

Site Name:	Land Adjacent To 38 - 42 Hampton Road
Planning reference number:	20/0222/FUL
Case officer:	William Tysterman
Consultant:	Owen Thomas
Comments provided on:	24/06/20

Details:

“Erection of a two storey residential building with accommodation within the roof to provide 14 flats (11 x 1 bed & 3 x 2 bed units) with associated car parking and landscaping..”

Expected offset payment

Recommended actions for applicant:

- Green roofs should be provided, of justification (with plans) given for their absence.
- Provide SAP outputs and summary to allow checking of figures in energy report.
- Provide report into benefits of on site energy network vs. individual heating with appropriate calculations.
- Detail cooling strategy in line with hierarchy

Documents considered:

Energy Strategy – Rev.A – Energist - 5th March 2020

Sustainable construction checklist

Flood Risk Assessment – Rev-1 : Lanmor Consulting – Feb 2020

Drainage strategy –Rev 1 - Lanmor – October 2020

Policy background :

Policy LP 17 Green roofs and walls

Green roofs and/or brown roofs should be incorporated into new major developments with roof plate areas of 100sqm or more where technically feasible and subject to considerations of visual impact. The aim should be to use at least 70% of any potential roof plate area as a green / brown roof.

The onus is on an applicant to provide evidence and justification if a green roof cannot be incorporated. The Council will expect a green wall to be incorporated, where appropriate, if it has been demonstrated that a green / brown roof is not feasible.

Policy LP 20 Climate Change Adaptation

A. The Council will promote and encourage development to be fully resilient to the future impacts of climate change in order to minimise vulnerability of people and property.

B. New development, in their layout, design, construction, materials, landscaping and operation, should minimise the effects of overheating as well as minimise energy consumption in accordance with the following cooling hierarchy:

1. minimise internal heat generation through energy efficient design
2. reduce the amount of heat entering a building in summer through shading, reducing solar reflectance, fenestration, insulation and green roofs and walls
3. manage the heat within the building through exposed internal thermal mass and high ceilings
4. passive ventilation
5. mechanical ventilation
6. active cooling systems (ensuring they are the lowest carbon options).

C. Opportunities to adapt existing buildings, places and spaces to the likely effects of climate change should be maximised and will be supported.

The use of green / brown roofs and green walls is encouraged and supported in smaller developments, renovations, conversions and extensions.

Policy LP 21 Flood Risk and Sustainable Drainage

A. All developments should avoid, or minimise, contributing to all sources of flooding, including fluvial, tidal, surface water, groundwater and flooding from sewers, taking account of climate change and without increasing flood risk elsewhere. Development will be guided to areas of lower risk by applying the 'Sequential Test' as set out in national policy guidance, and where necessary, the 'Exception Test' will be applied. Unacceptable developments and land uses will be refused in line with national policy and guidance, the Council's Strategic Flood Risk Assessment (SFRA) and as outlined in the table below...

Policy LP 22 Sustainable Design and Construction

A. Developments will be required to achieve the highest standards of sustainable design and construction to mitigate the likely effects of climate change. Applicants will be required to complete the following:

1. Development of 1 dwelling unit or more, or 100sqm or more of non-residential floor space (including extensions) will be required to complete the Sustainable Construction Checklist SPD. A completed Checklist has to be submitted as part of the planning application.
2. Development that results in a new residential dwelling, including conversions, change of use, and extensions that result in a new dwelling unit, will be required to incorporate water conservation measures to achieve maximum water consumption of 110 litres per person per day for homes (including an allowance of 5 litres or less per person per day for external water consumption).
3. New non-residential buildings over 100sqm will be required to meet BREEAM 'Excellent' standard.
4. Proposals for change of use to residential will be required to meet BREEAM Domestic Refurbishment 'Excellent' standard (where feasible).

Reducing Carbon Dioxide Emissions

B. Developers are required to incorporate measures to improve energy conservation and efficiency as well as contributions to renewable and low carbon energy generation. Proposed developments are required to meet the following minimum reductions in carbon dioxide emissions:

1. All new major residential developments (10 units or more) should achieve zero carbon standards in line with London Plan policy.
2. All other new residential buildings should achieve a 35% reduction.
3. All non-residential buildings over 100sqm should achieve a 35% reduction. From 2019 all major nonresidential buildings should achieve zero carbon standards in line with London Plan policy.

Targets are expressed as a percentage improvement over the target emission rate (TER) based on Part L of the 2013 Building Regulations.

C. This should be achieved by following the Energy Hierarchy:

1. Be lean: use less energy
2. Be clean: supply energy efficiently
3. Be green: use renewable energy Decentralised Energy Networks D. The Council requires developments to contribute towards the Mayor of London target of 25% of heat and power to be generated through localised decentralised energy (DE) systems by 2025. The following will be required:

1. All new development will be required to connect to existing DE networks where feasible. This also applies where a DE network is planned and expected to be operational within 5 years of the development being completed.
2. Development proposals of 50 units or more, or new non-residential development of 1000sqm or more, will need to provide an assessment of the provision of on-site decentralised energy (DE) networks and combined heat and power (CHP). These requirements may be adjusted in future years to take into account the then prevailing standards and any other national guidance to ensure the standards are met or exceeded.
3. Where feasible, new development of 50 units or more, or new non-residential development of 1000sqm or more, as well as schemes for the Proposal Sites identified in this Plan, will need to provide on-site DE and CHP; this is particularly necessary within the clusters identified for DE opportunities in the borough-wide Heat Mapping Study. Where on-site provision is not feasible, provision should be made for future connection to a local DE network should one become available.

Applicants are required to consider the installation of low, or preferably ultra-low, NOx boilers to reduce the amount of NOx emitted in the borough.

Local opportunities to contribute towards decentralised energy supply from renewable and low-carbon technologies will be encouraged where appropriate.

New non-residential buildings over 100sqm will be required to meet the relevant BREEAM 'excellent' standards. For conversions see Policy DM SD 3 'Retrofitting'..

Renewable Energy and Decentralised Energy Networks

New development will be required to conform with the Sustainable Construction Checklist SPD and:

- (a) Maximise opportunities for the micro-generation of renewable energy. Some form of low carbon renewable and/or de-centralised energy will be expected in all new development, and
- (b) Developments of 1 dwelling unit or more, or 100sqm of non-residential floor space or more will be required to reduce their total carbon dioxide emissions by following a hierarchy

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that first requires an efficient design to minimise the amount of energy used, secondly, by using low carbon technologies and finally, where feasible and viable, including a contribution from renewable sources.

(c) Local opportunities to contribute towards decentralised energy supply from renewable and low-carbon technologies will be encouraged where there is no over-riding adverse local impact.

(d) All new development will be required to connect to existing or planned decentralised energy networks where one exists. In all major developments and large Proposals Sites identified in the (forthcoming) Site Allocations DPD, provision should be made for future connection to a local energy network should one become available

CP3 Climate Change – Addapting to the Effects

3.A

Development will need to be designed to take account of the impacts of climate change over its lifetime, including:

Water conservation and drainage

The need for Summer cooling

Risk of subsidence

Flood risk from the River Thames and its tributaries

3.B Development in areas of high flood risk will be restricted, in accordance with PPS25, and using the Environment Agency's Catchment Flood Management Plan, Borough's Strategic Flood Risk Assessment and site level assessments to determine risk

London Plan Policy 5.2:

A Development proposals should make the fullest contribution to minimising carbon dioxide emissions in accordance with the following energy hierarchy:

1. Be lean: use less energy
2. Be clean: supply energy efficiently
3. Be green: use renewable energy

B The Mayor will work with boroughs and developers to ensure that major developments meet the following targets for carbon dioxide emissions reduction in buildings. These targets are expressed as minimum improvements over the Target Emission Rate (TER) outlined in the national Building Regulations leading to zero carbon residential buildings from 2016 and zero carbon non-domestic buildings from 2019.

Residential buildings:

Year	Improvement on 2010 Building Regulations
2010 – 2013	25 per cent (Code for Sustainable
2013 – 2016	40 per cent
2016 – 2031	Zero carbon

Non-domestic buildings:

Year	Improvement on 2010 Building Regulations
2010 – 2013	25 per cent
2013 – 2016	40 per cent
2016 – 2019	As per building regulations requirements

C Major development proposals should include a detailed energy assessment to demonstrate how the targets for carbon dioxide emissions reduction outlined above are to be met within the framework of the energy hierarchy.

D As a minimum, energy assessments should include the following details:

- a calculation of the energy demand and carbon dioxide emissions covered by Building Regulations and, separately, the energy demand and carbon dioxide emissions from any other part of the development, including plant or equipment, that are not covered by the Building Regulations (see paragraph 5.22) at each stage of the energy hierarchy
- b proposals to reduce carbon dioxide emissions through the energy efficient design of the site, buildings and services
- c proposals to further reduce carbon dioxide emissions through the use of decentralised energy where feasible, such as district heating and cooling and combined heat and power (CHP)
- d proposals to further reduce carbon dioxide emissions through the use of on-site renewable energy technologies.

E The carbon dioxide reduction targets should be met on-site. Where it is clearly demonstrated that the specific targets cannot be fully achieved on-site, any shortfall may be provided off-site or through a cash in lieu contribution to the relevant borough to be ring fenced to secure delivery of carbon dioxide savings elsewhere. (minimum 35% reduction achieved on site *GLA guidance*)

5.12 Green Roofs and Development Site Environs

Major development proposals should be designed to include roof, wall and site planting, especially green roofs and walls where feasible, to deliver as many of the following objectives as possible:

- a) adaptation to climate change
- b) SUDs
- c) mitigation of climate change
- d) enhancement of biodiversity
- e) accessible roof space
- f) improvement to appearance and resilience of the building
- g) growing food

Requirements and comments:

Requirement:

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LP 17: “Green roofs and/or brown roofs should be incorporated into new major developments with roof plate areas of 100sqm or more where technically feasible and subject to considerations of visual impact. The aim should be to use at least 70% of any potential roof plate area as a green / brown roof. The onus is on an applicant to provide evidence and justification if a green roof cannot be incorporated. The Council will expect a green wall to be incorporated, where appropriate, if it has been demonstrated that a green / brown roof is not feasible. The use of green / brown roofs and green walls is encouraged and supported in smaller developments, renovations, conversions and extensions. “

Comment:

Roof plans not found, although roof plats of over 100m2 seem likely.
No details of green roofs found, and they are not ticked in the sustainability checklist.
Some of the roof has PV panels which may block some area from being a viable green roof but it is not clear if this applies to the whole roof,

Action:

Green roofs should be provided, of justification (with plans) given for their absence.

Requirement:

LP 21: “All developments should avoid, or minimise, contributing to all sources of flooding, including fluvial, tidal, surface water, groundwater and flooding from sewers, taking account of climate change and without increasing flood risk elsewhere. Development will be guided to areas of lower risk...”

Comment:

A flood risk assessment has been provided showing that the development is within Zone1 – low risk.

The drainage strategy provided shows 100% attenuation for a 100 year (plus climate change) event.

Commitment is given to appropriate management and maintenance arrangements, providing evidence at an appropriate time that there have been put in place should be included in a condition

Action:

None

Requirement:

LP 22: “...will be required to complete the Sustainable Construction Checklist SPD. A completed Checklist has to be submitted as part of the planning application...”

Comment:

The checklist has been provided showing a score of 35 falling just within the B “Helps to significantly improve the Borough's stock of sustainable developments” rating. This appears to have been filled in correctly.

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Action:

None

Requirement:

LP 22: "...will be required to incorporate water conservation measures to achieve maximum water consumption of 110 litres per person per day for homes..."

Comment:

Detailed water use calculations using appropriate methodology are provided in the energy strategy showing 109 l/p/d. Evidence that construction has been in line with this should be included in a condition.

Action:

Confirm litres per person per day committed to.

Requirement:

LP 22: "...required to meet BREEAM 'Excellent' standard."

Comment:

N/A currently no BREEAM version applicable to domestic new build.

Action:

none

Requirement:

LP 22: "...All new major residential developments (10 units or more) should achieve zero carbon standards in line with London Plan policy...."

Comment:

With offsetting the homes are Net Zero Carbon .

The Energy Strategy shows 10.41 tonnes per year of carbon generated after onsite measures have been applied.

10.41 tonnes per year
X 30 years
= 312.3 tonnes
X £95 per tonne
= £29,668

The report shows £29,664.64 this £4 difference is likely due to there calculation having access to the starting figure to more decimal places than written up in the report so I provisionally except that one.

However sap calculations have not been provided so I can not confirm the validity of the stated tonnage.

As always this calculation should be updated when appropriate based upon inherently more accurate As Built energy calculations.

Action:

Provide SAP outputs and summary to allow checking of figures in energy report.

Requirement:

LP 22: “DE networks where feasible. This also applies where a DE network is planned and expected to be operational within 5 years of the development being completed

Comment:

The report demonstrates that there is no network nearby or planned, this is confirmed with the London heat map.

Action:

none

Requirement:

LP 22: “will need to provide an assessment of the provision of on-site decentralised energy (DE) networks and combined heat and power (CHP).”

Comment:

The development is too small to be considered appropriate for CHP by the GLA.
A building wide energy network could be considered over individual unit heaters, and from our experience the development is of a size where this is sometimes the best option.

Action:

Provide report into benefits of on site energy network vs. individual heating with appropriate calculations.

Requirement:

LP 22: “Where feasible, new development of 50 units or more, or new non-residential development of 1000sqm or more, as well as schemes for the Proposal Sites identified in this Plan, will need to provide on-site DE and CHP; this is particularly necessary within the clusters identified for DE opportunities in the borough-wide Heat Mapping Study.”

Comment:

N/A.
<50 units.

Action:

none

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Requirement:

LP 22: “Applicants are required to consider the installation of low, or preferably ultra-low, NOx boilers to reduce the amount of NOx emitted in the borough.”

Comment:

A Class 6 boiler is proposed with very low NOx emissions..

Action:

None

Requirement:

LP 20: “...in accordance with the following cooling hierarchy:

1. minimise internal heat generation through energy efficient design
2. reduce the amount of heat entering a building in summer through shading, reducing solar reflectance, fenestration, insulation and green roofs and walls
3. manage the heat within the building through exposed internal thermal mass and high ceilings
4. passive ventilation
5. mechanical ventilation
6. active cooling systems (ensuring they are the lowest carbon options).”

Comment:

Some details of efficient fittings and natural ventilation provided. No details on other steps found

Action:

Detail cooling strategy in line with hierarchy

Requirement:

London Plan Policy 5.2: “Development proposals should make the fullest contribution to minimising carbon dioxide emissions in accordance with the following energy hierarchy:

1. Be lean: use less energy
2. Be clean: supply energy efficiently
3. Be green: use renewable energy”

Comment:

Be Lean – actions are taken to improve the efficiency of the fabric including improved insulation and air tightness. This is shown to achieve a 7.21% carbon reduction.

Be clean – no actions taken, the use of an onsite network should be considered as detailed above.

Be Green – Significant use of solar voltaics are included in the proposal. This is shown to achieve further 27.93% carbon reduction.

Action:

The use of an onsite network should be considered as detailed above.

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Requirement:

London Plan Policy 5.2: “These targets are expressed as minimum improvements over the Target Emission Rate (TER) outlined in the national Building Regulations leading to zero carbon residential buildings from 2016 and zero carbon non-domestic buildings from 2019...

Residential 2016-2031 Zero Carbon

Non-domestic 2016 – 2019: As per building regulations”

GLA Energy assessment Guidance: both domestic and non domestic dwellings should achieve 35% carbon reduction on site

Comment:

The 35% on site carbon reduction target is met by the proposal but only narrowly with 35.14% so while technically compliant at this stage it would be recommendable to increase this margin to allow for any slight variance in the As Built results.

Offsetting is proposed to reach zero carbon as detailed above

Action:

None