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**3078:23**

**PROPOSED DEVELOPMENT OF ERECTING NEW WORKSHOPS AND OFFICES AT  
FORMER ABATTOIR SITE, CIBYN INDUSTRIAL ESTATE, CAERNARFON**

**ENERGY AND SUSTAINABILITY STATEMENT**

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## 1. INTRODUCTION

This Energy and Sustainability Statement intends to explain the principles which have been applied to the proposed new development to ensure that it is as energy efficient as possible and that all the sustainability targets for the proposal are met.

The planning application is for the erection of new workshop/welding building and workshop/office buildings together with a vehicle wash unit and other ancillary spaces. The site lies within the development boundary of Cibyn Industrial Estate in Caernarfon.

## 2. RELEVANT LEGISLATION & SCHEME JUSTIFICATION

The following legislation and guidance have been used when considering the energy efficiency and sustainability of the proposed development:

WELSH ASSEMBLY GOVERNMENT – TAN 12: DESIGN – SECTION 4: ENVIRONMENTAL SUSTAINABILITY

BUILDING REGULATIONS APPROVED DOCUMENT (VOLUME 2) WALES 2022

ANGLESEY & GWYNEDD JLDP 2017:

STRATEGIC POLICY PS 5:	SUSTAINABLE DEVELOPMENT
STRATEGIC POLICY PS 6:	ALLEVIATING AND ADAPTING TO THE EFFECTS OF CLIMATE CHANGE
STRATEGIC POLICY PS 7:	RENEWABLE ENERGY TECHNOLOGY
POLICY PCYFF 2:	DEVELOPMENT CRITERIA
POLICY PCYFF 5:	CARBON MANAGEMENT
POLICY PCYFF 6:	WATER CONSERVATION
POLICY CYF 7:	REGENERATION SITES

GWYNEDD COUNCIL SUPPLEMENTARY PLANNING GUIDANCE: PLANNING FOR SUSTAINABLE DEVELOPMENT – APRIL 2010

The proposed scheme is assessed on its compliance with each of the above legislation and guidance notes below:

## WELSH ASSEMBLY GOVERNMENT – TAN 12: DESIGN – SECTION 4: ENVIRONMENTAL SUSTAINABILITY

The key objectives from WAG TAN 18 for Environmental Sustainability are:

- Achieving efficient use and protection of natural resources
- Enhancing biodiversity
- Designing for change

When considering the suitability of a proposed development in terms of the TAN 18 guidance there are a series of Design Solutions which can be considered and implemented to ensure compliance. The proposed development will be assessed against each of the design solution criteria headings listed below:

### LANDSCAPE/TOWN SETTING

The site is located within the development boundary of Caernarfon and is also a designated Safeguarded Employment Site. This site is recognised as being an area within Caernarfon where it is deemed acceptable to erect industrial units.

We propose to create modern industrial buildings with insulated profiled steel cladding panels to the walls and roofs and sections of curtain wall glazing as practical and attractive design features while adding to the functionality of the proposed buildings. The new industrial buildings will be a marked improvement from the previous abattoir buildings and will improve the aesthetic of the industrial estate generally.

The existing large industrial buildings, storage containers and HGV vehicle trailers for the sites adjacent to the development site are all clearly visible from the Caernarfon Bypass Road so the visual impact of the new buildings will be negligible in comparison to the existing streetscape.

## BIODIVERSITY AND LOCAL ENVIRONMENT

A Preliminary Ecological Appraisal and Preliminary Roost Assessment for the site has been prepared by Arbtech Consulting Ltd. and has been included with the submitted planning application documents. The mitigation measures and recommendations included within the report have been included on the proposed plans.

A full Visual Appraisal and Landscape Strategy for the development has been prepared by Land Studio Landscape Architects and has been submitted as part of the planning application documents.

## ENERGY EFFICIENCY/CARBON REDUCTION

The proposed new office and workshop buildings will benefit from having a Photovoltaic Array on the roof of the building which can be linked to private storage batteries to provide renewable energy to supplement the energy needs of the finished building.

The proposed buildings will be subject to an SBEM (Simplified Building Energy Model) Energy Assessment Calculation to ensure compliance with Building Regulations Approved Document (Volume 2) Wales 2022. This calculation calculates the monthly energy use and carbon dioxide emissions of a commercial new build with a predicted energy performance rating given based on the building design and fabric thermal performance. It is envisaged that by including renewable technologies for the heating and energy requirements the proposed buildings it is conceivable for them to achieve an A rating.

The local bus service stops directly in front of the site at the Cibyn Industrial Estate Bus Stop with the services running in both directions throughout the week. There are also two further stops – Isgoed Bus Stop and Glan Peris Bus Stop within easy walking distance of the development site. There is also a secure bicycle storage area included as part of the proposal to encourage carbon free travel to work.

## SUSTAINABLE MATERIALS

The applicant intends to use as many locally sourced materials as possible purchased from local builders merchants within Cibyn Industrial Estate to minimize the carbon footprint of material deliveries to site.

All timber for the proposed development will be FSC Certified with appropriate certification included to ensure compliance. Local manufacturers will also be prioritized for the steelwork, internal fittings and joinery items.

The applicant have a close working relationship with a Recycling and Waste Management specialist which will enable the project to benefit from their expertise in the recycling and re-use of materials.

## WATER

A full Drainage Strategy has been prepared for the proposed development and is to be submitted as part of the application documents. The Drainage Strategy outlines the proposed water usage for the site and mitigation measures which can be taken to reduce the overall water consumption of the developed site. It is envisaged that the new use for the site would need dramatically less water than the previous use of the site as an abattoir.

The drainage strategy has been prepared for the development also demonstrates how the surface water for the development will be discharged in a sustainable way. The drainage strategy is included as part of the planning application documents.

## BUILDING REGULATIONS APPROVED DOCUMENT (VOLUME 2) WALES 2022

The basic intention of the above Approved Document is listed as:

*“Regulation 24 of the Building Regulations set requirements for Welsh Ministers to approve a methodology of calculation of the energy performance of a building. For a new non-domestic building, the approved methodologies are the Simplified Building Energy Model or other software tools approved under the Notice of Approval.*

*Regulation 25 requires Welsh Ministers to approve minimum energy performance requirements. These requirements are in the form of a target primary energy rate and a target emission rate. The targets are set out in Section 1 of this approved document”*

The proposed buildings will be subject to an SBEM (Simplified Building Energy Model) Energy Assessment Calculation to ensure compliance with Building Regulations Approved Document (Volume 2) Wales 2022. This calculation calculates the monthly energy use and carbon dioxide emissions of a commercial new build with a predicted energy performance rating given based on the building design and fabric thermal performance. It is envisaged that by including renewable technologies for the heating and energy requirements the proposed buildings it is conceivable for them to achieve an A rating.

## ANGLESEY & GWYNEDD JLDP 2017

### STRATEGIC POLICY PS 5: SUSTAINABLE DEVELOPMENT

The proposal site is within the Cibyn Industrial Estate with several other businesses and local employers occupying the existing industrial units, this has been designated a Safeguarded Employment Site. The sustainability of the development is demonstrated by this being an expansion of an existing well-established business located within the same industrial estate.

The proposal is also the re-development of a previously developed industrial site, namely the Sher Hala Foods Ltd. abattoir site and building. The previous class use of the site as 'Sui Generis' would suggest that the proposed use of the site would not be contrary to policy. Cibyn Industrial Estate is also a designated Safeguarded Employment Site.

The local bus service stops directly in front of the site at the Cibyn Industrial Estate Bus Stop with the services running in both directions throughout the week. There are also two further stops – Isgoed Bus Stop and Glan Peris Bus Stop within easy walking distance of the development site.

### STRATEGIC POLICY PS 6: ALLEVIATING AND ADAPTING TO THE EFFECTS OF CLIMATE CHANGE

The proposed new office and workshop buildings will benefit from having a Photovoltaic Array on the roof of the building which can be linked to private storage batteries to provide renewable energy to supplement the energy needs of the finished building.

A full Drainage Strategy has been prepared for the proposed development and is to be submitted as part of the application documents. The Drainage Strategy outlines the proposed water usage for the site and mitigation measures which can be taken to reduce the overall water consumption of the developed site. It is envisaged that the new use for the site would need dramatically less water than the previous use of the site as an abattoir.

The drainage strategy has been prepared for the development also demonstrates how the surface water for the development will be discharged in a sustainable way. The drainage strategy is included as part of the planning application documents.

The proposal is for the re-development of a previously developed industrial site, namely the Sher Hala Foods Ltd. abattoir site and building. The policy promotes the use of previously developed sites and this means that no versatile agricultural land will be lost by way of the development.

## STRATEGIC POLICY PS 7: RENEWABLE ENERGY TECHNOLOGY

The proposed new office and workshop buildings will benefit from having a Photovoltaic Array on the roof of the building which can be linked to private storage batteries to provide renewable energy to supplement the energy needs of the finished building.

## POLICY PCYFF 2: DEVELOPMENT CRITERIA

The site is located within the development boundary of Caernarfon and is also a designated Safeguarded Employment Site. This site is recognised as being an area within Caernarfon where it is deemed acceptable to erect industrial units.

The pre-application advice report has identified that the proposal is within an existing industrial estate and towards the far end of the estate to the opposite side of the nearest residential dwellings. The pre-app report has also identified that any noise created by the development will most likely be masked by the road noise from the adjacent trunk road.

## POLICY PCYFF 5: CARBON MANAGEMENT

The proposed new office and workshop buildings will benefit from having a Photovoltaic Array on the roof of the building which can be linked to private storage batteries to provide renewable energy to supplement the energy needs of the finished building.

The local bus service stops directly in front of the site at the Cibyn Industrial Estate Bus Stop with the services running in both directions throughout the week. There are also two further stops – Isgoed Bus Stop and Glan Peris Bus Stop within easy walking distance of the development site. There is also a secure bicycle storage area included as part of the proposal to encourage carbon free travel to work.

## POLICY PCYFF 6: WATER CONSERVATION

A full Drainage Strategy has been prepared for the proposed development and is to be submitted as part of the application documents. The Drainage Strategy outlines the proposed water usage for the site and mitigation measures which can be taken to reduce the overall water consumption of the developed site. It is envisaged that the new use for the site would need dramatically less water than the previous use of the site as an abattoir.

The drainage strategy has been prepared for the development also demonstrates how the surface water for the development will be discharged in a sustainable way. The drainage strategy is included as part of the planning application documents.



## POLICY CYF 7: REGENERATION SITES

The proposal site is within the Cibyn Industrial Estate with several other businesses and local employers occupying the existing industrial units, this has been designated a Safeguarded Employment Site. The sustainability of the development is demonstrated by this being an expansion of an existing well-established business located within the same industrial estate.

The proposal is also the re-development of a previously developed industrial site, namely the Sher Hala Foods Ltd. abattoir site and building. The previous class use of the site as 'Sui Generis' would suggest that the proposed use of the site would not be contrary to policy. Cibyn Industrial Estate is also a designated Safeguarded Employment Site.

The workers and staff of the current facility of Cerbydau Masnachol Cibyn Cyf use various means of travel to work; predominantly public transport and cars.

As the current business is intending to employ as many local people as possible it is envisaged that the majority of the workers for the new facility will either walk to site, use public transport or travel by car. Car sharing will be encouraged and the existing road and public footway network allows for safe travel by bicycle. The scheme proposal also includes a cycle storage area and electric vehicle charging points to encourage zero and low carbon methods of travel to work.

The local bus service stops directly in front of the site at the Cibyn Industrial Estate Bus Stop with the services running in both directions throughout the week. There are also two further stops – Isgoed Bus Stop and Glan Peris Bus Stop within easy walking distance of the development site.

### GWYNEDD COUNCIL SUPPLEMENTARY PLANNING GUIDANCE: PLANNING FOR SUSTAINABLE DEVELOPMENT – APRIL 2010

The above SPG lists the following as their principal aims:

- raise awareness of all the factors that can help improve the sustainability of a proposal
- secure greater environmental sustainability in all new developments, refurbishments and alterations to existing buildings
- encourage developers and applicants to consider sustainable development from the earliest stage of the design process and go beyond minimum standards.

The headings in the document are similar to the items included within the JLDP Planning Policy workings which have been addressed in the above sections.

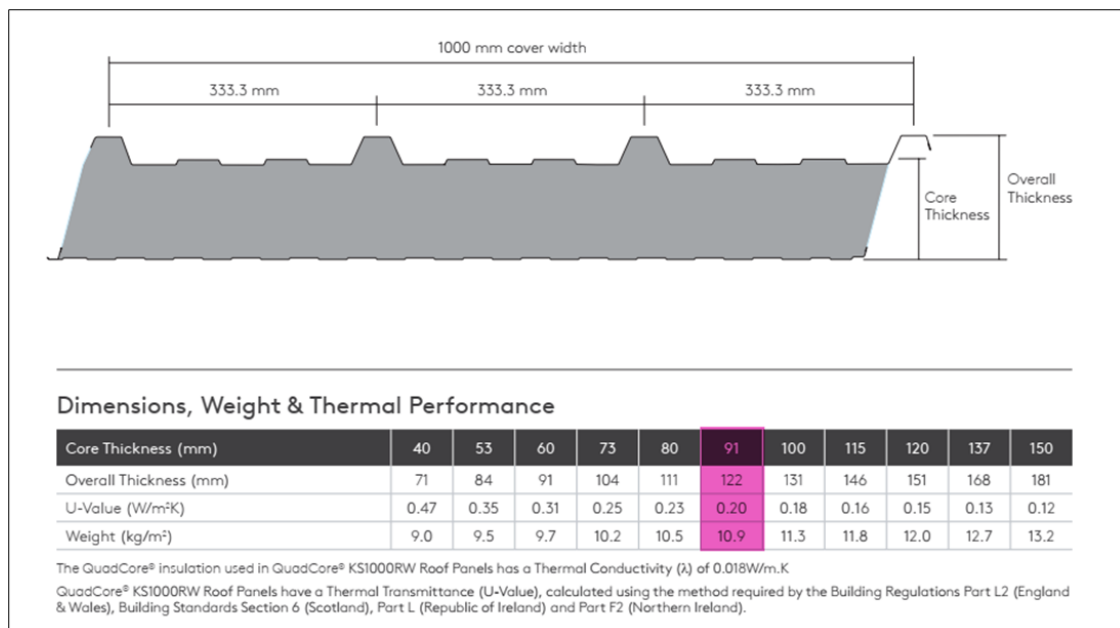
### 3. PROPOSED BUILDING FABRIC

As part of the development the completed buildings would need to achieve a certain standard of overall thermal performance to ensure that they meet the criteria set out in the Building Regulations Approved Document Part 2 Wales. Each building element will be assessed, and the build-up calculated to ensure that the following thermal efficiency values (U-Value) are achieved and surpassed where possible:

Roof	0.2 W/m <sup>2</sup> K
Walls	0.26 W/m <sup>2</sup> K
Floors	0.22 W/m <sup>2</sup> K
Windows	1.6 W/m <sup>2</sup> K
Roof Windows/Curtain Walling	1.8 W/m <sup>2</sup> K
Pedestrian Doors	1.8 W/m <sup>2</sup> K
Vehicle Access and Similar Large Doors	1.3 W/m <sup>2</sup> K
High-usage Entrance Doors	1.3 W/m <sup>2</sup> K

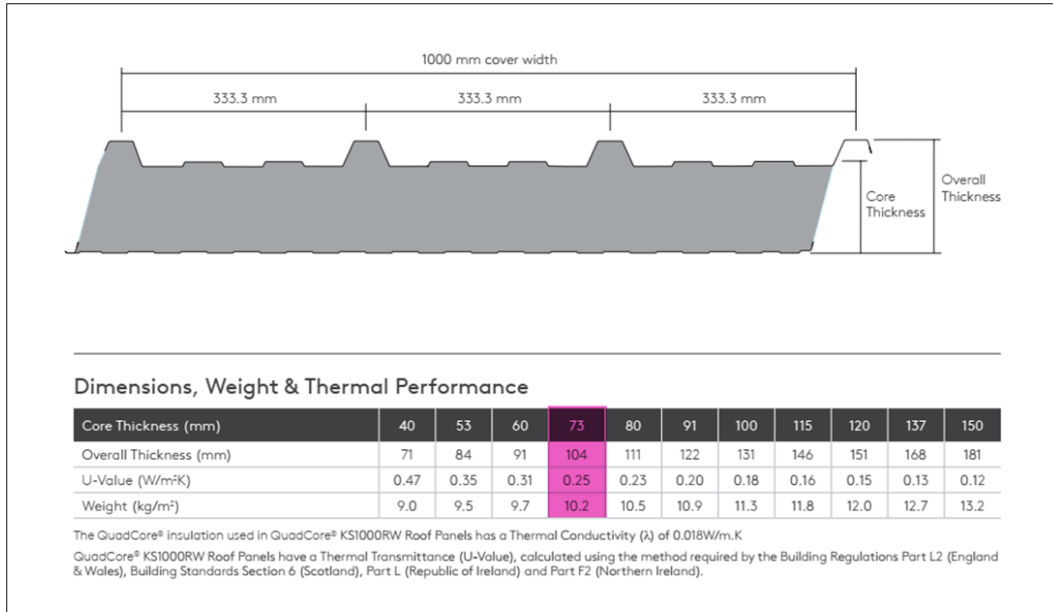
#### ROOF

The proposed buildings will have an insulated profiled steel cladding system fixed directly to the portal frame roof. The preferred system is the Kingspan QuadCore RW Trapezoidal Roof Panel system, the 91mm core thickness option will be specified to achieve the minimum 0.2 W/m<sup>2</sup>K required.



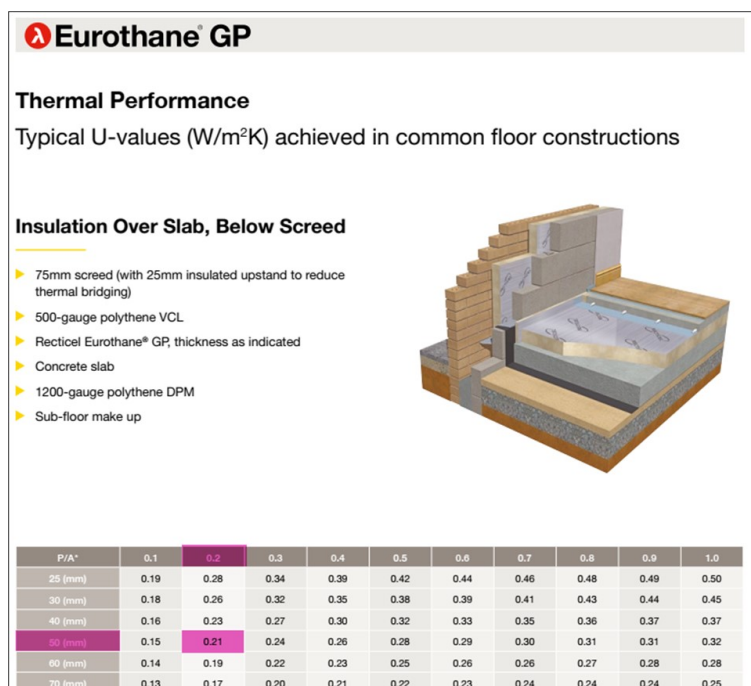
## WALLS

The proposed buildings will have an insulated profiled steel cladding system fixed directly to the portal frame walls. The preferred system is the Kingspan QuadCore RW Trapezoidal Roof Panel system, the 73mm core thickness option will be specified to achieve the minimum 0.26 W/m<sup>2</sup>K required.



## FLOOR

The proposed building will have a screeded floor over a concrete slab with insulation boards fitted. The preferred option would be 50mm Recticel Eurothane GP insulation boards installed between the floor screed and the 150mm thick concrete floor slab to achieve the minimum 0.22 W/m<sup>2</sup>K required.



## WINDOWS, CURTAIN WALLING AND EXTERNAL DOORS

The specific manufacturers of the windows, curtain walling and external doors will be chosen towards the construction phase of the development however the minimum target U-Values listed above will be provided to the manufacturers to ensure that the building elements will achieve the thermal performance required. Below are examples of manufacturers which offer excellent energy efficient products as standard:

### HORMANN INDUSTRIAL DOORS

Insulated industrial and personnel doors offered as being CO<sub>2</sub>-Neutral at no extra charge

### TECHNAL ALUMINIUM WINDOWS, DOORS AND CURTAIN WALLING SYSTEMS

*“Manufactured using Hydro CIRCAL® 75R aluminium. This high-quality aluminium contains a minimum of 75% recycled end-of-life aluminium (post-consumer scrap), from the likes of façades and windows that have been removed from buildings. As a result, it has one of the smallest CO<sub>2</sub> footprints of any aluminium worldwide with 2.3 kg of CO<sub>2</sub> emissions per kilo of aluminium. This is 86% or 7 times less than the global average for primary extraction.”*

*Technal UK 2020*

## 4. SUMMARY & CONCLUSION

The scheme proposal has been assessed in terms of the energy efficiency and sustainability of the development, it is evident by ensuring that mitigation measures listed above are implemented and the specification for the proposed building is followed accurately the new buildings can achieve excellent energy efficiency standards.

The development as a whole can be viewed as being sustainable by re-generating an existing industrial site within an area easily accessible by public transport and zero carbon methods i.e. walking and cycling. Provision has been included in the scheme proposal for cycle storage at the new facility to encourage zero carbon methods of travel to and from work.

The applicant has demonstrated a keen awareness of the possible impact of the development on the environment and has prioritized the use of renewable technologies for the facility as well as installing EV charging points within the scheme proposal