Reliance Precision, Rowley Mills & International House, Huddersfield

Climate Change Statement

On Behalf of

Reliance Precision Limited

Revision No: P02

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CONTENTS

1. Executive Summary

1.1 General

The sustainability statement has been prepared on behalf of Reliance Precision Limited and is in support of the proposed refurbishment and extension at Rowley Mills and new construction of International House, Huddersfield.

The Statement the sustainability and energy requirements as set out within the Kirklees council 'Local Plan – Strategy and Policies' adopted February 2019, and the Kirklees Council issued 'Climate Change Guidance for Planning Applications' guidance note issued June 2021.

The proposed development shall incorporate the essential consideration and desirable measures where practical and feasible as detailed within the guidance in the Kirklees Council issued 'Climate Change Guidance for Planning Applications' guidance note.

2. Introduction

2.1 General

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3. Policy Review

3.1 General

This section summarises the policy context for the sustainability statement, with a focus upon energy and carbon reduction and the various policies from international to local level.

3.2 National Planning Policy Framework

The National Planning Policy Framework (NPPF or the Framework) was introduced in March 2012 to set out government planning policy for England, removing all regional level planning policy in favour of '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.'

A number of iterations have since been published. The Framework was revised on the 20 July 2021, replacing the previous update in February 2019. All new Local and Neighbourhood Plans and reviews must align with the polices of the Framework 2021.

The Framework states clearly that the purpose of planning is to help deliver sustainable development and defines three mutually dependent pillars that must be equally considered in order to achieve this:

- Economic;
- Social; and
- Environmental.

There is a clear focus upon:

- Promoting high-quality design for new homes and places;
- Offering stronger protection for the environment;
- Constructing the right number of homes in the right places; and
- Focusing on greater responsibility and accountability of councils and developers for housing delivery.

3.3 Local Policy

3.3.1 Kirklees Local Plan

The Kirklees Local Plan Strategy and Policies was adopted by Kirklees Council in February 2019 and contains the following policies relating to Sustainability:

Policy LP24 Design

Good design should be at the core of all proposals in the district and should be considered at the outset of the development process, ensuring that design forms part of pre-application consultation of a proposal. Development briefs, design codes and masterplans should be used to secure high quality, green, accessible, inclusive and safe design, where applicable. Where appropriate and in agreement with the developer schemes will be submitted for design review.

Proposals should promote good design by ensuring:

d. high levels of sustainability, to a degree proportionate to the proposal, through:

i. The re-use and adaptation of existing buildings, where practicable;

ii. design that promotes behavioural change, promoting walkable neighbourhoods and making walking and cycling more attractive;

iii. considering the use of innovative construction materials and techniques, including reclaimed and recycled materials;

iv. where practicable, minimising resource use in the building by orientating buildings to utilise passive solar design. This includes encouraging the incorporation of vegetation and tree planting to assist heating and cooling and considering the use of renewable energy;

v. providing charging points to encourage the use of electric and low emission vehicles;

vi. incorporating adequate facilities to allow occupiers to separate and store waste for recycling and recovery that are well designed and visually unobtrusive and allows for the convenient collection of waste;

vii. designing buildings that are resilient and resistant to flood risk, where such buildings are acceptable in accordance with flood risk policies and through incorporation of multi-functional green infrastructure where appropriate;

viii. designing places that are adaptable and able to respond to change, with consideration given to accommodating services and infrastructure, access to high quality public transport facilities and offer flexibility to meet changing requirements of the resident / user.

Policy LP26 Renewable and low carbon energy

Renewable and low carbon energy proposals (excluding wind) will be supported and planning permission granted where the following criteria are met:

a. the proposal would not have an unacceptable impact on landscape character and visual appearance of the local area, including the urban environment;

b. the proposal would not have either individually or cumulatively an unacceptable impact on protected species, designated sites of importance for biodiversity or heritage assets;

c. the statutory protection of any area would not be compromised by the development;

d. any noise, odour, traffic or other impact of development is mitigated so as not to cause unacceptable detriment to local amenity;

e. any significant adverse effects of the proposal are mitigated by wider environmental, social and economic benefits.

Where the above criteria are met, the council encourages dialogue with local community groups promoting community renewable and low carbon energy schemes.

The creation of district heat networks is encouraged across Kirklees. Heat networks can be developed at different scales and all new developments should consider their potential. Proposals requiring a master plan should explore the potential of developing a heat network, or connecting to an existing network.

3.3.2 Kirklees Climate Emergency

The declaration of a climate emergency by Kirklees Council in January 2019 means that a greater focus on climate change is required in emerging and future planning policy documents. It also places a greater focus on the Planning and Development Service to ensure developments, applicants and developers are focussed on the council's priorities for a greener and more sustainable environment.

In November 2019, Kirklees council adopted a target to achieve 'net zero' in carbon emissions by 2038. This provides Kirklees with focus on both mitigation and adaptation to climate change. For mitigation, carbon emissions from human activities within Kirklees will need to be dramatically reduced to zero, with any remaining emissions safely removed from the atmosphere.

To achieve the 'net zero' by 2038 target, a stepping-stone of emission reduction targets have been identified as follows:

- 63% reduction by 2025
- 78% reduction by 2030
- 87% reduction by 2035
- 92% reduction by 2040
- 95% reduction by 2045
- 100% reduction by 2050

The emission reductions will be monitored and evaluated against these target dates.

3.3.3 Climate Change Guidance

Kirklees Council issued 'Climate Change Guidance for Planning Applications' guidance note in June 2021 to take effect from 23rd June 2021. The guidance note clarifies the expected content within the Climate Change Statement to ensure developments, applicants and developers are focussed on the council's priorities for a greener and more sustainable environment.

The guidance is divided into short sections to provide advice on completing each section of the Climate Change Statement. The guidance highlights which measures are:

- Essential considerations (where these are stated within a local plan policy); or
- Desirable (where further actions are encouraged).

Proposals should consider all measures outlined in this guidance (proportionate to the scale of development proposed) to ensure options to mitigate climate change have been fully explored.

4. Climate Change Checklist

4.1 General

The following sections provide a summary of the proposed measures at the development to address the requirements of the Kirklees Council 'Climate Change Guidance for Planning Applications' guidance note.

4.2 Reducing Energy Demand

4.2.1 Measures

It is noted the use of Combined Heat and Power (CHP) for developments is an essential consideration within the Kirklees Council 'Climate Change Guidance for Planning Applications' guidance note, and it will considered in the future for any building-wide improvements within Rowley Mills.

For the extension and initial refurbishment at Rowley Mills, it is likely the scheme will utilise existing systems where possible, and any new systems will be expected to be electric only.

The International House scheme will be registered under the new approved Document L of the Building Regulations 2021, which has been updated following the issue of the Kirklees Council climate change guidance in 2019. The use of all electric solutions is now encouraged to achieve carbon reduction targets for building regulation compliance, and CHP is no longer a beneficial solution for Part L compliance. Therefore to comply with Building Regulations, the International House scheme is proposed to be fully-electric.

The scheme will aim to include smart energy metering, building services controls and energy efficient white goods where feasible. This will be further explored during detailed design.

4.3 Minimising carbon emissions and waste during construction

4.3.1 Measures

The scheme will retain and refurbish an existing building at Rowley Mills in addition to expanding via an extension. This will to reduce the embodied carbon emissions when compared against the construction of a new building on the existing site.

However, the external space on the existing site is limited, therefore a new building is also proposed at International House which will be designed to meet current building regulations reducing the operational energy consumption and carbon emissions.

It will be a requirement of the contract for any principal contractor in charge of the construction site will produce a Site Waste Management Plan (SWMP) to incorporate procedures to minimise waste as part of development proposals during demolition, site clearance and construction. They will be required to hit best practice diversion from landfill, and construction resource efficiency targets.

The existing waste storage areas will be expanded if needed to ensure the extra waste generation associated with the new building areas can be incorporated within the current waste storage and collection strategy. The waste storage area will be labelled, segregated and accessible to provide recyclable and general waste storage areas for the expected waste streams from the development.

All of the operational waste streams are monitored by Reliance Precision to enable targeted waste reduction activities.

It will be an aim of the contract to ensure the principal contractor considers the embodied carbon, environmental management systems of the manufacture and sustainable sourcing when procuring materials for the development.

4.4 Renewable and low carbon energy

4.4.1 Measures

The feasibility of a number of potentially appropriate renewable energy technologies have been discussed for the proposed development as follows.

Technology	Suitable?	Observations
Air source heat pumps	√	Feasible technology to provide space heating and cooling.
Ground source heat pumps	X	Limited external space on existing site for boreholes or surface coils.
Biomass hot water	X	Insufficient plant, fuel storage and delivery space to integrate within an existing building.
Solar water heating	X	Feasibility issues with incorporating within an existing building and systems.
Photovoltaics	√	Roof space available, and feasible to incorporate.
Wind turbines	X	Poor yield within urbanised area and likely planning issues in proximity to the airport.
CHP (Combined Heat and Power)	X	Feasible for integration within the existing building in the future.

The feasibility of solar photovoltaics will be considered to the new rear extension, and possibly to the refurbished aspects of the Rowley Mills scheme. It is expected that solar photoltaics will be incorporated on the new-build International House scheme. The feasibility of incorporating solar photovoltaics will be explored during detailed design.

Air source heat pumps are recognised as a suitable low carbon source of space heating and cooling. The feasibility of incorporating air source heat pumps within the existing building and new extension will be explored during detailed design. It is expected air source heat pumps will be incorporated into the International House building to generate space heating and cooling from grid electricity.

Potential carbon emission savings from biomass are significant however there is limited ground floor area for biomass fuel storage and plant space. Integration with the existing systems may not be feasible, therefore this technology is discounted.

CHP is discounted at the moment for the existing Rowley Mills building, however it is a possibility for the future for any upgrade of all of the existing HVAC systems within the existing building. It has been

discounted for the new building at International House as it would be unlikely to allow compliance with current Building Regulations.

Solar thermal hot water technologies are discounted from consideration due to feasibility issues for incorporating within the existing building and installed systems.

A wind turbine would be able to provide zero carbon energy, however the yield would be compromised by the urbanised surroundings creating greater wind turbulence, and potential planning issues

No existing heat networks are in close proximity of the scheme, therefore the connection to district heat networks are not to be explored further.

4.5 Building design and layout for carbon reduction

4.5.1 Measures

A 'fabric first' approach shall be adopted for both the Rowley Mills and International House aspects of the scheme, and the design team have included a range of energy efficiency measures including:

- Enhanced U-values for the extension and new construction buildings to reduce energy demand associated with space heating.
- Improved U-values for the refurbished areas in line with Part L of the Building Regulations to reduce energy demand associated with space heating.
- Maximise the use of natural daylight both within the new construction, refurbished and extended areas to reduce energy use associated with artificial lighting.
- Reduced air permeability to reduce energy demand.

The proposed building services efficiencies shall exceed the Part L minimum values with high efficiencies throughout, and a lighting design incorporating high luminaire efficacies.

It is not proposed for the scheme to undergo a formal BREEAM assessment, however several of the holistic sustainability principles within a BREEAM assessment will be incorporated in the scheme as follows:

- Electric vehicle charging points.
- Main contractor operates a considerate constructors site.
- Low-flow sanitaryware fittings.
- Health and wellbeing promoted to occupied areas via best practice lighting levels, ventilation and acoustics.
- Sustainable and responsible sourcing of materials.

It is a ESG target of Reliance Precision to reduce electricity usage by 20%, and undergo a full scope 1 and 2 carbon footprint audit to develop and incorporate an improvement plan based upon findings.

4.6 Considering flooding and minimising its impacts

4.6.1 Measures

A Flood Risk Assessment (FRA) and Drainage Statement has been undertaken by Dudleys. This confirms the majority of the site is located within flood zone 1 as indicated by the Environment Agency, with small car parking areas within flood zones 2 and 3, therefore the proposed extension works are suitable without the application of a sequential test.

The hierarchy for surface water disposal has been followed in the design process. The use of infiltration was considered, however due to the risk of groundwater flooding and the deep layers of impermeable clay underlying the site, infiltration is considered unviable. Discharge to the watercourse Beldon Brook) to the immediate south is preferred as there are already existing discharges to this brook. Currently 1.022ha of impermeable area currently discharges to Beldon Brook via six separate outfalls. At 140l/s/ha, the brownfield runoff rate is 143l/s. A 30% reduction of the existing brownfield runoff rate would lead to a proposed discharge rate of 100l/s.

The proposed impermeable area of the site is 1.157ha. In order to contain the 1 in 100 year + 45% climate change rainfall scenario within the site, with the proposed total site discharge rate of 100l/s, attenuation of 570m³ via a geocellular attenuation tank is proposed.

4.7 Minimising water usage

4.7.1 Measures

The conservation of potable water demand within the development has been considered through water conservation techniques in line with policy LP34. Low-flow sanitaryware fittings will be specified within the new construction, refurbished and extension areas of the proposed development to reduce potable water consumption. This will include:

- Dual flush WCs.
- Spray and low-flow wash hand basin taps.
- Low-flow showers.

There are no proposal to incorporate rain or grey-water harvesting within the proposed development due to the feasibility of incorporating a system of this type.

4.8 Landscaping and biodiversity

4.8.1 Measures

A preliminary ecological assessment and biodiversity net gain calculation has been undertaken by Envirotech.

Under the current proposals set out there will be four retained habitats, one enhanced habitat and five new habitat areas. The enhanced habitat area will consist of 0.293ha of deciduous woodland which will be managed to go from poor to moderate condition.

The existing plantation woodland fails a number of condition criteria, primarily due to its single age, lack of understory, glades and species diversity. The woodland will be lightly thinned, and

underplanted. Standing deadwood can be created by selectively ringbarking trees to the middle of the woodland where the risk of falling on public areas is negligible. The ground flora can be enhanced with the sowing of a woodland seed mix such as Boston Seeds Woodland & Heavy Shade Wildflower Seed BS8P 100%. This will result in more glades, an understory, deadwood, regeneration and greater tree diversity.

Following the proposed enhancements there will be a gain of 0.39 biodiversity area units (+10.47%) which meets the essential consideration of providing a net gain in biodiversity.

The use of drought resistant plants, water retaining mulches and ground cover plants to reduce potable water consumption during operation will be investigated during detailed landscaping design to meet the desirable considerations.

4.9 Air pollution

4.9.1 Measures

A site specific transport assessment and travel plan has been produced to identify the existing transport constraints at Rowley Mills, and detail sustainable transport measures to encourage active travel and reduce the reliance upon private cars. To meet the essential consideration, the travel plan will be coordinated by a 'Travel Plan Coordinator' and include initiatives to promote walking, cycling, public transport use and reduction of private car use.

Both cycle to work and car sharing schemes have already been promoted and advertised to existing employees, and will continue to be supported during operation.

It is not proposed to alter the existing car parking provision onsite at Rowley Mills which already includes for 7no. electric vehicle charging points to address the essential consideration. The proposed landscaping design will include an enhanced habitat area of deciduous woodland which will be managed from a poor to moderate condition to mitigate impacts of air pollution within the site and meet desirable considerations.

It will be a requirement of the main contractor to aim to procure construction materials locally where possible to reduce carbon emissions and improve air quality associated with transportation of materials.

Any upgraded and new mechanical ventilation systems will be designed in line with British standards to improve the comfort levels of building occupants during the working day.

5. Summary

The proposed development shall incorporate the essential consideration and desirable measures where practical and feasible as detailed within the guidance in the Kirklees Council issued ‘Climate Change Guidance for Planning Applications’ guidance note.