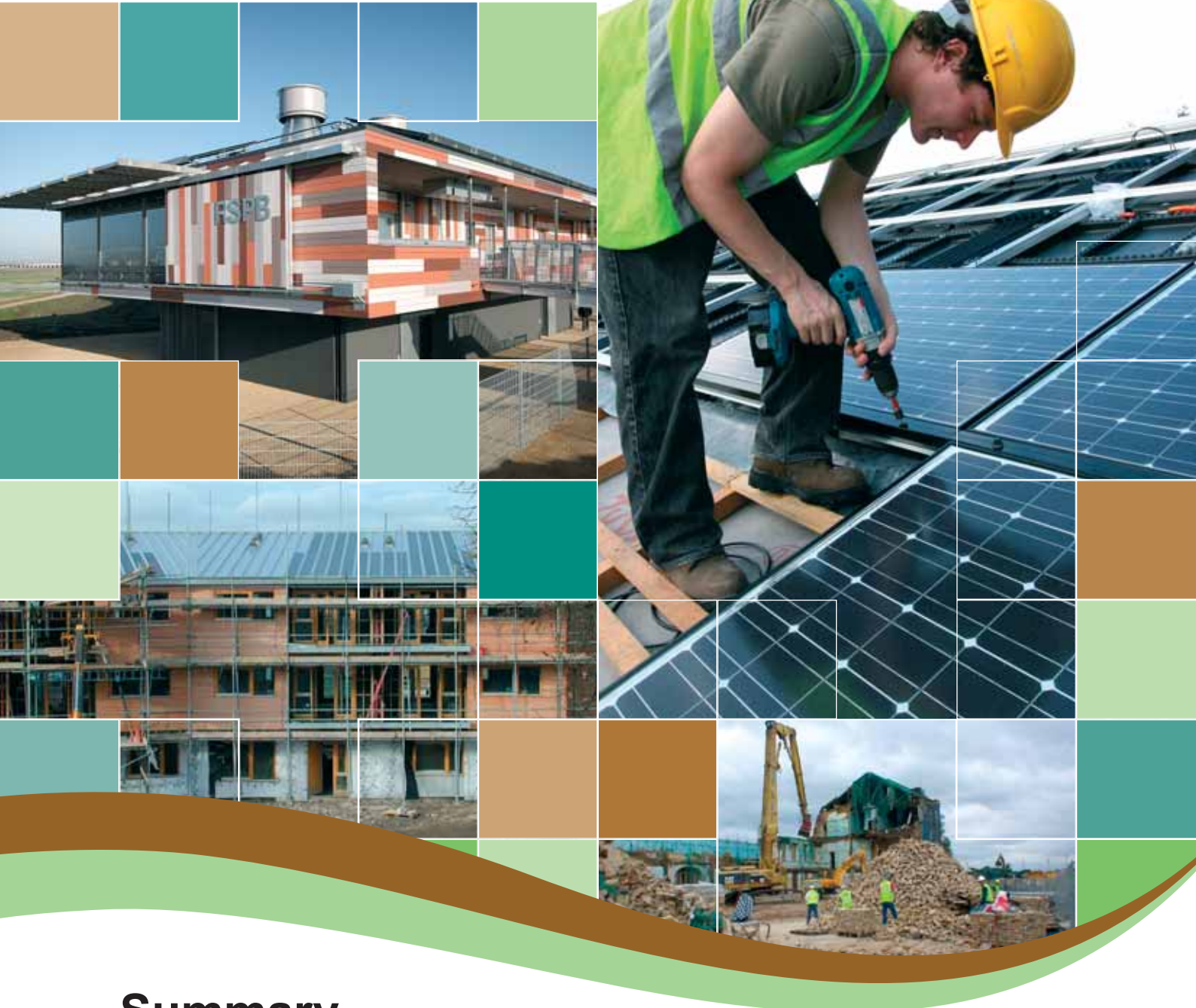


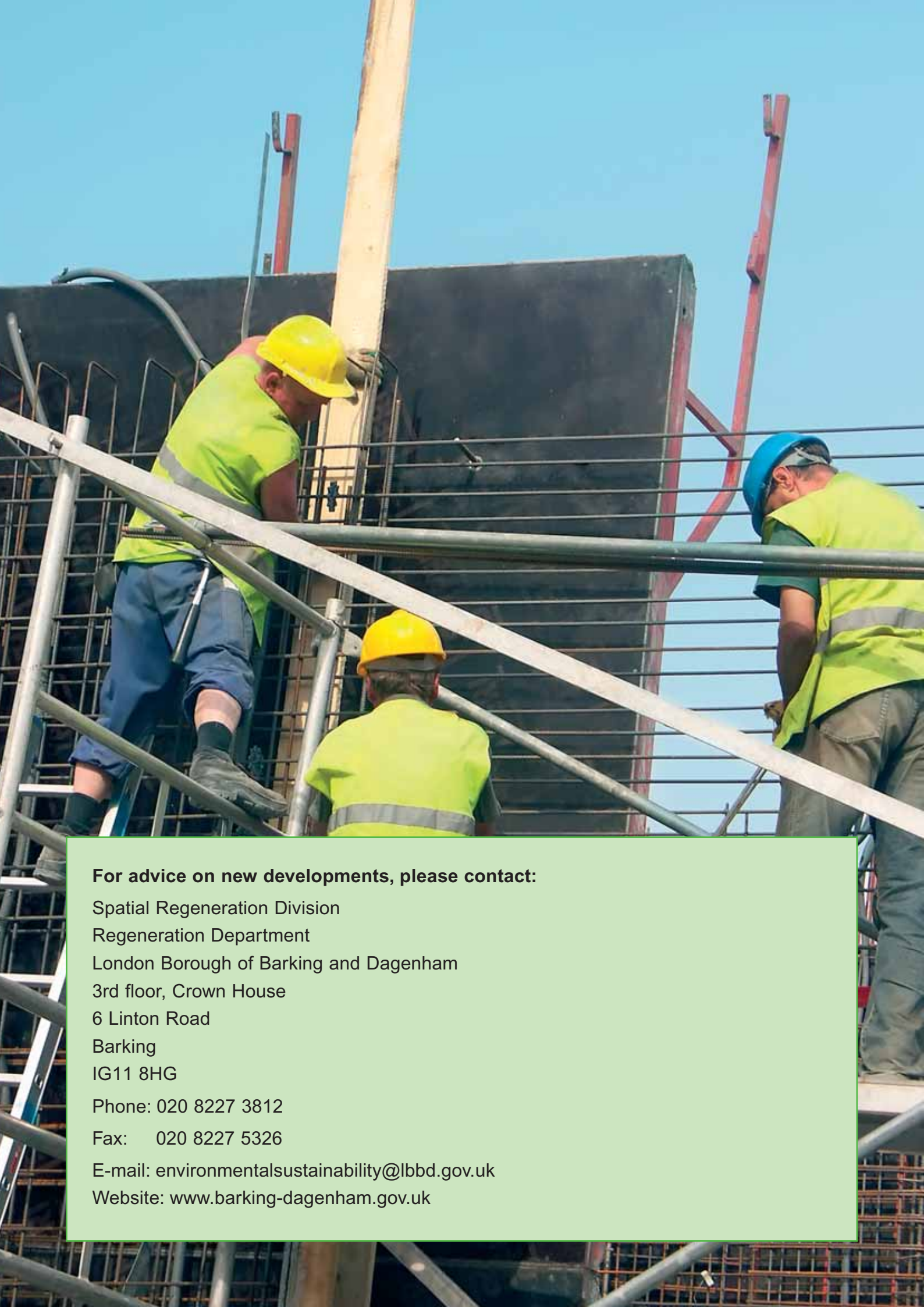
Planning advice note 5

# Sustainable design and construction

## An environmentally-friendly approach



### Summary



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## Cover photo credits

Photo of RSPB's Environment and Education Centre in Rainham Marshes (top-left corner) © Royal Society for the Protection of Birds (RSPB)

Photo of solar electric cells being mounted on a roof (top-right corner) © solarcentury.com

Photo of Warwick House under construction in Angell Town, Lambeth (bottom-left corner) © solarcentury.com

Separation of bricks (bottom-right corner) © EnviroCentre

# 1 Introduction

- a This planning advice note provides guidance to planners, developers and architects on environmentally-friendly design and construction. It will help us achieve policies set out in our Unitary Development Plan (UDP), future Local Development Framework (LDF) and London Plan.
- b We are committed to fighting environmental problems locally and worldwide, and we think new buildings should play their part in protecting the environment. With up to 25,000 new homes proposed in the borough over the next 20 years, we have an opportunity, through better design and construction methods, to make new developments work for the environment rather than against it.
- c This planning advice note sets out the environmental standards which different types of developments must meet in:
  - construction materials;
  - waste;
  - energy;
  - water; and
  - nature conservation and biodiversity.
- d We have classed developments in four categories and you should meet the sustainability standards in your category. The four categories are:
  - **strategic developments** — very large developments of over 500 homes that have to be agreed by the Mayor of London;
  - **major developments** — over 10 homes;
  - **developments within Barking Town Centre Energy Action Area**; and
  - **minor developments** — fewer than 10 homes (but not flat conversions or single house extensions).
- e Developments in Barking Town Centre are in a different category because the Mayor of London has chosen Barking Town Centre to be an energy action area which means requirements related to generating and using energy efficiently are more ambitious.



Flooding is one example of an environmental problem we could see more of in the future.

## 2 What are we asking you to do?



The Green Building in Manchester achieved EcoHomes Excellent.

(Photo: Farrells: Daniel Hopkinson)

### a Environmental assessments

We will ask you to give us an overall assessment of your buildings' environmental standards. You must do the assessment through an established system, for example, the Building Research Establishment's Environmental Assessment Method (BREEAM) for homes called EcoHomes.

### b Construction materials

Huge amounts of materials are used to build new homes, offices, commercial and industrial buildings every year. Some materials have

more of a negative effect on the environment than others. For example, producing polyvinyl chloride or PVC, which is often used to make window frames, causes pollution in the atmosphere.

For these reason we will ask you to:

- use materials from local suppliers to reduce the need for transport;
- use reused and recycled materials (this will mean that you throw fewer materials away);
- use materials which do not damage the environment unnecessarily when mined, made and transported;
- use timber from well-managed forests (this will help stop the unnecessary destruction of the world's forests); and
- do not use peat or weathered limestone because the supply of these materials destroys the special living places for plants and wildlife.

### c Waste

Burying waste underground is no longer acceptable. Space is running out. Burying waste pollutes the atmosphere, and materials that are buried cannot be reused. We must reduce the amount of waste we produce, recycle more and extract energy from waste.

For these reasons, we will ask developers to:

- show how they will reduce and recycle waste when building new homes or workplaces;
- reuse and recycle materials from demolition sites rather than burying them;
- provide recycling facilities for the future users of the buildings; and
- provide recycling and composting centres for larger building projects.

## d Energy

Our climate is changing and temperatures are expected to rise by a further 5 degrees centigrade during the next 100 years. Unless we reduce carbon dioxide (CO<sub>2</sub>) emissions and other greenhouse gases released into the atmosphere by transport, industry and our homes, climate change will have a huge effect on the world's economy, societies and wildlife.

For these reasons, we will ask you to:

- make the most of the sun's heat and light through design (for example, buildings should face within 30 degrees of the south);
- insulate buildings well so that heat is not lost through roofs, walls and windows;
- use energy-efficient lighting and lighting controls so that, for example, lights turn off automatically when nobody is in the building;
- install energy-efficient appliances, for example, fridges and washing machines;
- install community heating which is more efficient at heating buildings than individual boilers; and
- generate some energy for the building from renewable energy sources such as wind and sun. For example, install solar water heaters, solar electric cells on roofs or mini wind turbines.



The National Trust Building in Swindon has solar electric cells on its roof.  
(Photo: solarcentury.com)



## e Water

The south east of England is facing a water shortage with hosepipe bans becoming a regular event during the summer months. Water shortages will become more frequent as our climate gets hotter and an increase in sudden storms may lead to more flooding.

For these reasons we will ask developers to:

- include natural drainage systems (for example, rather than paving areas around buildings, use gravel or grass to allow rainwater to seep into the ground);
- make sure taps, shower heads and toilets do not waste water (for example, install dual-flush toilets); and
- provide water butts or tanks to collect rainwater which can be used, for example, to water the garden, and design water pipes so that water used for washing can be reused to flush the toilet.

## f Nature conservation and biodiversity

New buildings can disturb or even destroy plants and wildlife. Many species worldwide became endangered or extinct in the 20<sup>th</sup> century due to our need for housing, food and other natural resources.

For these reasons, we will ask you to encourage plants and wildlife when building homes or workspaces by:

- protecting habitats and species already there; and
- creating an environment where wildlife will thrive. For example, a green roof where plants can grow will encourage birds and insects to feed and nest on the building.



Developments, such as this one in the City of Malmo, Sweden, can be designed to encourage wildlife. (Photo: Town and Country Planning Association)

### 3 What do we need from you when you put in a planning application?

We will ask you to fill in a 'sustainability statement' telling us what you will do to make your buildings more environmentally friendly. You can download a statement from our website at <http://www.barking-dagenham.gov.uk/8-leisure-envir/planning/plan-documents.html> or contact us for one.

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This booklet is a sustainable design and construction planning advice note. You can ask for a translation by ticking one of the boxes, filling in your name and address and returning this form to the address at the end of these translations.

**Albanian**

Kjo broshurë është një njoftim këshillues i planifikimit të vazhdueshëm të projektimit dhe ndërtimit. Ju mund të kërkoni për një përkthim duke shënuar një nga kutitë, duke plotësuar emrin dhe adresën tuaj si dhe duke e kthyer këtë formë tek adresa në fundin e këtyre përkthimeve.

**Chinese**

此小冊子記錄能承受的設計和建築計畫的建議。你可以索取它的中文版，只需在其中一個方格內打鉤，填寫姓名和住址，並將表格寄回以下地址。

**French**

Ce livret est un petit guide sur l'établissement de plans et de construction durables. Vous pouvez en demander la traduction en cochant l'une des cases, en indiquant votre nom et votre adresse et en renvoyant cette fiche à l'adresse indiquée à la fin des traductions.

**Lingala**

Mwa mokanda oyo ezali note ya litiya ya planning ya dessin soutenu naa construction. Okoki kosenga ndemboli na yango soki oponi yoko ya ba boites, okomi kombo na adresse nayo sima ozongisi formulaire oyo na adresse ekomami na suka ya ba ndemboli oyo.

**Polish**

Niniejsza ulotka jest zawiadomieniem o planowanych budowach oraz trwałych zmianach architektonicznych. Aby uzyskać te informacje w języku polskim proszę zaznaczyć jedną z poniższych kratek, wpisać swoje dane oraz adres i odesłać ten formularz na poniżej podany adres.

**Portuguese**

Este folheto é uma nota de aviso de desenho sustentável e plano de construção. Pode pedir uma tradução ao pôr um sinal em uma das caixas, preencher o seu nome e endereço e devolver esta forma para a morada no fim destas traduções.

**Punjabi**

ਇਹ ਲੀਫਲੈਟ ਦਸਦਾ ਹੈ ਕਿ ਆਪਣੇ ਕੂੜੇ ਨੂੰ ਸਹੀ ਤਰ੍ਹਾਂ ਨਾਲ ਬਾਹਰ ਰੱਖਣ ਦੇ ਜ਼ਰੀਏ, ਤੁਸੀਂ ਬੌਰੇ ਨੂੰ ਕਿਸ ਤਰ੍ਹਾਂ ਸਾਫ਼ ਸੁਥਰੀ ਬਣਾ ਸਕਦੇ ਹੋ। ਦਿੱਤੇ ਗਏ ਬੌਕਸਿਜ਼ ਵਿਚੋਂ ਇੱਕ ਵਿਚ ਟਿੱਕ ਕਰਕੇ, ਆਪਣਾ ਨਾਮ ਅਤੇ ਪਤਾ ਭਰ ਕੇ, ਇਸ ਨੂੰ ਇਸ ਫ਼ੋਰਮ ਦੇ ਅਖੀਰ ਵਿਚ ਦਿੱਤੇ ਗਏ ਪਤੇ ਤੇ ਵਾਪਸ ਭੇਜਣ ਦੇ ਜ਼ਰੀਏ, ਤੁਸੀਂ ਇਸ ਦੇ ਅਨੁਵਾਦ ਲਈ ਕਹਿ ਸਕਦੇ ਹੋ।

### Somali

Buug-yarahan waxa uu ku saabsan yahay talobixinta qorshaha dhismaha iyo naqshadaynta. Waxaad codsan kartaa in lagu turjumo adigoo saxaya mid ka mid ah khaanadaha, kuna buuxinaya magaca iyo cinwaankaaga kadibna foomka ku soo celinaya cinwaanka ku qoran dhammaadka turjumaadahan.

### Swahili

Kitabu hiki kinaiidhinisha kwa muhtasari ushauri wa kuunda mipango inayodumu. Unaweza kuomba utumiwe tafsiri ya habari hii kwa kutia tiki kwenye kijisanduku na kuandika jina na anuani yako, halafu uitume fomu katika anuani iliopewanwa hapo mwisho wa tafsiri.

### Turkish

Bu broşür, sürdürülebilir tasarım ve yapı imar bilgi notu konusundadır. Broşürün Türkçe'ye çevrilmesini istiyorsanız, lütfen uygun kutuyu işaretleyip isminizi ve adresinizi yazdıktan sonra, bu formu en son sayfadaki adrese gönderin.

### Urdu

یہ کتابچہ ایک قائم رہنے والے ڈیزائن اور تعمیری پلاننگ کے ایڈوائس نوٹ کے بارے میں ہے۔ آپ اس کے ترجمے کے لئے کہہ سکتے ہیں۔ اس کے لئے دیئے ہوئے خانوں میں سے ایک پر ٹیک کریں، اپنا نام اور پتہ لکھیں اور اس فارم کو ان ترجموں کے آخر میں دیئے ہوئے پتے پر واپس بھیج دیں۔

Your name:

Your address:

If you would like information on audio tape, in large print or in Braille, please contact the

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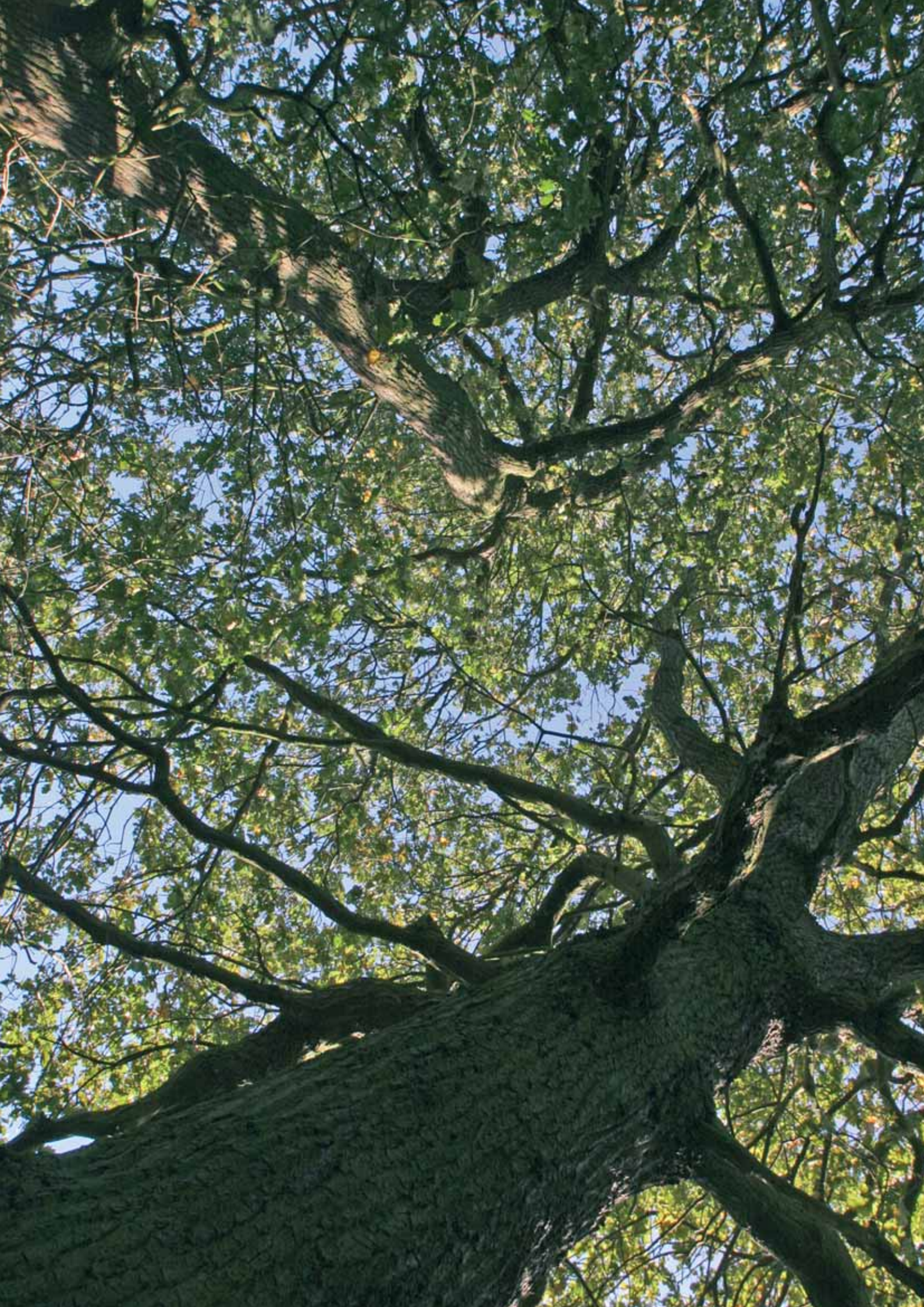
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