

Atlas Controls

North Street, Reading

Sustainability Statement

Report for

Miles Properties Reading Ltd

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Document Control Sheet

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2. Introduction

This report has been prepared as part of the planning application for the 16 North Street redevelopment within the borough of Reading. This document has been produced in order to address the sustainability objectives required by Reading Borough Council (RBC) and set out within the council's sustainable design and construction supplementary planning document.

RBC require a high standard of sustainable design and construction to improve the environmental performance of developments and to adapt to the effects of climate change. These best practice standards for sustainable design and construction are set out with the Supplementary Planning Guidance.

This Sustainability Statement seeks to address these requirements and will cover the following areas:

- Energy and CO2;
- Water;
- Materials;
- Surface Water Run-off;
- Waste;
- Pollution;
- Health and Wellbeing;
- Management;
- Ecology; and
- Transport.

This document has been written in line with the council's Sustainable Design and construction Supplementary Planning Document in order to clearly identify how the proposal responds to policy objectives.

2.1. Description of Development

The redevelopment of 16 North st consists of demolition of the the existing office building and new construction of 500m² of office space and 10 apartments.



2.2. Planning Criteria

2.2.1. National Planning Policy Framework

The National Planning Policy Framework (NPPF) sets out the Government's planning policies for England and how these are expected to be applied through local authorities. It acts as a guidance for local planning authorities and decision makers, both in drawing up plans and making decisions about planning applications.

The NPPF also provides a framework within which local people and their accountable councils can produce their own distinctive local and neighbourhood plans which reflect the needs and priorities of their communities.

2.2.2. Building Regulations Part L

Part L of the Building Regulations set out conservation of fuel and power. Part 1a of the regulation address new domestic buildings and part 2a new commercial buildings. The regulations consider both the total CO₂ emissions and, from 2013, the fabric efficiency of the building.

2.2.3. Reading Borough Council Local Development Framework

Detailed planning guidance is given in the Core Strategy 1 document (CS1): Sustainable Construction and Design. This seeks to ensure that the design of buildings use energy, water, materials and other natural resources appropriately to meet these requirements developments should:

- On larger developments of more than 10 dwellings or 1,000 m² of floor space, ensure that 50% of the provision meets the most up to date Eco-Homes and BREEAM Excellent standards;
- All new developments maximise the use of energy efficiency and energy conservation measures in their design, layout and orientation to reduce overall energy demand;
- All developments of more than 10 dwellings or 1000m² floor space incorporate onsite generation of energy from renewable sources and energy efficient design measures (including the use of CHP where appropriate) to off-set at least 20% of predicted carbon dioxide emissions from the estimated energy usage of the completed and occupied development;
- All developments reduce mains water use and demonstrate that water conservation measures are incorporated so that predicted per capita consumption does not exceed the appropriate levels set out in the Code for Sustainable Homes or BREEAM Standards.

3. Sustainability Strategy

3.1. Energy and CO2

The full details of the proposed energy strategy for the 16 North St development are proposed in the Energy and Sustainability strategy document that accompanies this Sustainability Statement within the planning application.

3.2. Water

All dwellings will be designed to achieve a maximum water consumption of 105 litres / person / day. This will be achieved through the installation of low flow sanitaryware. An example sanitaryware specification that could be used to meet this requirement is shown below:

- Dual flush WC's 4/2.7 l;
- Wash hand basins 3 l/min;
- Low flow shower 6 l/min;
- Bath capacity 150 l;
- Kitchen tap 5 l/min; and
- No water softening.

The development will not use rainwater or greywater recycling as this is not financially viable on a brownfield development of this size as it would require the need for buried water storage tanks.

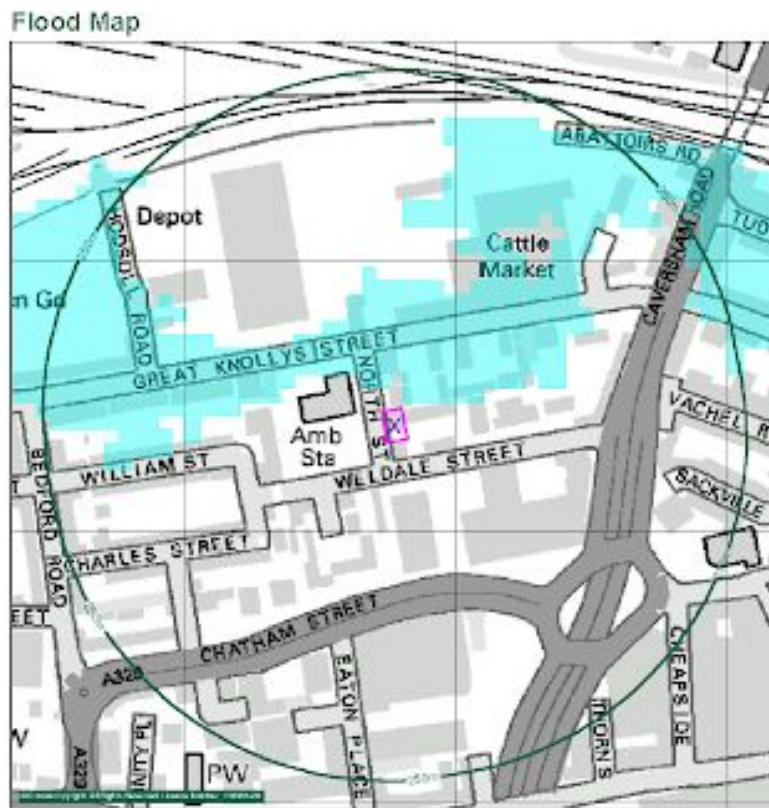
3.3. Materials

Materials will be selected to ensure the most efficient and long lasting building together with low environmental impact, which will include materials with a high rating in the BRE Green Guide. For instance, the aim is for the building fabric to be vapour open to reduce condensation, so materials such as natural lime renders and plasters will be used.

There will be a preference for materials with environmental directions, auditable life cycles and manufactures who implement environmental management systems such as ISO 14001. All timber used on site will FSC certified or the equivalent.

3.4. Surface water run-off

The development is located in Environment Agency Flood Zone 1. This is land having less than a 1 in 1,000 annual probability of flood from river or sea, the EA flood map for the area is shown below.



There would be no change to the surface runoff from the site in its current use and after the development. Any drainage attenuation system would require the digging of buried storage tanks. This would introduce a significant cost uplift which would reduce the viability of the scheme.

Note the development is designed that the roof run off is used to water of gardens and habitats as it runs off the building. This will provide attenuation.

3.5. Waste

The waste from the commercial units and the dwellings will be split. The residential waste storage areas are designed for recycled and non-recycled waste in line with Reading Borough Council Waste Strategy. The offices are provided with secure storage for two 1100l refuse containers for private collection of separate waste.

During the construction phase, waste sent to landfill will be minimised. The site waste strategy will start with the designer in the methods of construction (off site where possible) and material selection. Procurement will avoid over ordering and good site practices will ensure minimum waste generation.

3.6. Pollution

Potential pollution from the development could be; light, noise, water and air quality.

Light - any external lights in the development will be angled down and all lighting will be linked to occupation to ensure efficient operation.

Noise - this will be sound tested to ensure compliance with part E of the building regulations. The only mechanical plants in the building are the external heat pump units, these will be installed in the bin store and will comply with BS8233 and BS4142. Security systems will comply with BS4737 to prevent nuisance alarms.

Vertical wall construction between units provide both privacy and reduce noise between balconies.

Water - the site is on an area of low flood risk and the development consists of offices and dwellings. There will be no industrial or pollution discharge to drainage system.

Air Quality - there is no combustion on site. All mechanical systems are electrical, consequently there will be no discharge of flue gases. A detailed air quality assessment has been carried out for the development and accompanies this Sustainability Statement in the planning application. See the separate Energy and Sustainability report on minimising CO₂ emissions.

3.7. Health and Wellbeing

The development has been designed with the health and wellbeing of occupants in mind, including lighting, heating & cooling, security and disabled access.

Lighting - residents will benefit from dwellings with good levels of natural daylight and direct sunlight.

Heating & cooling - in low energy building preventing overheating is often more challenging than providing sustainable heating. Overheating can be uncomfortable in winter and dangerous in summer. Dynamic thermal modelling was employed to minimise overheating risk. Passive cooling techniques employed are; low thermal mass responsive heating, minimising internal gains, cross-ventilation and passive stack ventilation. Active cooling is

provided by recycling waste cold air from the heat pumps. For more details see the Energy and Sustainability report attached to planning application.

Indoor air quality - indoor air quality will be monitored and maintained at all times. If air quality drops residents and building manager are notified by text or email. The building will be vapour open construction which uses traditional and natural products (lime plasters, renders and paints) this removes the issues associated with 'off gassing' of VOCs that is associated with modern paints and varnishes.

Safety and security - secured design standards have been applied throughout the design. Access controls will include video entry and 'near field communication', NFC, to further occupants security. Car parking space will have gates to prevent unauthorised entry. Atamate is currently developing enhanced building security using software to identify abnormal behaviours patterns in the building. Where detected CCTV can be used to identify and escalate if issues are detected.

The building will exceed the building regulations and BS5588 in terms of escape and internal spread of fire.

Space - each apartment will meet the nationally described space standards, and secure car and bicycle parking spaces. All flats will have a private balcony and access to a private roof terrace.

Disabled access -

all dwellings have been designed to meet the sections M4(1) with a communal lift compliant with BS EN 81-70. All stairs and passageways meet at least the minimum standards for access.

3.8. Land use and ecology

The development is on brownfield site so will have no negative impact on the biodiversity of the site and aims to have a positive impact. The proposal includes soft landscaping on both the side of the building and on the roof. These gardens are designed to encourage biodiversity with naturally irrigated gardens. Nest boxes will be constructed in the eaves to house wildlife (swallows and bats).

3.9. Transport

The development is within 10 mins walk of Reading railway station which has been recently substantially upgraded and will shortly become the terminus of the Elizabeth line (formerly Cross Rail). Public transport is also provide by local buses.

All flats in the development will have a car space with an electric charger. Likewise bicycle storage will be available for office staff and residents. Bike storage will also include electric chargers.

4. Conclusions

The proposed 16 North Street development has been designed in support of national, regional and local sustainability policy. A holistic approach to sustainability has been taken whereby the team has sought to integrate sustainable design principles into the scheme from the outset. Due consideration has also been given to the remainder of the building's design, construction and operation stages. This approach seeks to ensure that the development will minimise any negative environmental impacts associated with energy and resource consumption, waste generation and land, noise, air and light pollution. The design of the 16 North Street development further aims to promote sustainability principles through the provision of a comfortable and safe built environment, maximising the use of sustainable design techniques, such as passive design and low environmental impact materials, and energy efficiency technologies, such as heat pumps and building control systems.

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