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The Hut Group

KING STREET TOWNHOUSE

Environmental Standards Statement



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EXECUTIVE SUMMARY

This Environmental Standards Statement (ESS) has been prepared on behalf of The Hut Group in support of the proposed refurbishment of King Street Town House. This strategy summarises the regulatory and local planning policies applicable to the refurbishment and sets out how it will address the relevant policy targets.

The refurbishment of King Street Town House will become a high end luxury hotel with conference facilities complete with pool and restaurant/ bar. The design will respect of the period architecture whilst updating to account for the current requirements.

The design of this building will push beyond current minimum standards to align with the trajectory of carbon reduction in building refurbishments.

ENVIRONMENTAL STANDARDS SUMMARY

Section	Approach
Energy Efficiency	The Energy Strategy for the Redevelopment of King Street town house has been developed in accordance with the Energy Hierarchy. 'Be lean>Be Clean>Be Green' and demonstrates the anticipated performance of the development against the requirements of the building regulations Part L2B. The energy hierarchy approach follows guidance from the Manchester Core Strategy. Through passive design, energy efficiency and renewable energy measure the building will achieve compliance with Part L2B whilst reducing the building carbon emissions.
Renewable Technology	Several renewable technologies have been evaluated to determine their potential applicability to the proposed development. Due to the heritage nature of this project options are limited, however provision has been made for Photovoltaic panels on the roof.

Environmental Design	The scheme will use materials and products with a proven sustainability record where possible.
Water Management and Weather Resilience	The site is within Flood Zone 1. The scheme will use Water efficient devices and sanitaryware where possible to reduce unnecessary water usage.
Waste Management	A Waste Management Plan will be in place for both the construction and operational phases.
Construction Management	A Construction Management Plan will be in place ahead of commencement of development.
Biodiversity	A Preliminary Bat Roost Assessment concludes that the proposed development at the site is therefore unlikely to result in any impact on individual bats or local bat populations

Contact name Charlotte Hodgson

Contact details +441612005146 | charlotte.hodgson@wsp.com

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INTRODUCTION

1 INTRODUCTION

This Environmental Standards Statement (ESS) has been prepared on behalf of The Hut Group in support of the proposed refurbishment of Kings Street Town House.

Kings Street Town House comprises of a full refurbishment of the existing hotel that will become a high end luxury hotel complete with conference facilities, pool and restaurant.

This ESS summarises the relevant regulatory and planning policies applicable to the Proposed Development and sets out how it will address and achieve the relevant policy targets.

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NATIONAL AND LOCAL POLICIES AND DRIVERS

2 NATIONAL AND LOCAL POLICIES AND DRIVERS

This section sets out the policies and drivers relevant to environmental standards.

2.1 BUILDING REGULATIONS PART L2B

Part L2B of the building regulations is the mechanism by which government is driving reductions in the regulated CO₂ emissions from building refurbishments.

2.2 NATIONAL POLICY FRAMEWORK

National Planning Policy Framework (NPPF) was published in February 2019 and has superseded all Planning Policy Statements (PPS) and Planning Policy Guidance (PPG) documents, with the exception of PPS10 (Waste). The NPPF sets out the Government's strategy on the delivery of sustainable development.

The NPPF places responsibility for policy making with the Local Planning Authority, who shall communicate their policies through Local Plans and facilitate the creation of Neighbourhood Plans. The NPPF states that there is a presumption in favour of sustainable development.

The following is extracted from paragraph 11 of the NPPF:

"Plans and decisions should apply a presumption in favour of sustainable development.

For plan-making this means that:

- a) Plans should positively seek opportunities to meet the development needs of their area, and be sufficiently flexible to adapt to rapid change;
- b) Strategic policies should, as a minimum, provide for objectively assessed needs for housing and other uses, as well as any needs that cannot be met within neighbouring areas, unless:
 - i) The application of policies in this Framework that protect areas or assets of particular importance provides a strong reason for restricting the overall scale, type or distribution of development in the plan area; or
 - ii) any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole.

For decision-taking this means:

- a) Approving development proposals that accord with an up-to-date development plan without delay; or
- b) where there are no relevant development plan policies, or the policies which are most important for determining the application are out-of-date, granting permission unless:
 - i) the application of policies in this Framework that protect areas or assets of particular importance provides a clear reason for refusing the development proposed; or

- ii) any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole.”

In respect of energy policy contained within the NPPF, paragraph 151 sets out that:

To help increase the use and supply of renewable and low carbon energy and heat, plans should:

- a) provide a positive strategy for energy from these sources, that maximises the potential for suitable development, while ensuring that adverse impacts are addressed satisfactorily (including cumulative landscape and visual impacts);
- b) consider identifying suitable areas for renewable and low carbon energy sources, and supporting infrastructure, where this would help secure their development; and identify opportunities for development to draw its energy supply from decentralised, renewable or low carbon energy supply systems and for collocating potential heat customers and suppliers.”

2.3 LOCAL PLANNING POLICY

Manchester City Council (MCC) documentation:

- Core Strategy (CS) (July, 2012)
- Supplementary Planning Documentation and Planning Guidance (SPDPG) (April 2007)

This strategy summarises the response of the Proposed Development to the policy framework of the MCC Adopted Core Strategy, and SPDPG documentation that together form the city’s policy landscape. The CS documentation supersedes the SPDPG and therefore the CS documentation will take precedence, however policies within the SPDPG are addressed within this Environmental Standards Statement.

2.4 5 YEAR ENVIRONMENT PLAN FOR GREATER MANCHESTER

Included in the five-year plan are a number of key items, including, but not limited to; increasing local renewable electricity generation, increasing the diversity and flexibility of energy supply and decarbonising how buildings are heated (serviced). These items encourage passive design and a shift away from fossil fuels to service buildings.

Additionally, the strategy includes a clean air plan to help tackle poor air quality – safeguarding Manchester residents from high levels of Nitrogen Dioxide (NO₂).

2.5 MANCHESTER ZERO CARBON FRAMEWORK

Manchester has recently set an ambitious target to be a ‘zero carbon city’ by 2038. As part of the strategy the city is looking to move away from fossil fuel as a primary means of serving buildings and looking more towards low carbon technologies. A key part of the zero-carbon city ambition is for new building’s to be zero carbon by 2028.

Whilst this is not a new building, the Proposed Development has acknowledged this aspiration and is aiming to reduce carbon emissions by applying the ‘lean, clean, green’ approach to low carbon design.

2.6 MANCHESTER'S GREAT OUTDOORS A GREEN AND BLUE INFRASTRUCTURE STRATEGY FOR MANCHESTER (2015-2025)

High quality green and blue infrastructure (GI) is an essential part of successful, liveable cities. The Council's commitment to produce a Manchester Green and Blue Infrastructure Strategy was set out in the Manchester Core Strategy (2012-2027), making it clear that action on GI should be seen in the context of the city's plans for growth and development.

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REDEVELOPMENT KING STREET TOWNHOUSE

3 REDEVELOPMENT KING STREET TOWNHOUSE

3.1 ENERGY EFFICIENCY

PASSIVE DESIGN

Passive principles are the foundation of the redevelopment of King Street Townhouse. Consideration has been given to how the building fabric will respond to its environment to reduce the energy consumption of the building. Due to the listed nature of this building it may not be possible to improve the current u values however, the façade will be replaced from the fifth to the eighth floor in order to achieve a more consistent and cohesive design, this addition will be optimised to have high efficiency u values that go beyond minimum requirements. This will reduce the energy required to heat and cool these spaces. The windows in the façade up to the fourth floor are not original, and hence already have energy efficient properties. Windows currently are only planned to be replaced on the ground floor Booth Street elevation. An inspection will be carried out at the beginning of Stage 3 to understand if replacing any windows could further improve the energy efficiency of the building.

ENERGY EFFICIENT SYSTEMS

The existing building is served via a highly efficient variable refrigerant flow (VRF) system to provide space heating and cooling. As part of the works it is proposed to reuse this system where possible, existing pipework and fan coil units will be retained and relocated to suit the new proposed development.

Reuse of existing high efficiency systems will significantly reduce the embodied carbon associated with the refurbishment.

Where systems do require replacement, they will be replaced with high efficiency systems to exceed the requirements of the Non-domestic Building Services Compliance Guide.

The existing lighting is proposed to be stripped out and replaced with a high efficiency LED lighting scheme, this will result in significant operational carbon reductions.

3.2 RENEWABLE TECHNOLOGY

Several renewable technologies have been evaluated to determine their potential applicability to the proposed development. Photovoltaic panels have been shown to be the only technically feasible option. Space for PV panels has been allocated on the roof of the rooftop toilet area. This will be investigated further at stage 3.

TECHNOLOGY	DESCRIPTION	CAPITAL COST	MAINTENANCE	CARBON/ENERGY SAVINGS	RECOMMENDED FOR KINGS STREET TOWNHOUSE?
Wind Power	Turbine/ generator converts wind energy to electrical power	£ Low- medium for small scale turbines in built up urban areas	Medium Requires regular maintenance. Access may be an issue	Low For small scale	No Not suitable for built up urban environment
Solar Hot Water	Solar energy used to heat water, usually for domestic hot water purposes	£ Low- Medium	Medium Increased legionella risk can cause additional maintenance	Low – Medium	No No available roof space (only available roof space allocated for PV)
PV panels	Converts sunlight to electrical power	££ Low – medium	Low No moving parts. Regular visual inspection required	Medium – high	Yes Roof space allocated on stage 2 drawings
Biomass Boiler	Uses plant-derived organic material to produce heat	££ Medium. Cost and availability of fuel can fluctuate	High Deliveries to site can be particularly problematic	Medium – High Depending on carbon content of fuel	No Not viable due to deliveries on site, fuel availability and air quality
Ground source heat pump	Provides low carbon heating and cooling by using the ground as a heat source and sink	£££ Cost of drilling boreholes would be very high	Low – medium Relatively few moving parts	Medium	No Deep boreholes would be required to meet load No suitable outside area to drill boreholes Energy piles not applicable to existing building

3.8 THE PATH TO NET ZERO CARBON

Greater Manchester's recently released 'Spatial Framework Consultation' prioritises sustainable development and commits the region to the exemplary target of achieving net zero carbon overall by 2038 and net zero carbon for all new buildings by 2028.

Whilst King Street Town House is not a new building, it is understood that all development in Manchester will need to contribute towards the path to net zero carbon.

The project achieves this by following the 'lean, clean, green' Principles, as follows.

Lean - Replacing windows on the ground floor with more efficient double-glazed units will reduce the energy required to heat the ground floor of the building. An inspection will be carried out at the beginning of Stage 3 to understand if replacing all windows would be of value to the project. The façade from the fifth to the eighth floor will be replaced with a highly efficient facade, this will also help to reduce the energy required to heat and cool the building.

In depth thermal modelling of the rooftop bar has been undertaken to understand how the g value (solar transmittance of the glazing) can reduce the cooling load in the rooftop bar. Figure 1 shows an image of the thermal model and tables 1 and 2 show the inputs assumed.

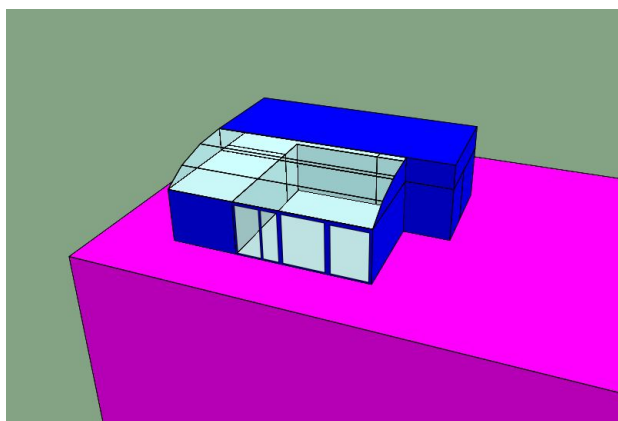


Figure 1 – Kings street townhouse thermal model

Construction type	U value	G value
Roof of rooftop bar	0.2	
wall of rooftop bar	0.28	
New glazing	1.3	0.28
New rooflight	1.52	0.28

Table 1 - Construction assumptions

This thermal modelling has shown that reducing the g value of the glass to 0.28 (from a baseline value of 0.4) has shown to reduce the cooling load in the rooftop bar by 15%.

Clean - It is proposed to re-use much of the existing building services (including external condensers and internal fan coil units) as they are efficient systems, with significant usable life remaining.

This approach to low carbon building services is to retain these elements wherever possible, hence saving significant amounts of embodied carbon.

The existing lighting is proposed to be stripped out and replaced with a high efficiency LED lighting scheme.

Green - Due to the heritage nature of this project only PV panels are feasible. Space for PV panels have been allocated in the Stage 2 design and this option will be investigated further at stage 3.

3.9 ENVIRONMENTAL DESIGN

The proposed development would see upgrades to the existing fabric through repairs to the existing façade, new double-glazed windows and the introduction of thermal linings where possible.

The new façades are to be constructed in glass reinforced concrete (GRC) which is considered more sustainable than the obvious alternative, pre-cast concrete. As the scheme develops, the team will aim to source materials and products with a proven sustainability record.

3.10 WATER MANAGEMENT AND WEATHER RESILIENCE

Section 4.9 of the Guide to Development in Manchester encourages thoughtful design to reduce the levels of pollution within the city's watercourses, as well as mitigating the effects of flooding should significant storms present themselves in the future.

As the development is within Flood Risk Zone 1 there is a low risk of flooding.

Water efficient devices and sanitaryware will be proposed to try and reduce unnecessary water usage.

3.11 WASTE MANAGEMENT

Section 4.10, 4.11 and 4.12 of the Guide to Development in Manchester describe how proposals should deal with the disposal or recycling of waste materials.

The proposed development will include the re-furbishment of the existing building and associated elements and the construction of a new rooftop extension.

It is understood that the Construction Waste Management Plan will be prepared by the main contractor, to ensure that all aspects of waste production, deliveries, noise, dust pollution etc are all accounted for and reasonably mitigated.

The Waste Management plan will constantly be reviewed for opportunities to improve the procedures and will also review areas where reductions in waste, or an increase in recycling waste can be made.

The design of designated areas for waste and recyclable waste once construction has been completed for the use of the occupant has and will be carefully considered, not only in terms of capacity but allowances made for access for collections.

These areas will have designated areas for recyclable waste which will encourage further responsibility to be taken by the occupiers to separate their own waste accordingly.

3.12 CONSTRUCTION MANAGEMENT

Section 4.13 and 4.14 of the Guide to Development in Manchester encourages environmentally friendly construction methods and materials which in effect reduces energy consumption.

This standard also encourages best practices during construction to prevent or limit damage to the environment and to make sure these measures are not being abused during the full construction phase.

It is understood that the contractor will be responsible for providing a comprehensive construction management plan containing all procedures on site and methodologies for a safe, environmentally conscious and efficient construction period.

3.13 BIODIVERSITY

Section 4.15 of the Guide to Development in Manchester requires plans and designs to be put in places to protect any wildlife found to be occupying the site. This is also to limit the loss of any existing tree and valuable fauna on site. Developers are required to demonstrate compliance with Manchester's Biodiversity Strategy by demonstrating how they have taken account of the effect of the proposed development on the biodiversity of the site.

The fully qualified and independent Ecologist have been appointed by the applicant and has undertaken a Preliminary Bat Roost Assessment. This concludes that the buildings at the site contained features that may be suitable to support roosting bats. However, due to the lack of any suitable habitat surrounding the site and concentrated urban surrounds, these buildings are considered very unlikely to be used by bats.

The proposed development at the site is therefore unlikely to result in any impact on individual bats or local bat populations and no further surveys to support this assessment are considered necessary.

To mitigate against the unlikely event that bats are discovered during site works a toolbox talk for onsite contractors and a manual soft strip of the roof coverings and other potential features has been recommended.

4 CONCLUSION

This Environmental Standards Statement has been prepared to demonstrate that the applicant and design team have given due consideration to the principles of sustainability which will be implemented at the proposed refurbishment of Kings Street townhouse.

This strategy has outlined considerations for each of the following issues and identified key points of focus going forward:

- Energy Efficiency
- Renewable Technology
- Environmental Design
- Water Management and Weather Resilience
- Waste Management
- Construction Management
- Biodiversity

THG

8 First Street
Manchester
M15 4RP

wsp.com

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