HS3: Urban Wastelands

Definition

For the purposes of this statement, urban wastelands are defined as those sites that support semi-natural vegetation that has developed over an imported or artificial substrate, subsequent to previous development or disturbance. Such sites include disused railway sidings, demolition sites, redundant industrial land and derelict land. It is noted that Urban Wastelands are not synonymous with 'brownfield land', which includes a much wider range of 'previously developed' land and can encompass sites which are now essentially the semi-natural woodland, grassland or other habitats covered in Section 1 of this document.

Greater London's Urban Wasteland Resource

It has not proved possible to assess the extent of London's urban wasteland resource. Urban wastelands were severely under-sampled in the London Wildlife Habitat Survey 1984/85 and more recent assessments of urban wasteland, derelict land and brownfield land, undertaken by other agencies, have used various incompatible definitions.

The London Wildlife Habitat Survey's underestimation was partly the result of the exclusion of many wasteland sites. These were the sites which did not fall within the size threshold for inclusion in the survey (1 ha in the outer London boroughs and 0.5 ha in the inner London boroughs).

Whatever the true extent of London's urban wasteland resource in the mid-1980s, there is no doubt that there has been a substantial reduction in its extent within the last decade. London's former docklands contained a significant proportion of the capital's urban wastelands, but most of this area has been redeveloped to accommodate London's burgeoning service sector industries. Other large areas have been lost in more recent years to provide land for new housing.

Despite the losses to some of the most extensive areas of urban wasteland in London, new sites, albeit smaller and more widely dispersed, are constantly being created as a result of abandonment – a feature of the development cycle in a major conurbation.

Nature Conservation Importance

As a whole, urban wastelands may be one of the most diverse of London's habitats. They encompass a wide range of sites with varying substrates, topographies and other factors that determine the distribution of plant and animal species. The variation in other habitat types such as grassland and heathland may be rather subtle, as a result of minor changes in soil chemistry and hydrology, for example. However, the variation amongst urban wasteland communities can be quite striking, because of the different substrates and the source of primary colonisation.

Some of the most important attributes of urban wasteland habitats are essentially ephemeral. Micro-topographical features and microclimatic effects are rapidly created as land is disturbed or surrenders to natural processes after abandonment. However, they are rapidly destroyed when land is recycled for new development or natural succession leads to eventual dominance by secondary woodland or *Buddleia* 'scrub'.

A common feature of many urban wastelands is the dominance of species that are considered to be 'weedy', ruderal or pioneer species. These species are best able to colonise disturbed or hostile environments, but often succumb to competition once conditions ameliorate or stabilise. For this

reason many of the species that flourish in urban wastelands are exotics which would normally be out-competed by native species, or are species which have exacting climatic or biological requirements that are rarely available except in the unusual conditions which arise on urban wastelands.

The characteristic plant species of urban wastelands is perhaps the butterfly bush *Buddleia davidii*, which is almost ubiquitous in wasteland sites across London. Despite the prevalence of this species a number of rare and unusual plants also occur. Many are exotics which are often distributed close to their source of colonisation (ports, goods yards etc.) but others, such as false London rocket *Sisymbrium loeslii* and lucerne *Medicago sativa* have become firmly established throughout. Several native species normally associated with more natural habitats are now often more likely to be encountered on urban wastelands than elsewhere in London. These include white mullein *Verbascum lychnitis*, bee orchid *Ophrys apifera* and teasel *Dipsacus fullonum*.

The importance of urban wastelands for invertebrates is becoming increasingly apparent. The varied micro-topography of these sites may be particularly important, producing hollows, banks, eroded areas, suntraps and crevices which can be exploited by a wide variety of different invertebrates. Dog's tooth and buttoned snout moths; long-tongued bumble bee *Bombus humilis*; striped-winged grasshopper *Stenobothrus lineatus;* and bombardier beetle *Brachinus crepitans* are all species that are associated with urban wastelands in London.

In inner London, birds such as linnet, goldfinch and whitethroat are often confined to urban wastelands or areas of railway corridor, canalside or parks that have a wasteland character. The bird most often cited as a wasteland species - the black redstart – does indeed occur on urban wasteland sites, but can be found in less derelict areas where the characteristics of the habitat are very diffuse.

Some Urban Wastelands of nature conservation value in Greater London

Feltham Marshalling Yards, LB Hounslow

Gillespie Park, Islington

Mudchute Park and Farm, LB Tower Hamlets

Wandle Meadow Nature Park, LB Merton

Threats and Opportunities

Threats

The single most prominent threat to urban wastelands is redevelopment. All urban wastelands are previously developed land, or land which has had an industrial use (usually the disposal of waste material). As such, urban wastelands are usually subject to redevelopment or decontamination proposals. Redevelopment of land or the restoration of contaminated land frequently results in the almost total loss of species present on the site, as there is often a requirement for the complete removal or capping of the existing surface material and vegetation. Although this will result in local extinctions of some species, many other species will maintain local populations if there are adjacent wasteland habitats or incipient wasteland habitats (newly cleared or abandoned sites) nearby. However, in modern day London the loss of urban wastelands far outstrips the creation of new ones. The debate concerning the environmental benefits and losses attributable to

redevelopment or restoration of urban wastelands cuts to the quick of the sustainability debate in London.

The lack of awareness of the nature conservation value of urban wastelands is a secondary, but related, threat. Many sites are comprehensively redeveloped simply because there is no consideration of the biodiversity value of urban wastelands, whereas a development which may impact upon a seemingly more 'natural' habitat is more likely to be conditioned to ensure appropriate protection or mitigation. Similarly, many good wasteland sites are subject to programmes of enhancement to 'improve' their nature conservation value without first appreciating or ascertaining existing value. Often the only enhancement required is improvements to interpretation and public access.

Opportunities

Many sites in London have been identified as being of nature conservation value due, at least in part, to the ecological interest of their wasteland flora and fauna. However, few urban wasteland sites have been protected as nature reserves, and fewer still managed to maintain their urban wasteland character, with the exception of a handful of sites such as Wandle Meadow Nature Park in Merton and the extension to Gillespie Park in Islington. The establishment and management of urban wasteland nature reserves presents a major opportunity for awareness-raising and advancing the cause of biodiversity conservation in urban areas. It also provides opportunities for research into methods for retaining, restoring or creating appropriate conditions to enable biodiversity to flourish in the built environment.

Most urban wasteland flora and fauna will still need to secure opportunities outside protected sites. Indeed the very processes that produce diversity in urban wasteland wildlife are dependent upon a turnover of sites or other disturbance factors. The advent of 'green' buildings and other initiatives to green the city are efforts to reinstate the processes which give rise to urban wastelands. Rooftop 'urban wastelands' could help offset habitats currently being lost to built development. Creating appropriate conditions to encourage natural colonisation by wasteland flora and fauna could also be encouraged in open spaces with limited existing nature conservation value, as a new means of enhancing biodiversity and a step away from the current orthodoxy of creating imitation 'flower-rich meadows' or 'bluebell woodlands'.

Data Sources

Greater London Council (undated). *A Nature Conservation Strategy for London: Woodland, Wasteland, the Tidal Thames and two London Boroughs.* Ecology Handbook No.4. GLC

Gilbert, O. (1992). *The flowering of the cities: the natural flora of urban 'commons'* English Nature.

Box, J., & Shirley, P. (1999). Biodiversity, Brownfield Sites and Housing: Quality of Life Issues for People and Wildlife. Urban Wildlife Partnership and UK-MAB Urban Forum.