

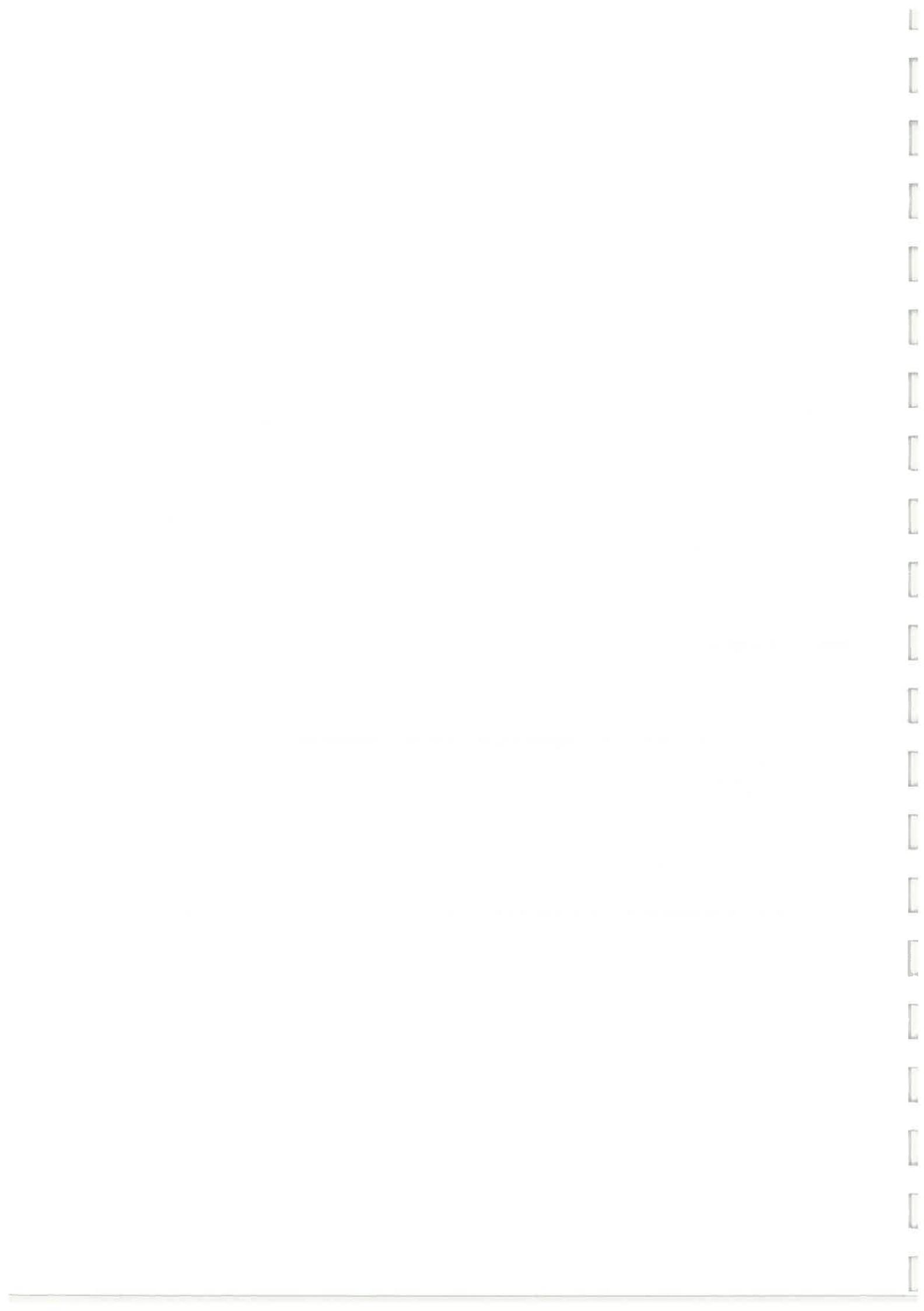
Brunswick Park Centre

Sustainability Strategy

10 MAY 2010 B/01960/10



Prepared for NHS Barnet and London Borough of Barnet
March 2010



Brunswick Park, Barnet, London

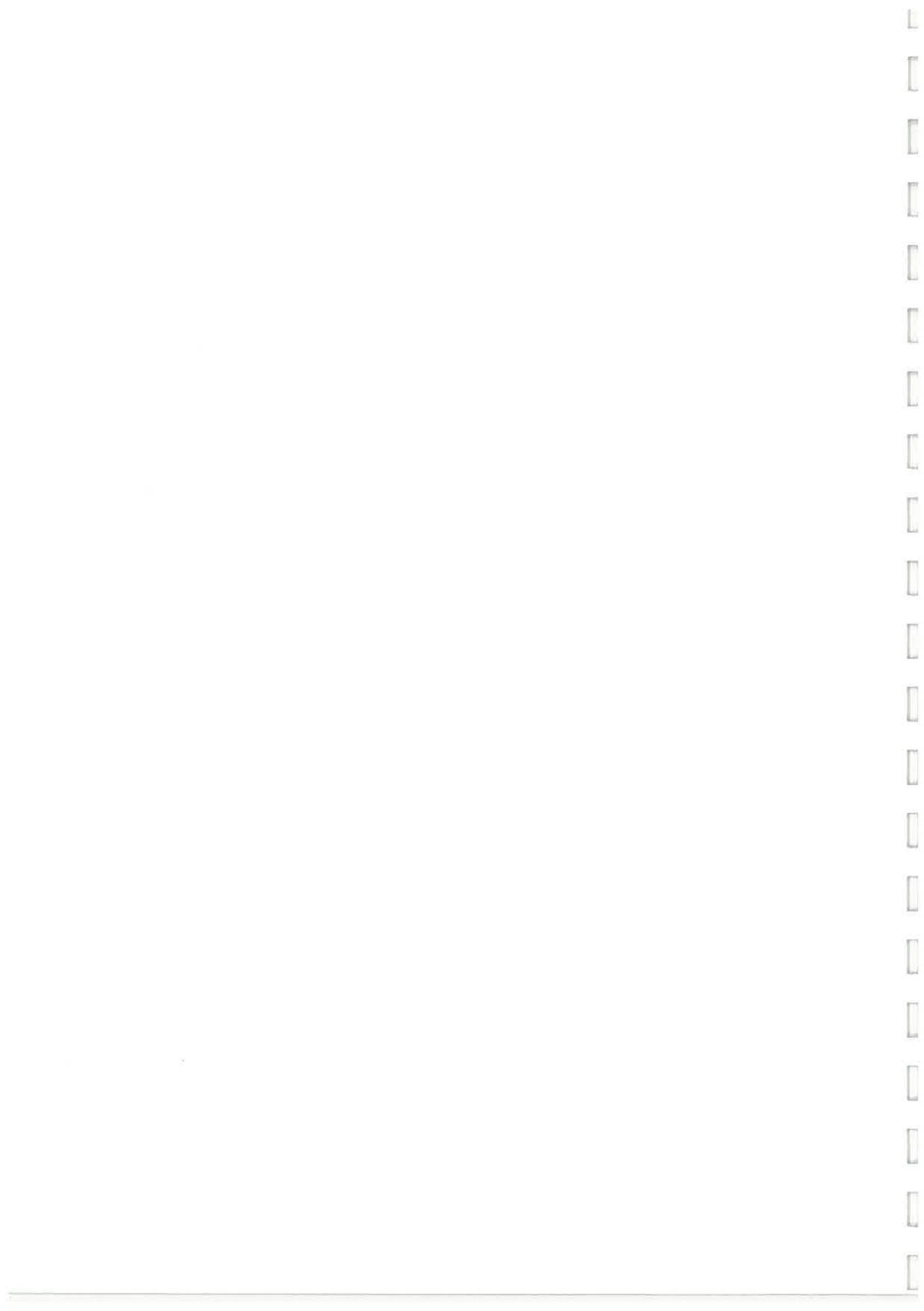
Sustainability Statement

for

Elevate Partnership

24 March 2010

Project Number: 5216
Issue 1.0





Brunswick Park, Barnet, London

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London | Bristol

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This report has been checked in accordance with Ferguson Brown's internal Quality Assurance procedures.

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1.0 Executive Summary

Ferguson Brown Sustainability Ltd have been commissioned to provide a sustainability statement for the proposed Brunswick Park co-location development in Barnet East, London.

Brunswick Park is a proposed new build development incorporating NHS consulting rooms, a childcare centre, Acorn special needs centre and a library. These facilities are to be located within a single building which also incorporates a hydrotherapy pool as well as associated administration and circulation space. The proposed site is to be built on existing green field land and will include an extension to the existing car parking facilities.

This sustainability statement is to accompany the application for full planning permission for the proposed development and reviews in detail and summarises the achievements and objectives of the development within the context of the following London Borough of Barnet definition:

"Sustainability Statement – Objectively assessing the full development proposal against all pertinent planning policy, guidance and standards, drawing on detailed technical documents and the Standards within this SPD (essentially Technical Planning Statements)"

The sustainability objectives from the London Plan (notably 'London Plan Supplementary Planning Guidance; Sustainable Design and Construction, May 2006') and also the London Borough of Barnet (notably 'Local Development Framework Supplementary Planning Document', Sustainable Design and Construction, June 2007) have been extracted, considered and where feasible, incorporated into the design of the development. This is detailed within Section 7 of this statement.

Description of key positive impacts of the development:

- the development will provide several community facilities within one building, thus reducing the need for multiple buildings that require additional infrastructure for each. Consequently the scheme becomes more relevant to a wider range of people and represents the vision of a healthy neighbourhood which is consistent with the priorities identified by key stakeholders and the Council.
- the proposed development reintegrates the whole site into the local context and provides community facilities that are open and accessible to all.
- The potential carbon savings of the development has been proposed to be delivered via either ground source heat pumps or photovoltaics. The incorporation of these technologies has been determined to achieve more than a 20% reduction in CO₂ emissions.
- a travel plan has been produced which provides options to reduce reliance on private cars and thus reduce carbon emissions associated with travel to and from the completed development
- the design of the building can be seen to be promoting sustainable design through:
 - the choice of materials that have a low environmental impact and locally sourced where possible;
 - the use of natural ventilation where possible to reduce the reliance of mechanical ventilation in combination with the use of thermal mass;
 - underfloor heating to reduce the amount of wasted energy used to heat the air;
 - the use of metering and BMS controls to allow monitoring thus allowing capability to identify areas of unusual energy use and to promote energy efficient building operation.

It is therefore suggested that the development will provide significant net overall benefit in sustainability terms and create a beneficial legacy within the London Borough of Barnet for future generations through function as a community building and energy reduction measures.

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3.0 Disclaimer

This sustainability statement has been prepared by Ferguson Brown Sustainability Ltd using all reasonable skill, care and diligence on behalf of the client. The opinions and guidance contained within this report are based solely upon the information available to Ferguson Brown Sustainability Ltd at the time of writing this report.

The contents of this report do not, in any way, purport to include any manner of legal advice or opinion.

4.0 Introduction

4.1 Purpose of the statement

This statement provides an assessment of the sustainability aspects that are relevant to the planning application submission for the proposed Brunswick Park development, Barnet East. This analysis identifies the sustainability objectives and indicators established in comparison to the relevant planning and sustainability policy frameworks. This statement also demonstrates how these objectives have been considered and where relevant incorporated and met within the proposed development for which planning permission is sought.

4.2 Role of Sustainability Statement

Ferguson Brown Sustainability have been appointed by Elevate Partnership Ltd to provide sustainability support for the Brunswick Park project.

This statement supports and is a part of the application for planning permission for the development of the proposed Brunswick Park building.

The development and application of a sustainability statement methodology can support a number of objectives that collectively embed sustainability within a project life cycle:

- providing evidence for planning applications;
- enabling effective options appraisal for the initial screening process, short-listed and preferred options;
- facilitating consultation and documenting decision-making rationale;
- establishing a sustainability framework for project design, construction and management, ensuring that sustainability benefits are realised;
- promoting good practice for sustainability through a consistent management framework; and
- providing a framework for performance reporting across other projects.

This statement demonstrates how sustainability considerations have been applied at the planning submission stage, providing clear indications of intent to apply the required criteria through to detailed design and construction.

4.3 Site and Proposed Development

The proposed Brunswick Park development seeks to relocate and redesign the existing library, nursery and healthcare facilities on the site. It is proposed that the existing community hall at the top of the site and the existing library and medical centre to the west of the site (adjacent to Brunswick Park Primary School) will be demolished after the new co-location facility is constructed. The relocation of these facilities is a critical as the existing buildings are unfit for purpose.

The project will be procured using the local NHS Lift Co ("Elevate Partnership") to deliver and maintain the combined children's centre, library and health centre for NHS Barnet and London Borough of Barnet (using in part Department for Culture, Media and Sport co-location funding). This includes the development of construction and facilities management (FM) services design, site acquisitions, procurement of the construction, FM contracts and long term maintenance of facilities.

The proposed building will be built on existing metropolitan open land (MOL). As part of the development there will be the reclamation of land via the demolition of existing buildings that will be returned to new MOL. Overall there will be an increase in the amount of MOL as part of the development.

This project is the initial phase of a longer term 2-3 phase master plan involving other buildings in the area. The later stages rely on the successful outcome of this initial co-location project.

It is proposed that there will be a separate landscaped area for the nursery and child care centre to the rear of the building. This will be designed to increase the ecological value of the land and also incorporate educational aspects that will be integrated into the learning syllabus. Other areas of the site including the car park and foot paths will have additional landscaping.

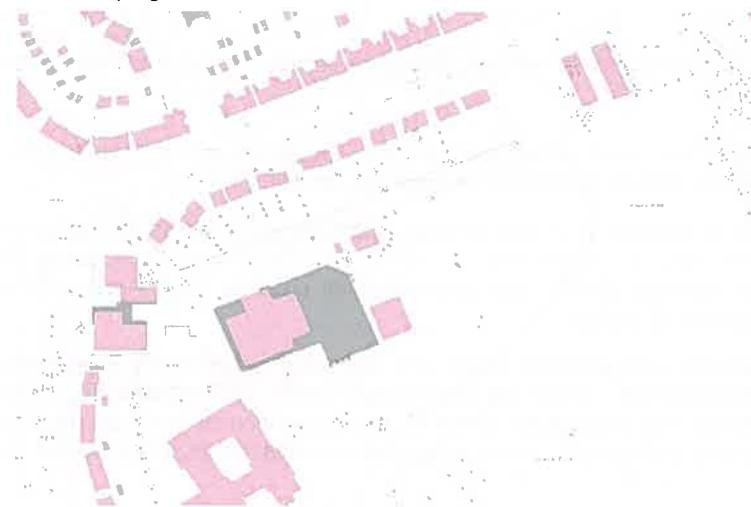


Figure 1 - Existing site

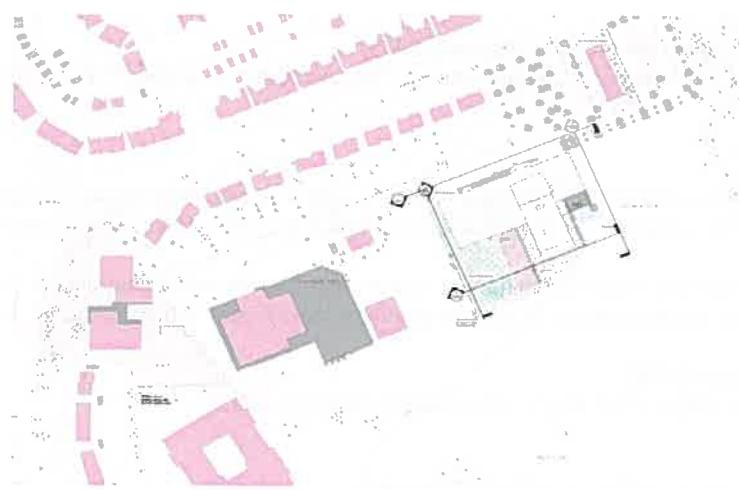


Figure 2 – Proposed development area

5.0 Policy Context

In 1987 the Brundtland Commission report generated the now widely accepted definition of "sustainable development" as follows:

"Sustainable development is development which satisfies the current needs of society without compromising the needs of future generations."

The project team recognises that sustainability is the balance between social, economic and environmental issues and is a concept that must be defined at national, regional and local levels.

Sustainable development is strongly promoted through international initiatives including the World Summit on Sustainable Development held in Johannesburg, 2003; national initiatives including the UK Government Sustainable Development Strategy (2005); and local initiatives such as Local Agenda 21 (LA21) developed in response to the Rio Earth Summit (1992).

Various national, regional and local planning policy and dedicated sustainability policy documents promote the themes of sustainable development - these are summarised below. The sustainability statement that follows in section 6 takes into account the progressive cascade and application of such policies from national, through regional and local level policy frameworks, where an appropriate level of detail is provided in response to specific design criteria.

The design of the development has considered the following planning documents:

National Policy

- PPS 1 – Delivering Sustainable Communities (January 2005)
- Planning Policy Statement: Planning and Climate Change; Supplement to Planning Policy Statement 1 (December 2007)

Regional Policy

- The London Plan 'Spatial Development Strategy for Greater London' (Consolidated with Alterations 2004)
- The London Plan 'Spatial Development Strategy for Greater London' (Consultation on draft replacement plan October 2009)
- The London Plan Supplementary Planning Guidance, 'Sustainable Design and Construction' (2006)
- 'Integrating energy into new developments: Toolkit for planners, developers and consultants'; London Renewables Toolkit (2004)
- The Mayor's Energy Strategy (2004)
- 'Connecting with London's nature', The Mayor's Biodiversity Strategy (2002)

Local Policy

- Core Strategy - Direction of Travel Document, November 2009
- Unitary Development Plan London Borough of Barnet, Adopted May 2006.
- Local Development Framework, London Borough of Barnet, Supplementary Planning Document 'Sustainable Design and Construction' (June 2007)

Other requirements

- BREEAM Bespoke, BRE (2008)

5.1 National Sustainability Policy

The progressive imperative to address sustainability comprehensively at the heart of government decision making has led to the incorporation of a number of recent policy instruments both within the planning system and the wider UK policy framework for sustainability.

PPS 1 – Delivering Sustainable Communities (January 2005)

Planning Policy Statement 1 (PPS 1) sets out the Government's overarching planning policies on the delivery of sustainable development through the planning system. PPS 1 sets out the Government's high level policy objectives for planning. It sets a framework for specific policies, which are set out in the thematic Planning Policy Statements. PPS 1 complements those documents but is not a substitute for the detailed guidance in those Planning Policy Statements. In particular, the way in which sustainable development objectives should be approached in detail in specific policy areas will be covered as appropriate in the relevant thematic PPS.

PPS 1 contains five broad objectives, based around the four sustainable development aims set out by the (now superseded) 'A Better Quality of Life – A Strategy for Sustainable Development for the UK', to ensure that planning facilitates and promotes sustainable and inclusive patterns of urban and rural development.

The five objectives are:

- making suitable land available for development in line with economic, social and environmental objectives to improve people's quality of life;
- contributing to sustainable economic development;
- protecting and enhancing the natural and historic environment, the quality and character of the countryside, and existing communities;
- ensuring high quality development through good and inclusive design, and the efficient use of resources; and;
- ensuring that development supports existing communities and contributes to the creation of safe, sustainable, liveable and mixed communities with good access to jobs and key services for all members of the community.

The key policy messages are:

- planning has a key role to play in the creation of sustainable communities;
- the planning system should be transparent, flexible, predictable, efficient and effective;
- plans should be drawn up with community involvement and present a shared vision and strategy of how the area should develop to achieve more sustainable patterns of development;
- the plan-led system, and the certainty and predictability it aims to provide, is central to planning and plays a key role in integrating sustainable development objectives; and
- planning is a tool for local authorities to use on establishing and taking forward the vision for their areas as set out in their community strategies.

PPS 1 provides national guidance on how sustainable development should be defined by the planning system, but recognises that this needs to be interpreted in each local planning area.

Planning Policy Statement: Planning and Climate Change; Supplement to Planning Policy Statement 1 (December 2007).

This PPS on climate change supplements PPS 1 by setting out how planning should contribute to reducing emissions and stabilising climate change and take into account the unavoidable consequences.

5.2 Regional Sustainability Policy

The London Plan (Consolidated with Alterations since 2004)

The London Plan replaces the previous strategic planning guidance for London (known as RPG 3). The Plan has development plan status and includes a number of policies on the environment which developments must adhere to.

All policies in the London Plan promote sustainable development and specific policies that relate to this development include policy 4B.3 Sustainable Design and Construction, policy 4A.4 – Energy assessment, policy 4A.6: Decentralised Energy: Heating, Cooling and Power and policy 4A.7 – Renewable Energy.

Policy 4A.3 - Sustainable Design and Construction states that:

"The Mayor will, and boroughs should, ensure future developments meet the highest standards of sustainable design and construction and reflect this principle in DPD policies. These will include measures to:

- make most effective use of land and existing buildings
- reduce carbon dioxide and other emissions that contribute to climate change
- design new buildings for flexible use throughout their lifetime
- avoid internal overheating and excessive heat generation
- make most effective and sustainable use of water, aggregates and other resources
- minimise energy use, including by passive solar design, natural ventilation, and vegetation on buildings
- supply energy efficiently and incorporate decentralised energy systems (Policy 4A.6), and use renewable energy where feasible (Policy 4A.7)
- minimise light lost to the sky, particularly from street lights
- procure materials sustainably using local suppliers wherever possible
- ensure designs make the most of natural systems both within and around the building
- reduce air and water pollution
- manage flood risk, including through sustainable drainage systems (SUDS) and flood resilient design for infrastructure and property
- ensure developments are comfortable and secure for users
- conserve and enhance the natural environment, particularly in relation to biodiversity, and enable easy access to open spaces
- avoid creation of adverse local climatic conditions
- promote sustainable waste behaviour in new and existing developments, including support for local integrated recycling schemes, CHP and CCHP schemes and other treatment options
- encourage major developments to incorporate living roofs and walls where feasible (Policy 4A.11)
- reduce adverse noise impacts.

The Mayor will and the boroughs should require all applications for major developments to include a statement on the potential implications of the development on sustainable design and construction principles. This statement should address demolition, construction and long-term management. Boroughs should ensure that the same sustainability principles are used to assess other planning applications.

The Mayor will and boroughs should ensure that developments minimise the use of new aggregates and do not use insulating and other materials containing substances which contribute to climate change through ozone depletion.

Developers should use best practice and appropriate mitigation measures to reduce the environmental impact of demolition and construction."

The London Plan, 'Spatial Development Strategy for Greater London (2004 with amendments) and Supplementary Planning Guidance on Sustainable Design and Construction (2006)."

The London Plan Supplementary Planning Guidance on Sustainable Design and Construction (2006)

The Mayor's Sustainable Design and Construction Supplementary Planning Guidance (SPG) provides an essential context for all developments and provides a mechanism for addressing climate change impacts through new developments. The standards in this SPG should be addressed in a statement on sustainable design and construction.

The GLA has worked with the London Sustainable Development Commission, WWF and BRE to develop a sustainability checklist for London based on the sustainable design and construction standards and guidance in the SPG.

The SGG defines the parameters that relate to sustainable design and construction and sets the context for the SPG. The SPG provides guidance on the way that the measures identified in the policy can be implemented to meet the London Plan objectives.

Integrating energy into new developments: Toolkit for planners, developers and consultants; London Renewables Toolkit (2004)

The London Renewables Toolkit provides support to planners, developers, consultants and other interested parties with planning policies in London which require renewable energy in new developments or major refurbishments. It offers advice on which renewable technologies are suitable to London including aesthetic issues, risks and reliability. It helps to understand how to comply with the requirements of the London Plan and relevant borough development documents. It offers in-depth calculations for use by consultants to help determine the most appropriate renewable for each scheme.

There have been further clarifications on issues surrounding the use of renewable energy technology issues within the more recent release of the London Plan.

The Mayors Energy Strategy (2004)

The Mayor's Energy Strategy sets out the Mayor's proposals for changes in the way that energy is supplied and used within London during the next ten years and beyond. The strategy aims to improve London's environment, reduce London's contribution to climate change, tackle fuel poverty, and promote economic development in the capital.

The strategy does this by promoting energy efficiency and introducing new and renewable energy technologies across London. The strategy provides a framework for the diverse and disparate work on energy taking place in London.

Connecting with London's nature, The Mayor's Biodiversity Strategy (2002)

The Mayor's Biodiversity Strategy sets out how London's four highlights of the Mayor's Biodiversity Strategy can be protected and looked after. It also aims to make sure everyone can enjoy and learn about the natural world.

This Biodiversity Strategy sets out 14 policies, and 72 proposals to implement the Mayor's policies, listing the main partners who are asked to take each proposal forward. It also provides an overview of London's wildlife and the places where it is to be found.

5.3 Local Sustainability Policy

Unitary Development Plan London Borough of Barnet, Adopted May 2006.

The London Borough of Barnet's Unitary Development Plan (UDP) Adopted May 2006 is a statutory document, the structure and basic content of which is set out by the government, but which is produced by the council. In May 2009, the Government Office for London, under the direction of the Secretary of State directed the council to save certain policies within its adopted May 2006 UDP and delete others. The saved policies will eventually be replaced by Barnet's Local Development Framework.

The extension of saved policies listed in this Direction does not indicate that the Secretary of State would endorse these policies if presented to her as new policy, it is intended to ensure continuity in the plan-led system and a stable planning framework locally, and in particular, a continual supply of land for development.

Selected saved policies are listed below:

- Policy GSD Sustainable Development
- Policy ENV5 Aggregates Facilities
- Policy ENV6 Light Pollution
- Policy ENV7 Air Pollution
- Policy ENV12 Noise Generating Development
- Policy ENV13 Minimising Noise Disturbance
- Policy ENV14 Contaminated Land
- Policy ENV15 Notifiable Installations
- Policy O17 Ecological Impact Statement

Local Development Framework, London Borough of Barnet, Supplementary Planning Document 'Sustainable Design and Construction', June 2007.

London Borough of Barnet currently have a Supplementary Planning Document (SPD) on Sustainable Design and Construction. The aim of this SPD is to provide guidance to planners, developers, architects and facility managers on how to achieve the Council's requirements in sustainable design and construction.

The SPD defines the parameters which must be addressed in the design of new developments including references to the following aspects:

- air quality and the exposure of people to air pollutants;
- noise quality and the exposure of people to noise;
- water quality and flooding risk;
- the quality and integrity of the local ecology;
- lighting and the potential for light pollution;
- microclimatic conditions such as wind and temperature;
- control of construction and other activities to prevent emission of pollutants, damage to the environment or nuisance to local people.

There is a new planning document that is being introduced to supersede the existing SPD. This new document is the Core Strategy - Direction to Travel Document which is intended to be adopted in 2011. Since this strategy is still being developed we have used the existing SPD for this document.

Core Strategy - Direction of Travel Document, November 2009

The Local Development Framework (LDF) will replace the Unitary Development Plan (UDP) when it is adopted in 2011. It will embody spatial planning to deliver positive social, economic and environmental outcomes and provide the overarching local policy framework for delivering sustainable development in Barnet. The LDF contains the Core Strategy which details the 'vision' for the LDF and the most fundamental, cross-cutting objectives and policies that the local authority and its partners will seek to deliver. Barnet's LDF will primarily consist of a suite of Development Plan Documents (DPD's) and Supplementary Planning Documents (SPDs) :

- the Core Strategy DPD setting out the vision, objectives and related strategic policies
- the Site Allocations DPD identifying future sites for development;
- the Development Management Policies DPD which sets out policy framework for decision making on planning applications;
- the Mill Hill East Area Action Plan DPD (adopted January 2009);
- the emerging Colindale Area Action Plan DPD (Examination in Public - November 2009);
- the emerging North London Waste Plan DPD (preferred options October 2009);
- a suite of 'supplementary planning documents' and 'design guidance notes' which provide more detailed guidance on determining planning applications and S106 requirements;
- the Local Development Scheme for Barnet which sets out the timetable for the above documents;
- the Statement of Community Involvement which sets out the principles on how Barnet will consult with the community; and
- the Annual Monitoring Report which assesses the performance of the LDF and identifies significant trends affecting Barnet.

The proposed development of Brunswick Park falls under the category of 'major development'. Therefore this development is required to demonstrate compliance with both the broader sustainable design principles and the specified environmental minimum requirements as outlined in the SPD and the London Plan. These justifications are detailed within Section 7 of this statement.

Under this SPD, London Borough or Barnet may ask any development to provide a comprehensive sustainability statement where, in the council's opinion, that development is expected to impact on sensitive social, environmental or economic receptors or where the proposed development is deemed to be politically contentious. The proposed development at Brunswick Park has the potential of impacting the social and environmental aspects of the Barnet area and thus requires a sustainability statement.

This SPD confirms that the sustainability statement must comply with the following requirements:

- in the case of Major and Large Scale Developments, the council will seek a full sustainability statement from a developer corresponding to the full range of issues set out in the SPD, together with associated local and regional planning policies.
- the council takes the view that sustainability statements are in EFFECT Technical planning statements
- sustainability statements, however, should represent objective (non-advocacy) reports which summarise the supporting information which is ultimately used by the Planning Statement.
- in a sense, sustainability statements can be equivalent to informal environmental statements (i.e. not such a formalised assessment process), but they need to cover the full breadth of design issues and planning policy and not just environmental related issues.
- they should seek to show how a development is designed and located to meet the interpretation of sustainable development provided in PPS1 – Delivering Sustainable Development and how it will create a beneficial legacy within Barnet for future generations.
- in the case of GLA referable projects, such sustainability statements should also satisfy the GLA requirement for 'Sustainable Design and Construction Statements', which address issues set out in the GLA's SPG on Sustainable Design and Construction.

6.0 Statement Methodology

6.1 Methodology Overview

Preparation of this Sustainability Statement included reviewing the policy requirements detailed within Section 5 of this report. This allowed us to identify strategic policy requirements for sustainable planning for the proposed development. We also attended strategic design team meetings to provide sustainability design advice and comment on design team proposals. A BREEAM assessment was also carried out with key design team members which was used as a design tool. Section 7 of this report is a summary of our findings.

Proposals for the Brunswick Park development have taken full account of the sustainability policy requirements identified in Section 5 above. To demonstrate the strategic fit of the development in sustainability terms, the requirements from both the Mayors 'London Sustainability Checklist' (including both desirable and essential standards) and the Barnet Supplementary Planning Document - 'Sustainable Design and Construction' have been adopted. A key principle of sustainability management is the application of sustainability throughout the life cycle of a project from initial concept, to outline and detailed design, then construction and aftercare. As part of our appointment we attended meetings to provided sustainability design advice.

The broad principles of the London Sustainability Checklist and the London Borough of Barnet can be summarised as follows:

Sustainability Checklist Framework:

Re-use
Re-use of land and building
Natural Systems
Maximise the use of natural systems
Energy
Conserve energy, materials and water resources
Materials
Conserve energy, materials and water resources
Water
Conserve energy, materials and water resources
Pollution and Flooding
Reduce the impacts of noise, pollution and microclimate effects
Comfort and Security
Ensure developments are comfortable and secure
Natural Environment
Conserve and enhance the natural environment and biodiversity
Waste
Promoting sustainable waste behaviour
Sustainable Construction
Promoting sustainable construction practice

6.2 Sustainability Criteria for Detailed Design and Construction

BREEAM was used as one of the design tools and thus details the main sustainability objectives for design, construction and management of the proposed development.

Building Research Establishment Environmental Assessment Methodology (BREEAM) is a tool used to assess the environmental performance of both new and existing buildings. It is regarded by the UK's construction and property sectors as the measure of best practice in environmental design and management.

BREEAM standards will be applied across the following development aspects:

- Management;
- Health and Wellbeing;
- Energy and CO₂;
- Transport;
- Water;
- Materials;
- Waste;
- Land use and Ecology;
- Pollution

A BREEAM pre-assessment was carried out 4th February 2010 with the design team. It was stated at this meeting that the project would be assessed under BREEAM Bespoke and the aim is to achieve a minimum BREEAM rating of 'Excellent'. The formal assessment process has already commenced for this project.

Please refer to Appendix 1 for the results of the BREEAM pre-assessment for the proposed development of Brunswick Park which details the current score is 75.02% and thus achieving an 'Excellent' rating.

Further standards or guidelines for good practice have been referenced from recognised industry schemes to address specific sustainability aspects of the design and construction, including:

- BRE Green Guide to Specification – provides guidance on the relative environmental impact of components and materials specified for construction;
- Considerate Constructors Scheme - the scheme is concerned about any area of construction activity that may have a direct or indirect impact on the image of the industry as a whole. The main areas of concern fall into three main categories: the environment, the workforce and the general public.
- Secured by Design – Principles and standards for safety and security, addressing the layout and design of the development and requirements for physical security.



7.0 Sustainability Assessment

The below table summarises the application of the London Sustainability Checklist and local sustainability policy criteria for the proposed Brunswick Park development, with respect to the strategic rationale for the scheme and the proposed design and construction.

The London Plan Supplementary Planning Guidance – Sustainable Design and Construction and London Sustainability Checklist		Barnet Supplementary Planning Guidance - Sustainable Design and Construction	Assessment and proposed Inclusions
Essential Standard	Mayor's Preferred Standard		
1. Re-use Land 100% of development on previously developed land, unless very special circumstances can be demonstrated.		No mention in SPD.	A master plan for the regeneration of this area, which includes the rebuilding of the existing Brunswick Park Primary School, library, health centre and nursery as well as the creation of a medium sized public swimming pool was prepared and costed in 2009. This master plan remains the context for the entire redevelopment of the site. This phase of the development pertains to the redevelopment of the library, nursery and medical centre as well as the demolition of the redundant facilities.
			The new development is not being built on previously developed. The proposed site is identified as green filled metropolitan open land (MOL) located southerly adjacent to Osage Lane. However, the proposed new building and car park will be built on 4,376m ² of MOL and as part of this phase the site's exiting developed land will be returned as MOL (resulting a final area of 4,967m ²). This demonstrates that there is an overall gain in green space.
		No mention in SPD.	The proposed development has been designed to maximise the sites potential. Several iterations of the design were developed with input from the future stakeholders to ensure that the best strategy was chosen. The design of the new building involves the co-location of the existing nursery, library and medical centre with the introduction of a childrens centre and Acorn Assessment Centre into one building. The library facilities will be able to remain open after normal business hours to allow for visitors to utilise the facilities when needed.
		No mention in SPD.	The site has reasonable links to the public transport network with a bus stop located within 150m of the site that is serviced by four different bus routes. As part of the development there the pedestrian and cycle access route will be widened to improve accessibility to the train station located 1km away.

The London Plan Supplementary Planning Guidance – Sustainable Design and Construction and London Sustainability Checklist		Barnet Supplementary Planning Guidance - Sustainable Design and Construction	Assessment and proposed Inclusions
Essential Standard	Mayor's Preferred Standard		
No mention in SPG.		The council requires that where contamination is suspected or found, applicants must submit an investigation and remediation strategy to the council for its consideration.	A detailed site investigation was carried out and it was identified that there were elevated levels of hydrocarbons within one sample taken from made ground but over all there was no significant contamination on the site. The report recommends that all soft landscaped areas be covers with at least 450mm of clean inert soil to eliminate the risk of ingestion. This has been included within the landscaping design. Further soil sampling will be carried out if unexpected pockets of material are identified during the ground works.
Buildings	Existing buildings are reused where practicable, where the density of development and residential amenity are optimised and where the building conforms or has the potential to meet the standards for energy, materials, biodiversity and water conservation set out in The London Plan.	No mention in SPD.	<p>The proposed site is green field and therefore there is no potential for re-use of existing buildings. The community hall will be demolished to improve the potential of the site by allowing better access to the area.</p> <p>The existing library and medical centre are no longer fit for purpose and thus can not be re-used. These are to be demolished and the waste reused or recycled where possible.</p> <p>The mixed use building has been designed with the different functionalities within core areas. The locations of these core areas allow for maximum functionality of the building as each area complements each other. An example of this is the central location of the hydro-therapy room allowing its use by the medical centre as well as the children centre and Acorn and the location of the medical centre waiting area is next to the library to encourage visitors.</p> <p>The following London Plan standards will be met:</p> <ul style="list-style-type: none"> - meeting the energy standards of Part L as well as the London Plan to reduce CO2 emissions - selection of materials from the Green Guide - improvement of biodiversity through improved landscaped areas and a green roof as well as an overall increase in MOL - reduce water use by incorporating low water sanitary fittings and collecting rain water.
	Existing roof space is reused where practicable to create new outdoor spaces and enhance biodiversity alongside the integration of renewable energy.	No mention in SPD.	<p>The proposed development is new build and therefore there will be no existing roof space therefore this criteria is not applicable.</p> <p>However the proposed development will incorporate a green roof to a majority of the ground floor roof and provide a PV array to the first floor roof. This means that there is currently no completion for roof space.</p>

The London Plan Supplementary Planning Guidance – Sustainable Design and Construction and London Sustainability Checklist		Barrett Supplementary Planning Guidance - Sustainable Design and Construction	Assessment and proposed Inclusions
Essential Standard	Mayor's Preferred Standard		
2. Natural Systems	Location and urban design	No mention in SPD.	<p>All developments to follow the principles of good design set out in London Plan policy 4B.1:</p> <ul style="list-style-type: none"> • maximise the potential of sites to promote high quality inclusive design and create or enhance the public realm • contribute to adaptation to, and mitigation of, the effects of climate change • respect local context, history, built heritage, character and communities • respect local context, history, built heritage, character and communities • provide for or enhance a mix of uses • be accessible, usable and permeable for all users • be sustainable, durable and adaptable in terms of design, construction and use (see Chapter 4A) • address security issues and provide safe, secure and sustainable environments (Policy 4B.6) • be practical and legible • be attractive to look at and, where appropriate, inspire, excite and delight • respect the natural environment and biodiversity, and enhance green networks and the Blue Ribbon Network • address health inequalities (Policy 3A.23).
			<p>Sustainable features of design access in and around the building have been detailed within Sprouts Design and Access Statement.</p> <p>The proposed development has been designed to follow the principles of good design set out in London Plan policy 4B.1 as outlined below:</p> <ul style="list-style-type: none"> • The proposed development merges the existing library, nursery and medical centre with the addition of a children centre and pharmacy into one building. The proposed development respects local context, history, built heritage, character and communities. The design of the site has been influenced by detailed consultation carried out with a wide range of community stakeholders. In addition the design of a co-location facility provides a gathering space that creates a sense of place and community area for the people of the area. • The proposed development promotes high quality inclusive design and will return existing developed land to metropolitan open land (providing an overall increase). The landscaped areas for the nursery will be used within the syllabus and areas introduced as MOL will provide a area of locals to collect nuts and berries. • The proposed development provides for or enhances a mix of uses with the inclusion of the following uses within one building maximising site density: <ul style="list-style-type: none"> - community library - children's centre and nursery - NHS medical facilities - Acorn Assessment centre including profound and multiple learning difficulties and autistic spectrum disorder classes - hydro therapy room - cafe - pharmacy • The proposed development has been designed to be accessible, usable and permeable for wheelchair users, walking disabled, those with vision, hearing and other sensory impairments as well as made simple and safe to navigate for children, the elderly and parents accompanying children. A ramp is provided at the front of the building and the ground floor is all one level allowing ease of access. There will also be the provision of well sign posted cycling and walking routes to and from the site. • The building will be designed to meet 'Secure by Design' requirements as well as meet all relevant safety requirements for fire risk prevention. The CPDA have already commented on the plans and visited site. Their recommendations have been incorporated into the current design and full application is being made at the same time as this planning application.

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		<ul style="list-style-type: none"> An Extended Phase 1 Habitat survey has been undertaken by a suitable qualified ecologist and it was identified that the site is of low ecological value. Landscaped areas will be introduced to improve the ecology of the site. The proposed development will address health inequalities by providing modern health care facilities which will supersede the previous facilities for the area. In addition the incorporation of the medical centre within a mixed use development (that also incorporates a library, community centre and nursery) promotes public health within the borough as it makes the medical centre more accessible to the community. 	A natural ventilation philosophy will be employed where possible to reduce energy consumption and carbon dioxide emissions. Generally, this will take the form of openable windows and possibly roof lights and proprietary ventilation terminals designed to maximise ventilation effectiveness whilst maintaining security and ease of maintenance requirements. Clinical and welfare facilities will have mix-mode or mechanical supply.
Minimise need for and use of mechanical ventilation, heating and cooling systems.	No mention in SPD.		A thermal comfort analysis will also be undertaken to ensure that the strategy meets the comfort requirements by not being too hot or too cold in occupied spaces.

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Adapting to Climate Change Buildings provide for flexibility of uses during their projected operational lives.		<p><i>No mention in SPD.</i></p> <p>The design of the development incorporates solid walls that can be opened up to allow for the enlarging of spaces.</p>	
Buildings adapt to and mitigate for the effects of the urban heat island and the expected increases in hot dry summers and wet mild winters.		<p><i>No mention in SPD.</i></p> <p>The buildings and site design mitigate the expected increases in hot dry summers and wet mild winters and the urban heat island effect via:</p> <ul style="list-style-type: none"> - light coloured walls – reflecting solar gain away from the building during summer - trees and planting throughout the site to provide shading especially within the nursery garden and car park areas. - the building is majority naturally ventilated - windows have brise soleil along the southern and eastern glazed areas around the library. - use of thermal mass within the block work walls. - a green roof will also be installed to the ground floor roof. <p>The building will cope with rather than adapt to the predicted increases in climate temperatures through the above initiatives.</p>	
3. Energy Carry out an energy demand assessment	(Policy A4.4 Assessment) Energy	<p>The council requires all planning applications and reserved matters applications (of all scales) to demonstrate how Part L of the Building Regulations (2006) will be achieved for the development.</p> <p>An energy demand assessment via the use of TAS energy software has been undertaken to ensure compliance with Building Regulations Part L. The analysis identifies that the annual energy consumption for the proposed building is 44,720 kgCO₂/year. The energy assessment confirms that Part L energy requirements will be met and that carbon emissions will be mitigated by the use of renewable technologies.</p>	

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Maximise energy efficiency. (Policy A4.6 Decentralised Energy: Heating , Cooling and Power and Policy 4A.7 Renewable Energy)	The council requires that all lighting in any development, internal and external, must be provided through natural ventilation where possible to reduce the reliance of mechanical ventilation in combination with the use of thermal mass. - well insulated building with low air permeability. - external shading (in the form of brise-soleil) will be provided to prevent solar gain in the summer months especially to the library windows. - variable speed drives are proposed on all pumps and fan motors. - use of underfloor heating to reduce the amount of wasted energy used to heat air. - use of metering and BMS controls to identify areas of unusual energy use. - use of energy efficient fluorescent lighting throughout the development. - providing a cover for the therapy pool to reduce heat loss.		
Major commercial and residential developments to demonstrate that consideration has been given to the following ranking method for heating and where necessary cooling systems: passive design, solar water heating, combined heat and power for heating and cooling (preferably fuelled by renewables), community heating and cooling, heat pumps and gas condensing boilers.	The council requires that all multiple-unit and mixed use schemes must use centralised heating (and where applicable, cooling) systems and shall not be 'all electric', unless it can be proven by the planning applicant that CHP unit as part of Phase 2 when the heating demand is more suitable for its outputs their complete design will emit less carbon than an equivalent centralised scheme.	A CHP unit is not feasible for sole use by the proposed building as this would be based on the electrical base load and thus there would be excessive amounts of waste heat. The use of a individual building CHP is not as beneficial as other renewable strategies not be 'all electric' unless it can be proven by the planning applicant that CHP unit as part of Phase 2 when the heating demand is more suitable for its outputs their complete design will emit less carbon than an equivalent centralised scheme.	The first option proposes photovoltaic (PV) and high efficient condensing boilers (with NOx emissions less than 40mg/kWh). This strategy will allow the building to achieve a 20% reduction in CO ₂ emissions from renewables. In addition pipe work will be installed within the plant room to allow for future connection to a community energy centre, when made available. The second option proposes ground source heat pumps (GSHP) with additional PV. This strategy will allow the building to achieve a 20% reduction in CO ₂ emissions from renewables. In addition pipe work will be installed within the plant room to allow for future connection to a community energy centre, when made available. There will be no additional electrical heating.

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	<p>All developments to demonstrate that consideration has been given to the following ranking method for heating and where necessary for cooling systems and should incorporate the highest feasible of the following options:</p> <ul style="list-style-type: none"> - solar water heating; then - combined heat and power/trigeneration, preferably fuelled by renewables; then - community heating. <p>New developments should always be connected to existing community heating networks preferably fuelled by renewables where feasible.</p>	<p>A CHP unit is not feasible for sole use by the proposed building as this would be based on the electrical baseload and thus there would be excessive amounts of waste heat produced. The use of a individual building CHP is not as beneficial as other renewable strategies in terms of reduction of overall CO₂ emissions.</p> <p>The current renewables strategy is either the option of ground source heat pumps with PV panels or solely PV panels with high efficient gas boilers.</p> <p>Please refer to the Energy Strategy Report for further information.</p>	
	<p>Major developments should make a contribution to London's hydrogen economy through the adoption of hydrogen and/or fuel cell technologies and infrastructure.</p>	<p>No mention in SPD.</p>	<p>The use of hydrogen power and fuel cells is still within its infancy and is not feasible for this development.</p>
4. Materials	<p>No construction specification of material with high embodied impact to be used (as defined by the Guide to Specification ratings in the Green above. Where a developer wishes to specify materials with a higher environmental impact, or materials or technical case for its use exists.</p>	<p>The council requires all developers to commit that they will only specify from renewable sources will be used.</p> <p>Where possible, materials that minimise environmental and health impacts and that are correlated to the BRE Green Guide to Specification Rating B and There will be a focus on the use of Green Guide 'A' rated materials for major building elements.</p> <p>This is detailed within the applicable BREEAM Bespoke pre-assessment in credit Mat 1 (Materials Specification - Major Building Elements).</p>	<p>Green Guide to Specification, then they must provide justification.</p>

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50% timber and timber products from Forest Stewardship Council (FSC) sourced and of timber products from a balance from a known temperate source.	90% structural timber from FSC source and the balance from a known temperate source.	The council requires that all timber used within Barnet must be certified to have been sourced from sustainably managed forests, through a recognised accreditation scheme such as the Forest Stewardship Council (FSC). Where timber will be used within construction, then the council will want to see confirmation of appropriate certification prior to the relevant stage of construction.	At least 80% of site timber will be responsibly sourced and 100% will be legally sourced. This is detailed within the applicable BREEAM Bespoke pre-assessment in credit Mat 1 (Materials Specification - Major Building Elements).
	No peat or weathered limestone to be used in buildings or landscaping.	No mention in SPD.	No peat or weathered limestone are intended to be used in either the buildings or landscaping.
	Insulation materials containing substances known to contribute to stratospheric ozone depletion or with the potential to contribute to global warming must not be used.	No mention in SPD.	It is the proposed developments intention that no insulation materials containing substances known to contribute to stratospheric ozone depletion or with the potential to contribute to global warming be used. This is detailed within the applicable BREEAM Bespoke pre-assessment in credit Mat 6 (Insulation).
	Before demolition, appraisal of maximising recycling of materials by use of ICE's Demolition Protocol.	No mention in SPD.	A site waste management plan will be produced for the development. The existing library and medical centre are planned to be demolished and thus an assessment for the re-use and re-cycling of the materials within the new development will be made.

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	50% of construction materials by mass to be sourced from a factory/plant, quarry, wharf, railhead or recycling centre within 35 miles of site wherever feasible.	No mention in SPD.	Wherever feasible, construction materials will be sourced from a factory/plant, quarry, wharf, railhead or recycling centre within 35 miles of site.
Minimise use of aggregates.	10% total value of materials used to be derived from recycled and reused content in products and materials selected	The council requires in all Major and Large Scale Developments that at least 10% of the total value of materials used should derive from recycled and reused content in the products and materials selected.	There will be a focus on the use of Green Guide 'A' rated materials for major building elements. The Green Guide ratings take into account the use of recycled content of materials, and materials with a high level of recycled content are rewarded with a higher rating. As a majority of the existing buildings will be demolished after the new building has been completed as they are still operational. Thus there is little scope for re-use of demolition materials within the proposed building.
5. Water	Residential developments to achieve average water use in new dwellings of less than 40m ³ new per bed space per year (approximately 110L/head/day)	Residential developments to achieve average water use in new dwellings of less than 25m ³ per bed space per year (approximately 70 litres/head/day)	This is not a residential development therefore this criteria is not applicable. However developments are designed to achieve the building will have water saving measures such as low flush toilets (4.5ltr), PIR responsive taps, all showers will have a flow rate that does not exceed 9 litres per minute and all urinals will be PIR flush. This is detailed within the applicable BREEAM Bespoke pre-assessment in credit Wat 1 (Water Consumption).
100% metering of all newly built property.		The council requires all developments to include water meters.	There will be 100% metering of water mains in all newly built property. This is detailed within the applicable BREEAM Bespoke pre-assessment in credit Ene 2 (Sub-metering of Substantial Energy Uses).
	Use of greywater for all non potable uses.	The council requires that development proposals where there are insufficient measures to meet the water targets per bed space, then a feasibility study must be provided on the potential to incorporate grey water recycling. If proven technically feasible, such a system must be committed to in the designs.	This criteria is not applicable as grey water usage cannot be utilised within the medical areas due to infection control requirements.