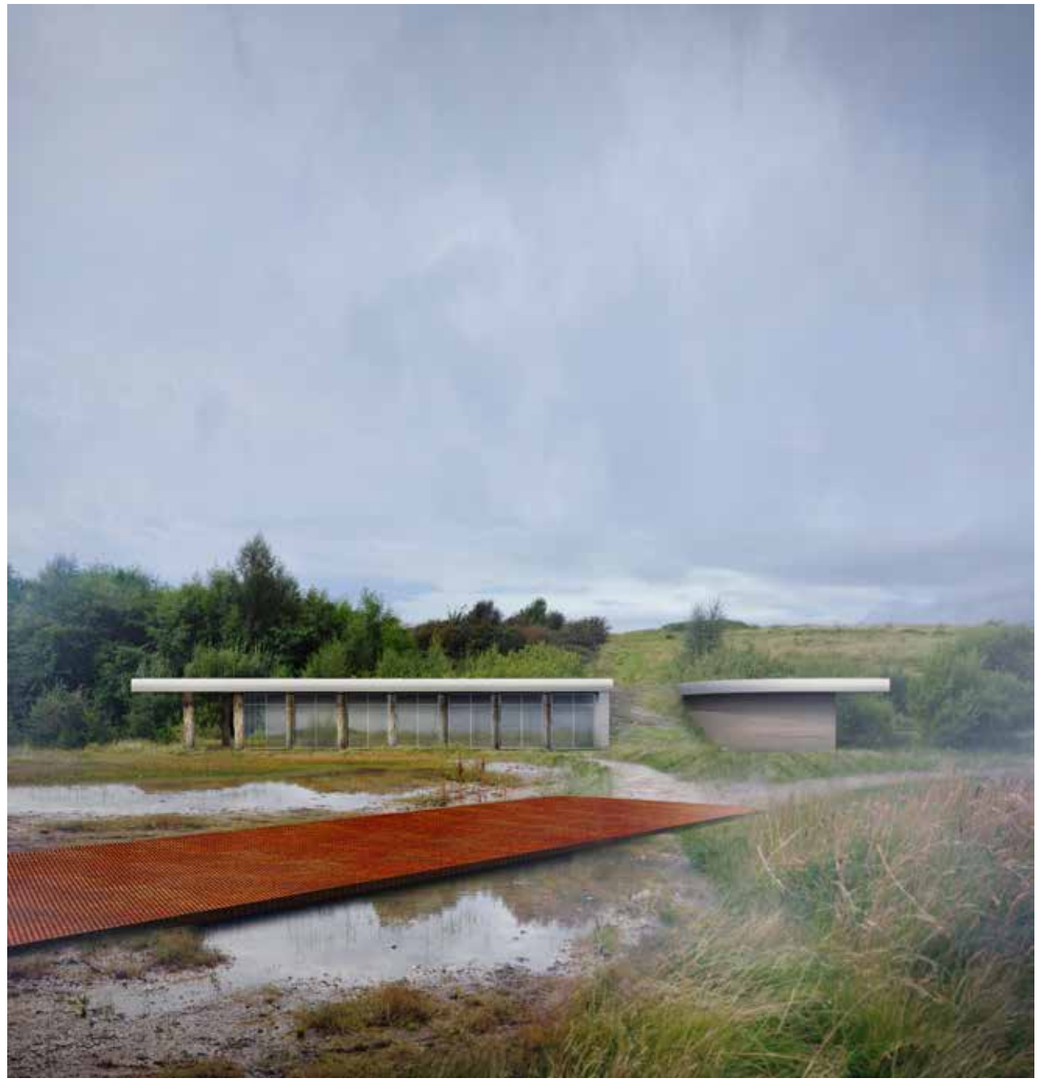
Two supporting Ancillary structures support the functioning of the Retreat as a whole.

Ancillary 1 houses 4 accessible WC and showers and a kitchen and dining area to provide breakout space for classes or gatherings within the Octagon. A ramped surface bisects the structure to soften the volume within the wider landscape.

Ancillary 2 is a simple gathering shelter and the hearth of the site. This pavilion provides covered space for people to come together in an informal but welcoming environment. The structure is a canopy housing an open fire pit with provision for wind shelter however is not a contained building.

Both Ancillaries are low-lying, low-impact forms designed to nestle within the the landscape as a supportive backdrop to the rest of the site. The structures will be built from timber frame and natural hemp-lime. The flat roofs have been designed for rainwater collection, that will be filtered and used as potable water for drinking, irrigation and toilet flushing where practicable.





Top.Concept Visual Ancillary 1. Exterior. IDK. 2020.
Bottom.Concept Visual Ancillary 2. Exterior. IDK. 2020.

2.2.3 Millway

Having gone through various ad-hoc refurbishments and reconfigurations over its 150 year life span, the proposed refurbishment Millway exists as a new stage in the long and productive life of this noble building.

Recognising the need to bring the project in line with modern performance requirements the proposal aims to revitalise the building at the transition from the town to the Ironworks Retreat site.

The renovation approach builds on detailed research into the history of the building. Over the course of its life, the building has expanded and contracted in line with the economic growth of the area. As demand on the building grew at the peak of the Ironworks operation, the roof was elevated to add additional stories. When the roof fell into disrepair as the Ironworks closed, the roof was replaced at a lower level. In keeping with this process of staged growth, the scheme looks to elevate the roofline once more, returning the building to its original stature and celebrating its new lease of life. In the upper storey generous gathering spaces are provided that maximise views of the surrounding landscape.

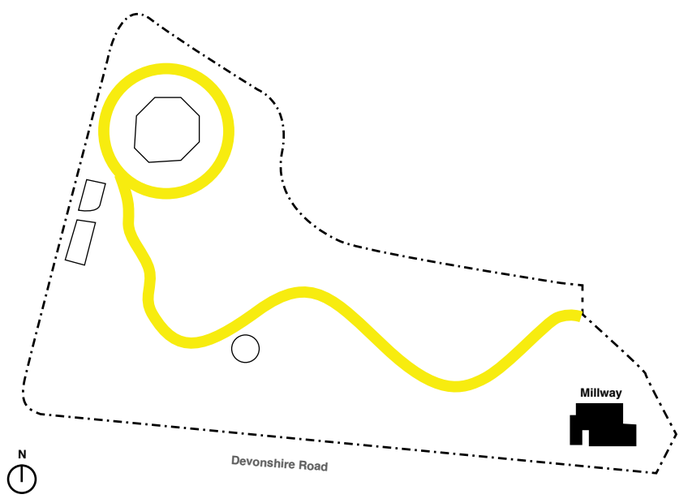
The new extensions to the south of the structure are to be demolished due to their poor construction quality and inflexibility. Removing the volumes will increase the circulation around Millway. This move will reinstate the original volume which is to be retained. A single storey masonry extension is offset at ground level, housing a restaurant and cafe. The massing of the volume is complimentary, yet subservient to the original building.

The revitalisation of Millway will return this important historic building to the heart of civic life in Millom once more. The proposal creates a “living room” for guests and the people of Millom; much-needed amenity space at the threshold between the town and its surrounding natural landscapes. The proposal avoids a strict demarcation of program, opting to work with the original scale and layout of the building. A generous spatial sequence is created: a catalogue of rooms to be explored and discovered.

In order to deliver this ambition, key service functions are necessary. These programs act as anchors within the more flexibly planned suite of rooms and include the Kitchen, Cafe/Restaurant and Reception area. Service, storage elements, plant and toilets are all located within the structure sited in non primary locations. All areas of the building are step free accessible to all persons with a lift providing access to the first floor spaces.

The cafe space will have approximately 50 covers with a maximum capacity of 70 covers (including guests at the retreat).

The boundary wall to Devonshire Road will be rebuilt as a low level drystone wall to create a more welcoming public aspect to the access to the site



Top. Millway. Existing exterior. IDK. 2020.
Bottom. Millway. Existing interior. IDK. 2020.

Concept Visual: Millway. IDK. 2020.

2.2.4 Residences

Four Residence units provide en-suite accommodation on the site with an additional two units built to accessible standards. Each unit will have its own private access and house up to two guests with en-suite facilities and storage space. The form of the Residences is a further investigation into spiritual geometry with similar energetic principles applied to the design and layout of the interior spaces.

These six units will be built as cylindrical forms, internally lined with lime plaster - externally with a texture render to varying heights to create a communal typology across the site. The accessible units are sited adjacent to additional accessible parking bays that have been introduced with hardstanding access routes provided.

2.2.5 Experiences

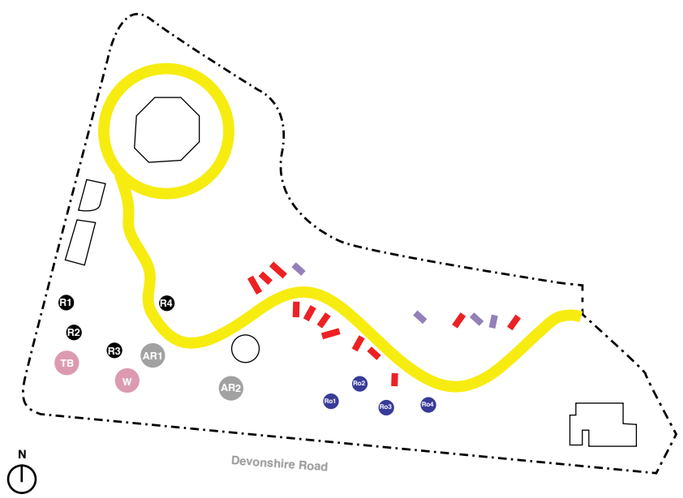
Two unique structures named the ‘Triple Burner’ & ‘Womb’ have been designed to offer guests the chance to spend an extended period of time in an experiential environment. The Triple Burner represents an alignment of internal energetics unified in the single formal expression of a dome with an oculus oriented at the sky. The Womb looks to create a nurturing safe and sheltered environment through its fluid composition.

Each space can accommodate 2 guests with en-suite facilities and has been designed to meet accessible standards. Both structures will be lime plastered on the interior with a textured render finish externally.

2.2.6 Additional accommodation

Five circular eco Rotundas, a collection of renovated Airstream caravans and restored Vardo wagons will all provide additional accommodation on the site to the Eastern side of the site.

Whilst the Residences, Womb and Triple Burner will provide unique experiential moments, the Rotundas, Airstreams and Vardos will serve the core residential function. The Airstreams and Vardo wagons will add a mobile quality. They are currently being refurbished and renovated by AIBM Ltd in their local workshop. These highly sought after pieces will be brought back into circulation and showcased as part of one of the largest (if not the largest) collections in Europe.



- TB / W The Triple Burner & Womb
- R1-R4 Residences
- AR1-AR2 Accessible Residences
- Ro1-4 Rotunda Accomodation
- Vardo Wagons
- Airstream Caravans

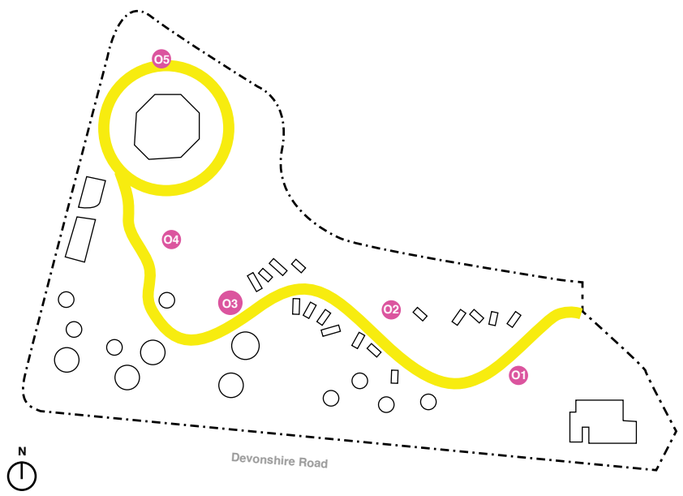
Top. Prefabricated Rotunda accomodation unit. Photo by IDK. 2017.
Bottom. Airstream Caravan. Unknown.

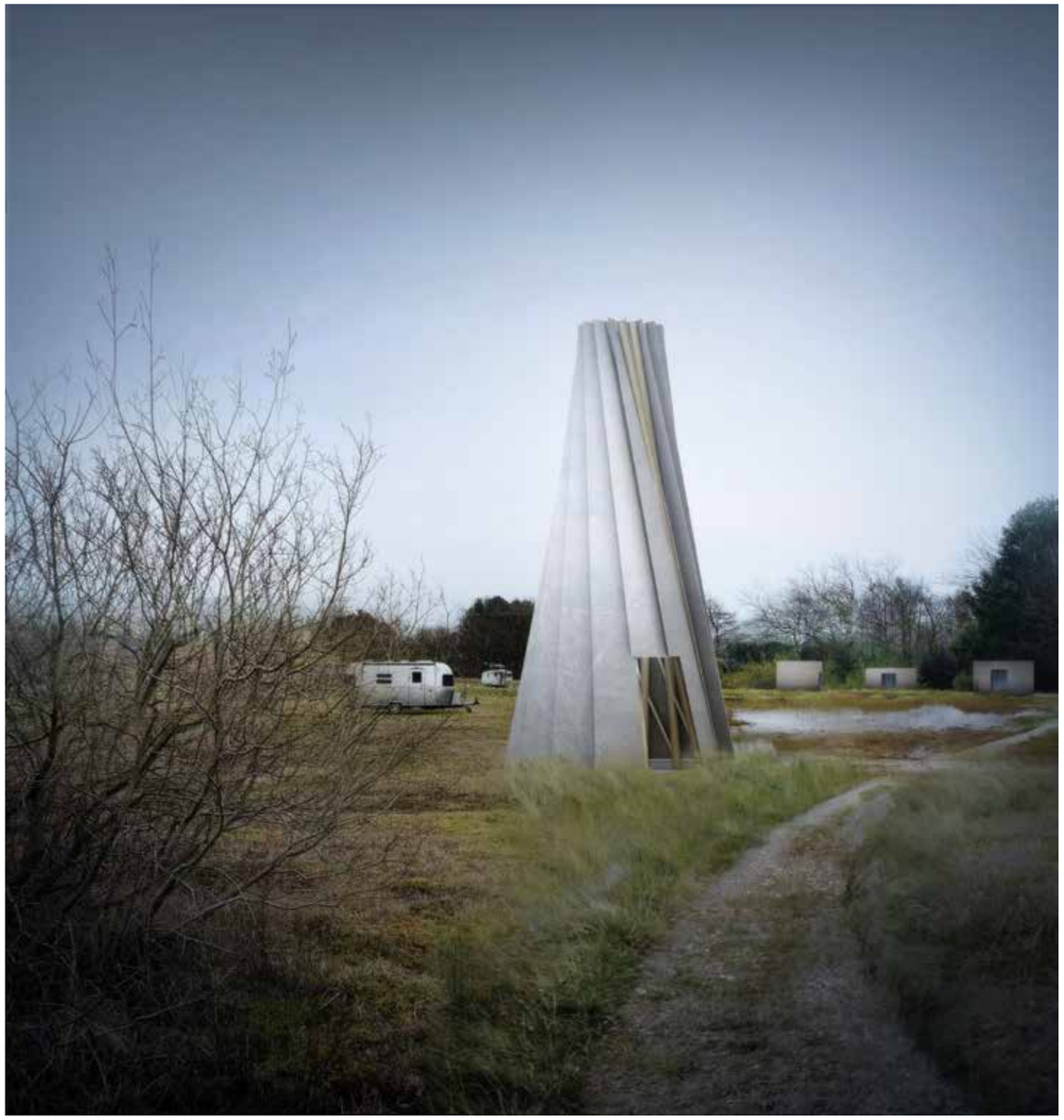
Left: Concept Visual / Looking South from Octgaon
Top: Concept Visual / The Triple Burner

2.2.7 Organs

Drawing inspiration from the primary organs of Chinese medicine - the Spleen, the Lungs, the Liver and the Heart - the ‘Organs’ are a series of carefully situated meditative sculptural moments within which to rebalance oneself. The form of each of the Organs is a manifestation of their specific quality and essence. When experienced in sequence along the Meandering Path, the series creates a collective healing journey.

A collection of standing stones from the same quarry as the Octagon facade form the Spleen - looking due West from the Eastern outlook. The Lungs looks North towards the mountains creating a sheltered moment of reflection looking beyond the site. The Kidney is a cave housing a natural rainwater pool.The Liver represents the spiraling growth from the earth and the Heart sits to the North of the Octagon - reached by a small path through the copse on the North Westen corner.





Concept Visual: The Liver

Concept Visuals. Organs (Clockwise from Top Left)
The Spleen / The Lungs / The Heart / The Kidney. IDK. 2020

2.2.8 Borwick Rails Warehouse

A new Warehouse on the Borwick Rails plot will provide dry secure storage for the Airstreams and Vardos that are waitng or will have been restored by AIBM at their workshop site. It will house a mezzanine level that will provide additional secure storage for parts and a small office workspace for the team to coordinate the renovation of these culturally significant artefacts.

As If By Magic Ltd. have curated one of the largest and most significant collections of both the Aristreams and Vardos in Europe and the company recognises the future potential to develop and grow a business in the renovation and restoration of these iconic objects. Adequate maintenance and storage is seen as being a key part of both the current plans and a long term vision for the viability of this culturally engaged, truly unique and diverse buisness growth strategy.

The structure has been sized to allow for the movement and storage of these units some of which are as large as 9m long, 2.5m wide and 3.6m high. The large turning circles and access requirements have primarily been the driving factor in the scale of the Warehouse.

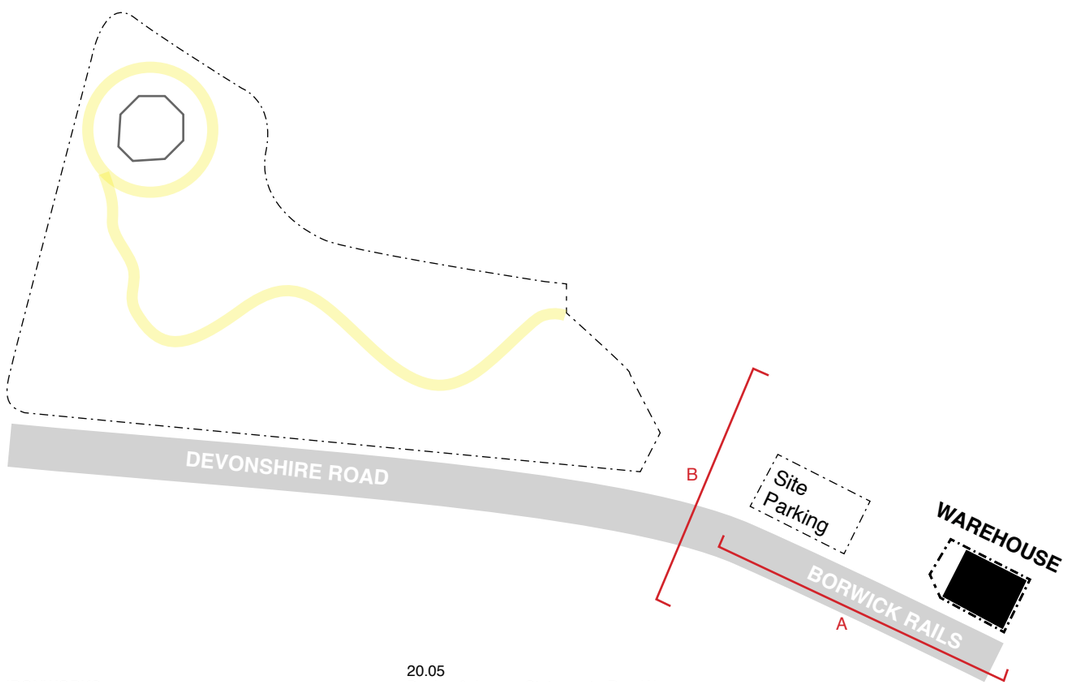
The associated planning drawings demonstrate the relevant scale and necessary spatial requirements based on a sample selection of the Wagons and Airstreams that AIBM currently own.

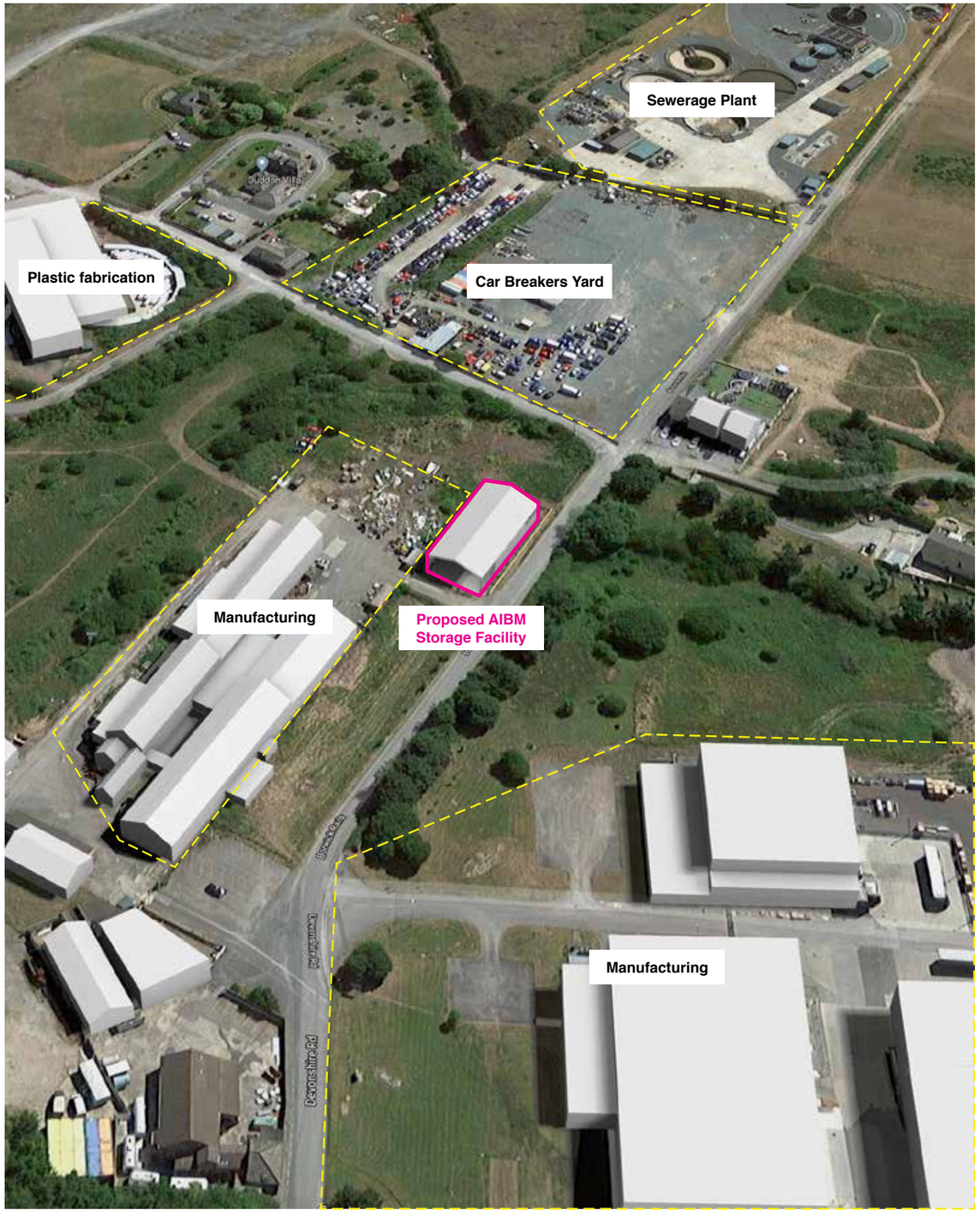
The material approach of the unit has been designed to create a light, open, tempered store space that is primarily functional, yet aesthetically considered. The open nature of the proposal is intended to allow passers by to enjoy the visual character of these assets whilst housing them securely.

Additionally, we have introduced a set of double doors to the South East elevation so as not to present a cold blank facade to the South East, rather aiming to create a visual connection that is both engaging, and celebratory.

Due consideration has been given to this South Eastern elevation where we have consulted with our Landscape Architect partner to ensure there is no significant bearing on the context when viewed in light of the far greater massing of the DrumWorks Ltd. warehouses to the rear. We have allowed for a hedgerow on the SE aspect soften the elevation and visual character.

The image opposite demonstrates the industrial nature of the context showing the warehouse structure relative to the neighbouring units. They illustrate that the proposed unit is in keeping with both the scale, form and functioning of the surrounding context. The massing, roof pitch and corrugated cladding all draw reference from and have been conceived to fit with the next door DrumWorks ltd buildings.





Borwick Rails contextual mapping

3.0 Visual impact & materiality

The design of the masterplan and individual component buildings has been developed over the past two years in design workshops with the client and design team to deliver on the client aspirations and philosophy for the site.

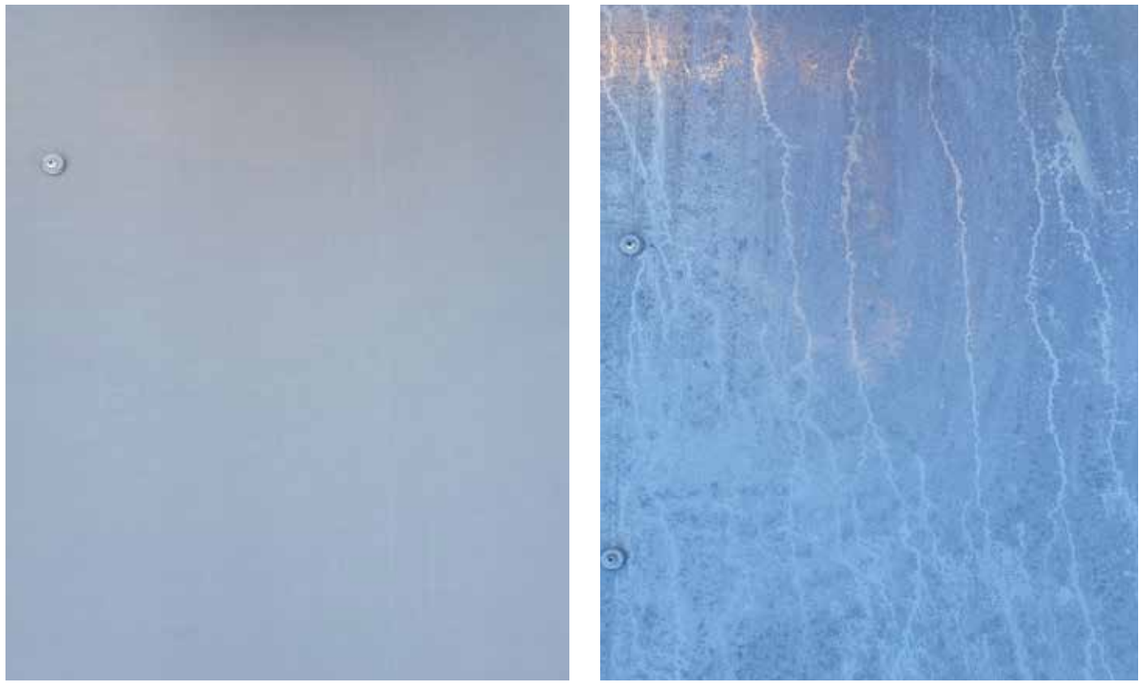
The Octagon stands at the North Western corner of the site. The facade modulates in response to each aspect that it faces, with the roof providing generous overhangs for shelter. A porch provides external seating for visitors to the site and shelter from the weather before entering the Octagon. The eaves line kept as low as possible to minimise the visual impact of the building. The two Ancillary buildings share a common roof line with the Octagon with generous overhangs to provide additional shelter.

The facades are built from sandstone slabs sourced from a nearby quarry in Alston. The stone has a distinct appearance due to a seam of iron ore running through the quarry site that creates a material connection between the new building and the rich history of the Millom Ironworks

The stone provides a durable and robust backdrop in the harsh marine environment of the Duddon Estuary. The textured surface will weather over time, bedding the structure in the site whilst the traces of iron will rust and imbue their natural colour pigment on the surface of the material. The stone grounds the project to the earth and to Cumbria as the roof absorbs the colours of the sky, providing a duality between heaviness and lightness that is fundamental to the client philosophy.

The new additions to Millway will be formed in a local brick with a Zinc roof to match the Octagon creating continutinty and a consistent material character.

The Residences, Sensory Expereinces and Ancillary 1 will largely be lined with a textured render to help the volumes absorb the character, colour and texture of the site.



Top. Octagon / Millway roof Zinc sample.
Bottom. Octagon facade Sandstone sample

4.0 Sustainability

In line with AIBM's sustainability ambitions and company principles, the site services are to be designed to reduce carbon emissions, through the inclusion of low or zero carbon technologies throughout the site. The sustainable energy scheme will provide a degree of self-sufficiency from on-site generation of both heat and electricity.

AIBM's sustainable vision encompasses energy use and the design of efficient buildings, but also embraces a broader definition of sustainability that encompass economic, social and environmental sustainability too. AIBM are creating a low impact development that protects and maintains the fragile ecology, creates new amenities and business functions for the town of Millom too. This holistic sustainable approach is further evidenced by the project team's aspiration for the highest level of BREEAM certification for the Octagon building.

The approach to design of the services within the buildings is driven by the following energy hierarchy:

1. Passive Measures - minimise building energy usage by considering building form and construction in order to avoid or minimise the need for mechanical and electrical services.

2. Efficient M&E Systems - minimise plant energy use by selecting the most appropriate engineering systems and optimising system performance.

3. Renewable Energy - the use of appropriate on-site renewable/low carbon energy technologies.

Given this approach the design is driven by first reducing baseline energy demand. Investment in good building design and fabric specification often has a better lifetime advantage when compared with high technology mechanical and electrical systems thus only after that has been achieved will we consider the application of renewable energy technologies.

The massing, orientation, materials and thermal properties of each of the buildings has been considered individually and as a collective to make best use of natural daylight and ventilation focusing on simple passive design to reduce the requirement for mechanical & electrical building services where they are not needed.

Feasibility studies have indicated that there is potential for a site wide network of the following renewable systems including:

- Ground source heating
Sited to the south of the Octagon, the array will require a series of 5 bore holes sunk into the ground at 8m spacings.

- Rainwater harvesting and purification
Rainwater collection will be used on the flat roof structures of the Ancillary buildings and any of the Residences where it proves feasible, providing all grey and potable water for the buildings. Rainwater collection systems will also be installed at the Warehouse.

- Photovoltaic Array
A photovoltaic array will be sited on the southern aspect of the new Millway roof with indivicative calculations demonstrating that the array would generate sufficient electricity for the most of the year. The Warehouse will additionally have a PV array on its roof.

- Natural Ventilation
The key spaces will be naturally ventilated to reduce the energy demand of the buildings.

4.1 BREEAM Assessment

The project is being assessed under the Building Research Establishment Environmental Assessment Method (BREEAM). Through this process, Sustainably Built Ltd have been brought onboard to assess the project against BREEAM criteria and to provide sustainability consultation for the design of the Octagon and Ancillary 1 building. The team is working towards the highest level of accreditation "Outstanding".

The process of BREEAM accreditation has lead to further consultation professional for the design of the project to ensure it long term sustainability including including:

Detailed ecological impact assessment with regarding the natural habitat of the site through consultation with AECOM Ecology.
Component level long term life cycle costing through the production of a component level life cycle cost plan for the period of 25 and 50 years.
Engagement with Cumbria Police to provide a Security Needs Assessment for the project.
Passive Design Analysis (Max fordham)
Low and Zero Carbon Feasibility Study (Max Fordham)
Sustainable Travel / Transport assessment (Axis Transport and Planning)

All of the above developmental consultation has fed into the designs for the Octagon and Ancillary 1 buildings.

BREEAM is the world's leading sustainability assessment method for master planning projects, infrastructure and buildings. Providing internationally recognised certification assessed against a broad range of scientifically rigorous requirements, that go beyond current regulations and practice. In order to enhance the economic and social value of the development, ensure continuous performance improvement and innovation, and to meet their high sustainability aspirations, AIBM ltd are aiming to achieve a BREEAM rating of Outstanding. This is the highest rating available and is achieved only by a very small percentage of the many thousands of buildings that undergo a BREEAM assessment, both in the UK and globally. Only one other project in Cumbria has achieved this rating.

In BREEAM terms, the Octagon in part would be classed one element of a wider 'campus' style development. Whilst it provides a standalone facility for a variety of uses, there is an inter-dependency on other facilities in the wider campus such as toilets, showers, car parking, cyclist facilities, etc. As such, connectivity around the development will be key in achieving a successful outcome and meeting AIBM Ltd's aspirations for genuinely sustainable development. BREEAM accepts and makes allowances for the use of existing and new proposed facilities on campus developments provided these facilities meet its very stringent criteria. As examples, this will require high numbers of cyclist facilities and low levels of car parking provision to encourage more sustainable ways to access the development. Sanitary facilities in the wider retreat will need to have ultra-low levels of water consumption and with the possible use of rainwater harvesting to reduce further the development's reliance on public water supplies. The additional land purchase will assist in ensuring this connectivity and additional space is available to meet these aspirations.

Another important area in achieving sustainability is ecology, particularly so on this development given its immediate proximity to 'Millom Ironworks LNR' SSSI. BREEAM encourages and rewards developments that enhance the local ecology. This can be achieved through introducing particular features that provide refuge and habitats for locally important species of fauna. Also through planting using species of flora that are locally important and sensitive to the immediate habitat. Although there are a number of ecological constraints on the Octagon development from the statutory authorities the Landscape and Ecology design look to make improvement wherever possible. The additional land we are proposing to purchase will enable the development to maximise its positive impact on the local environment and provide these enhancements where acceptable to Natural England.

5.0 Landscape

The essence of the project is to retain the existing characteristics of the site by maintaining, where practicable, and enhancing the high ecological and biodiversity value. A traditional landscape design approach was not considered to be appropriate due to the sensitivities of the site and surrounding landscape. As a result an ecology led process has focused on preserving the existing features by minimising direct effects upon the more sensitive parts of the site.

The existing neutral grassland and basis grassland are both to be retained with minimal landscaped impact from any new structures proposed. The planted border on the southern aspect of the site will be strengthened to create a more robust acoustic separation from the industrial estate and road using local species and planting. Existing brambles, trees and shrubs on site will all be retained and managed as part of creating a rich wildlife habitat. The lodges are to be placed upon EcoBase that is breathable and allows for the vegetation underneath to grow through.

Areas of bare ground are to be disturbed as little as possible with paths formed from permeable surfacing constructed from reclaimed granular slag. Two new wetland habitat areas are proposed as profiled to the Ecologist's specifications and have been introduced to encourage the diverse nature of the site ecology.

The existing road, subject to purchase, will be broken out and re-wilded with local grass species. This will have the added benefit of reducing the hard standing barriers between the Duddon Estuary SSSI and the site. In line with our ambitions to improve ecological diversity, any excavated slag from the construction phase of the project will be used to soften the steep embankment on site to improve species connectivity between the site and the adjacent nature reserve.

6.0 Ecology

The site and it's landscape are unique. Since the closure of the Ironworks, this area, locally known as 'The Slaggy', has become a haven for wildlife and as noted, it is now part of Duddon Estuary Site of Specific Scientific Interest and was declared a nature reserve in 2002.

The Slag piles have been and continue to be slowly colonised by plants and animals alike. There are areas of species rich grassland and a pond supporting Natterjack toads. Butterflies and ground nesting birds are frequent. There is a huge variety of plant and wildlife species which thrive at this location. Some of these are extremely rare and seem to have found their home in such unique locations.

The Duddon Estuary SSSI has been designated for its wintering and breeding bird populations (including internationally important numbers of redshank Tringa totanus and knot Calidris canutus), its saltmarsh and dune habitats, and the presence of natterjack toads. The Duddon Estuary has also been designated as a Special Protection Area (SPA) and Ramsar Site for its international assemblage of bird populations. The proposed development lies mainly outside this designation but adjacent to the Ramsar and SPA boundaries. However, a section of less than 0.1 hectare lies within the designated site.

The Morecambe Bay SSSI (designated for its internationally important populations of breeding and wintering birds, including over 110,000 wintering waders, diverse salt marsh habitats and geological formations) is situated less than 200m north of the site. Morecambe Bay has also been designated as a Special Area of Conservation (SAC), SPA and Ramsar Site, again for its internationally important assemblage of bird populations.

The Millom Ironworks Local Nature Reserve (LNR) abuts the northern boundary of the site and is known to support natterjack toads Bufo (Epidalea) calamita (NJT) and an important assemblage of breeding (including skylark) and over wintering bird species.

The development site occupies land which is considered by Natural England and the Herpetological Conservation Trust to be prime NJT foraging habitat and may also provide suitable habitat for hibernation. As such, the proposals for the development include provision for connecting the site with pathways for toad movement and increasing NJT habitat on site with creation of ephemeral ponds and suitable terrestrial habitat.

Habitats recorded on the actual site comprise scrub, neutral grassland, calcareous grassland and ephemeral short lived perennial communities. There are areas of dense low-growing bramble and shrubby scrub on the western boundary and some scattered scrub on the northern boundary.

Neutral grassland is found towards the eastern end of the site where more soil appears to overly the slag. This supports a mix of coarse and fine grasses together with herbs such as yarrow Achillea millefolium, common knapweed Centaurea nigra, ox-eye daisy Leucanthemum vulgare and common bird's-foot trefoil Lotus corniculatus. Pioneer calcareous grassland is the dominant habitat towards the west, north and east of the site. This supports plant species tolerant of the alkaline conditions common centaury Centaurium erythraea, fairy flax Linum cartharticum, eyebright Euphrasia sp., orchids (bee orchid Ophrys apifera, and carline thistle Carlina vulgaris.

There are areas of bare ground, which have been colonised by short perennials, rosette-forming species, ephemerals and opportunist species tolerant of the basic conditions. Species found on the overall site considered being of local interest / notable / rare include blue fleabane Erigeron acer, yellowwort Blackstonia perfoliata, squinancywort Asperula cynanchica, and ploughman's spikenard Inula conyza. Herb-rich grassland areas provide suitable habitat for a range of terrestrial invertebrates including Species of Principal Importance for conservation butterflies and moths. Species recorded in 2018 included Dingy Skipper Erynnis tages, Common Blue Polyommatus icarus and Small Heath Coenonympha pamphilus.

The mosaic of habitats found on site provides suitable conditions for reptiles on the site. There is a small population of common lizard Zootoca vivipara around the periphery of the overall site, including the development area. A reptile clearance of the site has been carried out to ensure no harm comes to lizards and amphibians during construction.

This is a Site of Special Scientific Interest (SSSI), a Nature Reserve, and a beautiful area. Prior to AIBM's acquisition of the site, the area was notorious for nuisance behaviour including illegal drug selling, fly tipping, and the use of illegal unlicensed vehicles. With AIBM's arrival, the situation has dramatically changed: in excess of 200 tons of fly tipping waste has been removed, unlicensed vehicles - including off-road motorbikes - are no longer permitted from driving on and around the area and the area is no longer a haunt for those wishing to engage in anti-social behaviour.

The site is a fantastic example of a unique landscape which has been exploited and reclaimed by nature. The following passage from French landscape designer and ecologist Gilles Clement talks about this kind of place in his concept for the 'Third Landscape.'

'The Third Landscape ...are left behind urban or rural sites, transitional spaces, neglected land, swamps, moors, peat bogs, but also roadsides, shores, railroad embankments, etc. To these unattended areas can be added space set aside , reserves in themselves: inaccessible places, mountain summits, non-cultivable areas, deserts; institutional reserves: national parks, regional parks, nature reserves...

From this point of view, the Third Landscape can be considered as the genetic reservoir of the planet, the space of the future…..'

This project aims to encourage this unique space of the future and help it thrive seeking to embrace the ecology rather than impede or impact its diversity and richness.

The Slaggy, Millom. IDK. 2019.

7.0 Access & Accessibility

The notion of an accessible open and welcoming space that fosters constructive, positive interactions between all people is a fundamental pillar of the project. To deliver on this principle, the intent is to improve the existing access across the site by limiting vehicle movement to making it a more pedestrian and bike friendly location.

The principal gateway to the nature reserve and Retreat will be through Millway to the East of the site. Millway will house an all-body all-abilities accessible café and accessible toilets for the public to use with the focus on disabled accessibility across the whole project.

The site as a whole will remain open to the public by foot/bike and new parking provision will be added in the land adjacent to the Millway entrance to create a car free space. Additional emergency access and accessible parking sites will be located at key stages along the meandering path for use by arrangement.

In addition to the two parking bays provided at the main site carpark, there will be accessible parking adjacent to Millway, the accessible accommodation units and next to the Octagon. All of these parking areas will be reserved for emergency vehicles and for visitors with specific accessibility requirements. The meandering path will be specified and designed to accommodate the passage of emergency vehicles

10 covered bike parking spaces will be provided at the site parking location with an additional covered bike shelter at Millway for a further 10 bikes. The structure will be a simple timber frame low level shelter with a profiled metal canopy roof.

5 designated motorcycle bays are sited at the Borwick rails carpark site.

Access to the Nature Reserve will be provided for non-resident members of the public through the provision of eight parking bays (two of which will be accessible). These parking spaces will be provided in the car park adjacent to Millway. A new access footpath will maintain connection between the parking area and the nature reserve.This will be key in preserving the site from vehicles, ensuring that the site will become very much part of the nature reserve landscape.

The reduction of vehicle access will allow nature to continue to take control of certain areas, helping plant wildlife regrowth. In line with the BREEAM targets, designated sheltered cycle parking locations will be provided at all car park sites and adjacent to existing nature reserve entrances. The existing public footpath that goes from Devonshire Rd, through the wood into the nature reserve which will be retained and maintained.

The perimeter boundary fences will be taken down from the western and northern aspects, removing all barriers and opening the site to the nature reserve.

Immediate access and circulation within all of the buildings will be tailored to the convenience of wheelchair users. Furthermore the design of the scheme creates a common experience for all persons. Practically, this will involve shallow ramped access to flush thresholds, appropriately positioned door and window furniture. Communal toilet and shower facilities will likewise have fully compliant disabled facilities in each location.

Bespoke low level lighting will illuminate access routes across the site at night as part of a scheme that will be designed in close coordination with the project ecologists to ensure minimum effect on the nocturnal habits of the site wildlife.

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