



WHITE HOUSE CLUB AND RESIDENTIAL DEVELOPMENT

ENVIRONMENTAL AND MECHANICAL AND ELECTRICAL SERVICES STATEMENT FOR PLANNING

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1.0 Setting the Scene

The following policy statements are made within the documents provided by planning following the committee date of 11th April 2009 and are relevant to the subsequent proposed planning conditions. As are the items referenced within planning from the Manchester City Council development plan.

1.01 Policy EN4 “Reducing Co2 emissions by enabling low and zero carbon development”

The council will seek to reduce fuel poverty and decouple growth in the economy, growth in co2 emissions and rising fossil fuel prices. All development must follow the principles of the energy hierarchy being designed to reduce the need for energy through design and the use of energy efficient features and through the use of low or zero carbon energy generating technologies.

1.02 Policy EN5 “Strategic areas for low and zero carbon decentralised energy infrastructure”

The regional centre has a major role to play in achieving an increase in the level of decentralised, low and zero carbon energy supplies.

1.03 Policy EN6 “Target framework for Co2 reductions from low or zero carbon energy supplies”

States that developments over 1000sqm will be expected to meet targets shown within the policy unless this can be shown to be not viable.

Consideration has been given to how the buildings functions would reduce overall energy demands and the building fabric is considered to be high quality and would allow energy costs to remain low.

1.04 General statement from the planning document.

Policies above requires the application of the energy hierarchy to ensure that passive measures, energy efficiency and low and zero carbon generation options are considered. This includes:

- Minimising energy demands – consider passive design measures and optimise building envelope in terms of orientation, air tightness and insulation and
- Meet demands efficiently – specify energy efficient plant, heating, ventilation, lighting and system controls to facilitate efficient operation.

1.05 MCC SDP relevant points

- **Benefits of ICT should be for all** 2.51 UDP Part 1 Policy 1.11 demonstrates the importance that the City Council places on new communications technology. All new development should ensure that the necessary infrastructure is provided to enable businesses and communities to benefit from the opportunities offered by ICT.
- **New developments should be easy to maintain and adapt** 2.52 UDP Part 1 Policy R1.1 sets out the City Council's intention to regenerate Manchester by the creation of sustainable communities. Successful development should be sustainable and flexible so that as needs and requirements change over time and new users and functions take over, buildings should not have to be redeveloped again in a relatively short period. Successful urban areas are characterised by the ability to evolve to meet the changing needs and demands of society, and emerging new neighbourhoods should also be capable of this.
- **Energy Efficiency** Part 1 Policy E1.5 encourages high standards of energy efficiency in new development. In the Environmental Standards Statement, developers should show how they have considered the steps necessary to reduce energy demand at the earliest stages of design. Developers should aim to reduce CO2 emissions by at least 25% more than the requirements of the current Building Regulations, which at present are Building Regulations: Approved Document L (2006) – 'Conservation of Fuel and Power.' The following design principles will assist developers in achieving energy efficiency targets: Minimise reliance on energy-using equipment for heating, cooling, lighting and natural ventilation Position trees and soft landscaping on and around the development and within buildings to provide natural shading, insulation and air conditioning Integrate energy efficient micro-generation and community heating schemes, such as combined heat and power (CHP) Site layout and building design principles should maximise the capture and use of daylight and passive solar energy, whilst avoiding excessive solar gain in summer Specify energy and water efficient appliances and systems.
- **Renewable Energy** - To reduce energy demand and the harmful impact of using energy from non-renewables, in line with UDP Part 1 Policy E1.5, developers should aim for at least 20% of final site energy demand to be met by on-site renewable energy technologies. Renewable energy targets can be achieved more readily by undertaking the measures suggested above to reduce the total energy demand of the building. It is possible to produce developments that use 50% and even 100% energy from renewable sources. To achieve this, developers should: Assess opportunities for integrating small and large scale renewable energy generation systems (i) to improve the energy security of occupants and the neighbourhood, including siting of energy generation businesses on-site and export of surplus energy Use a mix of technologies to help generation patterns match demand Investigate energy generation opportunities before designing building envelopes or fixing their location, to optimise utilisation of wind, solar and geothermal resources Consider final energy demand rather than building energy consumption in the selection and sizing of generation equipment Explore opportunities to tackle waste and energy issues collectively through use of anaerobic digesters linked to CHPs (Combined Heat and Power devices) Consider private wire networks as an alternative to grid connection and availability charges on larger developments.

- **Environmental Design** - Developers must demonstrate energy efficiency in line with UDP Part 1 Policy E1.5. For residential developments, this should be through the use of the Department for Communities and Local Government's 'Code for Sustainable Homes'. (In the short-term, compliance is voluntary but home builders are encouraged to follow the principles set out in the Code because the Government is considering making assessment under Code standards mandatory in the future) This Code builds on and replaces the EcoHomes system. Any developer in the process of achieving an EcoHomes assessment should discuss the transition to the Code for Sustainability with the relevant planning case officer. Whilst the City Council considers that new homes should achieve at least a three star sustainability rating under the Code for Sustainable Homes, developers should be aware that the Government target is for new homes to have a six star rating under the Code by 2016. The City Council would expect developers to be working towards meeting this six star rating. However, using alternative modelling tools that enable the developer to exceed the requirements of the Code is also encouraged.
- **To demonstrate energy efficiency in non-residential developments**, the City Council would encourage developers to use the Building Research Establishment Environmental Assessment Method (BREEAM) which is used to assess environmental performance. Developments should be achieving a design and post-construction rating of "very good." However, using alternative modelling tools that enable the developer to exceed the requirements of BREEAM is also encouraged.

2.0 Proposed Planning Conditions

2.1 Conditions 22 and 23 – Environmental Standards

22) Prior to any above ground works within phase 1 of the development details of an environmental standards statement shall be submitted for approval in writing by the city council as local planning authority. The development shall be carried out in accordance with those details.

A post construction review certificate/statement shall be submitted for approval within a timescale that has been previously agreed in writing to the city council as local planning authority for each phase.

23) Prior to any above ground works within phase 2 of the development details of an environmental standards statement shall be submitted for approval in writing by the city council as local planning authority. The development shall be carried out in accordance with those details.

A post construction review certificate/statement shall be submitted for approval within a timescale that has been previously agreed in writing to the city council as local planning authority for each phase.

2.2 Environmental Standards Statement In Response to 2.1 Above

Dappa Homes is an award-winning housebuilder and developer with an established reputation for delivering thoughtfully designed, expertly crafted, sustainable homes. They carefully consider the design, flow and fit out of new homes with a trusted network of professionals to ensure a premium finish featuring high-spec fixtures and appliances. They work with time served and trusted sub-contractors, architects and planning consultants from the design and planning stages right through to construction and adding finishing touches. Their new homes come with a 10 year insurance backed structural warranty from LABC Warranty and are constructed in accordance with high safety standards and strict building regulations.

The residential part of this development, or phase 2, has two elements to it. The individual housing estate and the multi tenanted apartment buildings.

The housing design for both elements of the residential development has been undertaken with a “fabric first” approach, providing a good standard of building fabric build up and materials that provide good insulation values and improved air tightness. The aim of this approach is to provide dwellings that are easily maintainable and are inherently low energy requirement a minimum level of energy use to heat and light the buildings. It is proposed that the individual housing units will be constructed of timber frame which generally has lower thermal mass and lower air permeability than other construction options.

The choice of energy use for heating and hot water has been reviewed with a utility specialist and due account has been taken of the availability of supplies in the area along with overall development costs.

For this development gas is the chosen choice of energy source for the individual housing units and electric the chosen choice for the multi tenanted apartment blocks. The houses will be provided with high efficiency combination boilers (potentially hydrogen ready, subject to a further development

cost review) for heating with traditional radiators and hot water. Boilers will be provided with smart controls and radiators with TMV's.

The apartments will be provided with direct electric storage radiators with integrated thermostats and controls for heating and heat pump hot water cylinders for hot water.

Ventilation to meet building regulations for both will be provided by trickle ventilation and continuous extract with boost facility.

These options allow both parts of the development to achieve and better current building regulations standards in terms of Part L compliance by a minimum of 15% on average, whilst allowing the overall cost of servicing the site to be within the development cost appraisal requirements.

The indicative calculations within the appendices show the ratings that these options expect to achieve in terms of SAP output and EPC rating.

The phase 1 development or club building is being constructed on the site of the existing club which is provided with existing utility supplies in terms of gas, water and electricity. It is intended to reuse the existing supplies wherever possible to reduce the amount of rework required, but the developer may need to re-provide these due to overall capacity and / or existing location, in which case the existing supplies will be disconnected, and the existing load made available for the new build club connections.

The building fabric again has been designed using a fabric first approach were possible and to achieve the architectural and client requirements in terms of presence for the site. This approach coupled with the use of air source heat pump technology for heating and cooling the main club spaces will allow for an energy efficient building design in construction and use, with a minimum betterment against current part L requirements of 15%.

Dappa Homes are keen to align their building designs with local sustainability and renewable generation aspirations, but always with the overall development requirements in mind. The use of ASHP for the club keeps the use of carbon energy sources low and in line with current moves towards use of electricity for main heat source.

Dappa acknowledge that the current trend is to move towards phasing gas appliances out completely. However, in terms of actual efficiency gas is still a good option, which, in time should be replaced with hydrogen when the current technology and R&D that that is ongoing gets to a stage where this can be rolled out. It would therefore be reasonable for a future replacement option for the natural gas boilers to be with hydrogen ready boilers when the installation is ready to be upgraded.

The developer will commission a suitable energy assessor to undertake the post construction review and provide an as built part L calculation with lodged EPC and developers statement for both phases.

The developer is keen to improve their processes to be more sustainable and will be implementing the considerate constructors scheme on the two phases of this project.

2.3 Condition 24 and 29 – External Plant

24) Prior to the first occupation of the club building within phase one details of any externally mounted plant, equipment and servicing shall be submitted for approval. The approved scheme shall be implemented prior to the first occupation of phase one and thereafter retained and maintained in situ.

29) Prior to the first use of the club building within phase one, details of a scheme to extract fumes, vapours and odours from the premises shall be submitted for approval in writing by the City Council, as local planning authority. The approved scheme shall then be implemented prior to the first occupation of the club building and thereafter retained and maintained in situ.

The club building function rooms are provided with ventilation systems which are above ceiling mounted within the relevant rooms of the building and ASHP heating and cooling. The ASHP plant requires external condensers that shall be externally mounted generally in the location shown on the attached drawing reference J115-GLD-00-DR-ES-6300-004-P3. These units will not add to the ambient noise level experienced at the surrounding residential units. The heating to the apartment on the top floor of the club is via gas central heating and the heating boiler will be mounted internally with a balanced flue that will exit the building via an external wall. A series of louvres will be provided in the external elevations of the club building for supply and extract air and these will be detailed on the elevations for review by the planners, as needed, at the appropriate time. Louvres will be of the quality recommended in the crime impact statement as “robustly constructed and fixed”. As the catering requirement has been omitted from the scheme there will be no catering extract systems included. The beer cellar will be provided with a vent to allow discharge of any gas build up from the bar filling systems either provided by the developer or the brewery equipment provider.

The attached drawings referenced J115-GLD-00-DR-M-5700-001-P3, J115-GLD-00-DR-M-5700-002-P3, J115-GLD-00-DR-M-5700-003-P2, show the layout of the ventilation systems proposed and the manufacturers detail attached, the ventilation unit proposed. These are subject to final design and any changes required as the design and construction develops. The numbers and outputs of the ventilation units have been determined based on a rate per person of 10 l/s with occupancy rates as agreed with the developer. The acoustic properties of the units have been checked by the acoustic consultant and these units will operate in line with the parameters required for the development.

2.4 Conditions 31,32 and 33 – External Lighting

31) The development hereby approved shall include a building and site lighting scheme and scheme for the illumination of external areas during the period between dusk till dawn. Full details of such a scheme shall be submitted for approval in writing by the City Council as Local Planning Authority before the first use of the club building within phase one.

The approved scheme shall be implemented in full prior to the first use of the club building and shall remain in operation for so long as the development is occupied.

32) The development hereby approved shall include a building and site lighting scheme and scheme for the illumination of external areas during the period between dusk till dawn. Full details of such a scheme shall be submitted for approval in writing by the City Council as Local Planning Authority before the first use of the Residential building within phase two.

The approved scheme shall be implemented in full prior to the first use of the club building and shall remain in operation for so long as the development is occupied.

33) If any lighting at the development hereby approved, when illuminated, causes glare or light spillage which in the opinion of the Council as local planning authority causes detriment to adjoining and nearby residential properties, within 14 days of a written request, a scheme for the elimination of such glare or light spillage shall be submitted to the council as local planning authority and once approved shall thereafter be retained in accordance with details which have received prior written approval of the City Council as Local Planning Authority.

Please refer to drawings reference J115-GLD-00-DR-ES-6300-005-P3 for the proposed external lighting scheme for the residential development and the club development. These schemes are subject to further design development and fitting selection. The streetlighting scheme for the residential development will be activated via photocell and is intended to be adopted by the local highways department and will remain lit during the hours of darkness. Apartment building mounted external lighting shall be in operation during the hours of darkness operated via photocell. The club lighting will be PIR / Photocell and timeclock controlled. The external lighting will remain on during hours of darkness whilst the club is open. Once the club is closed the external lighting will be activated via PIR so will be lit if persons come up to the building or car park.

External light fittings located around entrance doors will remain lit during hours of darkness via photocell operation.

2.5 Conditions 48 and 49 – Electric Vehicle Charging

48) Prior to the first use of the social club development within phase one, details of electric car charging points shall be submitted for approval in writing by the city council, as local planning authority.

The approved details shall then be implemented as part of phase one and be in place prior to the first use of the social club within phase one of this development.

49) Prior to the first use of the residential development within phase two, details of electric car charging points shall be submitted for approval in writing by the city council, as local planning authority.

The approved details shall then be implemented as part of phase one and be in place prior to the first use of the residential development within phase two.

The developer will provide a wired fused outlet to each residential property and a single EVC point.

The apartment buildings will be provided with 20% of car parking spaces, i.e. 5 no. EVC's within the external parking area of the apartment block.

The Club building will be provided with 10% of car parking spaces, i.e. 4no. car charging point for use by the staff, residents and visitors to the club.

2.6 Other items relating to planning and crime impact statement

The club building will be provided with a security alarm system that will be in operation outside of club opening hours. A separate security alarm system with electronic video door access will be provided to the residential unit.

A series of internal and externally mounted CCTV cameras will be provided to monitor the facility. It is intended that this system will be unmanned and used for recording purposes for any incidents that occur and as a deterrent for unsociable behaviour. Suitable signage identifying the use of CCTV will be provided. The club car park will also be included on the CCTV system. Resolution of the systems will be suitable to provide facial recognition.

The apartment blocks will not be provided with security alarms but with video door entry systems as recommended in the crime impact statement for the development. No CCTV is intended for the apartment blocks either internally or externally.

The residential units will be provided with a wired fused outlet to allow the occupier to install a security alarm system as a future provision.

Meters to the individual residential units shall be located in external semi recessed wall mounted meter boxes.

The incoming utility scheme includes for infrastructure for both BT (openreach) and cable (Virgin) to allow occupiers flexibility on choice of service providers.

The developer is not looking to rate any areas of the development under any Breeam or code assessments. Compliance and betterment of building regulations and energy efficiency standards will be demonstrated using standard SAP and SBEM compliance calculations and with robust detailing of fabric elements.

3.0 Appendices

3.1 Relevant Drawings

New Club & Car Park:

- J115-GLD-00-DR-ES-6300-004-T4

HVAC Layout:

- J115-GLD-00-DR-M-5700-001-T1
- J115-GLD-00-DR-M-5700-002-T1
- J115-GLD-00-DR-M-5700-003-T1

Site Plan – External Lighting Layout:

- J115-GLD-00-DR-ES-6300-005-T4

3.2 As Designed Part L Calculations

3.2.1 Typical Individual Residential Unit

3.2.2 Typical Apartment

3.2.3 Whitehouse Club Building