

# SUSTAINABILITY STATEMENT

QUEEN MARY'S HOSPITAL – COMMUNITY  
DIAGNOSTIC CLINIC

SIDCUP

VERSION 01

NOVEMBER 2023



Company Registration No: 10354408

**CLIENT:** OXLEAS NHS TRUST

**CONSULTANT:** XDA Consulting Ltd  
School House  
Lewes Road  
Westmeston  
East Sussex  
BN6 8RH  
  
Tel: 07709 425723  
Email: hello@xdaconsulting.co.uk  
Website: www.xdaconsulting.co.uk

**PROJECT NAME:** QMH CDC

**PROJECT REFERENCE:** X212

Version	Date	Description of changes
01	22.11.2022	Initial issue for comment

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# 1 INTRODUCTION

XDA Consulting Ltd has been appointed by Oxleas NHS Trust to undertake the BREEAM Assessment of the proposed Community Diagnostic Clinic (CDC). The proposal for the CDC scheme comprises of a refurbished area of 541m<sup>2</sup>, a new build extension with a GEA of 333m<sup>2</sup> and an external plant area with a GEA of 144m<sup>2</sup>. The new CDC shall provide healthcare services to the Sidcup community and its surroundings including MRI, CT and X-Ray together with clinical support spaces and staff facilities.

The Bexley Local Plan includes Policy DP30 Mitigating climate change which requires new non-residential development, refurbishment of existing buildings, and conversions, over 500m<sup>2</sup> floor space (gross) must meet or exceed BREEAM 'excellent' rating.

The scheme is being assessed against BREEAM 2014 Refurbishment & Fitout: Healthcare criteria. The BREEAM Assessor/AP was appointed at concept design stage to assist the design team to embed the BREEAM Excellent requirements within the scheme.

This Sustainability Statement provides an overview of the credits targeted to achieve the BREEAM Excellent rating.

## 2 PLANNING POLICY

### 2.1 NATIONAL POLICY – THE NPPF

The National Planning Policy Framework (NPPF), updated July 2021, sets out the government's planning policies for England and how these are expected to be applied and states that:

The purpose of the planning system is to contribute to the achievement of sustainable development. At a very high level, the objective of sustainable development can be summarised as meeting the needs of the present without compromising the ability of future generations to meet their own needs.

Achieving sustainable development means that the planning system has three overarching objectives, which are interdependent and need to be pursued in mutually supportive ways:

- Economic
- Social
- Environmental

So that sustainable development is pursued in a positive way, at the heart of the Framework is a presumption in favour of sustainable development.

### 2.2 LOCAL POLICY

#### 2.2.1 Bexley Local Plan

Bexley Local Plan was adopted on 26<sup>th</sup> April 2023 and sets out the principles for sustainable development. The local plan contains strategic, non-strategic and site allocation (for residential and residential-led mixed-use development) policies along with supporting text, which take account of and are supported by:

- legal requirements related to the preparation of local plans including the duty to cooperate;
- Government planning policy and guidance (without seeking to repeat these)
- London Plan policy and guidance (without seeking to repeat these);
- integrated impact (IIA) and habitats regulations (HRA) assessments of the Local Plan;
- a whole Plan viability assessment; and,
- a proportionate evidence base (including evidence underpinning the London Plan), in the form of plans and strategies, studies, reports, technical papers and assessments.

### **POLICY DP30 Mitigating climate change**

1. Major development proposals must meet London Plan requirements and calculate whole life-cycle carbon emissions through a nationally recognised Whole Life-Cycle Carbon Assessment and demonstrate actions taken to reduce life-cycle carbon emissions.
2. Minor development proposals should aim to achieve net zero carbon; reducing greenhouse gas emissions in operation and minimising annual and peak energy demand in accordance with the London Plan energy hierarchy.
3. The Council expects that, where possible:
  - a. new homes be designed to achieve:
    - i. BREEAM Home Quality Mark (HQM), or
    - ii. BREEAM Communities standards (for major housing-led mixed-use development), or
    - iii. Passivhaus, or
    - iv. other appropriate sustainability measures.
  - b. residential conversions, refurbishment, extensions and changes of use should be designed to achieve BREEAM Domestic Refurbishment Excellent or other appropriate sustainability measure.
  - c. new non-residential development, refurbishment of existing buildings, and conversions, over 500m<sup>2</sup> floor space (gross) must meet or exceed BREEAM 'excellent' rating; and
  - d. minor non-residential development achieves a BREEAM 'Very Good' rating.
4. Development must be designed to be water efficient and reduce water consumption. Residential development must not exceed a maximum water use of 105 litres per head per day (excluding the allowance of up to 5 litres for external water consumption). Refurbishments and other non-domestic development will be expected to meet BREEAM water-efficiency credits.

## 3 BREEAM OVERVIEW

BREEAM is a performance-based assessment and certification scheme that assesses, encourages and rewards environmental, social and economic sustainability throughout the built environment.

BREEAM measures sustainable value in a series of categories, ranging from energy to ecology. Each of these categories addresses the most influential factors, including low impact design and carbon emissions reduction; design durability and resilience; adaption to climate change; and ecological value and biodiversity protection.

Each category is sub-divided into a range of assessment issues, each with its own aim, target and benchmarks. When a target or benchmark is reached, as determined by the BREEAM assessor, the development or asset score points, called credits. The category score is then calculated according to the number of credits achieved and its category weighting. Once a development has been fully assessed, the final performance rating is determined by the sum of the weighted category scores.

BREEAM rating benchmarks for projects are presented in Table 3.1.

BREEAM rating	% Score	Performance equivalent to:
Outstanding	≥85	Less than the top 1% of UK new non-domestic buildings (innovator)
Excellent	≥70	Top 10% of UK new non-domestic buildings (best practice)
Very Good	≥55	Top 25% of UK new non-domestic buildings (advanced good)
Good	≥45	Top 50% of UK new non-domestic buildings (intermediate good practice)
Pass	≥30	Top 75% of UK new non-domestic buildings (standard good practice)
Unclassified	<30	

**Table 3.1 BREEAM rating benchmarks**

A BREEAM assessment assesses the performance of a development across a number of categories, and each has a defined weighting. This weighting system defines and ranks the relative impact of environmental issues and is used to determine the overall BREEAM score.

BREEAM RFO assessments are divided into parts that are applicable depending upon the type of refurbishment or fit-out project being undertaken. These parts are:

- Part 1 Fabric and Structure
- Part 2 Core Services
- Part 3 Local Services
- Part 4 Internal Design

The BREEAM Assessment of QMH CDC shall include Parts 1-4 therefore the environmental weightings shown in Table 3.2 shall apply.

Environmental Section	Weighting %
	Fully fitted out
Management	12
Health & Wellbeing	15
Energy	19
Transport	8
Water	6
Materials	12.5
Waste	7.5
Land Use & Ecology	10
Pollution	10
Total	100
Innovation (additional)	10

**Table 3.2 BREEAM section weightings**

## 4 ASSESSMENT SUMMARY

The scheme is being assessed against BREEAM New Construction 2018: Healthcare criteria. The BREEAM Assessor/AP has been working with the design team from Concept Design stage to advise the team on the requirements of BREEAM Excellent and ensure they are embedded within the scheme.

The design team have identified the credits that can be readily included in the scheme, referred to as 'targeted credits' and those which are considerably more complex which have been identified as 'potential credits'. These potential credits provide options for the team to include to further bolster the assessment score.

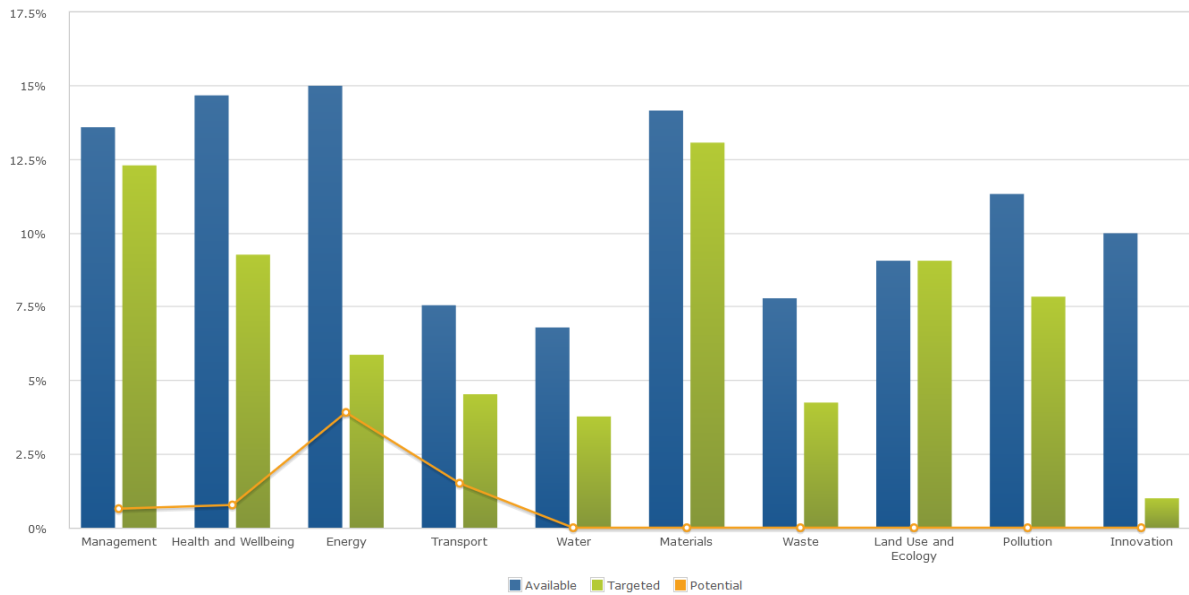
Table 4.1 shows the number of credits targeted in each BREEAM section with a graphical representation in Figure 4.1.

<b>Project:</b>	X212 - QMH CDC Sidcup
<b>Report:</b>	Pre-Assessment Stage
<b>Design Target:</b>	Excellent - 71.00%
<b>Potential Rating:</b>	Excellent - 77.84%

Section	Available		Targeted		Potential	
	Credits	Percent	Credits	Percent	Credits	Percent
Management	21	13.6%	19	12.3%	1	0.65%
Health and Wellbeing	19	14.68%	12	9.27%	1	0.77%
Energy	23	15.01%	9	115.87%	6	3.92%
Transport	10	7.56%	6	4.53%	2	1.51%
Water	9	6.8%	5	3.78%	0	0%
Materials	13	14.17%	12	13.08%	0	0%
Waste	11	7.79%	6	4.25%	0	0%
Land Use and Ecology	4	9.07%	4	9.07%	0	0%
Pollution	13	11.33%	9	7.85%	0	0%
Innovation	10	10%	1	1%	0	0%
<b>Total</b>	<b>133</b>	<b>110.00%</b>	<b>83</b>	<b>71.00%</b>	<b>10</b>	<b>6.85%</b>

**Table 4.1 BREEAM assessment summary scoring**

Performance by Section



**Figure 4.1 BREEAM performance by section of QMH CDC**

The following sections summarise the design measures being undertaken to achieve the BREEAM credits and the options being considered to enhance the score.



## 5 MANAGEMENT

The project stakeholders have met to identify and define the roles, responsibilities and contributions for each key phase of project delivery. Consultation has been undertaken with all key stakeholders to inform the project brief and develop the design.

A BREEAM Sustainability Champion has been advising on the implementation of BREEAM criteria from concept design stage, ensuring key BREEAM time sensitive elements are undertaken and the BREEAM strategies embedded in the design development.

Life cycle cost analysis of the scheme is being developed to enable design choices that deliver the lowest life cycle cost for the scheme.

The Contractor appointed for the scheme will be required to have ISO14001 accreditation and must register with the Considerate Constructors Scheme and achieve Performance Beyond Compliance certification. They shall be required to legally and responsibly source all their site timber and monitor all of their site impacts. This shall include setting targets, monitoring & recording data for:

- site energy consumption in kWh (and where relevant, litres of fuel used) as a result of the use of construction plant, equipment (mobile and fixed) and site accommodation
- potable water consumption (m<sup>3</sup>) arising from the use of construction plant, equipment (mobile and fixed) and site accommodation
- transportation movements and impacts resulting from delivery of the majority of construction materials to site and construction waste from site

The Contractor shall be required to appoint a BREEAM Sustainability Champion to assist them in achieving the agreed performance targets throughout the Construction, Handover and Close Out stages. They shall monitor construction progress against the performance target, proactively identify risks and opportunities related to the procurement and construction process, provide feedback to support them in taking corrective actions and achieving their agreed performance targets and monitor and, where relevant, coordinate the generation of appropriate evidence by the project team and the provision to the assessor.

A full schedule of commissioning of all installed services will be undertaken in line with Building Regulations, BSRIA and CIBSE guidelines. The principal contractor shall account for the commissioning and testing programme, responsibilities and criteria within their budget and the main programme of works, allowing the required time to complete all commissioning and testing activities prior to handover.

Prior to handover the Contractor shall a building user guides, containing both technical & non-information for the building users and the facilities manager. In addition, training schedules will be written and implemented to ensure building owners/users are introduced to installed systems, know who the aftercare team is and given an overview of the building user guide(s).

An independent 3<sup>rd</sup> party shall be appointed to undertake a Post Occupancy Evaluation (POE) which gains comprehensive in-use performance feedback and identifies gaps between design intent and in-use performance. The aim of this is to highlight any improvements or

interventions that need to be made and can inform operational processes and future developments due to the lessons learned. This is a valuable resource for the NHS Trust to reduce the performance gap on this building and any future developments.

## 6 HEALTH AND WELLBEING

To ensure visual comfort, all of the occupied spaces shall be provided with user operated blinds to provide glare control.

Internal lighting will be LED, minimising the energy associated with internal lighting. The lighting will be zoned with appropriate controls ensuring lighting is only switched on in areas where it is needed. This shall further reduce energy consumption and CO<sub>2</sub> emissions due to the lighting.

The external lighting shall be designed to be energy efficient and only be on when is needed for safety and security purposes.

Dynamic thermal modelling is being undertaken to assess thermal comfort and identify any potential risk of overheating for both the current and future climate change scenarios. This will enable the design to be optimised and ensure the most energy efficient building services are specified to overcome any risks of overheating.

An Indoor Air Quality Plan has been commissioned to inform the design, specification and installation decisions and actions that minimise indoor air pollution during occupation of the building. All of the products specified shall meet the European standards on VOC emissions from products to maintain indoor air quality for future occupants. The Contractor shall be required to undertake post-construction (pre-occupation) indoor air quality testing to ensure the total volatile organic compound and formaldehyde levels are within the required limits.

An acoustician has reviewed the scheme and provided design input to enhance the acoustic performance standards beyond the minimums required for HTM 08-01: Acoustic design requirements, 2013. The Contractor shall be required to undertake pre-completion acoustic testing to ensure the required acoustic standards are achieved in construction.

## 7 ENERGY

The CDC is being designed to be as energy efficient as possible, with highly insulated building fabric and energy efficient building services. Lighting shall be LED lighting which shall reduce energy consumption and also produces less heat gains into the spaces.

The buildings energy consumption shall be sub-metered to enable the different energy usages to be accurately monitored. This shall assist with targeting energy reductions in the relevant areas and identifying the impacts of any changes.

The specification of the equipment is being reviewed to ensure all unregulated energy consumption can be minimised as much as is practicable.

## 8 TRANSPORT

The site is well positioned with good access to public transport with a number of bus routes stopping within the hospital site, off Frogna Avenue. The hospital provides a range of amenities including food shops, access to cash and outdoor open space.

Urban Flow have undertaken a Transport Statement for the scheme and are developing a Framework Travel Plan which includes targets and measures to strongly promote sustainable modes of transport to and from the development.

## 9 WATER

The water demand in the CDC building will be reduced as far as practicable by fitting low water consuming sanitaryware and the target is to be 25% better than standard consumption. The water consumption shall be easily monitored using pulsed output water meters fitted onto the incoming water supply in the plant room.

The toilet areas shall be fitted with sanitary supply shut-off which shall prevent water flow when the areas are not in use. This can limit wasted potable water due to taps being left on, faulty cisterns or dripping taps.

All external planting shall rely on rainfall and manual watering. No irrigation shall be specified.

## 10 MATERIALS

The building materials proposed for the scheme are being reviewed using Life Cycle Analysis to identify the options with the lowest environmental impact. This shall be continually reviewed throughout design development to minimise the impact of scheme. The re-use of the existing building structure shall reduce the requirement for new materials and therefore the embodied carbon of the scheme.

The contractor shall be required to responsibly source all construction materials, procuring materials from suppliers with BES6001, FSC or ISO14001 accreditation.

A durability and resilience report for the scheme is being developed, identifying any areas at risk of damage from personnel and environmental factors and ensuring the materials specified are resilient. This shall reduce the likelihood of materials needing to be frequently replaced due to wear and tear.

## 11 WASTE

The Contractor shall be required to prepare a Resource Management Plan with construction waste resource efficiency of  $\leq 6.5$  tonnes waste per 100m<sup>2</sup> gross internal floor area and that more than 90% of waste generated is diverted from landfill.

The bin store has been designed to include a dedicated space for the segregation and storage of operational recyclable waste generated by the building. It shall be clearly labelled, to assist with segregation, storage and collection of the recyclable waste streams.

The scheme is being designed to be easily adapted according to climate change and any future changes in use for the building. For example, wall panels could be easily removed to enable large medical equipment to be removed & replaced, without destroying the building fabric. The scheme is being designed for disassembly ensuring a truly sustainable design solution considering both the current and future requirements and impacts of the building.

## 12 LAND USE & ECOLOGY

Greenspace Ecological Solutions (GES) have been appointed on the scheme and undertaken a preliminary ecological assessment (PEA). They have confirmed the development of the site shall not impact any designated sites or areas of ancient woodland. Further bat surveys are being undertaken to determine the presence or absence of bats.

GES shall develop a scheme along with biodiversity net gain calculations to improve the sites ecological value. A 5-year management plan shall be provided to ensure the ecology is maintained post-occupation of the building.

## 13 POLLUTION

The proposed building services shall include refrigerants therefore refrigerant leak detection shall be specified to ensure low risk of refrigerants escaping and polluting the atmosphere.

A flood risk assessment has been produced by Perega considering the risk of flooding from all sources and confirms there is low risk from:

1. Fluvial (rivers)
2. Tidal
3. Surface water: sheet run-off from adjacent land (urban or rural)
4. Groundwater: most common in low-lying areas underlain by permeable rock (aquifers)
5. Sewers: combined, foul or surface water sewers
6. Reservoirs, canals and other artificial sources

There shall be no increase in surface water run-off for the scheme as the site is currently building and hard standing, and will remain so with the proposed scheme.

The risk of light and noise pollution will be eliminated from the scheme. The external lighting will be compliant with Institute of Lighting Professionals (ILP) Guidance notes for the reduction of obtrusive light, 2011. This will limit the upward light ratio from the external lighting. The lighting shall also be controlled via timeclocks and daylight sensors so lighting is only on when required, and in evenings the lighting will be automatically controlled with presence detection for pedestrian walkways.

An environmental noise survey has been undertaken by KP Acoustics to determine the current noise levels from the site. The acoustician has provided design input to review the noise impact

of the proposed building services. This shall ensure the mechanical services design shall enable the noise to remain 5dBA below the background noise levels at night to provide no disturbance to the adjacent hospital wards.

## 14 CONCLUSIONS

The design proposals for the Queen Mary's Hospital Community Diagnostic Clinic have embedded sustainable design measures within the scheme to enable a BREEAM Excellent rating to be achievable.

Therefore, the Bexley Local Plan Policy DP30 Mitigating climate change can be met by the proposed scheme.