

Sustainability Statement for Planning

Client: Group D Developments Ltd

Site: Dye House,
Prescot

Proposals: The construction of 21 houses and 24 apartments across two blocks

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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 21 houses and 24 flats, Dye House, Prescott.

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

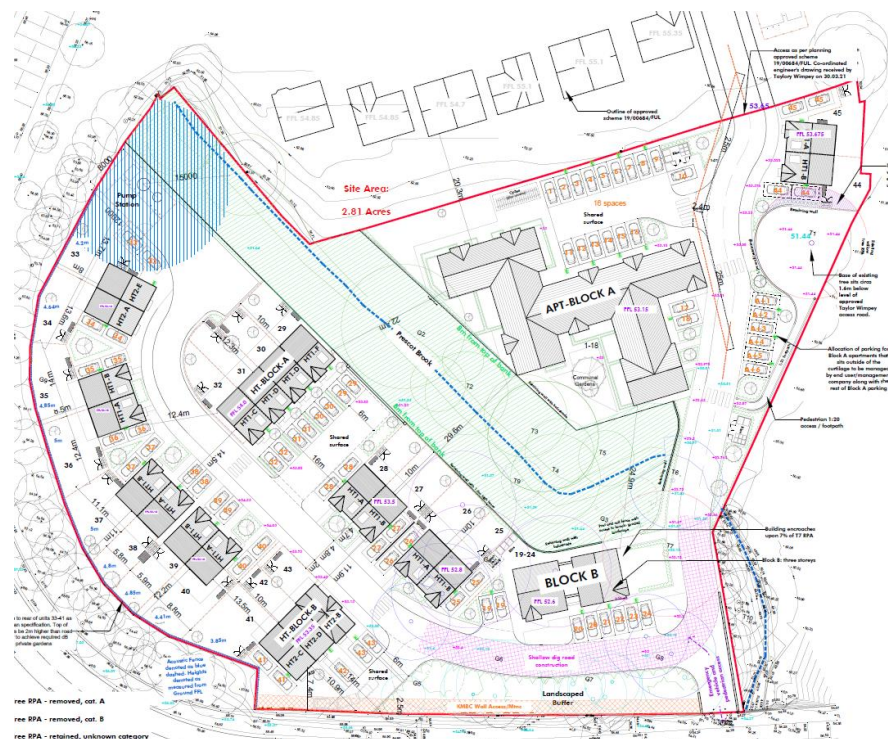
Policy CS 26 Waste Management

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

3 - Existing and Proposed Development

The site is located at Dye House, Liverpool Road, Prescot (Figure 1).

As previously detailed, proposals are for the construction of 21 houses consisting of terrace and semi-detached dwellings, with 16 three storey house types and 5 two storey house types. There are two blocks of flats with 18 apartments to Block A, and 6 apartments to block B.



The dwellings and apartments face in various orientations.

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 Dye House, 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 0.18W/m2k, Floor 0.11W/m2k, Roof 0.11-0.15W/m2k • Highly efficient Air Source heating system with time and temperature zone control This has shown to be an improvement over building regulations Part L 2021 baseline, by achieving an overall improvement in CO2 emissions and energy.

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 with overshadowing from trees to some plots and some of the dwellings have limited roof space for PV, as shown in the Energy Statement. There is the potential for ASHP's 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 on the periphery of Prescot and therefore has good access to public transport. There are no train stations near by, however there are several bus nodes located along Liverpool Road within 100m from the entrance to the site. There will be secure cycle storage spaces available with two spaces per house and one per apartment. The cycling for the occupiers will promote healthier travel methods and reduce CO2 emissions from vehicles. There will electric car charging points on site at one per house and 50% for the apartments.

<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. 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.

<u>Materials and Waste</u>	
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 materials with low embodied carbon. 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) will 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.

Nature Conservation and Biodiversity

Issue	Compliance
Protecting Species Promoting the Protection and Planting of Trees	An ecology report has been carried out by Collington Winter Environmental Ltd. The site is thought to be sufficient distance away from the SSSI impact risk zone. The existing site is a green field area and some existing buildings and is considered to be of low ecological value. The existing space has been considered throughout this development. There are existing broadleaved woodland trees on site and in the construction zone which will be protected were feasible. These will be fenced off for protection. The existing brook is to be retained and an 8m easement to be implemented. It has been recommended that a Construction Environmental Management Plan be set up. During site clearance, consideration for any amphibians is carried out. Due to the impact on the nesting birds, tree plant will be required to compensate for any loss of trees and bat boxes are to be installed on trees and houses. Vegetation removal will be outside of the nesting season. The bat survey has stated that there will be minimal impact on bats in the area and the bats surveys are known to be widespread around urban areas.
Designing development proposals	Best efforts have been made to improve and compensate for the ecological value of the site with bird boxes and plant of native trees.

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, blinds and low g-values on glazing. The dwellings are orientated where summer over heating should be reduced with less windows facing in a south direction. A new building regulations Part 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. Due to the noise issues on some plots there are restrictions to the windows being able to open, therefore thermal modelling would be recommended.
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.

<u>Flooding</u>	
Issue	Compliance
Flooding Resilience and Resistance	The development is located within flood zone 1, 2 and 3. The majority of the site is an area which is at low risk, however part of the site lies within zone 2. The development will be supported by a sequential test assessment. There is no know historical flooding of the site. At present the proposed development area is not at risk of flooding in the 100yr return period event but is potentially in the 100yr+CCA and 1000yr. The development proposals include a range of levels outside of the watercourse corridor resulting in the proposed development remaining dry, safe, and flood-free in all storm events including the 100yr RP + CCA design event Refer to Flood report Betts Hydro for more information, HYD730_DYE.HOUSE_FRA
Flooding and Basement Developments	There is no basement planned for the proposed development.
Surface water run-off	The site benefits from having an existing brook which will be used for the surface water discharge of the site. See Drainage Strategy & Maintenance Document by Shape February 2023.

<u>Land Contamination</u>	
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.

<u>Air Pollution</u>	
Issue	Compliance
Assessment Requirements	It is understood that an air quality assessment has been prepared for this development by Professional Consultant report Aug, 2022. The report states that; The potential for the exposure of future residents to elevated pollution levels was assessed based on the results of a desk-top study. This indicated that pollutant concentrations are likely to be below the relevant criteria at the development location. As such, the Site is considered suitable for the proposed use from an air quality perspective.
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 dwellings, 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.

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 higher potential for noise pollution due to the main roads, A58 and Liverpool Road. An acoustic assessment has been carried out for this development and states that certain plots will require specific ventilation strategies due to the traffic noise near the site. See Professional Consultant report May, 2021 for more details. Due to the restrictions on opening windows, a thermal modelling assessment would be required at building regulations stage to check on the overheating strategy.
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

Water Pollution

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 the construction of 21 houses and 24 apartments across two blocks on land to Dye House, Liverpool Road, Prescott.

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, high heating efficiency using electric ASHP
- 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 ecology of the site will be compensated for with planning of native trees and bird boxes, the existing brook will be retained
- To improve healthier travel, secure cycle storage will be installed
- Electric car charging points will be installed for the houses and apartments

Appendix A Site Plan

