Highgate Newtown Community Centre and Fresh Youth Academy

Sustainability Statement

NOVEMBER 2018

Community Investment Programme

Camden

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Highgate Newtown Community Centre and Fresh Youth Academy, 25 Bertram Street, London

ICENI PROJECTS LIMITED ON BEHALF OF LONDON BOROUGH OF CAMDEN DEVELOPMENT DIVISION

Iceni Projects Limited on behalf of

London Borough of Camden

Development Division

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EXECUTIVE SUMMARY

This Statement presents the sustainable development achievements for the redevelopment of the Highgate Newtown Community Centre and Fresh Youth Academy to provide 41 residential units. The associated proposed new community centre on site has been subjected to a separate BREEAM Pre-Assessment (Appendix A3).

Relevant policy has been considered prior to a review of the local socio-economic conditions, with a view to proposing a scheme that reflects local needs.

The scheme delivers effective balancing of the three pillars of sustainable development as follows:

Environmental

The new residential flats will be constructed to minimise indoor and outdoor water use during operation; being reduced to 105 litres/person/day.

The existing site is predominantly hardstanding with little or no biodiversity value. The proposals include green roofs and areas of biodiverse planting to help enhance biodiversity.

Greater than 80% of all demolition and construction waste produced will be diverted from landfill.

The entire proposed development will achieve a 37% reduction in CO_2 emissions compared to Part L 2013, with the remainder of domestic emissions being financially off-set to zero carbon.

Economic

The development would help contribute to the growth of the local economy through likely direct employment of the new residents in Camden.

Construction of these new dwellings would directly result in the creation of 185 jobs in the construction industry and associated supply chain.

New residents would serve to enhance the vitality and viability of the numerous local amenities.

The site represents a sustainable location in terms of access to employment, retail and leisure destinations, and the proposal would be an efficient use of land in an area with significant housing need.

Social

Creation of a range of apartment types to help stimulate local housing supply and reduce demand, with the proposed 3-bed homes encouraging more families to the local area.

Provision of a range of comfortable living environments that reduce issues such as high utility bill costs and flooding.

Proposed integration of housing with new community facilities and central public space, to help reduce any perceived social exclusion of new residents and promoting the site as a mixed-use community asset.

Enhancements to link with Croftdown Road, improving access for walking and cycling.

1. INTRODUCTION

1.1 Iceni Projects Ltd was commissioned by McBains to produce a Sustainability Statement on behalf of the Applicant, the London Borough of Camden Development Division, for a proposed development at Highgate Newtown Community Centre, 25 Bertram Street, London, N19 5DQ.

Report Objective

1.2 The purpose of this statement is to demonstrate that the residential portion of this proposed development achieves the sustainable development requirements relevant to local, regional and national priorities. The separate proposed onsite community centre has been assessed for sustainability under the BREEAM New Construction 2014 standard; further details can be found in the BREEAM Pre-Assessment produced by McBains, which is appended (Appendix A3) as both this statement and the pre-assessment comprise a site-wide analysis of sustainability.

1.3 The report is structured to meet this as follows:

- Section 3 discusses the planning context and policies which are relevant to sustainable development;
- Section 4 provides a review of the site context in relation to the three pillars of sustainable development, and the established need for the proposed scheme;
- Section 5 discusses the development response to the policy drivers of sustainable development; and
- Section 6 summarises the development's design response and the social and economic incentives for this proposed use.

Site and Surroundings

1.4 The 0.27ha site currently comprises three separate buildings associated with the Highgate Newtown Community Centre. These are the main community centre building including the main hall and nursery, Fresh Youth Academy building including a gospel hall on Winscombe Street to the north-east, and a separate cottage in the north-west corner of the site. The remainder of the site consists of a central courtyard covered with hardstanding.

1.5 The site is located off Bertram Street and Winscombe Street in a predominantly residential area of Highgate, with the nearest London Underground stations being Archway (1km to the north-east) and Tufnell Park (1km to the south-east). Highgate Cemetery is located approximately 220m to the north-west, and surrounding residential properties comprise 1-3 storey terrace and semi-detached units. The nearest retail and commercial land uses are concentrated along Junction Road (Archway) 900m to the east.

Overview of Changes to the Development

1.6 The Section 73 application seeks to modify the modify extant planning application (2016/6088/P) that was granted permission on 30 June 2017 for the comprehensive redevelopment of the site to provide replacement community facilities (Use Class D1), new residential units (Use Class C3) and improvements to the public realm.

1.7 These changes will result in improved community facilities, an improved public realm and open space, new homes, including family-sized homes and affordable Camden Living units, and a shorter overall construction programme.

1.8 The changes include:

- A higher quality and more usable community centre that better meets the needs of HNCC and FYA, including providing the sports hall at ground floor level
- The delivery of 41 residential units, an increase of 10 units, with 7 of these units being affordable rented units
- A revised unit mix that better responds to local needs. This unit mix would result in a minor increase in overall residential floorspace of 67 sqm.
- The removal of most of the basement level from the development, reducing overall construction programme.
- The height of scheme has been increased slightly in areas
- A revised public open space and courtyard area

1.9 The revised description of development is as follows:

facilities (Use Class D1) and 41 residential units (Use Class C3) together with associated public open

1.10 The intention of this statement is to focus on the sustainable design and construction elements of the residential parts of the scheme, as a BREEAM pre-assessment is included in Appendix A3, which demonstrates how the new community centre has the potential to achieve a BREEAM ‘Excellent’ rating.

2. PLANNING AND REGULATORY CONTEXT

2.1 Sustainable development approaches are incorporated within policy and regulation at a national, regional and local level, as set out below:

National

Climate Change Act 2008

2.2 On 26th November 2008, the UK Government published the Climate Change Act 2008; the world's first long-term legally binding framework to mitigate against climate change. Within this framework, the Act sets legally binding targets to increase greenhouse gas emission reductions through action in the UK and abroad from the 60% target set out in the Energy White Paper, to 80% by 2050.

2.3 As required under Section 34 of the Climate Change Act, the Fifth Annual Carbon Budget was accepted by the Government in June 2016. This sets out a budget for UK emissions for the period 2028 – 2032, targeting a 57% reduction below 1990 levels (base level).

National Planning Policy Framework

2.4 The Department for Communities and Local Government determines national policies on different aspects of planning and the rules that govern the operation of the system. Accordingly, the National Planning Policy Framework (NPPF), which came into force in March 2012 and was updated in July 2018, aims to strengthen local decision making.

2.5 Paragraph 11 of the NPPF confirms that the heart of this document is a "*presumption in favour of sustainable development*", and that development proposals that accord with an up-to-date development plan should be approved without delay.

2.6 Paragraphs 59 to 211 of the NPPF constitute the Government's view of what sustainable development means for the planning system. Three key pillars (or roles) of sustainable development are provided which must be performed by both local plan-making and decision-taking:

- **An Economic Role** – ensuring the provision of land and infrastructure needed to help build a *strong, responsive and competitive economy.*

- **A Social Role** supplying the required amount of housing while at the same time ensuring and building *strong, vibrant and healthy communities*. Ensuring that the built environment is sited around accessible local services which help support a community's *health, social and cultural well-being*.

- **An Environmental Role** ensuring development contributes to the protection and enhancement of the *natural, built and historic environment* through the improvement of biodiversity, minimising the use of natural resources and production of pollution / waste, and guaranteeing sufficient mitigation and adaptation to climate change.

2.7 The NPPF assesses and defines sustainable development (with regard to decision-making) through 13 themes, of which the following are considered relevant to this scheme:

1. **Delivering a sufficient supply of homes**
2. **Building a strong, competitive economy**
3. **Ensuring the vitality of town centres**
4. **Promoting healthy and safe communities**
5. **Promoting sustainable transport**
6. **Making effective use of land**
7. **Achieving well-designed places**
8. **Meeting the challenge of climate change, flooding and coastal change**
9. **Conserving and enhancing the natural environment**
10. **Conserving and enhancing the historic environment**

National Planning Practice Guidance

2.8 National Planning Practice Guidance (NPPG) accompanies the NPPF and sets out information for users of the planning system on how to apply the NPPF requirements. Relevant NPPF for sustainable development includes:

- **Climate Change** – advises how planning can identify suitable mitigation and adaption measures in plan-making and the application process to address the potential for climate change.

- **Design** – design influences how people interact with places and can affect a range of economic, social and environmental objectives. The guidance states that planning policies and decisions should seek to ensure that the physical environment supports these objectives.

- **Natural Environment** – explains key issues in implementing policy to protect biodiversity, including local requirements.

- **Renewable and Low Carbon Energy** – the guidance is intended to assist local councils in developing policies for renewable energy in local plans, and identifies the planning considerations for a range of renewable sources.

2.9 On the 25th March 2015, a ministerial announcement withdrew the Code for Sustainable Homes as a standard within Local Planning Authority development plans as part of the Deregulation Bill 2015 (following Royal ascent), stating:

conditions requiring, compliance with any technical housing standards other than for those

Regional

2.10 Within London, key sustainable development principles for economic, environmental and social development are set out below.

The London Plan (March 2016)

2.11 The London Plan is the overall strategic plan for London and includes policies for sustainable development as follows:

- **Policy 5.3: Sustainable Design & Construction** – seeks to encourage the incorporation of design standards contained within the London Plan Sustainable Design & Construction Supplementary Planning Guidance (SPG) including all minimum standards, and introduces major sustainability priorities to be demonstrated within all development in London.

- **Policy 5.11: Green Roofs and Development Site Environs** – promotes the incorporation of planting on roofs and walls to help minimise the impact of flooding, overheating (through active cooling), and enhancement of biodiversity.

- **Policy 5.15: Water Use and Supplies** – encourages all development to minimise the use of mains water through the incorporation of water saving measures and equipment, and all residential proposals to meet a water consumption target of ≤105 litres/person/day.

Sustainable Design and Construction SPG (April 2014)

2.12 This document provides guidance on the implementation of London Plan policy 5.3 as well as a range of policies relating to environmental sustainability. Best practice and priorities listed in this SPG are listed below:

- **Local Food Growing** – encourages provision of space for communal food growing
- **Water Efficiency** – encourages all residential schemes to meet water consumption rates of 105 litres or less per person per day, and for all developments to incorporate rainwater harvesting. Requires all individual residential flats to be separately water metered.
- **Materials and Waste** – prioritises the consideration of materials that have a low embodied energy (including materials with high recycled content, or materials that can be easily recycled), and for three of the main building elements to achieve a rating A+ to D in the BRE's *Green Guide*. Plus, At least 50% of all timber used should be sourced from either FSC or PEFC certified sources.
- **Biodiversity** there is no net loss in biodiversity following development.
- **Pollution** encourages compliance with the guidance set out in the London Plan Minimising Dust and Emissions from Construction and Demolition SPG, and for all external lighting to be designed to minimise light pollution.

2.13 Other issues covered in this SPG include minimising carbon dioxide emissions (discussed for this specific development in a separate Energy Strategy, which supports the planning application), avoiding internal overheating, efficient use of natural resources including water, minimising pollution, minimising the generation of waste and maximising recycling rates, and impacts from natural hazards including flooding.

Housing SPG (March 2016)

2.14 Part two of the GLA Housing SPG covers the issue of quality and elaborates on how to apply specific London Plan sustainability policies to residential schemes.

Local

2.15 In determining the local context, the London Borough of Camden (LBC) policy & guidance is provided through the following documents:

- Camden Local Plan 2017;
- Camden Planning Guidance – Design (July 2015); and
- Camden Planning Guidance – Sustainability (July 2015).

2.16 Both the guidance documents above have been adopted to support the Local Development Framework (LDF) and are therefore material considerations for determination of any proposals within the Borough.

Camden Local Plan

2.17 The Local Plan sets out the Council's planning policies, covering the period 2016-2031. It ensures that Camden continues to have robust, effective and up-to-date planning policies that respond to changing circumstances and the borough's unique characteristics. Policies of relevance to this statement are as follows:

- **Policy C1: Health and Wellbeing** – requires all development to positively contribute to creating high quality, active, safe and accessible places.

- **Policy C5**: **Safety and Security** – requires developments to demonstrate they have incorporated design principles which lead to community safety and security

- **Policy A1: Managing the Impact of Development** – proposals are encouraged to consider their negative effects on issues such as artificial lighting levels, noise, odour, fumes & dust, microclimate, and impact upon water infrastructure.

- **Policy A3: Biodiversity** – requires developments to realise benefits for biodiversity through the layout, design and materials used in the built structure and landscaping elements of a proposed development.

- **Policy D1: Design** – requires that development is sustainable in design and construction, is durable for the long term, and improves health of occupants.

- **Policy CC1**: **Climate Change Mitigation** – promotes zero carbon development and requires all development to reduce carbon dioxide emissions through following the steps in the energy hierarchy.

- **Policy CC2: Adapting to Climate Change** – requires all proposals to propose measures that aid in adaptation to climate change, such as incorporation of green infrastructure, and proposing suitable Sustainable urban Drainage Systems (SuDS) to minimise any increase in flooding from the site. It also encourages the use of the Home Quality Mark and Passivhaus for residential new build.

- **Policy CC3**: **Water and Flooding** – requires development to incorporate water efficiency measures, avoid harm to the water environment and improve water quality.

- **Policy CC5: Waste** – requires development to include facilities for the storage and collection of waste and recycling

Camden Planning Guidance (CPG) 1: Design (July 2015)

2.18 Although primarily associated with architectural guidance for proposals within the Borough, this SPD does highlight the Council's priorities with regards to designing safer environments, waste management during operation, building services equipment, and landscaping.

CPG 3: Sustainability (July 2015)

2.19 This SPD provides guidance on how to achieve the required carbon reductions of the borough and deliver more sustainable developments, and supports the policies outlined above.

2.20 The SPD is set out to cover all topics that constitute the national, regional and local vision of sustainable development within proposals such as energy & water, materials, green infrastructure and flooding. Relevant expectations noted in the SPD with regard to the various sustainability topics are as follows:

- **Energy Efficiency** – all new developments are to be designed to minimise carbon dioxide emissions. The most cost-effective ways to minimise energy demand are through good design and high levels of insulation and air tightness.

- **Water Efficiency** – all major developments should include greywater recycling and any landscaped areas requiring regular maintenance should include water butts. The Council expects all developments to be designed to be water efficient by minimising water use and maximising the re-use of water. New residential development is required to demonstrate that it is capable of achieving a maximum internal water use of 105 litres per person per day, with an additional 5 litres per person per day for external water use.

- **Materials** – All major developments should source 15-20% of the total value of materials used from recycled and reused sources, and 100% of building materials should achieve a BRE Green Guide to Specification rating of A+ to B. Additionally, 100% of all timber and timber products should be sourced from schemes supported by the Central Point of Expertise for Timber Procurement.

- **Sustainability Assessment Tools** – in place of the now withdrawn Code for Sustainable Homes (CfSH) assessment, Camden Council states that all new residential development must have a sustainability statement "*demonstrating how the development mitigates against the causes of climate change and adapts to climate change*".

- **Green Infrastructure** – an expectation for all development to incorporate brown roofs, green roofs and green walls unless it is demonstrated it is not possible.

- **Flooding** – developments must not increase the risk of flooding, and are required to put in place mitigation measures where there is known to be a risk of flooding.

- **Adaptation to Climate Change** – all development is expected to consider the impact of climate change and be designed to cope with the anticipated conditions.

- **Local Food Growing** – discusses the sustainability benefits of local food growing and expects development proposals to consider the opportunities for food growing.

2.21 Further information regarding planning policy issues is provided in the Planning Statement produced by Iceni Projects Ltd, which forms part of the submission package for this application.

3. SITE CONTEXT APPRAISAL

3.1 In line with the “three pillars” of sustainable development, outlined above, the site context has been considered with regard to its economic, social and environmental context with a view to co-ordinating design of the scheme to reflect local need.

Socio-Economic Context

Indices of Multiple Deprivation (IMD)

3.2 The English Indices of Deprivation use 38 separate indicators, organised across seven distinct domains of deprivation. The Indices of Multiple Deprivation data are then constructed by combining the seven transformed domain scores, using the following weights; income (22.5%); employment (22.5%); health and disability (13.5%); education, skills and training (13.5%); barriers to housing and services (9.3%); crime (9.3%); and living environment (9.3%).

3.3 The IMD can be used to rank every Lower Layer Super Output Area in England according to their relative level of deprivation. The data is not a measure of affluence; therefore the area ranked as the least deprived is not necessarily the most affluent.

3.4 The IMD data comprises a numeric value in a scale of 1 to 32,844 (1=most deprived) and are represented in a coloured scale of deciles (1=most deprived – dark red; 10=least deprived – light yellow) in Figure 4.1 below.

3.5 Government data (illustrated in Figure 4.1) indicates that the site (marked as a blue point) lies within an area ranking 5,950, where 1 is the most deprived. The area is therefore considered to have a relatively high level of deprivation overall and is amongst the 20% most deprived neighbourhoods in the country.

Figure 4.1 Department for Communities and Local Government IMD Data

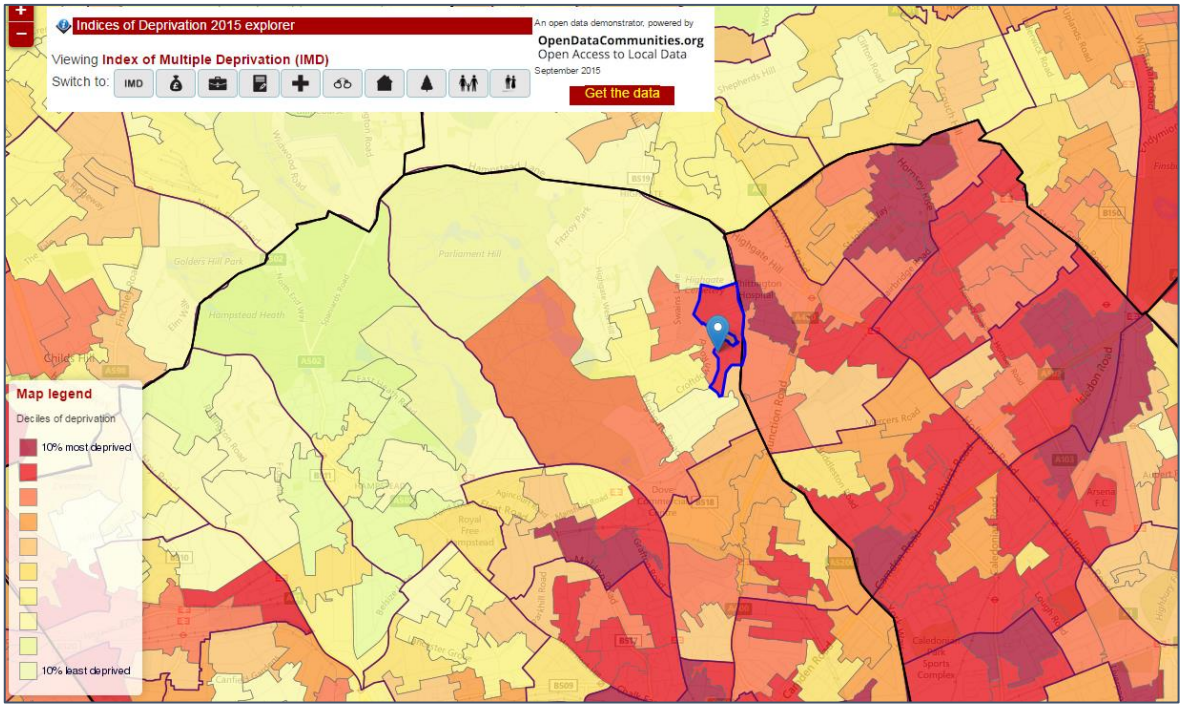


Table 3.1 IMD Domain Scores (out of 32,844 and where 1 is most deprived)

Domain	
Rank of Income Score	2,940
Rank of Employment Score	3,386
Rank of Health Deprivation and Disability Score	7,610
Rank of Education Skills and Training Score	16,662
Rank of Barriers to Housing and Services Score	14,770
Rank of Crime Score	12,528
Rank of Living Environment Score	11,046
Rank of IMD Score	**5,950**

3.6 As shown in the table above, the area exhibits particularly low scores for ‘Income’ and ‘Employment’. This therefore demonstrates an area suffering from a lack of local high quality employment options, leading to income inequality and health deprivation of residents.

3.7 When investigating inequality on a borough-wide scale, Camden has one of the highest rent to earnings ratios in London (85%; source: Private Rental Market Statistics 2014/2015; ASHE 2014, ONS) with only Kensington & Chelsea and Westminster being higher. This demonstrates an area struggling to meet housing demand, and this housing inequality being most acutely felt by Caribbean and Chinese ethnic minorities; the only population groups whose housing inequality (i.e. availability and affordability of housing, and quality of available housing stock) increased between 2001 and 2011 (source: Runnymede Trust).

Public Transport / Accessibility

3.8 In the context of these proposals an increase in travel to and from the proposed residential apartments by car has negative implications for all three pillars of sustainable development, as it increases local air pollution and greenhouse gas emissions, thereby contributing to climate change and societal health problems (and associated costs of this). It increases congestion and strain on road infrastructure, thereby reducing productivity of local road users including the residents, as more time is spent on the road which in turn could divert funding from other, potentially more pressing economic needs. The shift towards encouraging more sustainable forms of travel and prioritising developments that encourage this both through design and siting is imperative to the national planning agenda and is enshrined by the NPPF.

3.9 The site is considered to have moderate accessibility to public transport options, and has a PTAL rating of 3 due to the following:

- Archway and Tufnell Park Underground Stations are located at approximately equal walking distance from the site (approx. 1km, or 11-12 minutes' walk), with both stations having regular Northern Line services direct to a multitude of leisure, retail, public transport-hub and employment destinations in central London. Examples include the Euston and King's Cross / St Pancras national / international railway stations (8-9 minutes travel time during peak hours), and major employment / retail centres of Old Street (14 minutes' travel time), Bank (18 minutes' travel time), and Tottenham Court Road (11 minutes' travel time).

- Two north and south-bound bus stops are located on Dartmouth Park Hill approximately 300m or four minutes' walking from the site – the number 4 bus route services these stops and has regular services (every 7-10 minutes during peak hours) to Tufnell Park Underground Station, Highbury & Islington, Farringdon, St Pauls and Waterloo.

- A bus stop on Chester Road (230m or approximately three minutes' walk from the site) is serviced by the C11 which runs to Archway Tube Station, and also services Gospel Oak, Swiss Cottage and Primrose Hill.

3.10 A Transport Statement was produced for the site by JMP Consultants Ltd for the original application and this has been updated by the same firm (now known as Systra). This confirms that cycle and pedestrian infrastructure in the vicinity of the site is considered to be of a good standard, with a cycle and pedestrian route running along the western border of the site which connects Chester Road to the southern end of Croftdown Road, and connects to Bertram Street at the north-western perimeter of the site.

Community Facilities

3.11 Access to a wide range of nearby services and amenities is also an essential consideration when siting residential development as it helps reduce the requirement for car-based travel and aids in alleviating social exclusion, as it has been found that 48% of the poorest households (in terms of real income level) have no car, thereby relying on public transport or walking / cycling (source: Department for Transport 2015). Therefore, if residential development is poorly sited, this can lead to exclusion of less well off potential house buyers, and is inconsistent with the principles of socially inclusive, sustainable development.

3.12 The site is located close to clusters of services / amenities in Archway and along Highgate Road, with the following relevant amenities and services identified (all within approximately 11 minutes' walk):

- Food store – Tesco Express, Swain's Lane (700m; approx. eight minutes' walk).
- Publicly accessible cash machine – TSB bank, Highgate Hill (900m; approx. 11 minutes' walk);
- Outdoor open public space – Dartmouth Park, Bickerton Road (350m; approx. five minutes' walk). Hampstead Health is approximately 800m or 10 minutes' walk to the west of the Site;
- Sports centre / fitness facilities – Archway Leisure Centre, MacDonald Road (800m; approx. nine minutes' walk);
- Post box – Chester Road (230m; approx. three minutes' walk);
- Medical centre / GP – Brookfield Park Surgery, Chester Road (150m; approx. two minutes' walk);
- Pharmacy – Simmonds Chemists, Swain's Lane (750m; approx. nine minutes' walk);
- Dentist – Smilecare Dental Surgery, Junction Road (950m; approx. 11 minutes' walk);
- Library – Highgate Library, Chester Road (180m; approx. two minutes' walk);
- Child care facility – York Rise Nursery School, St Mary Brookfield Hall (700m; approx. eight minutes' walk);
- Primary school – Brookfield Primary School (270m; approx. three minutes' walk); and

- Secondary schools –William Ellis School (boys state school) and La Sainte Union Catholic School (girls state school) (900m; approx. 11 minutes' walk).

3.13 It should also be acknowledged that the proposals include for a replacement modern building for community uses, including a new sports hall, café, gym and a recording studio.

Capacity and Quality of Amenities and Services

3.14 The ability of existing amenities and services to cater for the predicted increased demand brought about by the residential proposals has implications for sustainable development, as it will inevitably determine whether new and existing residents choose to use local or further afield amenities / services. In addition to the environmental impacts this will have through increased use of transportation, it affects the financial viability of local amenities / services and the subsequent sense of place that residents gain from living in the area.

Local Schools

3.15 The William Ellis School and La Sainte Union Catholic Secondary School are located opposite each other on Highgate Road and are separate boys and girls schools, respectively. Both were awarded Ofsted 'Good' in the most recent inspections.

3.16 Both these secondary schools have lower pupil:teacher ratios than the national average (13.0 and 14.3 for the William Ellis School and La Sainte Union, respectively). Additionally, Camden has the 5th best ratio of total secondary school places offered to applications received in Inner London, with other Boroughs such as Wandsworth and Lewisham receiving more applications than places available. Camden also has the 4th highest percentage of first preference offers made to applicants, demonstrating a quality secondary school stock in the locality of the proposed development that can sufficiently meet the predicted increased demand.

3.17 The Brookfield Primary School caters for all children aged 3 to 11 years, and was awarded Ofsted 'Good' in the latest inspection with 62% of pupils meeting the expected standard in reading, writing and maths, similar to the national average. The school also has a lower pupil:teacher ration than the national average (16.5 compared with 20.6), indicating sufficient capacity to cater for the likely increased demand (source: Department for Education, 2018).

Economic Context

3.18 Although the general economic climate of the local area has been covered above, it is also important to assess other indicators of the economy in the context of the proposed residential apartments, and therefore if the development can be considered to complement and enhance the economic sustainability of the area.

3.19 The Borough of Camden is one of the most successful employment areas in the country, with approximately 24,000 businesses contributing £20 billion into the economy and generating 275,000 jobs (source: Camden Town Unlimited). Industries such as business administration and finance & insurance observed significant growth in Camden over recent years (17% & 7.7% growth between 2009 and 2012, respectively), and this will align with the likely occupations of new residents as salaries of first time house buyers in London usually need to be >£40,000 and office-based industries (such as the above) attract salaries of that range. Additionally, 46% of residents in the locality work in Camden itself (with 90% of total local residents working in greater London as a whole). Therefore it is likely that at least half the new residents would work in Camden, contributing to the thriving local economy and aiding in economic stability for the long term.

Environmental Context

Flood Risk

3.20 A Ground Investigation and Basement Impact Assessment has been completed for the site by Geotechnical & Environmental Associates Limited, and this confirms that according to the Environment Agency Flood Map, the site is not in an area designated at risk of flooding from rivers or sea. It also confirms that Bertram Street is not shown as a street at risk of surface water flooding.

3.21 In addition to this, a Flood Risk Assessment was produced by Conisbee for the previous application, and this confirms that the probability of flooding from any source is low.

Land & Water

3.22 A Basement Impact Assessment was produced for the site by Geotechnical & Environmental Associates Limited, and included a site analysis of ground conditions and potential contamination. Ground testing revealed an elevated concentration of lead and total polycyclic aromatic hydrocarbons (PAH), and a single sample contained 0.003% asbestos. However, it is considered that since the majority of made ground on site is to be excavated as part of the basement works, remedial measures are not considered to be required. An asbestos specialist will be consulted with during detailed design.

3.23 The nearest surface water feature is a pond located 269m southwest of the site, and no groundwater was encountered during an archive borehole (14.94m in depth) by BGS, therefore confirming that water is not at risk of contamination by the proposed works.

Biodiversity

3.24 A Preliminary Ecological Appraisal and Preliminary Roost Assessment has been completed for the Site by Syntegra Consulting. The survey confirms that the site consists of hard standing, scattered scrub and a small defunct hedgerow. It found that habitats on site are of some ecological value and the presence of protected species is moderate. Additionally, a BREEAM Land Use and Ecology report has also been provided by Syntegra which confirms that the site is of low ecological value. The bat and nesting bird survey found that the buildings were of low to no suitability for bats and no evidence was found of bats using the site. No evidence was found of birds using the site for nesting.

4. SUSTAINABLE DEVELOPMENT STRATEGIC RESPONSE

4.1 This section presents an overview of the proposed sustainable design and construction features for the residential parts of the scheme, which address the policy requirements of the NPPF, London Plan and Camden suite of policy documents. The assessment of technical reports enables an inclusive approach and identifies the key strategic themes discussed in the sub-sections below, which are structured around the Camden 'CPG3: Sustainability' document.

Energy

4.2 Energy has been separately addressed within the accompanying Energy Strategy produced by McBains, and additional detail can be found in this document.

4.3 The approach taken was developed in line with the London Plan Energy Hierarchy described in Policy 5.2 of "Be Lean", "Be Clean", and "Be Green" stages to reduce development-wide energy consumption. Low carbon technology, energy-efficient equipment and passive design will be incorporated into the scheme and an aspirational target of BREEAM "Excellent" will be sought for the Community Centre parts of the development (see Appendix A3).

4.4 Both the proposed residential dwellings and community centre were modelled using Stroma FSAP and EDSL TAS to determine the energy demand and the most effective opportunities for reducing carbon emissions. In terms of low carbon technologies (the 2nd stage of the Energy Hierarchy), connection to an existing or proposed district heating network was investigated but no nearby schemes were found. Therefore, a low NO_x gas-fired combined heat and power unit is proposed to provide low carbon heating / hot water for the entire site from a central energy centre. Back-up boilers will be employed to provide additional heat when necessary. At the 3rd stage of the Energy Hierarchy ("Be Green"), roof mounted photovoltaics have been considered the most favourable technology for the development, and a 40-45kWp array is proposed for the flat roofs.

4.5 The overall predicted reduction in regulated CO_2 emissions from the Baseline development model is approximately 37% for the entire development (including both the new build residential and new community centre), with the remainder of residential emissions up to 100% (i.e. zero carbon) being off-set through Camden's carbon offsetting mechanism and confirmed price per tonne of carbon emitted over a 30 year operational period. This is therefore in line with the requirements of London Plan Policy 5.2 and the BREEAM "Excellent" standard for the community centre.

Water Efficiency

4.6 The average person in England uses 150 litres of water a day and it is expected that by 2020 the demand for water could increase by 800 million litres per day (source: Environment Agency). Additionally, the Environment Agency and the London Plan highlights that Camden lies within an area of 'Water Stress'.

4.7 In order to address the above, the following design features will be committed to within the residential proposals.

Minimising Water Use

4.8 In line with Policy CC3 of the Camden Local Plan document and The London Plan Sustainable Design & Construction SPG, a combination of the following measures will be included (subject to detailed design) to reduce the amount of water consumption for the residential parts of the development:

- Basin taps will have flow restrictors fitted to reduce the flow to ≤ 3.5 litres/minute (at 3 bar pressure)
- All WCs will be dual flush – 5L full flush, 2L half flush
- Kitchen taps with a maximum flow rate of ≤ 5 litres/minute
- Showers shall have a flow rate ≤ 9 litres/minute (at 3 bar pressure)
- If installed, baths will have a capacity to overflow of ≤ 190 litres
- Where white goods are to be provided for residential units by the developer, those with lower water consumption will be selected as standard

4.9 In line with the supporting text of Policy CC3 of the Local Plan, the above water fittings will be specified to ensure that total water consumption will be reduced to approximately 104.4 litres/person/day (with an additional 5 litres/person/day allowance for external uses, as per Part G of Building Regulations – external water use has been minimised as confirmed below). A copy of the Code for Sustainable Homes Wat01 calculator has been provided in Appendix A2 to confirm this.

Water Monitoring

4.10 A water meter will be specified on the mains supply to each residential flat on site to allow residents to accurately monitor water use, as this has been shown to reduce water consumption by an average of 10-15% as residents have the ability to pay for the exact amount of water they use (source: OFWAT, 2011).

Maximising the Re-Use of Water

4.11 The consented scheme proposed the use of water butts for all ground floor private gardens to collect rainwater for irrigation. However, the drainage design for the updated scheme now routes rainwater drainage through the building interior. The diversion of rainwater drainage to the exterior of the building is not considered feasible and thus, the rainwater butts are now omitted. Given that the rainwater butts were only proposed for the ground floor dwellings and community roof garden (now omitted), this loss will not considerably affect the water consumption of the updated scheme.

4.12 In order to minimise the water used for irrigation, drought resistant species will be selected that, once established, will not need watering. Additionally, the proposed sedum roofs will also not require irrigation, due to the fact that they are succulent plants that retain water and survive in long hot dry periods

4.13 The specification of rainwater recycling has been considered by the design team and rejected at this stage, primarily on the basis of limited roof space due to the installation of the green roofs and solar panels. The specification of low flow fittings for all residential units will significantly reduce operational water use.

4.14 The feasibility of including grey water recycling into the residential elements of the scheme has been discussed by the design team, and rejected at this stage primarily due to lack of space required both for the underground storage tanks and internal high level storage tanks for each residential unit. The specification of low flow-rate fittings throughout will reduce water consumption by approximately >30% compared to average UK water consumption rates. Therefore, taking into consideration the scale of the development, its predicted low level of water use, the limited potential to use greywater for toilet flushing and the challenges posed for locating the greywater storage tanks within the site, this technology is considered to be an unviable proposal for achieving meaningful water savings.

Sustainable Use of Materials

4.15 Although a BREEAM assessment is only required for the proposed non-domestic community centre, the requirements this standard encourages with regard to waste and materials will be prioritised on a site-wide basis to encompass the residential proposals. In line with the CPG3 Sustainability ‘five key measures’ for minimising the use of resources, the following has been considered within the design.

Managing Existing Resources

4.16 During the demolition phase, the principal demolition contractor will be required to produce a pre-demolition audit detailing the quantities of demolition waste predicted and any opportunities for re-use of these materials on site, plus opportunities for recycling of this at licenced local facilities. In line with the BREEAM assessment requirements specific to the proposed community centre (please refer to BREEAM Pre-Assessment produced by McBains, for further details), at least 80% by tonnage of the entire site non-hazardous demolition waste will be diverted from landfill and either re-used on site (for example, crushed and used as sub-base material for new hardstanding areas) or recycled by an approved waste management contractor off-site.

Construction Waste

4.17 A Site Waste Management Plan (SWMP) shall be produced for all on-site activities to optimise materials resource efficiency in line with the Waste Hierarchy (Reduce, Reuse, Recycle). The SWMP will detail the design measures towards optimum use of materials, set specific targets for construction and demolition waste generation and appropriate mechanisms for segregating waste on-site.

4.18 As per the requirements of the BREEAM assessment for the proposed community uses, the entire development (including the proposed residential uses) will target ≥ 70% by tonnage of construction waste to be diverted from landfill.

Sustainable Materials

4.19 Materials for the development will be selected in consideration of the Green Guide to Specification. The Green Guide represents a review of an extensive list of building materials according to their lifecycle environmental impact, including embodied energy / carbon. Environmental performance is rated on a scale of A+ to E, where A+ represents the best performance. For the proposed scheme, it is intended that at least 75% of the main elements of the new residential buildings will achieve an A rating or higher, therefore being in compliance with the guidance given in the London Plan Sustainable Design & Construction SPG, and the Camden Sustainability CPG 3.

4.20 Timber will be selected and purchased in consideration of sustainability certification. It is intended that all proposed structural timber elements and temporary timber used for the new residential buildings (e.g. scaffolding) will be from certified sources under the FSC and/or PEFC.

Operational Waste

4.21 In line with Camden's current arrangements for recycling and general waste collection, all residential unit kitchens will be provided with spaces for the separate storage of general and mixed recycling. This will further incentivise recycling by providing a dedicated non-obtrusive space, meaning residents are not required to spend their own time and/or money making their own preparations. Additionally, the refuse stores have been positioned and designed to allow all potential residents to use them, and helping to minimise walking time from all residential units.

Green Infrastructure & Biodiversity

4.22 An Arboricultural Impact Assessment (AIA) was completed for the site as part of the original application by Greenman Environmental Management, and this has been updated to reflect the revised application. This confirms that four trees would be removed as a result of the proposed development and all surrounding trees would be adequately protected in accordance with the AIA. The loss of trees and associated biodiversity will be mitigated by the sitewide landscape plan, which will provide net gains in biodiversity. Additionally, removal of existing boundary walls close to three of the surrounding identified trees will be undertaken by hand under the supervision of an Arboricultural Clerk of Works.

4.23 As discussed in the Site Context Appraisal section, a Preliminary Ecological Appraisal has been completed for the site and this has made recommendations to ensure that any existing ecological features on the site be properly assessed by undertaking further surveys. The removal of features that could be used for bird nesting is advised to take place outside of the nesting season (March to August).

- Any potential adverse impacts from the proposed development will be able to be mitigated and enhanced through the inclusion of
- Bird and bat boxes
- A wildlife friendly planting scheme, including the addition of green roofs
- Bee bricks in building facades

4.24 Due to the site's constrained area and urban residential locality, the ability to influence biodiversity at ground level is limited. Therefore, in order to enhance the biodiversity of the site, it is proposed to incorporate 684m^2 of green roofs on available roof space. This will be integrated with the proposed photovoltaics (see Energy Strategy, McBains) as various research conducted on the integration of green roofs and PV confirms that the cooling effect provided by transpiration of vegetation improves the efficiency of PV by up to 10% (source: Hui & Chan, 2011). There are other multiple benefits of green / brown roofs such as their ability to reduce storm water runoff intensity (McBains' Sustainable Drainage report for the proposals confirms that a green roof will help to retain runoff and intercept rainfall), and the beneficial effect it has on microclimate and the passive cooling effect this would have on the residential flats.

4.25 The planting and landscape strategy, incorporated as part of the Design and Access Statement, states that a wide range of evergreen and perennial planting, together with informal flowering shrubs will be utilised to provide privacy and an attraction to invertebrates.

Sustainable Drainage

4.26 A Sustainable Drainage Strategy has been produced for the proposals by McBains, which updates Conisbee's flood risk assessment, produced for the original application. This provides a drainage strategy for the entire site that will provide attenuation up to an including the 1 in 100 year plus a 30% allowance for climate change storm event.

4.27 The 160m³ volumetric attenuation proposed will consist of green roofs and subsurface storage via ~149m³ modular underground storage tanks, with the rate of discharge being reduced from the current rate of 31 l/s to 5 l/s.

Adapting to Climate Change

Minimising Overheating

4.28 Details of thermal mass, orientation and natural ventilation for the proposed residential buildings are provided in the accompanying Energy Statement (McBains) as part of the overall overheating mitigation strategy, in line with the GLA cooling hierarchy.

4.29 As indicated above, the inclusion of green roofs and areas of planting will aid in microclimatic passive cooling for the proposed buildings and the immediate area surrounding the site.

Adapting to Heavier Rainfall

4.30 As discussed above, the development has been designed to minimise flooding and to not increase the amount of surface water run-off and therefore, chance of flooding for neighbouring properties even when accounting for a predicted 30% increase in rainfall as a result of climate change.

Adapting to Drier Summers

4.31 As discussed above, the site is in an area of water stress and therefore the residential units will be designed to minimise water use during operation. Fittings will be selected to ensure that internal residential water use does not exceed 105 litres/person/day, and the external planting will be selected to be low maintenance and drought resistant.

Pollution Prevention

Land Pollution

4.32 As confirmed within the Site Context Appraisal section, the Basement Impact Assessment submitted in support of the scheme found that although the made ground beneath the site contains significant contamination from lead and PAH's, the proposed excavation works will remove this contaminant risk. Additionally, it is proposed to conduct a more thorough asbestos contamination assessment during detailed design stage, as only minimal amounts of this were found during initial site testing.

Air Pollution

4.33 An Air Quality Assessment was completed in 2016 for the site by Isopleth Limited, and this concluded that since the proposed development will be car free, the air quality impact will be negligible from this source. The point source emissions from the proposed low NO_X gas fired CHP and domestic boilers are unlikely to be worse than for the existing site, therefore the predicted site-wide air quality impacts are within acceptable limits. Given that the current proposed servicing strategy is unchanged from that previously described, including the specification of low NOx CHP, the impact on local air quality can still assumed to be negligible.

4.34 Best practice methods for minimising the formation of dust and emissions from construction activities shall be implemented to reduce adverse impact on this primarily residential area. These methods shall be in line with the London Plan's *Control of Dust and Emissions During Construction and Demolition* SPG, as appropriate to the specific site and proposed activities. Control measures will likely include:

- Solid screens / barriers or other physical boundaries around dust / emission generating activities;
- Good site maintenance and regular inspections for liquid spillages;
- Washing of delivery vehicles wheels; and
- Sealed storage for cement, sand and fine aggregates.

4.35 Further details on the above can be found in the Construction Management Plan submitted in support of the planning application.

4.36 In addition to the above measures, it is intended that the construction phase of works on site (including both the proposed community centre and residential areas) will be assessed under the Considerate Constructors Scheme (CCS) (further details can be found in the BREEAM Pre-Assessment produced by McBains). This scheme encourages and rewards best practice methods / management on site with regard to a number of issues, including air pollution. For example, spot checks on site under the CCS can include the appropriate erection of barriers around dust generating activities.

4.37 During operation, the proposals will help stimulate the use of sustainable forms of transport that would help improve air quality across London; 58 secure long-stay cycle spaces are proposed on the ground floor of the residential blocks (equal to 1.4 spaces per residential unit) and the proposed development will be entirely car-free (with the exemption of disabled parking spaces). Additionally, a total of 18 short stay cycle spaces are proposed on-site and will likely be used by users of the new community facilities, as well as people visiting friends and family in the residential units. As discussed in the Site Context Appraisal section, the site is in a good location with regard to access to regular and reliable public transport options.

4.38 Additionally, approximately 684m² of green roof is proposed to be installed on available roof space, comprising a combination of sedum blanket and extensive plug planted roofs. Multiple scientific papers confirm that green roofs are able to efficiently remove air pollutants from the air during the growing season, with approximately 85 kg of air pollutants per hectare of green roof per year being absorbed and effectively mitigated (source: Yang et al. 2008). The pollutants most effectively removed from the air by green roofs include NO_2, particulate matter and SO_2, all of which are identified as being particularly abundant within London.

Noise Pollution

4.39 No air conditioning units are currently proposed for the residential units, therefore reducing the potentially noise-emitting external plant associated with this technology.

4.40 An Acoustic Report has been produced by Ion Acoustics Limited, in support of the planning application. This assessed both the noise ingress and egress from the residential units and the new community centre, and confirms that some limited external plant is proposed for the new community centre. This confirms that with regard to the residential units, the only risk of noise ingress comes from the hall and recording studio. Acoustic attenuation for natural ventilation paths is recommended, together with an absorptive ceiling to limit noise breakout from the main hall.

4.41 Additional analysis is required to ensure that noise levels from mechanical plant servicing the community centre is limited to levels set out in the Acoustic Report. Provided this is adhered to, all other uses on-site are expected to have a minimal impact on the new residential units. Noise pollution from the residential units to surrounding neighbourhoods is expected to be minimal due to the lack of noise-generating external plant.

Light Pollution

4.42 In order to minimise light pollution and therefore reduce adverse effects on surrounding residential amenity and protected species such as bats, external lighting shall be designed in compliance with the Institution of Lighting Professionals (ILP) *Guidance notes for the reduction of obtrusive light* (2011), with measures such as installing luminaires that minimise upward spread of light.

Water Pollution

4.43 As per the Sustainable Drainage Strategy produced by McBains for the proposals, the 684m² of green roofs proposed will act as a natural filtration system, removing pollutants and likely improving the water quality following runoff. Green roofs have the potential to remove a high proportion of total suspended solids and a medium proportion of heavy metals.

4.44 In terms of construction works, the site is approximately 700m from the nearest water course (the subterranean River Fleet) and therefore the risk posed to pollution of surface water is low.

Social Integration of the Scheme

4.45 The proposed new community areas of the scheme will improve the quality and amount of space currently available to the Highgate Newtown Community Centre (HNCC), therefore improving its ability to carry on serving the local community of Dartmouth Park and Highgate Newtown and potentially increasing the amount of people who volunteer and take part in its programmes. This has obvious social benefits for both the new and existing residents of the area, allowing people to attend sports and culture-based events and meet new neighbours. The Fresh Youth Academy will also have improved integrated flexible space to deliver its services for young people in the community.

4.46 The residential element serves to meet the observed significant local housing inequalities discussed in the Site Context Appraisal section by helping to alleviate the supply-side shortage of housing in the borough. Additionally, a mix of residential units ranging from one to three bedroom apartments and houses will attract a range of residents from various income backgrounds, producing a more stable place that prevents the social isolation of concentrated groups such as that which is seen in the 1980s London housing estates.

4.47 Additionally, the ability of the proposal to improve employment opportunities has a direct influence on social integration on both a local and national scale. The HBF report 'The Labour Needs of Extra Housing Output: Can the Housebuilding Industry Cope' states that for each home built 1.5 full time construction jobs are created, with twice that number of jobs created in the supply chain. Additionally, Ernst & Young LLP's Economic Impact Assessment for the Berkeley Group (2012) confirms that for every additional job created in the construction industry, a further 1.53 jobs are created in the wider economy. On this basis, the housing proposed as part of this scheme has the potential to create 185 jobs in the construction industry and associated supply chain, with an additional 93 jobs created in the wider economy.

5. SUMMARY

5.1 This Sustainability Statement provides an overview as to how the proposed residential parts of the scheme contribute to sustainable development in the context of the strategic, design and construction considerations.

5.2 It is proposed to redevelop the existing buildings and courtyard and change of use of the Gospel Hall to provide new community facilities and 41 residential units.

5.3 Sustainability is a broad concept and covers a range of environmental, social and economic themes. A review of the London Borough of Camden's planning policy has identified a number of requirements relating to sustainable development. Of these, policies D1 (*Design*) and CC2 (*Adapting to Climate Change*) of the Core Strategy, and the Camden CPG 3: Sustainability, are considered of greatest pertinence. Various London Plan policies and the Sustainable Design and Construction SPG are also considered relevant.

5.4 A review of local social and economic conditions identified an excellent location for the proposed residential use, with multiple public transport options within 12 minutes' walk of the site that service the majority of major employment, retail and leisure destinations across London.

5.5 The development contributes to sustainable development in Camden through the following:

- Provides a greater choice of residential accommodation in an area served by a wide array of local amenities and services, all of which will benefit from the new residents and were shown to be able to cater for any increase in demand.
- As per the Energy Strategy produced by McBains, the entire proposed development (including the proposed new residential units) will reduce CO_2 emissions by 37% relative to the Building Regulations Part L 2013 standards, with the remainder up to 100% of total residential regulated emissions being off-set through Camden's carbon off-setting fund.
- Encourages sustainable transport options for new residents by providing a car-free development, with 58 secure long stay cycle spaces to be provided for the residential units, or 1.8 spaces per flat.
- The biodiversity of the site is likely to increase following development through the proposed green roofs and areas of biodiverse planting.
- Water use during operation will be minimised by low flow-rate fittings. This will meet the London SPG target for 105 litres/person/day or less.

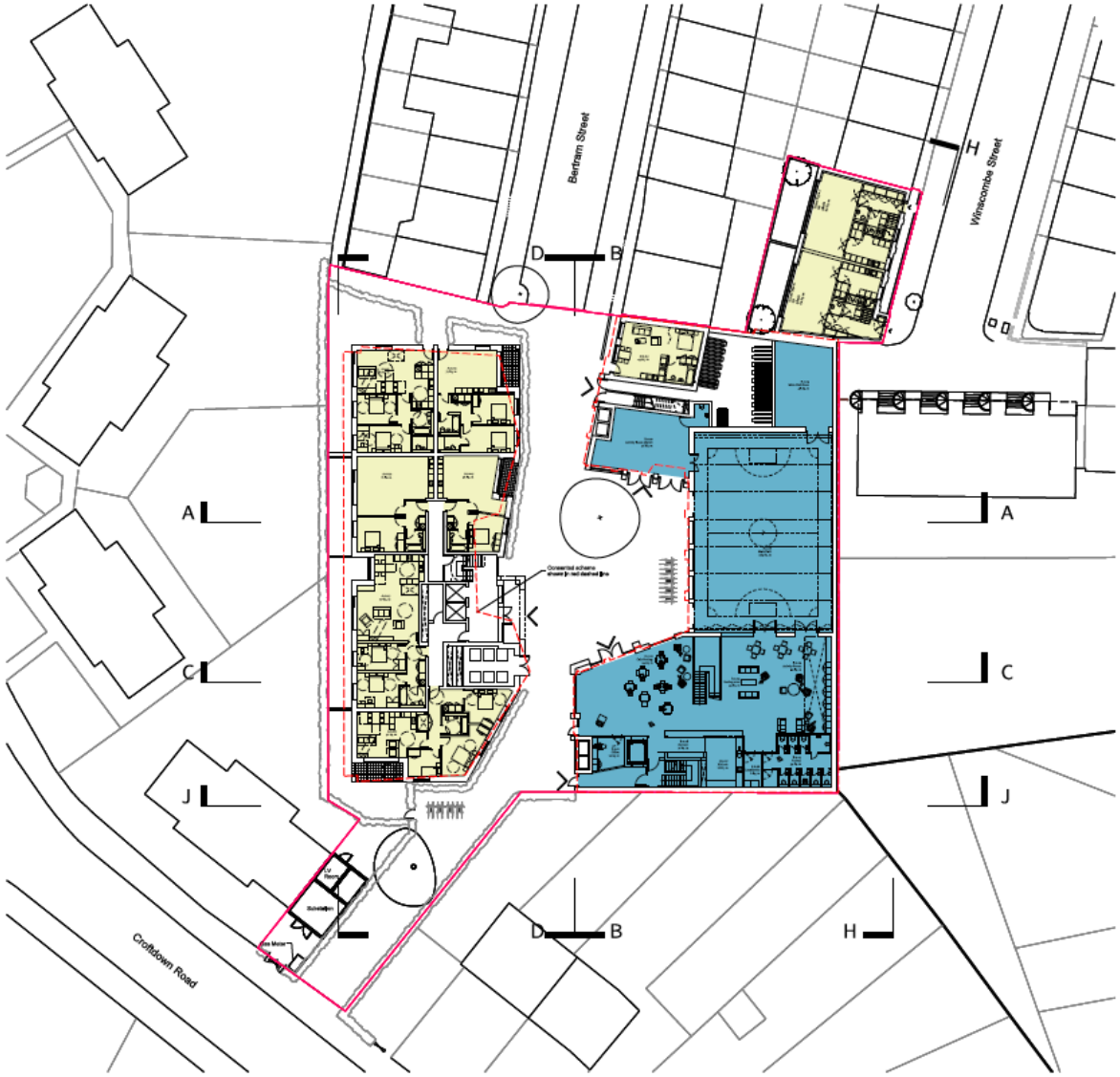
- Measures to reduce waste and use sustainable materials will be prioritised; ≥80% of construction and demolition waste will be diverted from landfill and at least 20% of the total value of primary construction materials will be sourced from recycled and reused sources.

- The integration of proposed residential flats with new community facilities will aid in social integration of the new residents and significantly enhance the sense of place for the site and surrounding neighbourhood.

- Measures will be adopted for the associated new community centre on-site so that it has the potential to achieve a BREEAM 'Excellent' rating, as per Appendix A3.

5.6 Overall, the proposals for the scheme are in line with the principles of sustainable development as well as the policy requirements of the planning authority, and will provide a development that seeks to promote these principles in operation.

A1. SITE PLAN



Planning

rcka			
Title: Site Plan – As Proposed			
Project: Camden HNCUPTA	Client: Camden Council		
Date: 26.01.2016	Drawn by: AB	Checked: DK	Scale: 1:2000@A1
Job No: 1415	Drawing No: PL-GA-ST-800		Revision: O

A2. CFSH WAT1 CALCULATOR PRINT OUT

breglobal

Job no:	16-S011
Date:	21/07/2016
Assessor name:	
Registration no:	N/A
Development name:	ighgate Newtown Community Centre (Res

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WATER EFFICIENCY CALCULATOR FOR NEW DWELLINGS - (BASIC CALCULATOR)

	House Type:	Type 1		Type 2		Type 3		Type 4		Type 5		Type 6	
	Description:	Typical Unit											
Installation Type	Unit of measure	Capacity/ flow rate	Litres/ person/ day	Capacity/ flow rate	Litres/ person/ day	Capacity/ flow rate	Litres/ person/ day	Capacity/ flow rate	Litres/ person/ day	Capacity/ flow rate	Litres/ person/ day	Capacity/ flow rate	Litres/ person/ day
Is a dual or single flush WC specified?		Dual		Select option:		Select option:		Select option:		Select option:		Select option:	
WC	Full flush volume	5	7.30		0.00		0.00		0.00		0.00		0.00
	Part flush volume	2	5.92		0.00		0.00		0.00		0.00		0.00
Taps (excluding kitchen and external taps)	Flow rate (litres / minute)	3.5	7.11		0.00		0.00		0.00		0.00		0.00
Are both a Bath & Shower Present?		Bath & Shower		Select option:		Select option:		Select option:		Select option:		Select option:	
Bath	Capacity to overflow	190	20.90		0.00		0.00		0.00		0.00		0.00
Shower	Flow rate (litres / minute)	9	39.33		0.00		0.00		0.00		0.00		0.00
Kitchen sink taps	Flow rate (litres / minute)	5	12.56		0.00		0.00		0.00		0.00		0.00
Has a washing machine been specified?		No		Select option:		Select option:		Select option:		Select option:		Select option:	
Washing Machine	Litres / kg		17.16		0.00		0.00		0.00		0.00		0.00
Has a dishwasher been specified?		No		Select option:		Select option:		Select option:		Select option:		Select option:	
Dishwasher	Litres / place setting		4.50		0.00		0.00		0.00		0.00		0.00
Has a waste disposal unit been specified?		No	0.00	Select option:	0.00	Select option:	0.00	Select option:	0.00	Select option:	0.00	Select option:	0.00
Water Softener	Litres / person / day		0.00		0.00		0.00		0.00		0.00		0.00
	Calculated Use		114.8		0.0		0.0		0.0		0.0		0.0
	Normalisation factor		0.91		0.91		0.91		0.91		0.91		0.91
Code for Sustainable Homes	Total Consumption		104.4		0.0		0.0		0.0		0.0		0.0
	Mandatory level		Level 3/4		-		-		-		-		-
Building Regulations 17.K	External use		5.0		5.0		5.0		5.0		5.0		5.0
	Total Consumption		109.4		0.0		0.0		0.0		0.0		0.0
	17.K Compliance?		Yes		-		-		-		-		-

A3. COMMUNITY CENTRE BREEAM PRE-ASSESSMENT

BREEAM 2014 (Other Buildings - Community Centre)

Pre Assessment Review - HNCC

McBains

Rev 1	17.10.2017 (T.Pegg)
Rev 2	14.06.2018 (T.Pegg)
Rev 3	21.06.2018 (T.Pegg)
Rev 4	28.06.2018 (C.Castaneda)
Rev 5	16.07.2018 (T.Pegg)
Rev 6	24.09.2018 (T.Pegg)

FULLY FITTED
Excellent

Target Rating 70.00%

Targeted score: 71.37% (indicative total score: following **design team input to date)**

Credits status:
- Targeted
- Not targeted
- Evidence received and signed off
- Potential credit
- Evidence outstanding
- Very onerous / unachievable

Actions (with Timescale)
- Stages 1 and 2
- Stage 3
- Tender
- Stage 4
- Stage 5

Categories	Credit Name	Credits available	Credits breakdown	Credits status	Overview of requirements	Action	Responsible Party	Stage
Management	Man 01: Sustainable Procurement	4	1	1	- decision making involves client, building occupier, design team and contractor from Stage 2 (Stage C) - training scheduled for tenants	**PM** provided project directory and **completed proforma.**	PM	from 2 onwards
			1	1	Prior to end of Stage 2 (Stage C) - relevant bodies consulted to influence the design - consultation plan shows consultation at key milestones, feedback provision to relevant bodies - feedback to be implemented by end of Stage 4 (Stage D)	Public consultation has been ongoing throughout the Pre Application process as explained in Pre App Document No.3, RCKa, Sept 2018. BREEAM assessor review planning consultation documents and ensure feedback **addressed by end of Stage 4**	Planning Consultant + BREEAM	by end of 2 by end of 4
			1	1	At Stage 1 (Stage B) BREEAM AP appointed to assist in the setting of BREEAM targets. These must targets must also be achieved at BREEAM design stage	**Client** appointed BREEAM AP	Client	at 1
			1	1	BREEAM AP attends regular meetings to monitor & report on BREEAM progress throughout design. **Note: previous BREEAM AP credit must have been achieved.**	**Client** appointed BREEAM AP	Client	
	Man 02: Life cycle cost and service life planning	4	4	4	At Stage 2 (Stage C) **(2 credits) Elemental** Life Cycle Cost (LCC) analysis in line with 'Standardised method of life cycle costing for construction procurement' PD 156865:20081. By end of Stage 4 (mid Stage F) **(3rd credit) Component** level LCC analysis to be completed **(4th credit)** capital cost for the building in pounds per square metre (£k/m2) for: Construction, including prep works,materials, equipment/labour Site management Construction financing Insurance and taxes during construction Inspection and testing	LLC study has been instructed by the PM in September 2018. All 4 credits are targeted.	PM	at 2
	Man 03: Responsible Construction Practices (MANDATORY - 1 credit under CCS Scheme for Excellent)	6	PRE REQUISITE	pre requisite	All timber and timber-based products used on the project is 'Legally harvested and traded timber'		Client (Contractor)	Tender
			1	1	Principal contractor operates an environmental management system (EMS) (e.g. ISO 14001 or BS 8555 compliant) Onsite pollution prevention practices in line with PPG 6 - Working at construction and demolition-sites;	Client to confirm contractor will be required to operate compliant EMS programme	Client (Contractor)	
			1	1	During Stages 5 and 6 (Stages J and K): BREEAM AP attends regular meetings to monitor & report on BREEAM progress throughout **construction/handover** period.	Client to confirm appointment for CONSTRUCTION stage BREEAM AP	Client (Contractor)	During 5 & 6
			2	2	CCS score	Client to confirm contractor will be required to score 2 credits i.e. score of 35 or above	Client (Contractor)	Tender
			2	2	1st credit: energy and water records 2nd credit: transport of materials and waste **(includes ground works and landscaping)**	Client to confirm contractor will be required to score 2 credits and thus keep thorough records of energy, water and transport of materials and waste, (including ground works and landscaping waste)	Client (Contractor)	
		Exemplary	Exemplary	+1	CCS score of 40 or above	Client to confirm contractor will be required to achieve exemplar CCS score of 40 or above	Client (Contractor)	

Categories	Credit Name	Credits available	Credits breakdown	Credits status	Overview of requirements	Action	Responsible Party	Stage
Management	Man 04: Commissioning and handover (MANDATORY - 1 credit for User Guide for Excellent)	4	1	1	scheduled commmissiong of services / inspection of fabric conducted **prior to handover** commissioning monitor so comssioning in line with BSRIA/CIBSE	Client to confirm this requirement will be included within Contractor's specifications	Client (Contractor)	Tender
			1	1	**(by end of Stage 4).** specialist commissioning manager for complex systems appointed prior to Stage 5 (Construction) to undertake design reviews and inform commissioning schedule **(1st credit under Man 04 must have been awarded)**	Client to confirm this instruction will be completed **prior to the start of Construction**	Client (Contractor)	End of 4
			1	1	Integrity of the building fabric, including continuity of insulation, avoidance of thermal bridging and air leakage paths is quality assured through: Air tightness testing undertaken by professionals of ATTMA (Air Tightness Testing and Measurement Association) and UKAS accredited OR thermographic surveys (Level 2 qualified) **Any defects to be rectified before handover**	Client to confirm suitable QA air tightness and thermographic surveys will be instructed	Client (Contractor)	Tender
			1	1	**Building user guide** to provided to tenants, including the following: a. The building's design intent b. The available aftercare provision and aftercare team main contact(s), including any scheduled seasonal commissioning and post occupancy evaluation c. Introduction to, and demonstration of, installed systems and key features, particularly building management systems, controls and their interfaces d. Introduction to the Building User Guide and other relevant building documentation, e.g. design data, technical guides, maintenance strategy, operations and maintenance (O&M) manual, commissioning records, log book etc. e. Maintenance requirements, including any maintenance contracts and regimes in place.	Client to confirm contractor will be required to produce a compliant Building User Guide	Client (Contractor)	
	Man 05: Aftercare (MANDATORY - 1 credit for Seasonal commissioning for Excellent)	3	1	1	Aftercare support in place including: a) meeting between aftercare team and tenant b) onsite Facilities Manager training c) onsite aftercare support during first 6 months d) helpline after care support 6-12 months after occupation e) collection of energy + water data during first 12 months of occupation	Client to confirm contractor will be required to provide compliant after care support	Client (Contractor)	
			1	1	seasonal commissioning activities will be completed over a minimum 12-month period after handover	Client to confirm contractor will be required to provide compliant Seasonal Commissoning	Client (Contractor)	
			1	1	POE committed to after 12 month occupation by 3rd party	Client to confirm whether this credit is to be targeted	Client	
Health & Wellbeing	Hea 01: Visual Comfort	4 (Offices) or 5 (Retail)	1	1	Glare control - ext. shading / blinds **(transmittance < 10%)** to shade against summer+winter glare. (Curtains not acceptable as can't provide graduated shading) - If only ext. shading used, **modelling is required** to show no glare during occupied hours.	Client to confirm whether this credit is to be targeted	Client (Architect)	
			1 (2 credits for Retail)	+1	Daylight OTHER BUILDING - COMMUNITY CENTRE 1 credit available, requiring the following: 80% of area has average daylight factor = 2% AND a) or b) a) uniformity ratio, b) view of sky & room depth criterion met	2% Average Daylight Factor (ADF) required in all occupied rooms. 3% ADF required in atrium. This credit is relevant for 'occupied areas' which are typically defined as 'being occupied for 30mins or more'	Client (Architect + Daylight Consultant)	
			1		View Out a) 95% of occupied floor area is within 7m of window that has a View Out (view of landscape or buildings at eye level, with 10m between window ajdacent building). b) Window area must be <20% of wall area	NOT TARGETED: unachieavable as no windows on east façade at GF as confirmed by architects at BREEAM meeting on 22.06.2018 **For Reference:** 95% of floor area is within 7m of a vertical window which is at least 20% of the wall area Sports halls are excluded from this credit.		
			1	1	int & ext lighting in line with guidelines regarding lux (illuminance) levels - INTERNAL: SLL Code for Lighting 2012 and CIBSE Guide 7 (computers screens) EXTERNAL: BS 5489 (roads/amenity) and BS12464 (workplaces) * zoning required for int. lighting (no more than 4 workstations, central/ window desks, display & counter areas,	M+E to confirm inclusion within M & E specifications	M+E	

Categories	Credit Name	Credits available	Credits breakdown	Credits status	Overview of requirements	Action	Responsible Party	Stage
Health & Wellbeing	Hea 02: Indoor Air Quality	5 (2 for Shell + Core)	1	1	air quality plan to include: a. Removal of contaminant sources b. Dilution and control of contaminant sources c. Prooedures for pre-occupancy flush out d. Third party testing and analysis e. Maintaining indoor air quality in-use	Client to confirm contractor will be required to produce Air Quality Plan	Client (Contractor)	Tender
			1	+1	Ventilation: a) or b) a) intakes are 10m from extracts, and 20m from roads/car parks (if natural vent strategy, windows >10m from roads/car parks) b) ventilation designed in line with BS 13779 Annex 2 and 3 (filtration) Buildings will unpredictable occupancy levels must have CO2 linked/demand led ventilation.	M+E to confirm at Detailed Design.	M+E	
			1	1	VOC (products) *All decorative paints and varnishes meet relevant standards required by BREEAM (Table 18 of BREEAM 2014 guidance) 5 of the following also comply with relevant standards: - wood panels - timber structures e.g. glulam - wood flooring - Resilient textile and laminated floor coverings (e.g. vinyl, rubber) - suspended ceiling tiles - flooring adhesives - wall coverings	Client to confirm which products will meet the standards and include within specifications	Client (Architect)	
			1	1	VOC (post construction testing) *Formaldehyde and Total VOC concentrations are measured post construction, **pre occupancy** - remedial works committed to in order to achieve formaldehyde (100µg/m3) and Total VOC (300µg/m3) Testing to be inline with: a. BS ISO 16000-4: 2011 Diffusive sampling of formaldehyde in air3 b. BS ISO 16000-6: 2011 VOCs in air by active sampling4 c. BS EN ISO 16017-2: 2003 VOCs - Indoor, ambient and workplace air by diffusive sampling5 d. BS ISO 16000-3: 20116 Formaldehyde and other carbonyls in air by active sampling.	Client to confirm whether this credit is to be targeted	Client (Contractor)	
			1	1	Potential for natural ventilation. * occupied areas capable of using nat vent, proven by either: - openable windows = 5% floor area, OR, - vent rates and thermal comfort achieved by CIBSE AM10 compliant modelling - 2 levels of user, ventilation control - purge (odour/overheating) - background vent for good indoor air quality given the occupancy & internal pollution levels of the space	M+E to confirm that Natural ventilation strategy can allow for 2 levels of user control e.g. openable windows with trickle vents	M+E	
	Hea 04: Thermal Comfort	3	1	1	**by end of Stage 3 (Stage C)** CIBSE AM11 modelling to prove thermal comfort in winter & summer in line with CIBSE Guide A (mechanically ventilated buildings) and CIBSE TM52 (natural ventilated buildings) - Time out of Range (TOR) values are approved by MEP engineer	M+E to confirm. Compliance with these critieria may impact internal daylight levels.	M+E	by end of 3
			1	+1	Thermal comfort including for climate change - achieve 1st credit above - pass overheating modelling using DSY (Design Summer Year) weather files, as follows: *Natural ventilation:* Time period: **2050s** Emissions scenario: Medium (A1B) *Mechanically Ventilated / Mixed Mode Buildings* Time period: 2030s Emissions scenario: Medium (A1B).	Client to confirm. Compliance with critieria may have significant adverse effects on internal daylight levels.	Client (M+E)	
			1	1	Controls + zoning. - 1st credit achieved, and modelling informed temp controls strategy Strategy to include: - zoning for heating/cooling (e.g. perimeter/central areas) - user control of heating/cooling developed with building users/ industry guidance - accounts for occupancy patterns - consider non technical building user use of controls (e.g. are TRVs likely to used properly?) - manual overrides and options for individual, user control - proof that no simaltaneous heating & cooling can take place	M+E to confirm that this credit can be achieved for the Office areas M+E to confirm that Hea 4 (1st credit) regarding CIBSE Guide A and TM52 analyses is achieved.	M+E	

Categories	Credit Name	Credits available	Credits breakdown	Credits status	Overview of requirements	Action	Responsible Party	Stage
Health & Wellbeing	Hea 05: Acoustic Performance	3 (Only 1 for Retail Shell+core)	1	1	sound insulation between **acoustically sensitive rooms** and other occupied areas complies with the performance criteria given in Section 7 of BS 8233:2014 (section 7.5 if unfurnished, section 7.7.6 if furnished)	Acoustician to confirm compliance with criteria by email or report	Acoustician	Tender
			1	+1	Achieve indoor ambient noise levels that comply with the design ranges given in Section 7 of BS 8233:2014.			
			1	1	Achieve sound absorption & reverberation times, where applicable, set out in Section 7 of BS 8233:2014. **where no 'speech/performance' areas, credit awarded by default**		Acoustician	
	Hea 06: Safety and Security	2	1	1	- compliant external areas e.g. pedestrian/cycle paths dimensions/connections to local highways, BS 5489 compliant lighting etc. - compliant dedicated delivery access and drop-off areas	Architect to confirm a) pedestrian & cycle paths are compliant b) delivery areas/drop-off areas are compliant M+E to confirm external lighting will be BS5489 compliant	Architect & M+E	
			1	1	At Stage 2 (Stage C) 'secure by design consultation and implementation	Meeting should discuss the following: 1. A **visual audit** of the site and surroundings, identifying environmental cues and features pertinent to the security of the proposed development. 2. Identify **any other stakeholders** regarding the SbD Officer that should be consulted regarding the development's security. 3. Identify risks specific to the proposed, likely or potential **use** of the building(s). 4. Identify risks specific to the proposed, likely or potential **user groups** of the building(s). 5. Identify any **detrimental effects** the development may have on the existing community. Architect and planning consultant met with Secure by Design officer on 16.07.2018. Jim Cope (Police Constable - Design Out Crime Officer forwarded meeting minutes to Nick Grant at Iceni (planning consultant) on 19th July 2018. SbD Officer to confirm drawings and security measures have been implemented following advice given during the meeting	Architect + Planning Consultant	by end of 2
Energy	Ene 01: Reduction of CO_2 Emissions (Mandatory - 5 credits Excellent)	12	12	6	SBEM calculations to be undertaken.	M+E to undertake updated SBEM modelling. VZDV modelling results (Rev 3 - 28.10.16) indicates credit score of 6.	M+E	Tender
	Ene 02: Energy Monitoring (MANDATORY - 1st credit Very Good or Excellent)	2	1	1	- Submetering of space Heating,- Domestic Hot Water,- Humidification,- Cooling,- Fans (major),- Lighting- Small Power to **allow 90% of each fuel use (e.g. elec, gas)** to be monitored - BMS to be installed (where floor area >1,000m2) , or all meters with pulsed output to allow future connection to a BMS	M+E to confirm inclusion within M & E specifications	M+E	
			1	1	- sub metetering by tenant area OR floorplate in single tenancy	M+E to confirm inclusion within M & E specifications	M+E	
	Ene 03: External Lighting	1		1	- average initial luminous efficacy at least 60 lm/W - daylight and PIR control The above requirements **include** decorative & floodlighting	M+E to confirm inclusion within M & E specifications	M+E	
	Ene 04: Low carbon design	3	1	1	Passive design - 1st credit under Hea 4 is achieved - at **Stage 2 (Stage C)** a review of passive measures is undertaken, covering the following: 1. Site location 2. Site weather 3. Microclimate 4.Building layout 5. Building orientation 6.Building form 7. Building fabric 8. Thermal mass or other fabric thermal storage 9. Building occupancy type 10. Daylighting strategy 11. Ventilation strategy 12. Adaptation to climate change.	M+E to ensure relevant criteria are considered within the energy strategy to be issued for planning. All items have been considered within thermal modeling which has been undertaken during July and August 2018.	M+E	by end of 2
			1	1	Free cooling - Passive design credit above is achieved - free cooling was included within Passive Measures review - one of the following strategies is adopted: nightime cooling, displacement vent w/o active cooling, **natural ventilation w/o mechanical cooling**, ground source cooling	M+E to incorporate night-time cooling within natural ventilation strategy.	M+E	Tender
			1	1	- at **Stage 2 (Stage C)** a low/zero carbon feasbility study is undertaken with its recommendations incorporated into the design - 5% CO_2 reduction achieved	M+E to confirm once updated SBEM model is completed for the planning submission The draft SBEM calculations achieve a 10% CO2 reduction for the community centre as per calculations undertaken by McBains in August 2018.	M+E	by end of 2
	Ene 06: Energy Efficient Transportation Systems	3	1	1	transport demand analysis according to BS 25745 and lowest energy solution specified use of regenerative drives to be considered	M+E to confirm whether a transport demand analysis has been undertaken, or if not, to undertake this study.	M+E	Tender
			2	2	The following energy efficient features included: standby mode lighting average efficacy at least 55 lm/W variable speed, variable-voltage, and variable-frequency (VVVF) control of the drive motor.	M+E to confirm that the energy efficient features will be specified for all relevant lifts.	M+E	

Categories	Credit Name	Credits available	Credits breakdown	Credits status	Overview of requirements	Action	Responsible Party	Stage
Energy	Ene 08: Energy Efficient Equipment	2	2	+2	demonstrate unregulated energy reductions from relevant systems	**Potential credit**: considered unlikely Community Centre will install energy efficient appliances M+E to demonstrate unregulated energy reductions from relevant systems: a) small power & plug-in equipment b) swimming pool c) Communal laundry facilities with commercial sized appliances d) data centres e) computer rooms f) Domestic scale appliances (individual and communal facilities) g) healthcare equipment h) kitchen & catering facilities	M+E M+E	Tender
Transport	Tra 01: Public Transport Accessibility	4 (4 for Other Type 2) (5 for Retail)	4 (4 for Other Type 2) (5 for Retail)	4	PTAL rating, which covers - The distance (m) from the main building entrance to each compliant public transport node - The public transport type(s) serving the compliant node e.g. bus or rail - The average number of services stopping per hour at each compliant node during the standard operating hours of the building for a typical day	PTAL rating is 3 (where 6b is the maximum possible score). Accessibility Index = 12.32. Postcode: N19 5DQ WebCAT Access Date: 28/06/2018 BREEAM Credit equivalent = 4 credits The Community Centre is classed as 'Other Building - **type 2**' which is defined by BREEAM as "...a building occupied by a number of core staff/employees with a larger number of consistently frequent visitors/users (either resident or non-resident)..."	BREEAM	
	Tra 02: Proximity to Amenities	1	1	1	Offices & Retail are classed as Building Type 1 and thus must be within 500m of the following: - food outlet - cash machine - access to sports/leisure facility (e.g. tennis courts, gym)	For the purposes of Tra 2, the Community Centre is classed as 'Other Building - **type 6**', requiring the following amenities to be within 500m walking distance of the proposed development: Food outlet - Pub within 85m Park - Dartmouth Park is within 500m Minimum 2 ammenities within 500m required for 1 credit, hence 1 credit achieved. The postcode of the Community Centre is N19 5DQ	BREEAM	
	Tra 03: Cyclist Facilities	2	1	1	- 1 cycle space per 10 members of staff (halved in city centre locations) small RETAIL: 10 spaces in total (halved in city centre locations)	**The Building Type is as per Tra 1** (which requires 1 space per 10 staff; 1 space per 10 visitors) Architect to confirm number of cycle spaces for community centre. Architect to confirm anticipated number of buildings users (staff and visitors separately) From the planning Transport Statement (JMP, 8th Sept 2016) the following are assumed: :23 spaces are providing across the Basement and ground floor levels i.e. sufficient for 230 staff and visitors	Architect	
			1	1	2 of the following are provided: - changing rooms - lockers - showers - drying rooms	**The Building Type is as per Tra 1** Architect to confirm a) which 2 of the 4 possible facilities are provided b) no. of showers, benches, clothes hooks, drying rooms, changing rooms provided	Client + Architect	
	Tra 04: Max. car parking capacity	2	2	2	1 credits: 1 space per 3 - 5 building users depending on Acessibility Index 2 credits: 1 space per 4 - 6 building users depending on Acessibility Index	Architect to confirm that there will be no car parking provision for the development, either for residential nor non-residential uses.	Architect	
	Tra 05: Travel Plan	1	1	1	**Prior to construction** travel plan responds to the needs of a site specific transport assessment - what measures will be implemented? And to minimise private car use?	Transport consultant to provide BREEAM addendum to the Transport assessment and travel plan provided as part of the planning submission.	Transport Consultant	by end of 3
Water	Wat 01: Water Consumption (MANDATORY - 1 credit Very Good or Excellent	2	2	2	- 2 credits = 25% reduction in water consumption will be achieved through water efficient fittings. Sanitaryware only. Process water in industrial buildings not assessed. - further credits require RWH or greywater	Architect: to confirm which low flow sanitary fittings (WCs, urinals, taps, showers, baths, dishwashers, washing machines) will be specified in order to achieve 2 credits	Architect	Tender
	Wat 02: Water Monitoring (MANDATORY - mains supply meter for Very Good or Excellent)	1	1	1	- water meter with pulsed output on mains supply, connected to BMS - 10% water demand areas/plant must be sub metered	M+E to confirm inclusion within M & E specifications	M+E	
	Wat 03: Water Leak Detection and Prevention	2	1	1	water leak detection system on mains supply: - within building - between building and site boundary	M+E to confirm inclusion within M & E specifications	M+E	
			1	1	- water supply shut off in WC areas, using any of following: - A programmed time controller i.e. switch water on and/or off at predetermined times. - A presence detector and controller - A central computer for overall control	M+E to confirm inclusion within M & E specifications	M+E	
	Wat 04: Water Efficient Equipment	1	1	1	identify unregulated water use than could be reduced such as Water efficient irrigation e.g. drip fed, low water plants, use RWH water	M+E to confirm inclusion within M & E specifications i.e. drip fed irrigation, RWH for irrigation, or rely solely on precipitation	M+E	
Materials	Mat 01: Life Cycle Impacts	5	5	+1	Green Guide ratings for: - External Walls,- Windows,- Roof,- Upper Floor Slabs,- Internal Walls,- Floor Finishes /Coverings.	Architect to provide details for Mat 1 calculator (build-ups, areas, Green Guide ratings + numbers)	Architect	
	Mat 02: Hard Landscaping and Boundary Protection	1	1	+1	80% to have A or A+ ratings (by area)	Architect to provide details of hard landscaping materials' Green Guide ratings	Architect	

Categories	Credit Name	Credits available	Credits breakdown	Credits status	Overview of requirements	Action	Responsible Party	Stage
Materials	Mat 03: Responsible Sourcing of Materials (MANDATORY - all timber in line with UK Govt procurement policy i.e. legal & sustainable Very Good + Excellent)	4	4	1	80% of materials in following elements are responsibly sourced • Structural Frame; • Ground floor; • Upper floors (including separating floors); • Roof; • External walls; • Internal walls; • Foundation/substructure; • Fittings: includes stair case, windows (frame and glazing units), doors (internal and external), floor finishes and any other significant fitting or finish present; and • Hard landscaping.	Client to confirm obligations will be placed on the contractor. Contractor sources materials for the project in accordance with a documented sustainable procurement plan, inline with BS 8902, local sourcing review, & monitoring proceedures of purchasing process. Contractor to review and feedback (for applicable materials and process) to BREEAM Assessor. Information included in the following tables of BREEAM guidance document: Table 44 (list of applicable building elements (walls, floors etc.) and materials (bricks, metal, concrete etc.)	Client (Contractor)	Tender
	Mat 04: Insulation	1	PRE REQUISITE	PRE REQUISITE	Any new insulation specified for use within the following building elements must be assessed: - External walls,- Ground floor,- Roof,- Building services	New build development so all insulation will be assessed	Architect + M+E	
			1	1	Thickness and conductivity of insulation (Green Guide & responsible sourcing assessed as part of Mat 1 and Mat 2 respectively)	Architect to confirm all insulation will be A or A+ rated according to the BRE's Green Guide.	Architect + M+E	
	Mat 05: Designing for Durability & Resistance	1	1	1	- areas of high vehicular/pedestrian traffic are protected, including: entrance, corridors, stairwells, lifts, delivery/storage areas, car parking areas - show consideration of durability of materials of various items, including: balconies, external walls,	Architect to provide annotated drawings, summarising consideration of Environmental and Material degradation factors as per Table 50 in the BREEAM guidance document.	Architect	
	Mat 06: Material efficiency	1	1	1	From Stage 1 (Stage B) to construction 'identify appropriate measures to optimise the use of materials in building design, procurement, construction, maintenance and end of life , stages e.g. show reports and calculations to show materials reduction through design changes	Architects have commenced with materials optimisation study Architect to implement recommendations by end of Stage 5	Architect	from 1 to end of 5
Waste	Wst 01: Construction Waste Management	3	3	2	reduced waste volumes generated	Client to confirm obligations will be placed upon the contractor. Contractor to provide BREEAM compliant Site Waste Management Plan, committing to max waste generated <7.5 m3 or 6.5 tonnes per 100 m2 (gross internal floor area) and diverting volumes of construction waste (from demolition (80%) and construction(70%)) away from landfill to a recycling facility.	Client (Contractor)	Tender
		1	1	1	diversion of demolition AND construction waste from landfill	Client to confirm obligations will be placed upon contractor. Contractor to confirm % that will be diverted from landfill.	Client (Contractor)	
	Wst 02: Recycled Aggregates	1	1	+1	>25% by weight or volume) of recycled or secondary aggregates in 'high-grade' building aggregate uses.	Structural Engineer to confirm whether this would be feasible	Struct. Eng	
	Wst 03: Operational Waste (Mandatory - 1 credit for Excellent)	1	1	1	dedicated space for recyclables : 2m2 per 1000m2 GEA (+ 2m2 where catering facilities exist) - compactors to be used where appropriate	Architect to confirm area (m2) dedicated to recyclable materials.	Architect	
	Wst 05: Adaptation to climate change	1	1	1	At Stage 2 (Stage C) Undertake climate change adaptation strategy appraisal for structural and fabric resilience i.e. risk assessment of climate change impact on structure and fabric from 'extreme' weather	Architects have commenced with climate adaptation strategy appraisal. Architect to implement recommendations by end of Stage 4.	Architect	by end of 2
	Wst 06: Functional adaptability	1	1	1	At Stage 2 (Stage C) Undertake functional adaptation strategy which includes recommendations for measures to be incorporated to **facilitate future adaptation**. These measures must then be implemented,e.g. façade replacement, plant replacement, accessibility to local power/data infrastructure	Architects have commenced with future adaptation strategy appraisal. Architect to implement recommendations by end of Stage 4.	Architect	implemented by end of 4
Land Use and Ecology	LE 01: Site Selection	1	1	1	Use previously developed	100% of proposed development is on previously developed land	Ecologist	Tender
		1	1	+1	If contaminated land, remedial work conducted	Client to confirm from site investigations	Client (Contractor)	
	LE 02: Ecological Value of Site and Protraction of Ecological Features	1	1	1	1. Use land of **LOW** ecological value and protect existing features throughout construction 2. need ecologist OR fulfil checklist which is quite complicated, esp. if trees / hedgrow onsite e.g appoint ecologist to help with other LE credits	Ecologist confirmed in writing that the site is land of inherently low ecological value and therefore no protection of ecological features is required. **(Ecological report, Syntegra, March 2016)**	Ecologist	
		1	1	1	Prior to construction All existing features of ecological value within the assessment zone are adequately protected from damage **during clearance**, site preparation and construction activities in line with BS 42020: 2013		Ecologist	by end of 4

Categories	Credit Name	Credits available	Credits breakdown	Credits status	Overview of requirements	Action	Responsible Party	Stage
Land Use and Ecology	LE 03: Mitigation Ecological Impact (MANDATORY - 1 credit for Very Good +Excellent)	2	2	2	Minimise the impact of development on existing site ecology e.g. species change -9 to zero (1st credit) zero or positive (2nd credit)	**Ecologist** confirmed in writing that The site has a change in ecological value of 0.11, a positive change in species. The proposed post layout has set aside 75.90m2 of native and wildlife planting that will consist of further hedgerows, shrubs, bulbs and flowers **(Ecological report, Syntegra, March 2016).** Architect to confirm the area of green wall and /or green wall within the current 2018 design.	Architect	Tender
	LE 04: Enhancing Site Ecology	2	2	1	At Stage 1 (Stage B), Ecologist appointed (site survey, advice, report (stage 2) a) 1st credit - Site survey+ recommendations in report b) 2nd credit - species change at least 6 1st credit is required to score 2nd credit	Ecologist confirmed in writing that recommendations have been made to enhance the ecological value of the site including bird boxes, bat tubes and peat free compost. **(Ecological report, Syntegra, March 2016)** Client has appointed ecologist to review the updated 2018 design Ecologist to confirm the number of species change and recommendations	Ecologist	by end of 1
	LE 05: Long Term Impact on Biodiversity	2	2	2	Prior to site clearance (with local BAP by Stage 1) Mandatory: prior to works on site: - UK/EU legislation - 5yr landscape+mgt plan for building occupants (in lin with BS 42020, covering: o Protected features o Existing/new habitats o Reference to local biodiversity action plan (BAP) Reviewed by end of Stage 1 2nd credit - additional measures implemented - site biodiversity champion - workforce made aware of ecological features - records kept of protection measures - new habitat created - works programming to avoid nesting seasons etc.	Ecologist confirmed that 2 credits are possible assuming architect and contractor implement his recommendations and comply with the relevant mandatory / additional requirements. Client has appointed ecologist to review the updated 2018 design Ecologist to liaise with Architect and advise on legislation, 5 year management plan and new habitats. Client to confirm obligation placed upon contractor	Client (Contractor) + Ecologist	by end of 1
Pollution	Pol 01: Impact of Refrigerants		PRE REQUISITE	PRE REQUISITE	All systems (with electric compressors) must comply with the requirements of BS EN 378:2008 (parts 2 and 3)	M+E to include within M & E specifications	M+E	Tender
		3	3	+1	(1 - 3 credits). - air-con/refrigeration systems GWP ≤10 achieves 2 credits. OR - (possible 2 CREDITS) Credit also considers the "Direct Effect Life Cycle (DELC) carbon dioxide equivalent" : a measure of the effect on global warming arising from emissions of refrigerant (in the case of this BREEAM assessment issue) from the equipment to the atmosphere over its lifetime (units: kgCO2eq.). The calculation involves estimating the total refrigerant release over the period of operation and subsequent conversion to an equivalent mass of CO2. (Alternative way to score 1 or 2 credits, depending on DELC CO2 equivalent found from using the Pol 1 BREEAM calculation tool). 4th credit - Leak detection system and automatic shutdown would achieve 1 credit	M+E to review at Detailed Design, notably for air conditioning likely required within the gym and recording studio.	M+E	
	Pol 02: NO_x Emissions	3	3	3	NOx for space heating + hot water	M+E to include within M & E specifications the requirement for heating and hot water to have combined NOx < 40mg/kWh	M+E	
	Pol 03: Surface Water Run-off	5	2	2	(2 credits) FRA = low	Flood risk consultant to confirm no increase in impermeable area (compared to existing site) and that risk of flooding from all sources is LOW.	Flood risk Eng.	
			1	1	- drainage consultant appointed (1) runoff RATE < pre devept site + climate change for 1 and 100 year return events (2) **relevant agreements** are in place for any SUDS (ownership, long term use, and maintenance)	**Drainage Eng.** planning stage FRA (Conisbee, 31st Oct 2016) states that runoff RATE (including for climate change) is less than the existing site for 1 and 100 year events. (Please refer to the Design Notes on Drawing C100, Rev P2 on page 63. These list the proposed greenfield rates compared to the existing rate of 38.2l/s on page 17) Drainage Eng. to outline all SUDS measures and maintenance required. Client to confirm in writing the required maintenance will be undertaken.	Drainage Eng. + Client	
			1	1	c. (1) a) Attenuation runoff VOLUME < pre devpt site b) no flood risk to building if local drainage failure	**Drainage Eng.** Planning stage FRA (Conisbee, 31st Oct 2016) confirmed runoff VOLUME (including for climate change) is less than the existing site for 1 and 100 year events. Drainage Eng. to confirm in writing that no risk to building in the case of drainage failure	Drainage Eng.	
			1	+1	d. (1) a) no discharge for 5mm of rain b) SUDS treatment of water e.g. permeable paving + oil filters	Drainage Eng. to confirm that the first 5mm of all rain fall within the site boundary will be prevented from leaving the site e.g. permeable paving, rainwater harvesting etc. **AND** pollution control measures that will be installed.	Drainage Eng.	
	Pol 04: Reduction of Night-time Light Pollution	1	1	1	- designed inline with ILE guidance (uplighting angles) - off 2300-0700 except safety/security lighting	M+E to include with M & E specifications	M+E	
	Pol 05: Noise Attenuation	1	1	1	- noise emitted to sensitive areas within 800m - noise impact assessment in compliance with BS 7445 - no greater than +5dB during the day (07:00 to 23:00) and +3dB at night (23:00 to 07:00) compared to the background noise level.	Acoustician to confirm compliance by email or report, notably for the sports hall.	Acoustician	

A4. GENERAL NOTES

A4.1 The report is based on information available at the time of the writing and discussions with the client during any project meetings. Where any data supplied by the client or from other sources have been used it has been assumed that the information is correct. No responsibility can be accepted by Iceni Projects Ltd for inaccuracies in the data supplied by any other party.

A4.2 The review of planning policy and other requirements does not constitute a detailed review. Its purpose is as a guide to provide the context for the development and to determine the likely requirements of the Local Authority.

A4.3 No site visits have been carried out.

A4.4 This report is prepared and written in the context of an agreed scope of work and should not be used in a different context. Furthermore, new information, improved practices and changes in guidance may necessitate a re-interpretation of the report in whole or in part after its original submission.

A4.5 The copyright in the written materials shall remain the property of Iceni Projects Ltd but with a royalty-free perpetual licence to the client deemed to be granted on payment in full to Iceni Projects Ltd by the client of the outstanding amounts.

A4.6 The report is provided for sole use by the Client and is confidential to them and their professional advisors. No responsibility whatsoever for the contents of the report will be accepted to any person other than the client, unless otherwise agreed.

A4.7 These terms apply in addition to the Iceni Projects Ltd "Standard Terms of Business" (or in addition to another written contract which may be in place instead thereof) unless specifically agreed in writing. (In the event of a conflict between these terms and the said Standard Terms of Business the said Standard Terms of Business shall prevail.). In the absence of such a written contract the Standard Terms of Business will apply.