

Sustainability Statement for Planning

Client: D2 Architects

Site: The Roby Public House,
Greystone Road,
Knowsley,
L14 6UH

Proposals: The construction of nine two and three-storey dwellings

Contents:

1 - Introduction	3
2 - Planning Policies.....	3
3 - Existing and Proposed Development.....	4
4 – Sustainability Statement.....	5
5 - Conclusion	17

Report Details:

Prepared by	Date	Project	Revision
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1 - Introduction

This Sustainability Statement (SS) has been prepared in support of the planning application for the construction of nine three-storey dwellings at The Roby Public House, Greystone Road, Knowsley, L14 6UH.

2 - Planning Policies

Knowsley Council Core strategy sets out policies to promote Sustainable Development and the council requires a sustainability statement to be provided for all major planning applications in line with the key principals of Knowsley Core Strategy Section 9, Caring for Knowsley.

Policy CS 22: Sustainable and Low Carbon Development

Policy CS 22 requires an energy statement and an energy assessment has been carried out for the development using the new SAP 10 software and provided as a separate report.

Policy CS 23 Renewable and Low Carbon infrastructure

Policy CS 23 requires a review of low or zero carbon technologies

Policy CS 25 Management of Mineral Resources

Policy requires materials to be responsibility and sustainability sourced

Policy CS 26 Waste Management

Policy CS 26 requires all construction and operational waste to be reduced were possible

3 - Existing and Proposed Development



The site is located at The Roby Public House, Greystone Road, Knowsley, L14 6UH (Figure 1).

As previously detailed, proposals are for the construction of nine two and three-storey dwellings at The Roby Public House, Greystone Road, Knowsley, L14 6UH.

The front entrance of the dwellings all face in a North-East direction.

Given the scale and nature of the site, there are some constraints to the development proposals in terms of the layout, positioning and orientation of the proposed dwellings. Subsequently, these constraints will impact on the feasibility of sustainable measures (as discussed in Section 4 of this report).

4 – Sustainability Statement

<u>Energy</u>	
Issue	Compliance
Energy Demand	Throughout the new development of The Roby Public House, Greystone Road, best efforts have been made to reduce the need for energy and reduce heat demand. A preliminary Energy assessment has been carried out on the development to show how it can be improved. As the drawings supplied are at a planning stage, assumptions have been made about the construction, heating and ventilation. Therefore, the energy strategy which has been used, should be used as guidance for energy efficiency.
Maximise use of passive energy	Through the use of passive and active design measures the design team have enabled the development to require less energy through the use of optimised insulation, reduced cold bridging and light coloured materials.
Increased Energy Efficiency	An Energy Statement has been carried out for the proposed development to accompany this report and SAP calculations have been carried out for the proposed dwellings which show how the dwellings will go beyond building regulations Part L. The dwellings will incorporate; • Low fabric element u-values, External wall u-value 0.17W/m²k, Floor 0.09W/m²k, Roof 0.13W/m²k • Highly efficient gas heating system with time and temperature zone control • Shower waste water heat recovery • An estimated PV System totalling 18kWp for the whole development facing in a South-West direction with an export meter present

	This has shown to be an improvement over building regulations Part L 2021 baseline, by achieving an overall improvement in CO2 emissions.
Renewable Energy Sources	The feasibility of several renewable technologies has been reviewed and shown that the majority of these are limited due to the site location and the nature of some of the dwellings being terrace properties, as shown in the Energy Statement. There is the potential for some Solar PV Panels and it is understood this is the clients preferred choice which has been used in the energy statement.
Responsible Travel Provisions	The site is in a suburban area and therefore has good access to public transport. Including several bus nodes located along Childwall Lane and Page Moss Lane. The site is also approximately 800m away from Broad Green Train Station and 1.8km away from Roby train station. There will be cycle storage spaces available and electric car charging points on site (total number to be confirmed) for the occupiers to promote healthier travel methods and reduce CO2 emissions from vehicles.

<u>Water</u>	
Issue	Compliance
Water Saving Measures	Initial advice from the design team suggests the water saving measures can be incorporated in order to reduce water usage (See Appendix B). It has been identified that there is the opportunity to have low flow rates and dual flush toilets.
Water Consumption Targets	Water efficient fixtures, fittings and appliances will be provided to ensure that internal water use targets are achieved to comply with the local planning requirements of the Knowsley Council and building regulations target of 125 L/person/day which is in line with Part G minimum standards.
Reusing Water	A preliminary feasibility study of the potential to include rainwater harvesting could be carried out; given the nature of the development however it may be considered not feasible to install a rainwater harvesting system. There has been further consultation with drainage consultants, and it is understood that water butts, permeable paving to car parking spaces and Geocellular crate attenuation measures to retain the peak storm events will all be implemented.
Metering	A water meter could be provided. During detailed design, consideration will be given to the provision of digital meters with connectivity to a central building management / billing system, rather than standard analogue meters.

Materials and Waste

Issue	Compliance
Design Stage Choosing materials that minimise the use of resources are sustainably sourced, do not cause harm to health and are robust.	The contractor and developer will need to design and choose materials that will influence the construction process and the embodied carbon of the development by, specifying sustainable materials. Ensuring that materials are responsibly sourced, sourcing materials from local sources, minimising the harmful effects of some materials on human health, ensuring that specified materials are robust and sensitive to the building type and age. It is intended that insulation materials will have an Ozone Depletion Potential (ODP) of zero, and a Global Warming Potential (GWP) of less than five. Where specified by the developer (e.g. low VOC paint), finishes and other materials will not contain or emit toxic substances. Where timber is installed it will be 100% legally sourced and FSC certified.
Construction Stage Management of materials resulting from demolition through the waste hierarchy	The Contractor will need to reduce waste during the construction phase of the development via the hierarchy of, Reduce, Reuse (prioritising on-site reuse of demolition materials, followed by offsite reuse), Recycle (prioritising on-site recycling, then off-site recycling), Resource recovery (for energy generation processes – fuels, heat and power); and Disposal. A Site Waste Management Plan (SWMP) could be prepared and incorporate non-hazardous waste, demolition and excavation waste if applicable. The BRE Smartwaste tool is an example of what can be used as an easy tool by contractors.

Storage for Recyclables & Waste	Sufficient internal and external space will be provided to facilitate recycling and the good management of waste for the building occupiers. The dwellings will be fitted with internal waste storage facilities in the kitchen for the segregation of recyclable materials, in compliance with BS5096.
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Nature Conservation and Biodiversity

Issue	Compliance
Protecting Species	The existing site is a public house and is considered to be of low ecological value.
Promoting the Protection and Planting of Trees	The existing space has been considered throughout this development. There are no existing trees or green spaces on site but twenty new trees/shrubs will be planted to improve the ecology of the site.
Designing development proposals	The existing development is limited in ecological measures, however efforts have been made to improve the ecological value of the site with the above listed measures and increasing the size of green spaces. The developers should adhere to the following hierarchy when considering biodiversity on their development by; avoiding adverse impact to the biodiversity interest, minimise impact, seek mitigation, and seek appropriate compensation where the benefits of the proposal clearly outweigh the biodiversity impacts.

Tackling Increased Temperatures and Drought

Issue	Compliance
Preventing Developments from Overheating	Overheating within buildings can result from either too much heat entering a building and not being released or too much heat being generated within a building and not being released. Therefore, if the internal environment becomes too hot it is likely occupiers will try to find a way to cool their environment. In order to continue minimising CO₂ emissions the design team have considered the internal comfort and implemented the following measures to reduce over heating, via cross ventilation, lightly colours external walls, and blinds. The dwellings are orientated where summer over heating should be reduced with less windows facing in a south direction. A new building regulations O for overheating is now required for new dwellings, and the proposed dwellings will have to comply with this via a simple method or thermal modelling.
Promoting Heat and Drought Resistant Planting	It is essential that landscaping does not use excessive amounts of water. Having ensured the landscaping of the development does not require excessive amounts of water, consideration will be given the including plant species which are heat and drought resistant. Advice from an ecologist should ideally be sought before any plant species are selected.

Flooding

Issue	Compliance
Surface Water Flooding	Surface water flooding is the most likely form of flooding that development may be exposed to. Further consultation with drainage consultants will be required.
Flooding Resilience and Resistance	The development is located within flood zone 1, an area which is at low risk and the site is less than 1.0ha. Therefore, no Flood Risk Assessment is required.
Flooding and Basement Developments	There is no basement planned for the proposed development.

Land Contamination

Issue	Compliance
Responsible Person/Organisation	The current site is not identified as being contaminated as a result of previous uses.
Bioremediation	Bioremediation is not known to be required.

Air Pollution

Issue	Compliance
Assessment Requirements	It is understood that an air quality assessment has not been prepared this development.
Construction and Demolition	To recognise and encourage construction-sites which are managed in an environmentally and socially considerate, responsible and accountable manner. For the proposed development, the contractor will comply with 'The Control of Dust and Emissions during Construction Demolition SPG'. Control measures will be implemented by the contractor on site to prevent air and dust pollution. An example of this could be using dust sheets on materials and skips, damping down in waste areas.

Design and Occupation	Ventilation pathways will need to be designed to reduce the build-up of air pollutants in the dwelling/s, through cross ventilation, and either naturally ventilated or mechanical ventilation. Where there is mechanical ventilation, exhaust flues will be positioned away from intake flues for fresh air. In naturally ventilated buildings/spaces: openable windows/ventilators are over 10m from sources of external pollution. There is no requirement for mechanical ventilation for this development.
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Noise

Issue	Compliance
Sources of Noise	The proposed site is located within an existing residential area, with few commercial units in the vicinity. The area is identified as having a low potential for noise pollution from residential dwellings. An acoustic assessment has not been carried out for this development.
Mitigation of Noise Emitted by Development	Noise attenuation measures will be incorporated on-site where required, to ensure that any noise generated by equipment or services will not generate a source of noise pollution or negatively impact the surrounding area. The developer will comply with the council's construction noise rules which states what hours of the day

	the site can work within.
Mitigation of Noise impacts on the Development	For the occupiers of the dwellings, the specification of the partition walls, floors and external walls will be designed to go beyond Document E of the building regulations. The following should be followed, and best efforts will be made here were possible to avoid impacts of external noise to the occupiers. Locate noise sensitive areas/rooms away from the parts of the site most exposed to noises, create setbacks, design the building so its shape and orientation reflect noise and protect the most sensitive uses, position non-residential uses closer to the noise source in mixed use developments, design in lobbies, balconies, winter gardens and dual facades; and carefully locate noise generating equipment for the building such as plant and services away from sensitive uses.

<u>Light Pollution</u>	
Issue	Compliance
Type of Light Pollution	Light pollution comprises any adverse effect of lighting for building occupiers, and for this development includes; Glare, 'Light Trespass' and 'Sky Glow' and Poor Artificial Lighting
Potential Effects	Light pollution can have a detrimental impact on the quality of life of residents; by significantly changing the character of the locality, altering wildlife and ecological patterns and wasting energy
Lighting Design to Minimise Impacts	To minimise obtrusive light where applicable, lights will be designed to be used only in appropriate areas, and that upward lighting is minimised, this will help to reduce light pollution and effect to neighbours. Where there is external lighting, it will have to be designed to the following standards. First to be energy efficient going beyond Part L of the building regulations, with the aim to achieve no less than 60 lumens per circuit watt. Second all external lights will be automatically controlled for the prevention of operation during daylight hours and presence detection in areas of intermitted pedestrian traffic. The ILP Guidance for the reduction of obtrusive light, 2001 will be used to design the lighting strategy. All external lighting (except for safety and security lighting) can be automatically switched off between 23:00 and 07:00. If safety or security lighting is provided and will be used between 23:00 and 07:00, this part of the lighting system complies with the lower levels of lighting recommended during these hours in Table 2 of the ILP's Guidance notes. Illuminated advertisements, where specified, must be designed in compliance with ILE Technical Report 5 – The Brightness of Illuminated Advertisements

<u>Water Pollution</u>	
Issue	Compliance
How Sustainable Drainage Contributes to Water Quality	There are no activities on site which lead to pollutants accumulating on hardstanding areas, therefore traditional drainage systems will be sufficient.
Connection of New Developments to the Sewer Network	The drainage assessment that was carried out by GWK Structural Solutions indicates that the site is in close proximity to the main existing sewer network which should be utilised. Therefore, connection should not be a problem.

5 Conclusion

The proposed development is for construction of nine two and three-storey dwellings at The Roby Public House, Greystone Road, Knowsley, L14 6UH.

Knowsley council Core strategy sets out Policy CS22 which requires a sustainability statement to be provided for all major planning applications in line with the key principals of the Sustainable Design and Construction of the Core Strategy.

Given the scale and nature of the development site, there are some constraints to the development proposals in terms of the layout, positioning, and orientation of the proposed dwellings. Subsequently, these constraints will impact on the feasibility of certain sustainability and energy efficient measures that can be incorporated into the development (as discussed in Section 4 of this report).

The above sustainability statement sets out what the requirements are of the planning policies and what can be achieved for the proposed development.

The main features of the site to meet the building environmental standards are:

- The energy efficiency measures of the building are to go beyond Building Regulations Part L 2021
- The development is to take an energy efficient approach which is to be designed to be highly insulated, with low u-values, good air tightness, shower heat recovery and Solar PV System
- Water efficiency is a big driver of sustainability and indoor fittings which will have water efficiency will be installed. These will help to meet Part G minimum standard of 125L/person/day
- The location lends itself to excellent transport links
- The ecology of the site will be improved

Appendix A Site Plan

