

# Garth Wymott 2

# Energy and Sustainability

# Statement

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GHX0000 Project Wide

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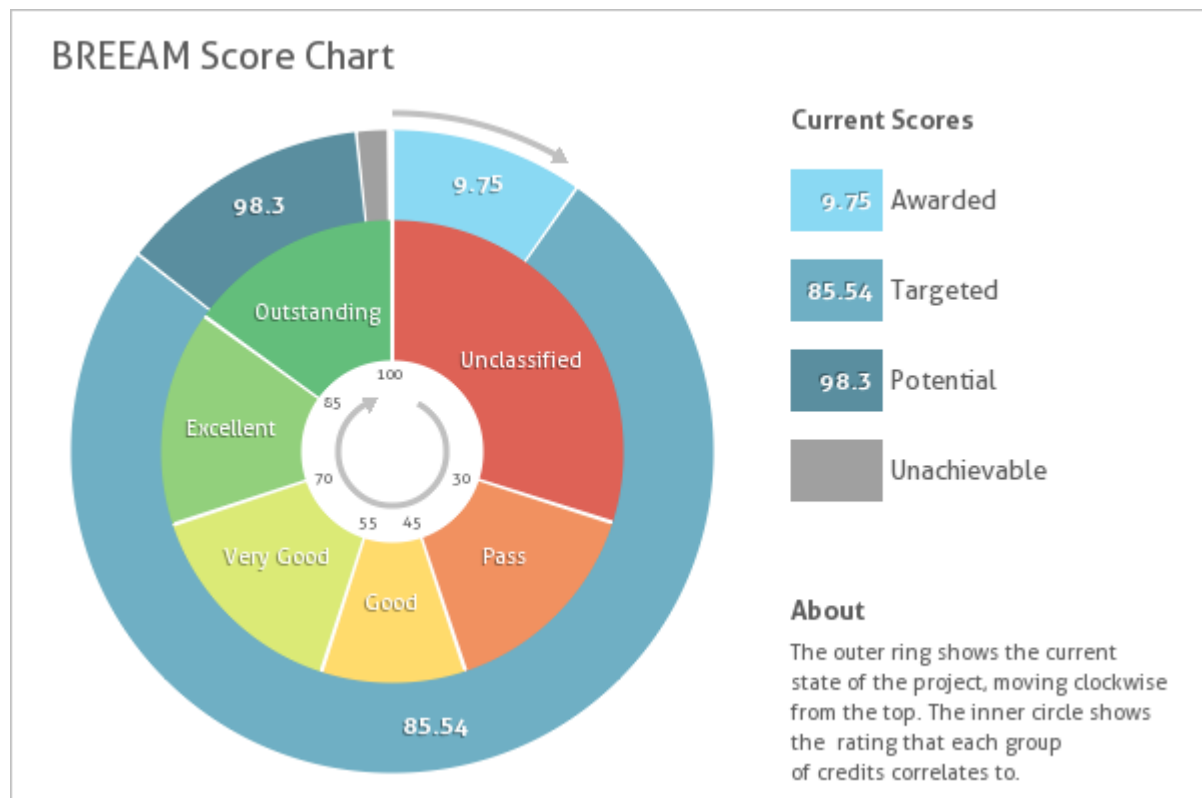
## 1 Executive Summary

The purpose of this Energy and Sustainability Statement is to demonstrate that the proposed new prison development at Garth Wymott 2 is considered sustainable, as measured against relevant local and national planning policy.

The new Category C prison, located adjacent to HMP Garth and HMP Wymott in Lancashire, will comprise several buildings including seven house blocks, support buildings, a Care and Separation Unit (CASU), an Entrance Resource Hub, a Central Services Hub, workshops, a kitchen, associated storage and hard and soft landscaping. There will also be a new boiler house, and a bowling green with a club house located on site.

The Ministry of Justice (MoJ) is investing heavily in the sustainability of its New Prisons Programme and has developed its own sustainability plan. The MoJ's commitment to sustainability covers several key targets for all new prisons which exceed local and national planning policy requirements. Amongst others, these aspirations include targeting near zero carbon operations, 10% Biodiversity Net Gain, and at least BREEAM 'Excellent' certification, with endeavours to achieving BREEAM 'Outstanding'.

The new prison has been registered and will be assessed against the latest BREEAM 2018 New Construction scheme, under the 'prison' assessment category. A BREEAM Pre-Assessment report has been prepared and is included in **Appendix A** of this statement. This outlines a possible route to achieving a BREEAM 'Outstanding' score of 85% however the exact route to certification may vary as the detailed design progresses. The figure below provides a high-level visual summary of the currently targeted score, but more detail is provided in the BREEAM Pre-Assessment Report.



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The key features of the BREEAM and sustainability strategy are outlined as follows:

- **Sustainable Transport:** Sustainable modes of transport will be encouraged for staff and visitors through the provision of cycle storage facilities and electric vehicle charging points in line with planning requirements.
- **Biodiversity and Ecology:** Existing ecology will be protected where possible and ecological enhancements will be implemented to target around 20% Biodiversity Net Gain.
- **Materials:** New materials will be selected based on their environmental impact and responsible suppliers will be used. The new building materials will be sourced locally where possible to reduce transportation pollution and support the local economy.
- **Waste and Recycling:** Construction waste will be minimised by applying modern methods of construction, and at least 95% of waste will be diverted from landfill. During operation there will be a designated Waste Management Unit which will provide facilities for the separation, recycling and disposal of solid waste streams generated across the site.
- **Energy Efficiency:** The new prison will aim to be net zero carbon ready through the specification of high fabric energy efficiency, heat pumps and energy efficient lighting, appliances, and equipment and on-site renewable energy generation.
- **Water Efficiency:** Flow control devices and water efficient fixtures and fittings will be installed to reduce water consumption in line with BREEAM Wat 01 requirements.
- **Flood Risk and SUDs:** The proposed development site will benefit from Sustainable Urban Drainage Systems (SUDs).
- **Pollution:** Measures will be implemented to minimise noise, air and light pollution both during construction and operation.
- **Health and Wellbeing:** The promotion of health and wellbeing for future occupants has been a key consideration in the design of this new prison, particularly in terms of thermal, acoustic and visual comfort, site safety and security and promoting active modes of travel.

## 2 Introduction

### 2.1 Purpose of Statement

This Energy and Sustainability Statement sets out the sustainable design and construction measures included in the proposed new prison development at Garth Wymott 2 within the administrative boundary of Chorley District Council and Lancashire County Council. In addition to the prison, a new boiler house and bowling green club house will be constructed which will also be designed to be sustainable.

The purpose of this statement is to demonstrate that the proposed new prison development is considered sustainable, as measured against all relevant local and national planning policy. In addition, this statement provides an initial response to the comments received from the pre-application advice detailed below.

This Energy and Sustainability Statement does not duplicate the work of the technical reports prepared in support of the application but presents the findings in the overall context of sustainability.

### 2.2 Site Analysis

The proposed new prison development site currently comprises mainly open land with some smaller buildings including a boiler house currently serving both adjacent prisons. To the north, the site is bordered by open farmland, with single farmhouses and buildings beyond. To the east, the site is bordered by Pump House Lane and a residential area beyond which is open farmland. To the south, the site is bordered by HMP Wymott, and to the west by HMP Garth.

Due to the nature of the development and proximity to existing prisons, the site is not located within close proximity to public transport or local amenities. Notwithstanding this, the proposed development has considered the inclusion of sustainable transport modes, including cycle storage facilities and electric vehicle charging points, to facilitate sustainable transport movements for staff and visitors to and from the site.

### 2.3 Pre-Application Advice

Pre-application advice was sought for the outline planning application (Ref: 2020/00028/PREAPP dated 2<sup>nd</sup> September 2020) and the following response was provided in relation to energy and sustainability topics:

*“The use of landscaping to the periphery of the development site will be beneficial in softening the visual impact of the development and will help to increase the biodiversity benefits.*

*In relation to mitigating the impact on neighbouring residential occupiers it is recommended that a noise survey is provided particularly in relation to the inclusion of workshop facilities, and that noise mitigation are included where necessary.*

*Landscaping is also an important factor in mitigating the visual impact on public amenity in relation to those residential occupiers nearest to the site.*

*The aspiration to achieve a BREEAM Excellent rating as a minimum is welcomed.*

*Policy 27 of the Central Lancashire Core Strategy requires minimum energy efficiency standards for all new buildings to be ‘Very Good’ (or where possible, in urban areas, ‘Excellent’) according to the Building Research Establishment’s Environmental Assessment Method (BREEAM).”*

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## Ecology

The Council's ecology advisors, Greater Manchester Ecology Unit (GMEU), made the following recommendations:

*"A full extended Phase 1 Habitat Survey to be undertaken. Particular attention should be paid to known biodiversity resources, including:*

- *Recorded presence of bat roosts within buildings including a maternity colony*
- *Presence of ponds/waterbodies on site with records of great crested newt both to the east and west of the prison complex.*

*Full and detailed surveys should be undertaken for these two groups.*

*Where other protected species interest is also identified the necessary follow-up survey work should be undertaken to support any future application. Layouts should respect existing features and where avoidance is not possible then appropriate mitigation and/or compensation should be achieved.*

*The Framework (February 2019 para 175d.) guides decision takers to seek biodiversity enhancements via the planning system and it is recommended that these are sought within the constraints of the final operational use of the facility. It is likely that such facilities will not come under the auspices of the new Environment Bill and Biodiversity Net Gain requirements."*

## Flood Risk and Drainage

The following comments were made in relation to flood risk and drainage:

*"It is noted that the site is located in Flood Zones 2 and 3 and that a Flood Risk Assessment will be required in support of any such application. There are areas that are susceptible to surface water flooding on any around the site. This is likely to be a concern raised by local residents.*

*The NPPG clearly outlines the hierarchy to be investigated by the developer when considering a surface water drainage strategy. The following drainage options should be considered in the following order of priority:*

- *into the ground (infiltration);*
- *to a surface water body;*
- *to a surface water sewer, highway drain, or another drainage system;*
- *to a combined sewer.*

*It is recommended that the applicant implements the scheme in accordance with the surface water drainage hierarchy outlined above. Although Lancashire County Council as the LLFA have not commented at this stage they will be consulted as part of the application and it is advisable to make contact with them. You may be able to seek further advice from United Utilities via their free pre-app service."*

### 3 Planning Policy

#### 3.1 National Planning Policy Framework (NPPF)

The latest NPPF was published in July 2021 and sets out the Government's planning policies for England.

The NPPF provides a framework for achieving sustainable development, which has been summarised as "*meeting the needs of the present without compromising the ability of future generations to meet their own needs*" (Resolution 42/187 of the United National General Assembly). At the heart of the framework is a presumption in favour of sustainable development.

The document states that the planning system has three overarching objectives which are interdependent and need to be pursued in mutually supportive ways:

- a) An economic objective – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure;
- b) A social objective – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering well-designed, beautiful and safe places, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being; and
- c) An environmental objective – to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.

#### 3.2 Local Policy: Central Lancashire Core Strategy and Chorley Local Plan

The Central Lancashire Core Strategy (adopted July 2012) has been produced by the Central Lancashire authorities of Preston, South Ribble and Chorley, with assistance from Lancashire County Council. Its purpose is to help co-ordinate development in the area and contribute to boosting investment and employment.

Chorley District Council Local Plan (adopted 2015, covering the period up to 2026) forms part of the statutory Development Plan for Chorley. The role of the Plan is twofold: to identify the scale of development in each settlement and allocate sites to meet the development needs of Chorley in order to achieve the vision for growth as outlined in the Central Lancashire Core Strategy; and to identify key local issues and provide a set of policies to manage change which will be used by decision makers to determine planning applications. The Chorley Local Plan (CLP) conforms with and builds on the policies outlined in the Central Lancashire Core Strategy (CLCS).

These documents set out the following sustainability-related policy requirements for new developments:

##### **Sustainable Development**

- **CLP Policy V1: Model Policy** – Within the settlement areas there is a presumption in favour of appropriate sustainable development.

##### **Sustainable Travel**

- **CLP Policy ST1: New Provision or Improvement of Footpaths, Cycleways, Bridleways and their associated facilities in existing networks and new development** – New development and highway and traffic management schemes will not be permitted unless they include appropriate facilities for pedestrians, cycle parking facilities, and/or cycle routes.

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- **CLP Policy ST4: Parking Standards** – Proposals for development will need to make parking provision in accordance with the requirements detailed in the Chorley District Local Plan.
- **CLCS Policy 3: Travel** – The best approach to planning for travel will involve a series of measures: Reducing the need to travel, improving pedestrian facilities, improving opportunities for cycling, improving public transport, enabling travellers to change their mode of travel on trips, encouraging car sharing, managing car use, improving the road network, and enabling the use of alternative fuels for transport purposes.

### **Biodiversity**

- **CLCS Policy 18: Green Infrastructure (and Biodiversity and Nature Conservation SPD)** – Manage and improve environmental resources through a Green Infrastructure approach to protect and enhance and invest in the natural environment and secure mitigation and compensation where a development would lead to the loss of green infrastructure.
- **CLCS Policy 22: Biodiversity and Geodiversity (and Biodiversity and Nature Conservation SPD)** – Conserve, protect and seek opportunities to enhance and manage the biological and geological assets of the area.
- **CLP Policy BNE9: Biodiversity and Nature Conservation** - In Chorley, Biodiversity and Ecological Network resources will be protected, conserved, restored, and enhanced.
- **CLP Policy BNE11: Species Protection** – Planning permission will not be granted for development which would have an adverse effect on a priority species unless the benefits of the development outweigh the need to maintain the population of the species in situ. Should development be permitted that might have an effect on a priority species planning conditions or agreements will be used to mitigate these impacts.

### **Energy and Sustainable Resources**

- **CLCS Policy 27: Sustainable Resources and New Developments (and Renewable and Low Carbon Energy SPD)** – Incorporate sustainable resources into new development through the following measures:
  - a) Minimum energy efficiency standards for all other new buildings will be ‘Very Good’ according to the Building Research Establishment’s Environmental Assessment Method (BREEAM).
  - b) Evidence is set out to demonstrate that the design, orientation and layout of the building minimises energy use, maximises energy efficiency and is flexible enough to withstand climate change;
  - c) Additional building fabric insulation measures, or appropriate decentralised, renewable or low carbon energy sources are installed and implemented to reduce the carbon dioxide emissions of predicted energy use by at least 15%;
  - d) Appropriate storage space is to be provided for recyclable waste materials and composting.
- **CLCS Policy 28: Renewable and Low Carbon Energy Schemes (and Renewable and Low Carbon Energy SPD)** – Proposals for renewable and low carbon energy schemes will be supported and planning permission granted where the following criteria listed in the CLCS are met. This is a key aim of the Core Strategy.
  - a) The proposal would not have an unacceptable impact on landscape character and visual appearance of the local area, including the urban environment;
  - b) The reason for the designation of a site with statutory protection would not be compromised by the development;
  - c) Any noise, odour, traffic or other impact of development is mitigated so as not to cause unacceptable detriment to local amenity;

- d) Any significant adverse effects of the proposal are considered against the wider environmental, social and economic benefits, including scope for appropriate mitigation, adaptation and/or compensatory provisions.

#### **Water**

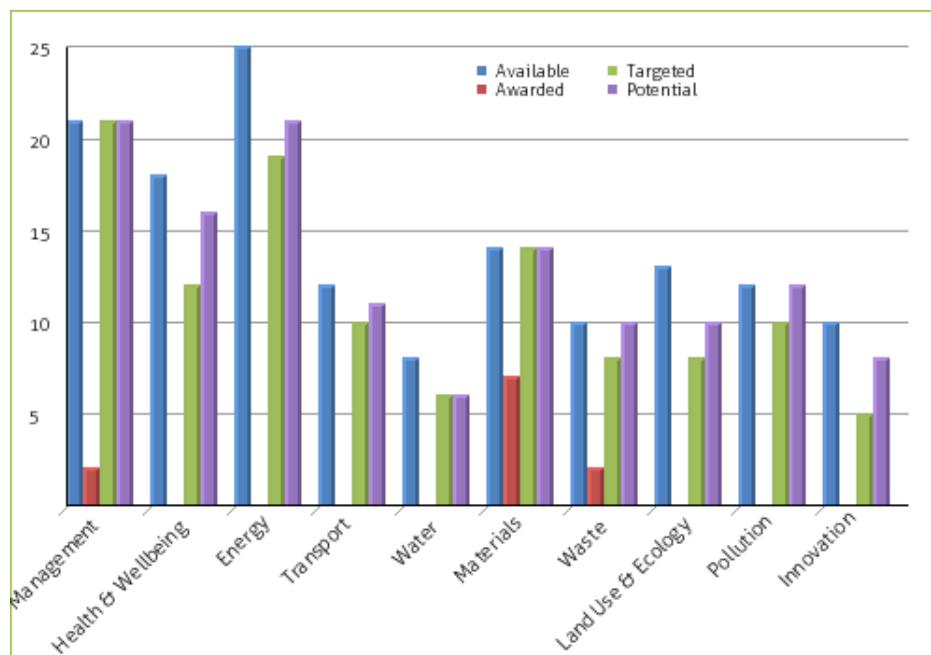
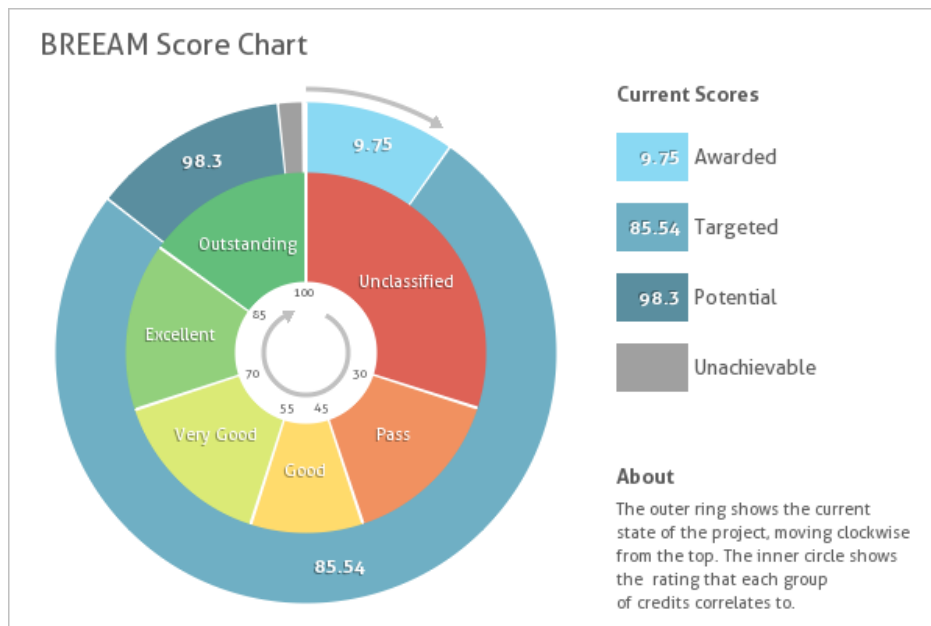
- **CLCS Policy 29: Water Management** – Improve water quality, water management and reduce the flood risk by minimising the use of water in new developments, working with the regional water company, pursuing opportunities to improve the sewer infrastructure, managing the capacity and timing of development to avoid exceeding sewer capacity, encouraging the adoption of SUDS and seeking to maximise the potential of Green Infrastructure to contribute to flood relief.

#### **Pollution**

- **CLCS Policy 30: Air quality** – Improve air quality through delivery of Green Infrastructure initiatives and through taking account of air quality when prioritising measures to reduce road traffic congestion.
- **CLP Policy BNE6: Light Pollution** – Applications for development requiring external lighting must include details of the lighting scheme as part of the application.

## 4 Prison – BREEAM Assessment

The new prison has been registered and will be assessed against the latest BREEAM 2018 New Construction scheme, under the ‘prison’ assessment category. A BREEAM Pre-Assessment Report has been prepared and is included in **Appendix A** of this Statement. This outlines a possible route to achieving a BREEAM ‘Outstanding’ score of 85% and the minimum credit requirements. The exact route to certification may vary as the detailed design progresses. The figures below provide a high-level visual summary of the currently targeted score and credit weightings.



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## 5 Bowling Green Club House

The bowling green club house, located on land to the south of HMP Wymott, will also be designed to be energy efficient and sustainable.

The following measures are proposed for the new building:

- Highly efficient building fabric;
- Passive cooling techniques;
- Renewable energy technologies (e.g. photovoltaic panels on the roof);
- Low energy lighting (LED fittings with PIR sensors);
- Waste minimisation measures and storage for both waste and recycling;
- Water efficient fixtures and fittings; and
- Ecological enhancements.

## 6 Planning Policy Compliance

In accordance with the relevant policy requirements of the NPPF, Chorley District Council Local Plan and Central Lancashire Core Strategy, the following section provides a summary of the proposed new prison development's response. Further details are provided in the subsequent sections, supporting specialist reports and the appended BREEAM Pre-Assessment report.

| Planning Requirement  | Prison Development Response   |
|---|---|
| <b>Sustainable Development</b><br>(CLP Policy V1)                       | <ul style="list-style-type: none"> <li>A minimum target of BREEAM 'Excellent' will be achieved with endeavours for BREEAM 'Outstanding'</li> </ul>  |
| <b>Sustainable Travel</b><br>(CLP Policy ST 1, ST 4 and CLCS Policy 3)  | <ul style="list-style-type: none"> <li>A Transport Assessment and Outline Travel Plan have been completed outlining sustainable transport measures</li> <li>Cycle facilities and storage for 51 cycles are to be provided on site</li> <li>Transport will be monitored and managed during construction</li> <li>At least 10% of total parking will be allocated to electric vehicle charging points, coupled with locally installed PV</li> </ul>   |
| <b>Biodiversity</b><br>(CLCS Policy 18, 22 and CLP Policy BNE 9 and 11) | <ul style="list-style-type: none"> <li>Ecology surveys have been completed and areas of high ecological value will be retained where possible</li> <li>Approximately 20% Biodiversity Net Gain is currently being achieved for the site</li> <li>A long-term Ecological Management Plan will be developed</li> </ul>  |
| <b>Energy and Sustainable Resources</b><br>(CLCS Policy 27 and 28)      | <ul style="list-style-type: none"> <li>High fabric energy efficiency, heat pumps, photovoltaic panels and energy efficient lighting, appliances, and equipment will be specified to assist in achieving the MoJ's target to be net zero carbon</li> <li>An energy metering system and Building Management System (BMS) will be installed so that at least 90% of the estimated annual energy consumption can be assigned to an end-use category and monitored</li> <li>During operation there will be a designated Waste Management Unit which will provide facilities for the separation, recycling and disposal of solid waste streams generated across the site</li> </ul> |
| <b>Water</b><br>(CLCS Policy 29)  | <ul style="list-style-type: none"> <li>Water efficient fixtures and appliances will be specified throughout the new prison in accordance with BREEAM Wat 01 requirements</li> <li>Water meters will be installed on the mains water supply to each building</li> </ul>  |

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| Planning Requirement  | Prison Development Response   |
|---|---|
|   | <ul style="list-style-type: none"> <li>• A site-specific Flood Risk Assessment has been completed</li> <li>• SuDS are to be incorporated into the drainage design</li> <li>• An Adaptation to Climate Change Strategy is being developed</li> </ul>   |
| <p><b>Pollution</b><br/>(CLCS Policy 30 and CLP Policy BNE 6)</p> | <ul style="list-style-type: none"> <li>• A Noise Impact Assessment has been completed and an Acoustic Consultant has been appointed to ensure noise impacts are minimised</li> <li>• An Air Quality Assessment has been completed</li> <li>• The prison will be designed to not exceed the levels set by BREEAM in terms of NO<sub>x</sub>, VOCs and PM<sub>10</sub></li> <li>• The external lighting strategy will be compliant with the ILP Guidance for the Reduction of Obtrusive Light (2011) and lighting will be adequately controlled to minimise light pollution</li> <li>• A Land Contaminated Report has been completed</li> </ul> |

### Energy Strategy

During construction, energy and fuel use will be closely monitored and measures will be put in place to reduce consumption as far as possible. The construction site will aim to be diesel-free, using at least 40% electric and hybrid plant on site, and the site will source all electricity from renewable sources.

The proposed new prison will aim to be “net zero carbon ready” which means that the buildings will be highly efficient and can be operated without the use of fossil fuels. This will be achieved through the following measures:

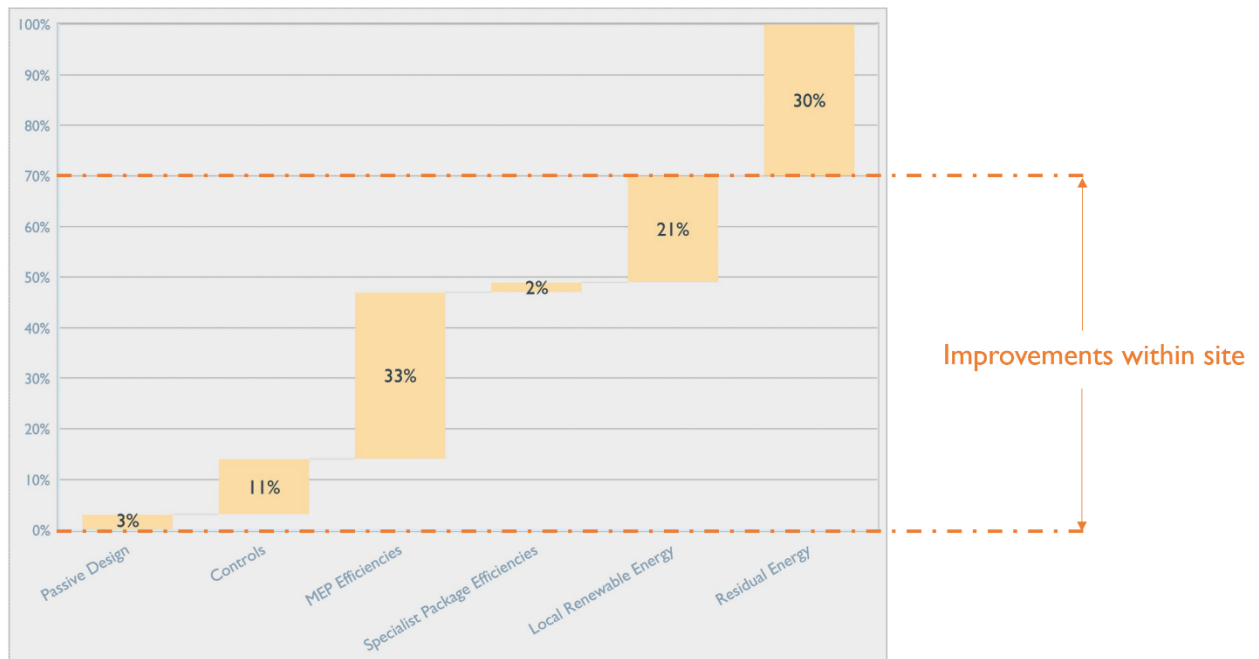
- Reducing energy demand from the buildings as far as possible through the specification of a highly energy efficient building fabric and low/zero carbon heating and hot water solutions (e.g. heat pumps).
- Using electricity as the primary energy source, without the need for fossil fuels (in particular natural gas).
- Future-proofing the prisons to allow the simple retrofit of any emerging technologies to reduce energy consumption and carbon emissions. This includes an allowance for future connection to local off-site renewable energy generation such as solar farms.
- Ensuring that renewable energy generation (e.g. from photovoltaic panels) is constructed on the site to provide zero carbon electricity and heat where practical.
- Using the land within the estate to capture carbon to partially offset emissions.
- Offsetting any residual carbon emissions generated by the prison operations that cannot be avoided using verified carbon offsetting providers.
- Minimising the whole life carbon emissions associated with the prison in line with PAS 2080 and taking steps to minimise the embodied carbon content as far as practicable.

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The graph below demonstrates the distribution across the energy hierarchy.



The above energy strategy will exceed the minimum requirements set by local and national planning policy and is therefore considered compliant with CLCS Policies 27 and 28.

### District Heating

There are no existing community schemes or sources of waste heat and power in the vicinity of the site that could viably provide heating to the proposed scheme.

Connection to the existing heating systems with HMP Garth and/or HMP Wymott was not considered viable. This was due to the complex capacity upgrades that would be required to the existing prison, with the associated operational risks to a live custodial environment.

The installation of an internal gas or biomass fired heating network for the new prison was not considered due to the client requirement for decarbonised sources of heating, in this case the use of heat pumps.

### Transport

During construction, the contractor will be required to monitor all construction traffic and minimise impacts as far as possible. All vehicles delivering or collecting from site will be required to meet Euro 6 emissions standards. Sustainable modes of transport will be encouraged, and cycle storage and electric vehicle charging will be provided for staff.

The development is committed to delivering the following sustainable transport measures. Further details are provided in the Transport Assessment and Outline Travel Plan submitted with this application.

- At least 10% of total parking spaces will be allocated to EV charging points which will be coupled with locally installed PV.
- 51no. BREEAM compliant storage spaces and cycle facilities will be provided across the site for staff and visitors.

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- An appropriate level of parking will be provided.
- Direct and convenient access to/from existing pedestrian and cycle routes and public transport services.

### **Health and Wellbeing**

The promotion of health and wellbeing for future occupants has been a key consideration in the design of this new prison.

In terms of thermal comfort, extensive thermal modelling (in line with CIBSE AM11) and an overheating assessment (in line with CIBSE Guide A/CIBSE TM52) will be undertaken. Following this the building services and façade design will be designed accordingly to reduce the risk of summer overheating.

To ensure internal visual comfort, a glare control strategy will be developed, and all internal lighting will be designed to meet the SLL Code for Lighting 2012 requirements.

The design team will consult with the MoJ's Security Specialist to ensure that the design of the new prison buildings, car park and amenity spaces are extremely safe and secure.

An Acoustic Consultant will be appointed to work with the design team to ensure the internal noise levels meet the criteria stipulated in Section 7 of BS 8233:2014.

The energy strategy is based on the use of an all-electric system, which in addition to reducing the site CO<sub>2</sub> emissions, will have a benefit in terms of local air quality.

Staff and visitors to the prison will have access to storage and showering facilities to encourage cycling and other active forms of transport to promote health and wellbeing.

### **Ecology**

The ecology surveys confirms that the existing site is of nature conservation importance up to the Local Level and contains populations of several species. The reports provide a series of recommendations in conformity with protected species legislation and planning regulations.

The design team, including the landscape architects, will continue to work with the project ecologists to protect existing biodiversity as far as possible, and in accordance with MoJ's Sustainability Delivery Plan, they will seek to achieve a target of 10% Biodiversity Net Gain (currently achieving around 20%).

A long-term Ecological Management Plan will also be developed to ensure habitat outcomes are delivered post-development.

### **Water Supply and Use**

Water use will be minimised through the use of:

- Highly water efficient taps, showers and WCs (subject to operational requirements);
- Water efficient kitchen equipment, including dishwashers and pre-rinse taps; and
- Automatic controls on water systems to control leaks.

In addition, a water meter will be installed on the mains water supply to each building. Any water-consuming plant or building areas consuming more than 10% or more of buildings total water demand will also have either an accessible sub-meter or have water monitoring equipment integrated into plant.

### **Waste Management**

A Waste Management Strategy has been submitted in support of this hybrid planning application and sets out how waste and recycling will be managed during both the construction and operational stages of the development. In summary, a Site Waste Management Plan will be developed by the Principal Contractor prior to construction to minimise the amount of waste produced through the use of modern

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methods of construction and accurate construction forecasting and will ensure at least 95% of construction waste is diverted from landfill.

During operation of the development there will be a designated Waste Management Unit (WMU) which will provide facilities for the separation, recycling and disposal of solid waste streams generated across the site.

Please refer to the Waste Management Strategy for more detail.

### **Materials**

A detailed Life Cycle Assessment will be carried out and new building materials will be selected to ensure that they minimise environmental impact and have low embodied energy – from manufacture, transportation and operational stages, through to eventual demolition and disposal. A Sustainable Procurement Plan is being developed to guide the specification towards sustainable construction products. All timber used on site, including timber used in the construction phase, such as hoarding, fencing and scaffolding, will be responsibly and sustainably sourced.

## **Appendix A: BREEAM 2018 New Construction Pre-Assessment Report**