

Supplementary Planning Guidance Greener Resources

SPG 8b Materials

1. INTRODUCTION

1.1 In assessing the materials proposed in development schemes the Council will have particular regard to the following: adopted Haringey Unitary Development Plan (1998) Policy DES 2.6, Haringey UDP First Deposit Consultation (2003) Policies UD 1 and UD 2, SPG1a and SPG 9, and this supplementary guidance.¹

1.2 Supplementary guidance is provided below regarding the following:

- Context
- Visual aspects of materials
 - Built form
 - Anti-grime (graffiti and fly-tipping)
 - Non glare
- Sustainable development - environmentally friendly materials
 - Reuse, recycling and avoiding waste
 - Replaceable - from sustainable sources
 - Natural, non-toxic and non polluting
- Asbestos
- Locally sourced
- Maintenance and durability
- Further sources of information

2. Context

2.1 The Council expects all development schemes to take on board sustainable development and requires a sustainability statement to be submitted with applications for planning permission and listed building consent. Guidance is

¹ Information in the sustainable development and subsequent sections of this SPG has largely been adapted from work done by the Sustainability Team of the London Borough of Enfield, entitled: "Greening Your Home -Householders Guide to Sustainable Design and Construction", April 2002, financially supported by the Government Office for London, and further developed by Camden 's Sustainable Buildings Steering Group in their "Camden Green Buildings Guide". Haringey would like to thank these organisations for allowing us to reproduce from those documents. Enfield's document can be viewed on the following website -- www.enfield.gov.uk and Camden's appear on www.camden.gov.uk

provided in SPG 9: Sustainability Statement – Including Checklist. Materials is included as one of the items on the checklist.

- 2.2 The Council also expects all development schemes to be of quality design and requires a design statement to be submitted with applications for planning permission and listed building consent. The choice of materials is an important design element. Guidance is provided in SPG 1a: Urban Design Guidance.
- 2.3 In choosing materials as part of any development scheme, the aim should be to try and take both the sustainability element (how environmentally friendly the materials are) and the visual element (how the materials look) into account. It is accepted that outside heritage areas, the ability to take on board sustainable materials will be influenced by the availability locally, and financial viability, of sustainable materials.

3. Visual Aspects of Materials - How Materials Look

Built Form

- 3.1 The visual element of good use of materials, is using those which adhere to urban design principles, such as those in keeping with the building itself and the character and appearance of the local area. This is of particular importance with window materials, facing materials (such as bricks and roof finishes), shopfront design, advertisement signage, street furniture and other components of a built urban environment. (See also SPG6a, Shopfronts, Signage and Security, SPG6b Advertisements and SPG1a Design Guidance).
- 3.2 To some people there are parts of the built environment which “look good” because they have an inherent beauty due to what they represent. To them an urban windmill providing renewable energy or a roof slope made up of shiny blue photovoltaic (PV) solar modules which also provide renewable energy would both be beautiful because they represent a way of providing energy without using the earth’s depleting fossil fuels and without producing harmful CO₂ emissions (other than that embodied in their construction or used in their transportation to site). They are thus a sustainable means of providing energy.
- 3.3 However the two elements of good design do not need always to be conflicting. For example, it is possible to incorporate visibility of materials into the choice of sustainable materials so that, for example, non reflective PV panels are used rather than shiny blue ones in a Victorian terrace or, say, using free-standing panels discreetly hid behind parapet walls. (See the renewable energy section of SPG9: Sustainability Statement – Including Checklist).
- 3.4 Any materials proposed for a building or its environs need to be sensitive to the building in question, the adjoining buildings and any distinctness in the local character of the surrounding area.

- 3.5 In areas where certain materials predominate, such as a certain colour of brick or slated roofs, it would normally be expected that new development would use similar materials. In some cases, such as in conservation areas or regarding listed buildings, identical materials would be expected for example, any new facing bricks will normally be expected to be second hand to match the existing. In less defined areas with more diverse materials a strong building can use sensitive materials to integrate an area giving new definition and strength. In all cases details of the proposed materials should be supplied either at the time of the original application or submitted for subsequent approval if subject to an appropriate planning condition.
- 3.6 New windows proposed to be installed in, say, an extension to a building, should normally match those existing. Match those “existing” in planning terms usually means matching the original windows installed at the time the building was erected, such as timber sashes rather than installing any inappropriate new window. Windows constructed of UPVC (Unplasticised Polyester Vinyl Chlorine, aka PVCu), aluminium or other non-traditional materials tend not to match the detailing of traditional timber windows and they will generally not be acceptable. (For example the thickness of the frame members in plastic, UPVC or aluminium double glazed units tends to be greater than in traditional timber windows). Not only can this impact negatively on the look of the building but it can also reduce the amount of available daylight. (There will also be environmental impacts to be considered of using UPVC frames – see below under Section 4).
- 3.7 The choice of materials for the surfaces of paved or hard landscaped areas, around those buildings is also important. The type and colour of paving slabs can have a great impact on the setting of a building and needs careful consideration.

Anti Grime

Graffiti²

- 3.8 Walls, fences and other boundaries of a property can be potential targets for graffiti. (This is especially true for a large windowless expanse in the flank elevation of corner properties).
- 3.9 Experience has shown that the best way to deal with graffiti is to remove it as quickly as possible after it has been applied (preferably within 48 hours) as a deterrent to the “artists” concerned.
- 3.10 Coatings applied to materials such as brick, stone, mortar, timber and paint, can protect them from graffiti permeating the surfaces and allow for easy removal. There are two types of such protective coatings: “sacrificial” and “permanent” coatings.

² Information in the graffiti section of this SPG has been adapted from information obtained from Sheffield City Council’s Grime Busters and the Anti-Graffiti Association. Haringey would like to thank these organisations. See their websites: www.sheffield.gov.uk and www.anti-graffiti-association.co.uk Further information on the Anti- Graffiti Association can be obtained from the Chairman, Derek McGovern on Tel: 020 7646 1460.

- 3.11 Sacrificial Coating: – is one which enables light graffiti to be washed off but very stubborn graffiti would need the coating to be removed (i.e. literally “sacrificed”) and the relevant patches re-coated following cleaning. It is possible to get sacrificial coating which does not shine or cause discoloration to the surface.
- 3.12 Permanent Coating – is one which is designed to be more resilient, to enable repeated graffiti removal easier and quicker. The coating can last 10 years or longer and it is suitable for use on a wide range of surfaces. It has a clear matt or clear gloss finish. This will require chemicals to remove the graffiti.
- 3.13 Companies exist which remove the graffiti by gently blasting it with either water or compressed air combined with a cleaning agent. Some companies use bicarbonate of soda to ensure that the cleaning agents and run off pose no risk to health or the environment. Further information can be obtained from the Anti Graffiti Association (see footnote 2 on page three for contact details).
- 3.14 Non coated surfaces may require chemicals to remove the graffiti with the risk that inappropriate chemicals can cause the dyes to seep deeper into porous materials such as brickwork.
- 3.15 When designing a scheme it is important to identify surfaces at risk from graffiti and consider ensuring that they are protected with a coating from which the graffiti can be easily and, if necessary, repeatedly removed. Even painted surfaces which need protection, such as a mural, can be treated with a permanent anti-graffiti coating.
- 3.16 The drawings submitted with the planning application should be annotated to indicate which, if any, of the boundary surfaces are to be treated with anti-graffiti coatings.

Fly-tipping

- 3.17 Building waste is sometimes fly-tipped in streets and other areas by disreputable builders. It is important to ensure that the builder to be used is registered as a licensed waste carrier and can provide detail of where the development’s building waste will be taken.

Non Glare

- 3.18 Glare is an interference with visual perception which can be caused by the reflection of sunlight off a building or structure’s surface due to the materials chosen. Although this can happen with any glass it can be more intensive if it occurs due to the choice of facing materials in certain locations.
- 3.19 Care therefore needs to be taken in particular with the choice of certain metallic and other shiny facing materials, such as stainless steel, and their intended siting on a structure or building façade so that unpleasant glare does not occur to pedestrians and road users, nor to occupants of buildings opposite.

4. **Sustainable Development - Environmentally Friendly Materials**

- 4.1 Building and construction materials which are environmentally friendly are those which do less damage to the environment than the relatively unsustainable alternatives. This involves using materials which do not damage the environment, either because of where they come from or what they are doing to the environment – including effects on the long term health of the occupants. This is becoming less of a challenge to designers and builders as so-called “green” supplies become more available (for example, see Section 6, below).
- 4.2 There are associated benefits from using environmentally friendly materials, which will be easily noted by future occupants, e.g. lower energy bills due to including solar panels which is particularly important for people in potential affordable housing units and others who may be suffering from fuel poverty. Some of the environmental benefits may be less obvious but are of wider significance (e.g. from using timber from sustainably managed forests). However
- 4.3 Environmental performance assessment methods such as the Building Research Establishments (BRE) Environmental Assessment Method (BREEAM), BRE’s Eco Homes Method, the NHS Environmental Assessment Tool (NEAT) and the Schools Environmental Assessment Method (SEAM) all use materials as one of the performance criteria. (See SPG 8c: Environmental Performance).

Reuse, Recycling and Avoiding Waste

- 4.4 It is important to control and regulate the amount of waste produced during the building process and not to over order. The quantities required should be calculated carefully so that there is as little waste as possible.
- 4.5 In terms of required materials, wherever possible, recycled materials and reclaimed components should be used providing they are compatible with the visual design elements of the scheme and provided that they are not polluted.
- 4.6 Timber can often be repaired and reused, for example timber windows and, also sometimes, old and reclaimed floorboards. Old fencing can be used for temporary strutting.
- 4.7 The production of materials such as bricks is an energy intensive industry and therefore using second-hand bricks can therefore be beneficial to the environment.
- 4.8 To assist any future reuse of bricks, lime mortars should be used instead of cement (the production of which, like bricks, is also energy intensive). Lime mortars are a traditional means used in laying bricks and do not set as hard as cement. Thus the mortar can be cleaned from the brick making it possible for the bricks to be reused. In contrast, cement mortars cannot be removed making the bricks good for nothing more than hardcore. (Lime mortars tend to look better aesthetically than cement mortars too).

- 4.9 In terms of aggregates and stone, when using rubble or hardcore the use of quarried stone should be avoided, especially limestone, as there are environmental problems associated with extraction. Alternatives include “minestone”, the stone waste from the mining of coal and metallic ores, or preferably recycled crushed concrete, broken bricks or material from road resurfacing. When recycled aggregates are used, however, care must be taken to ensure they are not potentially contaminated.
- 4.10 Using recycled glass products is more sustainable than using virgin glass, the manufacture of which is also an energy intensive process.
- 4.11 There are a number of salvage yards of either architectural pieces or standard building materials in or close to north London. Names of some firms can be found in local newspapers or yellow pages under building products. The Architectural Salvage Index can be contacted for a list of yards and dealers (web: www.handr.co.uk; Tel: 01483 203221). Demolition sites can also be a source of ready materials. It is important to ensure that any salvage bought has been obtained ethically. The Salvo Network produces a database of stolen items. www.salvo.co.uk/index.html
- 4.12 In general old lead pipes for plumbing should not be considered as suitable for recycling. Care should be taken in removing them and in the disposal of old flaking paint, as it may contain lead.

Replaceable - from Sustainable Sources

- 4.13 In terms of new materials, care should be taken not to deplete the earth's threatened resources, which include certain tropical hardwood (including plywood). These should be avoided unless it is known that they come from a sustainable source which will be easily replaceable without harm to the environment. Timber from environmentally managed forests always carries either the Forest Stewardship Council's Trademark³ or another label from an equivalent internationally recognised, globally applicable, independent certification scheme for good forest management. European soft woods, such as pine and birch plywood, should be used where possible.
- 4.14 There are paint products available, which are made from renewable natural materials such as linseed oil, balsamic turpentine and various citrus oils and plant and tree resins. In addition, natural pigments can include earth and mineral pigments (such as ochre, umber and sienna) and paint extenders / fillers including types of clays and chalk which are in plentiful supply.

Natural, Non-toxic and Non-polluting

- 4.15 The impact of the materials on the health of its occupants is a matter that discerning architects and developers are starting to take into account.

³ The Forest Stewardship Council's Trademark is a label on timber and wood products which indicates that the wood comes from a well-managed forest. It guarantees that the forest of origin has been independently inspected and evaluated to comply with an internationally agreed set of strict environmental, social and economic standards.

- 4.16 Up to 90% of the internal surface area of a building may be covered with a synthetic petrochemical covering. Studies have shown that the indoor environment can be up to ten times more polluted than the external environment.
- 4.17 This pollution can be reduced by using more sustainable products for building and finishing buildings, for example natural, water-based paints and solvent-free wood finishes can be used that do not give out any toxins. Many natural paints and finishes are now more widely available.⁴
- 4.18 The use of such natural products can benefit allergy sufferers and those sensitive to certain chemicals.
- 4.19 Natural paints also benefit the health of buildings by helping them to 'breathe' – i.e. they can assist a buildings fabric to absorb and regulate moisture. This in turn helps human and building health by reducing condensation, moulds and related problems.
- 4.20 There are also natural earth and mineral derived pigments and types of clay and chalk paint extenders and fillers.
- 4.21 The manufacturing processes that such natural ingredients undergo in such natural materials involve minimal pollution, waste and energy and ensure their maximum biodegradability.
- 4.22 Natural flooring products can be used to assist in the reduction of noise pollution being transmitted within buildings. For example underlay boards, manufactured from compressed wood fibre, which can provide both a smooth surface and an impressive 36 decibel sound reduction. Natural rubber that has been made with non-chlorine based ingredients makes durable flooring in bathrooms which is also a shock absorber. Natural linoleum (made from renewable material such as linseed oil, resin from pine trees, wood from deciduous trees and natural cork, all mixed together with inorganic fillers such as clay and chalk) can also act as an efficient sound absorber. (Natural linoleum is also naturally antibacterial, anti-static, is resistant to fats and oils and becomes stronger over time).
- 4.23 Timber can be used that is unfinished (not painted or varnished) and can then be treated using natural oil and wax finishes. It is a more sustainable material for windows and doors than those constructed of UPVC.
- 4.24 UPVC requires hazardous chemicals in production releases harmful additives and creates toxic wastes from production to disposal.
- 4.25 The production and disposal of UPVC windows leads to the release of highly poisonous chemicals, which threaten the environment and human health. UPVC production releases no less than six of the fifteen most hazardous

⁴ Some of the larger DIY stores sell natural products and many companies sell through the internet or by mail order.

chemicals listed by European governments for priority elimination. When UPVC windows come to be disposed of, many of these chemicals are again released into the environment, either through chemical reactions caused when UPVC is incinerated or through depositing old UPVC frames in landfill sites.

- 4.26 However there are many alternatives to PVC and Greenpeace International has produced a database for people interested in all levels of construction trying to track down PVC alternatives – www.greenpeace.org/~toxics/.

5. **Asbestos**⁵

- 5.1 Any refurbishment or redevelopment should consider the need for an asbestos survey. (In some homes built or refurbished between 1945 and 1989, asbestos may be present in some cement products such as tanks and pipes; insulating boards, lagging, tiles, roofing felts and also some household equipment such as ironing board pads, fire blankets etc).
- 5.2 Provision should be made for the safe removal and disposal of any asbestos which exists in existing property to be demolished as part of a redevelopment scheme.
- 5.3 If the property with asbestos present is to be extended, say, rather demolished and the asbestos is undamaged it may be appropriate for it to be left alone. However it should never be drilled, sawn, sanded or scrubbed with a wire brush. Some asbestos can be sealed depending on the type and amount of damage incurred either with special paints or a flexible polymeric or a bitumastic covering. If asbestos materials are badly damaged or releasing dust, they should be removed by specialist licensed contractors. Small items should be sealed in strong plastic bags and marked 'Asbestos' as should larger unbroken pieces which should be double wrapped in strong polythene. The Corporation of London will collect free of charge quantities of up to 50 Kilos. Tel: 0207 332 3433 weekdays. (For further advice and information on asbestos removal contact Haringey Council's Environmental Health department, at 639 High Road, Tottenham N17 8BD 020 8489 5230 Minicom for people with hearing or speech problems: 020 8885 7549).

6. **Locally Sourced**

- 6.1 Locally supplied materials (if there is nothing else to choose between them) should be used as it avoids unnecessary transport of goods over long distance.

⁵ Asbestos has been used in building materials and products for many years, particularly for fire protection. Asbestos is a natural, fibrous material of which there are three types: blue, brown and white. Diseases from asbestos are mainly of an industrial nature where exposure to the fibres has been gross and prolonged. Some asbestos products are soft and are easily damaged allowing fibres to be released into the air, which can be harmful.

- 6.2 This is equally true of recycled products if they have to be transported long distances. Such transportation costs should be put into the notional environmental equation in that it could, on occasion, be more sustainable to buy local new products.

7. **Maintenance and Durability**

- 7.1. Longer lasting materials are to be preferred over those less robust as not only does this avoid frequent replacement (and more waste from the discarded materials) but it can result in savings over time. The full life costs of a product will make something dearer in the short term (such as PV roof tiles) but cheaper in the long term.
- 7.2. When comparing prices between UPVC and timber windows and doors initial capital costs should be compared with the total costs over the lifetime of the unit. Timber, if from a certifiable source, is well seasoned and kept protected. It will last longer in the long run than UPVC windows (and will be more sustainable in terms of the other toxicity implications mentioned in Section 4, above). In the short term, UPVC is low maintenance but are usually impossible to repair and even slight damage requires the whole unit to be replaced. The National Building Federation's 'Standards and Quality in Development' gives UPVC window frames a life expectancy of 20 to 25 years, and vacuum-treated softwood frames 25 to 35 years. According to the Green Building Digest, 'well designed and well maintained timber windows can and do last the lifetime of the building in which they are installed.'
- 7.3. Materials used in surfaces for vehicle and pedestrian movement should take into account maintenance costs. This again is likely to result in initially more expensive options being comparatively cheaper in the long run.

8. **Further Sources of Information**

- 8.1 The following are examples of suppliers of green information and or products:

Association for Environment Conscious Building - for information on non-toxic paints. Tel: 01559 370908 www.aecb.net

Construction Resources Ltd - Ecological builders' merchant and building centre. Stock alternative paints and finishes and provide independent advice. - 16 Great Guildford Street, London SE1 0HS. Open 10am – 6pm Monday – Friday. Late opening Wednesday 'til 8pm. Tel: 020 7450 2211 Fax: 020 7450 2212 www.ecoconstruct.com

Eco-Friendly House Plants by B.C Wolverton (1996) - for information on removing chemicals with houseplants. Published: Phoenix.

Environment and Energy Helpline - primarily for businesses 0800 585794 or websites www.envirowise.gov.uk www.actionenergy.org.uk Envirowise (deals with waste minimisation) and Action Energy (deals with energy efficiency)

Green Building Digest, School of Architecture, Queen's University of Belfast, 2 – 4 Lennoxvale, Belfast, BT9 5BY, Northern Ireland. Tel/Fax: 01232 335466. Email: t.woolley@qub.ac.uk (available for the Building Research Establishment bookshop) - provides information on environmental issues for specifiers and purchasers of building materials.

Green Building Store - Tel: 01484 854898 www.greenbuildingstore.co.uk

Guide to Specifications (1998) and *Green Guide to Housing Specification* (2000), Building Research Establishment (BRE) - available from the BRE bookshop www.brebookshop.com

Handbook of Sustainable Building (1996), Anink, Boonsta & Mak – A Dutch equivalent to the Green Guide to specification that uses the 'environmental preference' method to describe the options for different building elements. It also has a number of interesting case studies.

The Green Guide to Specification, Jane Anderson David Shiers with Mike Sinclair (2002) Copyright by Consignia, Oxford Brookes University and the Building Research Establishment. SBN 0-632-05961-3. Published by Blackwell Science website: www.blackwell-science.com - for construction professionals.

Suppliers Guide – alternatives to pvc and also pvc plastic – a looming waste crisis by Greenpeace publications: www.greenpeace.org.uk

8.2 There are many other organisations giving advice and selling green products.

This SPG has been consulted on as part of the Haringey UDP First Deposit Consultation. As such, it is a material consideration in determining planning applications.