



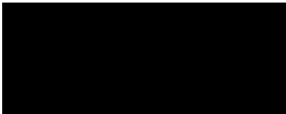
SUSTAINABILITY STATEMENT

NYTON NUSERIES, EASTERGATE &
WESTERGATE

AUGUST 2017

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EXECUTIVE SUMMARY

- ✦ Our proposed residential development at Fontwell Avenue, Eastergate includes the construction of 208 no. homes.
- ✦ Measures will be enacted throughout the construction phase to ensure a sustainable development is created.
- ✦ Taylor Wimpey Group operates a nationwide timber procurement policy and affords advantage to materials with a lesser environmental impact.
- ✦ Eco-sanitary ware and flow restriction devices will be included in the service specification of every property.
- ✦ Energy efficiency measures will be included in the construction specification.
- ✦ A site waste management plan will operate.

1 INTRODUCTION

We, Taylor Wimpey, have prepared this Sustainability Statement to accompany the planning application for our proposed development off Fontwell Avenue, Eastergate. The application seeks permission for the development of 208 no. properties, landscaping and associated highway works. This Statement includes details on our strategy to address sustainable construction and in particular addresses;

- Material selection
- Pollution during construction
- Waste management
- Health and well being
- Water efficiency
- Energy efficiency

A number of documents have been used in order to complete this report. These include;

National Planning Policy Framework (NPPF) includes a presumption in favour of sustainable development. The Framework expands upon the guiding principles and objectives of a successful planning system. These include the building of a strong and competitive economy, delivering high quality housing, requiring good design and meeting the challenges of climate change.

Approved Document L1A sets fabric efficiency standards and together with SAP, establishes a maximum CO₂ emission rate for new build residential properties. The Approved Document is the Government's sustainable design benchmark in England and was most recently amended in April 2014.

2 MATERIAL SELECTION

Significant amounts of energy and natural resources are consumed in the production, transportation and disposal of building materials. Two issues are of significant importance in the procurement of materials: the environmental impact of materials and the sourcing of materials.

We operate a nationwide timber procurement policy. This policy has at its core a commitment to purchase legally and sustainably sourced timber. Suppliers of timber must produce full Chain of Custody Certificates right through the supply chain; from the initial timber yard, manufacturing process, transformation and distribution. Secure certificates must be produced by valid accrediting bodies – FSC, PEFC, CSA, SFI & MTCC.

Included within our environmental procurement policy is a commitment to “afford advantage” to those materials which have a lesser environmental impact than rival products and to “review alternative materials that have a lower environmental impact” when developing material specifications. As part of the procurement policy we review the Environmental Management Systems of all suppliers and endeavour to work in a collaborative manner with all our suppliers to improve the effectiveness and performance of such policies.

As standard we will where possible source materials from suppliers who have Environmental Management Systems in place which conform to the BES Excellent or Very Good standard or similar. Table 1 below details the environmental impact rating of our material and construction specification for the Nyton Nurseries when assessed against the Building Research Establishment’s Green Guide.

Table 1 – Green Guide Ratings

ELEMENT	GREEN GUIDE RATING
External Wall	A+
Internal Wall	A
Party Walls	C
Roof	A+
Glazing	A
Ground Floor	A+
Intermediate Floor	A+

3 POLLUTION DURING CONSRUCTION

The NPPF requires sustainable development proposals to include measures to protect the natural environment on site and adjacent to it. Measures concerning waste are detailed in another section of this report, instead this section concentrates on those measures to be included in the construction phase to mitigate the negative impacts of construction on the natural environment and public health.

The semi-rural location of the site and its proposed residential use means there will be no air or water quality risks arising from the scheme post construction. Therefore measures will be targeted to reduce water and air pollution during the demolition and construction phases. Below are a sample of the measures to be undertaken by site operatives;

- ✱ Fuel and chemical stores will be located on impervious bases with a bund and secured. The base and walls of the container will be impermeable to the material stored.
- ✱ Where dust is generated in small quantities through the normal construction process, such as the cutting of bricks and, where significant volumes are required, specialist cutting equipment will be used i.e. brick saws which have dust suppression built in through the use of water jetting onto the cutting surface.
- ✱ If cutting is required on a lesser scale i.e. cutting of pipes, bricks, blocks, paving slabs, chases etc. during installation or laying of these materials. This will be carried out in a part of the site, using mechanical saws, which is considered the most appropriate at that time and, away from any sensitive receptors.
- ✱ Waste containers and skips will be covered.
- ✱ Just in time deliveries will prevent the stockpiling of unnecessary materials on site, but where unavoidable materials will be secured and covered where necessary to prevent pollution.
- ✱ Hard surfaced roads will be constructed as soon as possible or at the earliest time that the build programme allows.

The measures above will be implemented through induction and toolkit talks with all site operatives and the posting of literature and signs in the site compound.

4 WASTE MANAGEMENT

In 2012 the Government repealed the Site Waste Management Plan Regulations, therefore there exists no legal obligation to operate such a plan at Nyton Nuseries. However as an environmentally responsible developer we intend to operate such a Plan at the application site.

As engaged partner in the WRAP initiative and with an eye to future regulatory changes we conduct regular reviews of our performance. At the present time we are engaged in a drive to reduce the volumes of waste generated on site and increase the percentage of waste diverted from landfill through reuse and recycling. Current data and previous performance suggests we have achieved a 70% reduction in waste volumes per house completed since 2007.

These levels of performance are enforced through the adoption of robust Site Waste Management Plans but also through effective and coordinated design and procurement. The following briefly summarises the policies contained within both our waste management policies.

- ✦ Design to minimise wastage during the construction phase.
- ✦ Landform design and mass balance exercises are undertaken to retain as much material on site and reduce disposable volumes. There should be careful sub and topsoil storage and accommodation within the predetermined landform.
- ✦ Maximise the value of recycled aggregates through the separation of physical and chemical contaminants and through the careful matching of the materials generated with appropriate site use.
- ✦ Regular inductions and toolkit talks to all contractors and sub-contractors are standard. Careful site management of stockpiling and storage, segregation of waste groups and the prevention of cross contamination are implemented as standard.
- ✦ Agreements are in place with suppliers to reduce the amount of packaging on goods delivered to site. Take back agreements and “*just in time delivery*” are in place with key suppliers.
- ✦ All waste contractors are required to segregate demolition waste off site and provide records of such.
- ✦ Landfill will be the last option when no economic solution can be found.

5 HEALTH AND WELL-BEING

In achieving ever stricter levels of sustainability, it is important we do not lose sight of the fact that we are building homes that people can live in. This is an integral part of sustainability. While it is quite difficult to measure health and wellbeing, the following are a sample of the measures that will be included in the detailed design to address this issue.

- ✱ Each property will have a large living/dining space or family space.
- ✱ Each of the principal living rooms will have sufficient glazing to allow natural light to penetrate into the rooms, reducing the need for artificial lighting. Numerous studies have also shown this to be beneficial to the general health and happiness of occupants.
- ✱ Each property will include a room large enough to operate as home office.
- ✱ Each home will benefit from a garden or private space for recreation. Each property will also have a designated space for recycling facilities.
- ✱ A number of properties will have garages. Each will be large enough to store bicycles.
- ✱ The party wall specification will reduce sound transmission between properties providing comfort to future residents.

6 WATER EFFICIENCY

Approved Document G of the Building Regulations requires each new home to achieve a water consumption rate of no more than 125 litres per person per day.

We propose to avoid the use of complicated and expensive recycling technologies and instead plan to incorporate low flow sanitary ware and eco-sanitary products into the design of each property to achieve a low water consumption rate. This strategy will permanently reduce water consumption instead of compensating for a high usage through grey water recycling or rainwater harvesting. The tables below summarise the proposed flow rates and capacities and the water efficiency calculation.

Table 2 -- Flow Rates

FIXING	FLOW RATES
Toilets	6 & 3 litre dual flush
WHB Taps	4 litres/min
Kitchen Taps	3.8 litres/min
Bath	170 litres
Shower	9 litres/min

Table 3 – Nyton Nuseries Water Efficiency Calculation

Installation Type	Unit of Measurement	Capacity/Flow Rate	Use Factor	Fixed Use (litres/person/day)	Litres per Person day, $=[(1) \times (2)] + (3)$
		(1)	(2)	(3)	(4)
WC (Dual Flush)	Full Flush (litres)	4.60	1.46	0.00	6.71
	Part Flush (litres)	2.90	2.96	0.00	8.58
Taps (excluding kitchen tap)	Flow rate (litres/min)	4.00	1.58	1.58	7.90
Bath (where shower present)	Capacity to overflow (litres)	170	0.11	0.00	18.70
Shower (where bath present)	Flow rate (litres/min)	9.00	4.37	0.00	39.33
Kitchen/utility room sink taps	Flow rate (litres/min)	3.80	0.44	10.36	12.03
Washing machine *	Litres/kg dry load	8.17	2.10	0.00	17.16
Dishwasher	Litres/place setting	1.25	3.60	0.00	4.50
Waste disposal unit	Litres/use	If present = 1 If absent = 0	3.08	0.00	
Water softener	Litres/person/day		1.00	0.00	
TOTAL	(5)				114.91

(5)	Total Internal Water Consumption	114.91
(6)	Normalisation Factor	0.91
(7)	Internal Water Consumption [(5) x (6)]	104.57
(8)	External Water Use	5.00
(9)	Part G Water Consumption [(8) + (7)]	109.57

An internal water consumption of 104.57 litres per person per day is calculated. This is lower than the Government's water efficiency target confirmed in the Technical Housing Standards Review, confirming that a high level of efficiency and sustainability will be achieved.

7 ENERGY STRATEGY

The NPPF requires new build homes to be sustainable in line with the Government's building policy and nationally described standards, this being Part L of the Building Regulations. Part L was most recently amended in 2013. The enhanced standards included in the Approved Document will deliver homes with an emission rate some 44% lower than comparable 2002 standards.

Aside from national our exposure to the marketplace has confirmed that purchasers demand energy efficient homes with low operating costs and familiar user-friendly technologies. As such our current construction specification has been tailored to these demands and incorporates many of the lean and clean measures of the Energy Hierarchy. Listed below are some of the measures that will be incorporated into the detailed design of the scheme;

- The construction specification of every home will include high levels of insulation in the ground floor, external walls and roof spaces.
- The detailed house type designs incorporate the thermal bridging guidance produced by the Government, thereby reducing a significant source of heat loss.
- An efficient gas condensing boiler will be installed in each property. The heating designs of each house type will include dual zone controls with delayed start thermostats.
- Energy efficient lamps will be installed in every light fitting.
- Each property will be naturally ventilated using efficient decentralised and continuous system 3 extract fans.
- Each entrance will be illuminated with an energy efficient external light or provision will be made for a purchaser to install such a fixture.
- The white goods installed in each property or offered to purchasers will be energy efficient with an A+/A rating.

The table overleaf provides a summary of the likely energy efficiency standards targeted in the design and construction of each home;

Table 4 – Specification Summary

Element	Part L	Enhanced Specification
Wall	0.30W/m ² K	0.25W/m ² K
Party Walls	0.20W/m ² K	0.00W/m ² K
Cold Roof	0.20W/m ² K	0.11W/m ² K
Floor	0.25W/m ² K	0.15W/m ² K
Glazing & Doors	2.00W/m ² K	1.32W/m ² K
Air Permeability	10 m ³ /(h.m ²) @ 50 Pa	5 m ³ /(h.m ²) @ 50 Pa

The targeted u-values go significantly beyond the minimum standards of Part L. This will ensure the thermal envelope of every home will be energy efficient.

8 EVALUATION

We have prepared this Sustainability Statement to accompany the planning application for our proposed development at Fontwell Avenue, Eastergate. This Statement includes details on material selection, pollution, waste management, water efficiency and energy efficiency. The key endeavours are as follows;

- We operate a national timber procurement policy which requires all suppliers to verify the source of their product. Full Chain of Custody certification must be presented.
- The construction specification for Grantham Road achieves A+ - C ratings when assessed against the Building Research Establishments Green Guide.
- Eco sanitary ware and flow restriction devices will be installed in every property. Water consumption levels compliant with Part G will be achieved.
- A site waste management plan will operate at the development.
- Energy efficiency measures will be included in the design and construction of every home.

In conclusion, our strategy addresses energy efficiency, water efficiency, pollution and material selection. When assessed against the definition included in the NPPF the proposals can be described as sustainable. We therefore recommend the approval of these measures.