



# Wanstead Flats

## INDIVIDUAL SITE PLAN

### SUMMARY

Wanstead Flats forms the largest of the thirty-eight management compartments that comprise Epping Forest. It is an area of open acid grassland, sports pitches, heath, scrub, woodland, scattered trees and waterbodies, located at the southern end of Epping Forest; owned and managed by the City of London Corporation (COL). Wanstead Flats has a number of statutory designations and is a hugely important resource for the people of East London, both for its provision of sporting facilities and also for the opportunity to experience a natural environment within urban surroundings. It is one of the few breeding sites for Skylark (*Alauda arvensis*) in London and is a notable stop-off for migrating birds. It has a long and well-documented history, from the historical right of commoners to graze cattle and the site's protection and management under the Epping Forest Act 1878, through to World War II and modern times. Significant predicted housing growth is planned in the local area with consequent additional visitor pressure. This Individual Site Plan lists current management considerations but also presents a strategic work programme to ensure a sustainable future for the conservation and heritage interest of Wanstead Flats, along with its immense recreational value.

### INTRODUCTION

Wanstead Flats (187 hectares), makes up one of 38 management compartments and covers 7.8% of the surface area of Epping Forest. Epping Forest is one of London's largest and most significant natural Open Spaces, managed in perpetuity by the City of London Corporation, as The Conservators of Epping Forest, under the auspices of the Epping Forest Acts 1878 and 1880.

Individual Site Plans (ISPs) aim to review and collate the City Corporation's property management considerations at specific locations, to give an overview of current practice and outline longer term plans. An important part of the process is to work with key local stakeholders to ensure that we capture the management issues impacting each site. Site selection is centred around areas of Epping Forest that have a high number of competing issues and/or high visitor numbers.

The ISPs reflect the current level of activity at each site; however, an important part of each ISP is the identification of any potential improvement and enhancement projects that require additional resources, including support from external operational stakeholders, for example in the form of grant funding or volunteer person-hours. The information gathered in each report will be used by the City Corporation to prioritise work and spending on each site as part of the development of the 2020-30 Management Strategy and subsequent Business Plans for Epping Forest.

Each ISP will aim to follow the same structure, outlined below:

- **Background** – a brief description of the extent of the site covered by the ISP;
- **Property Management Context** – a list of property management constraints for the activity such as legal and statutory obligations directly relevant to the activity or location;
- **Management Considerations** – a list of identified management considerations for the site, with respect to ecology, conservation, community, heritage, landscape and any other identified management issues;
- **Potential Enhancement Projects Requiring External Support** – a list of projects that would enhance the quality of one or more aspects of the site, for which additional support would be required;
- **Management Strategy** – a summary of the key overall objectives for managing the site, as identified by the audit;
- **Outline Management Programme** – a summary of the management actions identified for the site as a result of the audit and consultation process, with anticipated timelines for completion;
- **External Operational Stakeholders** – a list of external stakeholders who have an operational input to the site, who have been consulted as part of the compilation of the Individual Site Plan;
- **Bibliography** – a list of existing reports (if available) that have formed part of the audit for the ISP; and
- **Appendices** – including a detailed activity plan.

## BACKGROUND

Wanstead Flats is a large area of open acid grassland, sports grassland, heath and scrub, with patches of woodland, scattered groups of trees and two water bodies. The Flats are located at the southern-most tip of the Forest and sit mainly within the London Borough of Redbridge, with the northern area of Bush Wood within the London Borough of Waltham Forest, with a small part (Manor Park) within the London Borough of Newham. Wanstead Flats is bounded by the communities of Forest Gate, Leytonstone, Aldersbrook and Manor Park, as well as the City of London Cemetery in the southeast, and Wanstead Golf Club in the northeast. It is close to Wanstead Park (also part of Epping Forest) to the northeast and to Manor Park Cemetery in the south. The far northern edge is bounded by the busy A12, before Epping Forest continues northwards towards Leyton Flats via an underpass at the Green Man Roundabout.

The Flats are bisected by four major roads: Bush Road (A114), which separates Bush Wood from Bush Wood North; Centre Road (A114) which runs north-south through the centre of the site; Forest Drive (A117) which separates Manor Park from the main body of Wanstead Flats; and Lake House Road, which divides Bush Wood Flats from the central part of the Flats. In addition to these roads, Aldersbrook Road (A116) runs along the north-eastern boundary, Capel Road runs along the southern boundary and Harrow Road/Dames Road border the southwest of the site. Figure 1 (Appendix 5) shows the locations of the named areas within Wanstead Flats.

Wanstead Flats is accessible from the entire perimeter at all times on foot and there are good public transport links, with eight over ground or underground stations within one mile of the Flats. A large proportion of visitors are likely to be dog-walkers (Epping Forest Visitor Survey 2017 – Footprint Ecology). Wanstead Flats is also well-connected via Transport for London's Cycleways network. There are three main public car parks, at Alexandra Lake, Centre Road and Jubilee Pond. At Jubilee Pond, there is also an easy access path around the pond, which links to a nearby children's play area managed

by the London Borough of Waltham Forest. There are three additional surfaced car parks for seasonal use by those playing football at Capel Road, Harrow Road and Aldersbrook Road.

Within the context of Epping Forest, Wanstead Flats forms the largest of the thirty-eight Forest management compartments. It has a number of statutory designations, and a long history as an important resource for the people of east London, both for its provision of sporting facilities and also for the opportunity to experience a natural environment within urban surroundings. Wanstead Flats is currently home to 44 football pitches and a separate area is set aside for flying model aeroplanes. Wanstead Flats is also heavily used by cyclists, dog-walkers and other pedestrians. Permissive horse-rides are present, though these are much less used by horse riders than in previous years.

Taken together, Leyton Flats, Wanstead Flats and Wanstead Park comprise a very significant area of open space (347.31ha/859.22acres – 14% of Epping Forest's total area) less than 6 miles from central London. The southern part of Epping Forest is hugely valued and visited by a great number of Londoners for recreation and access to nature. The 2014 visitor survey found that Wanstead Flats is the third most visited area within Epping Forest, with almost 300,000 visits per year. Overall, the southern half of the Forest has over half a million visits per year, which is almost twice as many visits as visitor hubs in the northern Forest, for example at High Beach.

In the 1600s, Wanstead Flats was known as 'Wanstead Heath'. It was a wetter, marshy area, with scattered trees and shrubs, grazed by sheep and cattle. Wanstead Flats gets its current name from the 'flats' or 'terraces' of gravels over which it lies, which are fluvial sandy gravel deposits from the River Thames. In 1886, Wanstead Flats was drained, levelled, sown with grass seed and 40,000 young trees were planted. At the turn of the century, Alexandra Lake, Bandstand Pond (formerly Angel Pond) and Jubilee Pond (formerly Dames Road Pond and then Model Yacht Pond) were dug by hand by local unemployed men. Bandstand Pond, and two further ephemeral ponds in Bush Wood, dry out in summer. The Cat and Dog Pond is a small wetland area west of Lake House Road and just north of Harrow Road changing facilities.

Bush Wood and Bush Wood North, in the northwest of Wanstead Flats, are mature secondary woodland over acid grassland and include the remains of ornamental planting from the Wanstead Park Estate, an historic Grade II\* listed landscape. The historic Evelyn Avenue of Lime trees on Bush Wood Flats is also a remnant of the historic Wanstead Park Estate. Bush Wood, Bush Wood North and Bush Wood Flats are all within the Grade II\* listed Wanstead Park Registered Park and Garden. Wanstead Flats as a whole has a distinctive history and heritage that is well-documented.

Historically, the Flats were a grassy heathland from the 12<sup>th</sup> century onwards after the Abbots of Stratford were granted the right in 1199 to graze large flocks of sheep. Wanstead Flats was also used by Epping Forest commoners and drovers on the way to London's markets. It is likely that there has been grassland and/or heathland habitat here for over a thousand years. Today, the area is made up of an intricate mix of recreational/sport pitches, planted roundels of trees, scrub, acid grassland and ponds. It is designated as a Site of Metropolitan Importance for its conservation value to London and part of the acid grassland is designated as a Site of Special Scientific Interest. It is also one of the few breeding sites for Skylark (*Alauda arvensis*) in London and is a notable stop-off for migrating birds, especially in the Autumn. It is one of the best recorded areas for wildlife in Epping Forest with considerable work undertaken by volunteers from the local Wren Group.

The absence of visitor facilities such as a café and public toilets means that Wanstead Flats is better suited to local short duration visits. The Flats do not have the infrastructure to support longer duration visitors, and the lack of infrastructure means the Flats may be less attractive as a visitor location for those from further afield. However, the environmental impact of existing visitors is currently adversely affecting important aspects of the biodiversity on Wanstead Flats. For example, excessive feeding of the wildfowl by visitors has resulted in a large increase in the local rat population; the rats predate on the ground nesting Skylark, resulting in a marked decline in population numbers. The additional visitors resulting from increases in local housing numbers will be detrimental to the special nature of the Flats and to the population of Skylark, which are vulnerable to disturbance from people and dogs. This ISP seeks to define the management and mitigation that will be required to address this future threat to the special nature of Wanstead Flats.

## PROPERTY MANAGEMENT CONTEXT

### Flood risk

- The water bodies on Wanstead Flats fall outside of the Rivers Beam, Ingrebourne and Roding Catchment Management Plan. There are no Environment Agency designated flood risks associated with the water bodies on Wanstead Flats. There are however localised flooding issues.
  - The **Alexandra Lake** outflow, which is piped under Aldersbrook Road, has been known to block due to invasive tree roots entering the Victorian drainage pipes through settlement and age-related deterioration and cracking. The outflow, which is the responsibility of the London Borough of Redbridge as the Highway Authority, is monitored by the City Corporation's City Surveyors Department. Following a CCTV investigation in 2019, it is proposed to install a liner to restrict future root growth from blocking the outfall.
  - The **Alders Brook**, which originally had its source on Wanstead Flats and latterly Alexandra Lake is now culverted beneath the City of London Cemetery before joining the River Roding to the east. CCTV surveys indicate that the culvert is now 95% blocked by progressive sedimentation and will require extensive clearance.
  - The **Jubilee Pond** outflow: During periods of prolonged heavy rainfall, the long pond outfall to the Centre Road drainage ditches can be impeded, leading to flooding immediately to the south and west of the pond.

### Statutory Designations

- Site of Special Scientific Interest (SSSI): The northern part of the central section of Wanstead Flats, between Lake House Road and Centre Road, is designated a *Site of Special Scientific Interest* (SSSI). The compartment was assessed by Natural England (NE) in January 2010 as 'unfavourable - recovering', based on habitat assessments and invertebrate assemblage data, together with the effect of all ongoing and planned management. However, Natural England states that, "*notwithstanding the assessment of 'unfavourable - recovering', there remains a very significant issue relating to air quality and the deposition of acidity and nitrogen pollutants. In addition, the anticipated recovery in the condition of the grassland and heathland will not take place unless management continues to be undertaken as planned*".
- Metropolitan Green Belt: In the 2019 draft Local Plan for Waltham Forest, development proposals affecting Epping Forest should be sensitive and proportionate, delivering enhancements



where possible and must not contribute to adverse impacts on ecological integrity, amenity or visitor enjoyment.

- Registered Parks and Gardens: Bush Wood North, Bush Wood and Bush Wood Flats form part of the historic Wanstead Park, listed as Grade II\* in the Register of Parks and Gardens (Historic England, 1986). The Registered Park and Garden forms the western flank of the Flats.
- Archaeological Priority Areas (APA):
  - The majority of Wanstead Flats is designated a Tier III Archaeological Priority Area by the London Borough of Redbridge (London Borough of Redbridge, 2019).
  - Manor Park is classified as a Tier III Archaeological Priority Area by the London Borough of Newham due to it being part of an extensive area of historic rural landscape (Newham London, 2015).
  - The north-western tip of Bush Wood North, around the A12 interchange, is part of ‘Leytonstone High Street’ Archaeological Priority Zone 18 (APZ18), designated by the London Borough of Waltham Forest (2006) as it is an ancient route, which may have evolved from a Roman Road, with medieval and later settlement expanded along the road.
  - A small sliver of land within the London Borough of Waltham Forest, east of APZ18 and west of the boundary with the London Borough of Redbridge, is not designated for its archaeology.
- Site of Metropolitan Importance (SMI): SMIs are the best wildlife sites in London, designated as such in the London Plan (London Assembly, 2016). Epping Forest South SMI, which includes Wanstead Flats, is listed as a Site of Metropolitan Importance in the Redbridge Local Plan (London Borough of Redbridge, 2018), and in the Newham Local Plan (London Borough of Newham, 2018).
- Locally Important Geological Site: The London Geodiversity Partnership has proposed the area of Wanstead Flats south of Bush Road and west of Forest Drive (i.e. not including Bush Wood North or Manor Park Flats) as a Candidate Locally Important Geological Site (LIGS) (London Geodiversity Partnership, 2015, 2016). Consultation regarding this proposed designation is currently being undertaken by the London Geodiversity Partnership (2019), as part of the London Geodiversity Action Plan 2019-2024. Should it be accepted as a LIGS, Wanstead Flats will feature in the next version of *London’s Foundations*, which is supplementary guidance to the *London Plan*.

## Tree Safety

- Tree Safety: Wanstead Flats has four different tree safety zones identified.
  - Red + Zone Trees along main roads and a group of trees designated as an area for Forest School activities, which are surveyed annually by specialist external tree safety consultants.
  - Red Zone Trees alongside minor highways and around the football changing rooms and Forest Lodges, are surveyed every two years by specialist external tree safety consultants.
  - Amber Zone Trees in areas highly frequented by the public and where trees abut properties, are surveyed every three years by specialist external tree safety consultants.
  - Green Zone Trees alongside the ‘Official’ path network as identified on the Epping Forest visitor map are surveyed by City Corporation Forest Keepers on a five-year rotation.

## Fire Risk

- Whilst contrary to Epping Forest bylaws, the frequent recreational use of disposable barbecues and the setting of cooking fires on the dry grassland of the Flats has contributed to periodic and at times large wildfires, most recently in 2018.
- Wildfire management at Epping Forest is under review at the time of reporting and additional measures may be identified as part of this review.

## Damaging Introduced Exotic Species (DIES)

- Oak Processionary Moth (*Thaumetopoea processionea*): The larvae of the non-native Oak Processionary Moths are a risk to human health (GB non-native species secretariat, 2019). There was a heavy infestation of several trees in 2018 and further outbreaks are expected in coming years. Future responses will involve removal of the nests, especially at lower levels, with some pesticide treatment in limited cases.
- New Zealand Pigmyweed (*Crassula helmsii*): There is a heavy infestation of New Zealand Pigmyweed in Alexandra Lake, and it was present in Bandstand Pond when this pond still held water; the species would reappear if and when the pond refills. A report by Native Landscapes (2019) suggests that the difficulty in controlling New Zealand Pigmyweed is such that the best option to eradicate *Crassula helmsii* from Alexandra Lake would be to bury the Lake. However, this is impractical given the size of the Lake, so total eradication is not a feasible option. Consultation with Ken Adams (pers. comm., 2019) suggests that trying to control *Crassula helmsii* with herbicide is ineffective as it only affects the plants above the water level. Ken Adams has consulted botanists in Tasmania (where this population originated from) about how they control the plant, and they use dredging and scraping to keep the *Crassula* infestation under control. Using this method, the aim will be to reduce *Crassula helmsii* to a maximum of 10%.
- *Massaria* disease: This fungal disease causes large lesions on the upper surfaces of major branches of infected London Plane trees (*Platanus x hispanica*), and can cause branch drop, with subsequent tree safety issues. COL surveys London Plane trees three times a year for signs of diseased branches and pro-actively removes branches assessed as being at risk of branch drop.
- Canada Goose (*Branta canadensis*): Canada Geese, a non-native species, are heavy grazers of aquatic and waterside vegetation, their droppings increase nutrient levels in water bodies and soils and their trampling can exacerbate bankside erosion (GB non-native species secretariat, 2019). Currently, COL carries out control of non-native geese populations on Alexandra Lake 2-3 times/year through treating the eggs to prevent hatching, under a new general licence “to kill or take certain species of [non-native] wild birds to conserve [native] wild birds and flora or fauna” (Natural England, 2019a); the general licence includes Canada Goose.
- Ring-necked Parakeets: Ring-necked Parakeets are frequently recorded at Wanstead Flats. There is concern that, in large numbers, this species can have a negative impact on native birds that nest in tree holes, by competing with native birds for a finite number of tree cavities (GB non-native species secretariat, 2019). The new general licence “to kill or take certain species of [non-native] wild birds to conserve [native] wild birds and flora or fauna” (Natural England, 2019a) includes Ring-necked Parakeet. Should the population of Ring-necked Parakeet at Wanstead Flats become large enough to be problematic, COL will be able to rely on this new general licence for the control of this species; however, no management measures are currently undertaken.

- **Brown Rat:** The local population of Brown Rat has been significantly boosted by supplementary feeding of the local wildfowl population by visitors. This artificially enlarged population of Brown rat is potentially having a significant negative impact on the local ground nesting Skylark, a nationally declining bird of conservation concern that breeds on Wanstead Flats. In the most recent breeding season (2019), Skylark were recorded as singing, but did not display any evidence of having bred successfully (6 October 2019 blog update, <http://wansteadbirding.blogspot.com/>).
- **New general licences and SAC/SSSI:** The new Natural England general licence relied upon by COL to control non-native birds on its land no longer includes any land within, or within 300m of, a site of European conservation importance (Natural England, 2019a). However, the northernmost boundary of Wanstead Flats is just over 300m from the southern boundary of the Epping Forest Special Area of Conservation (SAC), which is a European protected area. Natural England (2019a) also states that “*users will need to ensure they have consent from Natural England for any activity on Sites of Special Scientific Interest*”. COL will liaise with Natural England regarding any non-native bird control (and other management activities) it plans to undertake on the SSSI land at Wanstead Flats.

## Infrastructure

- **Water body inlets/outlets:**
  - Jubilee Pond has no natural inlet, but there are two man-made inlets to Jubilee Pond. One inlet on the eastern end, adjacent to the outlet, brings water to the pond from land drainage across the festival site. This has an oil trap installed to limit pollution of the pond. A second inlet on the western end brings water to the pond from a bore hole supply. The pond water level is maintained by abstraction under licence from the Environment Agency; the licence is due for renewal in 2025.
  - Jubilee Pond has an outlet on the eastern side of the pond, near the jetty. In 2018, this was found by the City of London’s Surveyors to link with a large drain that runs along the south side of the Festival site. The drain appears to function as a water holding area as it terminates near the festival site roadside entrance with no outfall. Options for achieving an outfall for this drain are currently being developed. The drain itself is relatively shallow and at risk of collapsing and management options to remedy this are also being reviewed.
- **Jubilee Pond liner:** Jubilee Pond was relined in 2013, with a new waterproof liner installed. The original form of the pond was retained with only a few minor alterations to the shape and contours. The pond has a maximum depth of 2.5 metres. The pond has been waterproofed with approximately 12,000 sqm of Firestone EPDM 1.2m Geomembrane, protected on either side with Bontec 300g/sq.m non-woven geotextile (Appendix 3). The Firestone Geomembrane has a 20 year warranty (see Appendix 3).
- **A number of biotic and abiotic factors have resulted in significant bankside erosion of the pond and the islands, which has potential to compromise the effectiveness of the new liner. Several measures to protect the bank have been trialled and have had mixed success:**
  - **Marginal plant establishment:** Repeated attempts to establish pond edge plants to create a natural revetment and protection for the pond edge have had limited success. It has worked especially well at the eastern end of the pond, but elsewhere very intense wildfowl grazing has led to the failure of the plants being established.
  - **Rock revetment:** A small trial section of the pond was protected with a rock based revetment in 2016 using large, manually immovable boulders, back filled with gravel and



surfaced with Coxwell self-binding gravel. This has worked well; however, it is expensive at a material cost of £300/m and also gives a visual finish that may be considered intrusive for some prominent edge sections.

- Faggot revetment: Some of the islands were enclosed with faggot revetment in 2016. This has had mixed success. The bank around the island is steeply shelving and further work to better backfill is desirable, to aid further natural marginal plant establishment. The faggots have proved to be excellent protection for fish fry and some fish populations have increased considerably as a result.
- Fencing: a low wooden fence has been erected around part of the perimeter, to deter visitors from accessing and eroding sections of the pond edge and to allow marginal vegetation to establish. This low fence replaced larger more intrusive fences that detracted from the general amenity of the area and the success of the low fence is being monitored.
- Jetties: There is a jetty towards the eastern end of Jubilee Pond, the maintenance of which is overseen by the City Surveyor's Department.
- Information boards/signposts: A number of signs have recently been updated around Wanstead Flats. As part of this ongoing work, two new information boards about the presence of Skylark at Wanstead Flats have been installed, and there are two new 'Feeding the Birds' information boards at Alexandra Lake and Jubilee Pond.
- Forest Furniture: There are three Broxap picnic tables on the north-eastern side of Jubilee Pond; there are no other formal benches on Wanstead Flats. A bike rack is located at the northern end of the pond.
- Monuments: The Joseph Fry drinking fountain is located at the junction of Woodford Road/Centre Road and Capel Road, erected in the late 1890s in memory of his commitment to the Metropolitan Drinking and Cattle Trough Association. This Association raised funds for the construction of many drinking fountains for people and horses in and around London in the second half of the nineteenth century, thereby providing clean water for London's poor and suitable drinking water for animals (<http://www.e7-nowandthen.org/2016/05/public-monuments-in-forest-gate.html>). The fountain has historic interest but is currently out of operation.

### Boundaries / Property

- Football changing facilities:
  - Harrow Road: These facilities were upgraded in 2009, following approval by the Project Sub (Policy and Resources) Committee (17 January 2018, <http://vmtcapp12/ieListDocuments.aspx?CIId=168&MID=19369>), to comply with FA guidelines. FA guidelines require separate access to changing, shower and toilet facilities for children and adults, male and female players, and staff (e.g. match officials or volunteers), who are using the facility at the same time.
  - Aldersbrook/Capel Road: The changing room buildings at these two sites have reached the end of their design life. They are currently in a poor condition, having received no major repairs or refurbishment for some time. Neither do they comply with current FA guidelines for separate accesses to changing and toilet facilities or with the Equality Act (2010), particularly in relation to the protected characteristics of age, sex and disability. They are also costly to heat and provide hot water and are inefficient to maintain. The Capel Road changing rooms also suffer from a leaking flat roof and will require upgrading in the near future.

- Upgrading of changing rooms: There is a proposal to upgrade at least one further facility as part of a Parklife project bid to install artificial grass pitches for all weather and evening use.
- World War II buildings: The buildings at Aldersbrook Road include two buildings purported to be relics from World War II, though these are not listed on Historic England's National Heritage List for England, a register of all nationally protected historic buildings and sites in England. As part of the proposals for redevelopment of the changing facilities at Aldersbrook Road, a survey and report will be commissioned from COL City Surveyors to verify the history of these two buildings.
- Forest lodges: There are six lodge properties on Wanstead Flats; a pair of Forest Lodges off Blake Hall Road in Bush Wood North, one off Bush Wood Road in Bush Wood, a pair of Forest Lodges off Aldersbrook Road, and a Groundsman's Lodge adjacent to the changing facilities at Capel Road. The Capel Road lodge is currently unoccupied pending renovation and possible repurposing.
- Boundary along Capel Road: The Epping Forest boundary along Capel Road is unmarked and does not follow the physical boundary; it is not always clear who has responsibility for which stretch of road verge. There is a strip of land registered to the London Borough of Redbridge opposite house numbers 36-92. Forest land appears to go right up to the edge of Capel Road opposite house numbers 92-162, but 12 of these householders have registered the land opposite their houses, so those parcels are not the responsibility of Epping Forest.
- Long-standing licence holders: There are a number of long-standing licence holders at Wanstead Flats, who have an interest in the site through their operations. These include the Wanstead Model Flying Club, Wanstead Flats Parkrun, the Royal Pigeon Racing Association, Wanstead Flats Forest School and Be Military Fit. Numerous other organisations are granted licences each year on an ad hoc basis to operate on Forest land.

### Highway Verges

- The verges along the roads around Wanstead Flats are cut once a year in August/September to prevent encroachment onto the pavements.
- Sightlines at car park entrances and road junctions are cut annually by COL in June/July.

### Utilities

- Beckton desalination pipeline: This pipeline transfers drinking water treated at the Thames Water Desalination Plant (also known as the Beckton Desalination Plant) to northeast London for use by local residents. The pipeline crosses Wanstead Flats from the southeast to the northwest. Upon completion of the works Thames Water issued COL with a notice that states: *'After the work is finished, we will send you a plan showing the exact position of the pipe, and the strip of land over the pipe that must be kept clear of structures or trees in case we have to carry out repairs or remedial works'*. The pipeline corridor is currently under short mown football pitches and well-used paths through grassland, so is not likely to develop scrub.

## MANAGEMENT CONSIDERATIONS

### Ecological

- Climate change: this over-arching and increasingly serious problem will need to be factored into future management decisions for the site and, particularly, the protection of its scarce habitats and species. It is likely to increase the susceptibility of the trees and vegetation to diseases and drought. With the latter problem of drought, there is also an accompanying fire risk with such a large area of dry grassland.
- Favourable Condition of the SSSI – Site Improvement Plan (SIP): Management work will need to try to address the two key problems for favourable condition identified by Natural England: air pollution and recreational pressure. To address the former, a close working relationship is required with other stakeholders, particularly the London Boroughs of Redbridge, in whose area most of the Flats lie, and the neighbouring Waltham Forest and Newham through the updating of their Local Plans and their highways and development proposals. Recreational pressure also needs to be considered and this current ISP outlines management proposals that will address the issues of visitor numbers and help to protect habitats such as the acid grassland and heather.

### Acid grassland

- Acid grasslands are so-called because they are characterised by nutrient-poor (low nitrogen and phosphorus content) and acidic soils (those with a low pH that are sandy/gravelly). They are closely associated with, and often interweave with, dry heathlands where heather and other heathland plants are characteristic. The low nutrient soils favour a wide diversity of specialist native plants that can thrive where the more dominant grasses cannot easily survive. At Wanstead Flats these native plants give the Forest landscape its distinctive character, and, in fact, much of the area was known as Wanstead Heath in the 19<sup>th</sup> Century because of its natural vegetation. The native plants include low-growing vegetation such as Sheep's Sorrel, Tormentil, Heath Bedstraw and Heather (a scarce species in Epping Forest). These occur alongside fine-leaved grasses and rushes, including scarce species such as Mat-grass, Heath Grass, Heath Rush and Sheep's-fescue.
- The SSSI area on Wanstead Flats, to the west of Centre Road, was notified in recognition of the habitat's importance and its boundaries incorporate the best remaining area of Heather and the heathland/acid grassland mosaic. However, to the east of Centre Road the acid grasslands, although more homogenous in species, are in fact even more extensive and include rarities like Creeping Willow in a few small patches. Acid grassland is a UK Biodiversity Action Plan Habitat and, as such, is a top priority for wildlife conservation nationally.
- In addition to plant species, the acid grasslands support many scarce specialist insect species, particularly solitary bees and wasps. They are also a very important area in London for breeding Skylark and Meadow Pipits, red-listed and amber-listed respectively as species of conservation concern, following significant declines in the UK in the last 25 years. Migratory birds (see also Scrub section below) that use the grasslands include Wheatear, Stonechat and Whinchat, all declining species.
- The open areas of acid grassland to the east of Centre Road were managed, under a bespoke Environmental Stewardship Scheme prescription, as a mosaic of areas on a 5-year cycle. However, in response to fire management concerns, increasing areas of broom scrub and also concerns about the decline in breeding Skylarks and Meadow Pipits, grassland management at Wanstead Flats has been reviewed and the pattern of rotational cutting is moving to more frequent cutting of the mosaic every one or two years for most areas, depending on the species

make-up of the sward. The aim is to prevent the build-up of a thatch of dead grasses in some areas where there are coarser, broad-leaved grass species.

- Together with Leyton Flats, the acid grassland at Wanstead Flats makes up 10% of the acid grassland in London, the largest single area after Richmond Park and Wimbledon Common. Two major wildfires in recent years (in 2003 and 2018) resulted in the temporary loss of the acid grassland vegetation, but also removed areas of gorse and broom that had encroached on the acid grassland. In order to help regenerate the acid grassland following the most recent wildfire, COL have recently (2019) removed a layer of ash and topsoil to reduce nutrient levels and re-establish an acid grassland sward. These scrapes will be monitored to assess the recovery of and changes in the acid grassland species composition and extent.
- The east-facing bank at the western edge of Brick Field (The Dell) has a mosaic of ephemeral bare ground and tall acid grassland habitat, which is of high conservation importance for specialist invertebrates.
- The quality of the acid grassland is being adversely impacted by the following significant issues:
  - Decline in grazing: Prior to the modern era, Wanstead Flats was an area of largely open acid grassland and heath, kept free of scrub by the grazing of commoners' cattle; this practice ceased following the outbreak in 1996 of mad cow disease (*Bovine spongiform encephalopathy*, BSE).
  - Scrub and tree encroachment: Specialist acid grassland species at Wanstead Flats are declining.
  - Air pollution: Deposition of nitrogen pollutants from the air is causing a rise in soil fertility, allowing more competitive species to dominate the more desirable scarce acid grassland species.
  - Recreational pressure: There is some loss of acid grassland areas through visitor trampling pressure and nitrification from dog mess along the informal path network.

### Scrub

- The scrub habitat at Wanstead Flats is valuable for birds as a breeding habitat and during migration periods (particularly autumn/winter), when it provides shelter and food in the form of berries and invertebrates for a diverse number of migrating bird species, such as Redstart, Ring Ouzel, Spotted Flycatcher and Lesser Whitethroat. The location of the Flats close to the Thames corridor coupled with its extensiveness, make it one of the most significant sites for migratory birds in the London area.
- The scrub is also important as a food source for invertebrate species (nectar, dead wood, leaves, honeydew, other invertebrates) and for breeding and shelter. For many early flying insects, hawthorn and blackthorn are particularly important as they are an early source of nectar in the calendar year.
- Following repeated concerns regarding persistent anti-social behaviour in and around the areas of scrub, a Forest Operations Development Plan (COL, 2018) was created to draw together the scrub management issues on Wanstead Flats and outline a management strategy and action plan that reconciles the important conservation objectives with tackling serious antisocial behaviour concerns. This plan also incorporates a reduction in the fire risk, and this has been further reviewed in 2019 by a specialist fire consultant. The areas of Broom scrub burnt down in 2019 will be managed as lower-growing vegetation and existing areas of Broom and Gorse will be kept smaller and more immature.

### Ditches and open water

- The ditches on Wanstead Flats provide valuable aquatic habitat for invertebrates, but stretches are currently overgrown with Bramble scrub; succession to dry ditches will follow in time without intervention management. The ditch and wet area in the SW corner of the SSSI area is the highest priority for enhancement and would be likely to benefit a wide range of species.
- Fish surveys of the main aquatic bodies in Epping Forest are undertaken regularly by City Corporation staff.
  - Alexandra Lake: This pond was last surveyed in February 2017 (Pallet, 2017a), and found to contain no fish. Large populations of Canada and Greylag Geese were recorded, but no fish-eating birds such as Grebe or Heron. No toad or frog spawn were seen either.
  - Jubilee Pond: This pond was last surveyed in September 2017 (Pallet, 2017b), and found to contain the largest population of Gudgeon in Epping Forest, as well as healthy populations of Tench and Rudd. However, large numbers of Canada Geese (130+ in the most recent survey) were also recorded.
- An amphibian survey was undertaken on the ponds and lakes within Epping Forest in 2013 (Catherine Bickmore Associates, 2014) to assess their suitability for amphibians and make management recommendations. Alexandra Lake was assessed as being of medium importance for amphibians and medium priority for management. At the time of the assessment, Jubilee Pond was not studied as it was being relined. Further details of the survey and specific management recommendations are in Appendix 2.
- Water quality: The water quality of Jubilee Pond is currently within normal parameters, but Alexandra Lake has become a 'dead water' (Pallet, 2017a). The water quality in Alexandra Lake has been impacted in the following ways:
  - Excessive feeding of wildfowl with bread, which artificially boosts bird population numbers and also boosts local populations of vermin;
  - Birds defecating the processed bread into the water, causing eutrophication and a drop in the pH level; and
  - Littering of plastic bags.
- Loss of open water habitat:
  - Alexandra Lake: Historically, there have been problems with the lake drying up and becoming stagnant in the summer months. The lake was partially dredged in 1992 and 1998, but the issues with low water level remain.
  - Bandstand Pond: Historically, this pond held water in summer and its fringes supported the nationally-scarce grass species, associated with cattle trampling of pond margins, *Alopecurus aequalis* Orange Foxtail. However, in recent years the pond has dried up and is now a wet depression dominated by Rush species and the Foxtail seems to have been extirpated by overgrowing vegetation and lack of grazing animals.

### Notable species

- Skylark: This nationally declining bird of conservation concern breeds in the long acid grassland areas of Wanstead Flats. However, in the most recent breeding season (2019), Skylark were recorded as singing, but did not display any evidence of having bred successfully (6 October 2019 blog update, <http://wansteadbirding.blogspot.com/>). High levels of disturbance from people and their dogs is thought to be responsible for unsuccessful breeding attempts, along with a large local Brown Rat population (see above). Temporary signs are erected by COL ahead of the breeding



season to inform visitors of the threat that disturbance poses to successful skylark breeding and to encourage people to keep their dogs to the main paths. The nearest breeding population of Skylark to Wanstead Flats is on Rainham Marshes, nine miles away across a heavily built-up part of London. As such, replenishment of the breeding population at Wanstead Flats by birds currently breeding at Rainham Marshes is unlikely. The continued presence of Skylarks on Wanstead Flats is therefore of significant conservation importance.

- Other birds of conservation interest: the key breeding birds are the summering warblers and Wanstead Flats has supported important populations, significant in a Forest and London context, of both Whitethroat and Lesser Whitethroat in recent years. The fires of 2018 have reduced the areas of scrub for these species and restoration of small areas of scrub and longer grass will be important to retain these species. Birds of prey records for Wanstead Flats include Little Owl (with two breeding pairs in some recent years), Tawny Owl, Kestrel and Sparrowhawk. Also of conservation interest are breeding and wintering Meadow Pipit, wintering Stonechat, and breeding Green Woodpeckers. The area of the Flats is also very important for supporting feeding flocks of Starling and House Sparrows. The closely mown grassland of the football pitches is an important feeding location for populations of wintering gulls; the birds roost overnight on the Walthamstow Reservoirs.
- Green Hairstreak butterfly (*Callophrys rubi*): Wanstead Flats is the only known locality within Epping Forest for this species, which has undergone a national decline in both abundance and occurrence in the last 10 years (Fox, 2015);
- Broom-tip moth (*Chesias rufata*): Wanstead Flats is the only locality within Epping Forest for this species, which has been categorised as ‘vulnerable’ in the IUCN’s Red List of Species of Conservation Concern, having suffered a population change of -73% over the last 25 years, and -84% over the last 35 years (Fox *et al.*, 2006); and,
- *Philodromus rufus* (spider): A rare spider with very few UK locations, and the only site in Epping Forest.
- Creeping Willow (*Salix repens*): The sprawling and diminutive Creeping Willow, which is scarce throughout Epping Forest, is present in six locations on Wanstead Flats, in grassland west of Alexandra Lake between the Aldersbrook Road and Capel Road playing fields. The species is scarce in London and the population on Wanstead Flats is very vulnerable due to their location (outside the SSSI) and isolation, with little opportunity to spread into new areas.
- Ancient / veteran trees: There are five large ancient Sweet Chestnut trees in Bush Wood, which are a legacy of the landscaping carried out when this area was part of the historic Wanstead Park. The trees are believed to be over 300 years old and include one with a girth of 25 feet (7.6m), making it one of the largest trees in Epping Forest. These trees have not yet been mapped and registered formally on the COL veteran tree register but are nonetheless monitored regularly.

## Heritage and Landscape

- Site interpretation: Wanstead Flats has a distinctive history and heritage that is well-documented; the Leyton and Leytonstone Historical Society has published several booklets on the various aspects of the history of Wanstead Flats (see Bibliography).
- Wanstead Flats and Wanstead Park Estate: The nearby Wanstead Park Estate is a nationally (potentially internationally) important historic designed landscape, created around Wanstead House during the 17<sup>th</sup> to 19<sup>th</sup> centuries (LDA Design (in draft), 2019). It is Grade II\* on Historic England’s *Register of Parks and Gardens of Historic Interest* (Historic England, 1986). The

western part of Wanstead Flats, namely Bush Wood North, Bush Wood and Bush Wood Flats, were historically part of the landscape of the Wanstead Park Estate, and remnants of that landscaping is still in evidence today, notably the 1764 'Evelyn Avenue' in Bush Wood – many of the trees are replacements in the original locations.

- Mass review of troops: George III (1760-1820) held a mass review of his troops on Wanstead Flats; and military use continued from time to time. This was also the first instance of the Flats being used for the gathering of a large crowd.
- Markets/fairs: At the end of the 18th century, an annual cattle market was held on the Flats in March and April. An Easter Fair was held on the Flats in the late 19th century, and although this has not been continuous, there are still fairs held on the Flats to this day on the 'Fairground Site'.
- Social History: Wanstead Flats played a significant part in the eventual securing of Epping Forest for the nation. In 1852, Viscount Wellesley, the Lord of Wanstead Manor, fenced off a large area of Wanstead Flats, but a local farmer broke the fencing and drove his cattle back onto the land to assert the commoners' right to allow their cattle to wander freely across the Forest. In 1854 the City of London Corporation bought land at Aldersbrook Farm to provide a cemetery for the City (now the City of London Cemetery). This gave the Corporation commoner status and entitled them to graze cattle on Epping Forest. In 1871, Wellesley's heir, Lord Cowley, enclosed an area south of the present-day Wanstead Park, and allowed his tenants to fence off other parts of the Flats. These illegal actions provoked protest meetings across east London, and in July 1871 a mass demonstration was held on Wanstead Flats which culminated in the destruction of large sections of these fences. At this moment the Corporation took legal action against the Lords of the Manor in Epping Forest and won, thereby outlawing any enclosure of Epping Forest. In 1878, the Epping Forest Act and the Corporation of London (Open Spaces) Act were passed, and the Corporation began to purchase as much of Epping Forest land as possible to protect it for the recreation and enjoyment of the people of London.
- Quarrying: Between 1864-1881, an area of Wanstead Flats now known as 'Brick Field' (also known as 'The Dell') was quarried and bricks were produced to build the nearby new housing estates. The Brick Field quarry was given a 17 year lease by the Mornington Estate as Lord of the Manor of Wanstead. The Brick Field is now a distinctive flat area of short mown grass, with an east-facing earth bank at its western end, which has considerable nature conservation interest.
- Monkey Parade and Bandstand: A Victorian promenade feature, known locally as Monkey's Parade, was located on Wanstead Flats along Capel Road. It had a surfaced path with cast iron benches (sacrificed for the war effort) and a bandstand, erected by the Corporation of West Ham.
- London Plane Avenues: These were planted around the edges of Wanstead Flats by a former Superintendent around 1900.
- World War II: Wanstead Flats has a notable WWII legacy and was used in a variety of ways during WWII, described in detail in publications by the Leyton and Leytonstone Historical Society (see Bibliography). Of particular interest are the use of the Flats to tether barrage balloons (the tethers remain in situ), the location of army telecommunication huts and a major anti-aircraft installation on the Flats and extensive allotments. Both American and British troops gathered on Wanstead Flats in their hundreds in the run-up to D-Day. Surface and buried remains of this period in the history of Wanstead Flats are still on site, and further remains were uncovered as a result of a large wildfire on the Flats in the summer of 2018.
- Post-war period: After the Second World War, there was a major debate in Parliament and elsewhere about the Flats being used for housing. West Ham Council wanted to house its homeless on the Flats, but this was refused. However, along Capel Road, East Ham Council had

already built a large settlement of pre-fabs, erected using labour from the POW camps on the Flats. This settlement existed until eventual demolition in 1960.

- 1953 Plantation: A grove of now mature trees was planted on Wanstead Flats in 1953 to commemorate the coronation of HM Queen Elizabeth II. A small lead plaque with words to that effect is still in situ within the trees, hidden amongst the undergrowth.
- Tree circles: The bandstand near Angel Pond was demolished in 1957, and a circle of trees planted to mark its former location. A second circle of trees was planted on Manor Park Flats, 150 metres from the end of Capel Road. These, together with a metal fence, surrounded an underground Local Government Command Centre (London Borough of Newham). The fence has been removed, the above ground entrance has been dismantled and the below ground structure is understood to have been filled in.

### Access and Signage

- Pedestrian access:
  - Wanstead Flats is easily accessible on foot by local people, as well as by public transport. There are eight over ground or underground stations within one mile of Wanstead Flats, and three Transport for London bus routes skirt the edges of the Flats.
  - Shared use trails: Shared use trails run through Wanstead Flats and connect with a north-south route through Epping Forest. The Big Walk (formerly known as the Centenary Walk), a long-distance path through Epping Forest, also uses these shared use trails. As the area is on Thames Gravels, path surfaces are in reasonably good condition and do not become water-logged in winter. Overall, there are approximately 9 miles (14.5km) of paths on the Flats where the COL has a management responsibility.
  - Lime Trail: A 1.5 mile circular path loops around Bush Wood and Bush Wood Flats, which is way-marked with posts (COL, 2019). The route is signposted from Lake House Road car park.
  - There is an opportunity to define pedestrian access locations around the Flats to create a positive sense of welcome, which links to conservation messages, particularly during the bird breeding season. This can be achieved through a combination of entrance enhancement (e.g. regular litter picking) and habitat management works (such as grassland management to provide routes from entrances that reduce disturbance to ground-nesting birds), and the provision of signage appropriate to the size of the entrance.
- Access via cycle routes:
  - Quietway 6 currently connects the south-eastern corner of Wanstead Flats (Manor Park) with Fairlop Waters Country Park, an open space around 3 miles to the northeast. In addition, there is a proposal to extend Quietway 6 along Capel Road to link up with Victoria Park. COL will ensure that the Quietway remains accessible when on COL land by managing scrub encroachment.
  - Northwest of Wanstead Flats, the London Borough of Waltham Forest has recently (2019) inaugurated a new junction at Whipps Cross, which improves cycle links between an Olympic pedestrian and cycle route along Whipps Cross Road (along the western edge of Leyton Flats, also part of Epping Forest) and a cycleway along Lea Bridge Road, thereby linking Leyton Flats and Whipps Cross with Hackney Marsh and the Queen Elizabeth Olympic Park. This expanded cycle network is easily accessible from Wanstead Flats via the shared access route over the Green Man roundabout, which separates Wanstead Flats and Leyton Flats.

- London Borough of Redbridge also installed and cares for a cycle access route from Aldersbrook Road via Empress Avenue, which links to Wanstead Park and Ilford, providing access to Redbridge Underground station further north, Valentines Park further east and Manor Park to the south.
- Overall, London's cycleways projects may increase the number of visitors arriving at Wanstead Flats by bike, and potentially increase the number of visitors to the Flats. Nonetheless, there is an opportunity to link Wanstead Flats and the wider Epping Forest with this extended London cycle route for recreation and commuting north through the Forest. Refer to the Forest Paths Policy Development Note, in development.
- Vehicular access and car parking:
  - There are three gated car parks serving Wanstead Flats at Lake House Road; Centre Road and by Alexandra Lake on Aldersbrook Road. These are locked at night with the time varying through the year in line with daylight hours. Additional football parking is available at Capel Road, Aldersbrook Road and Harrow Road during the football season.
  - Car parking capacity: At weekends and holiday periods, the car parks are frequently full. With the projected increase in the number of visitors to Epping Forest, car park capacity will be a developing concern. The car parks (particularly Centre Road car park) also have a localised negative effect on ground-nesting birds through increased disturbance from visitors and their dogs. Furthermore, the presence of litter bins and litter in the vicinity of the car parks encourages the local rat population; these rats also predate the eggs and young of ground-nesting birds at Wanstead Flats, thereby jeopardising their breeding success. The car parks also suffer from a localised increase in dog faeces, with a corresponding adverse effect on the acid grassland species. These issues will need to be considered in the future car parking strategy.
  - Designated spaces: Lake House car park is currently the only car park that has designated spaces for disabled visitors.
- Signage:
  - New signage is being introduced across Epping Forest to replace the old Palladian style signs as funds and local need dictate. Currently, at Wanstead Flats, there is a mixture of signage and no signage at the northern end of Wanstead Flats, for visitors coming from further north.
  - An entrance to Wanstead Park (Epping Forest land) is located around 260m north of Wanstead Flats, but this route is not signposted. There is an opportunity to better connect the two sites, including providing finger-post signage from Jubilee Pond, thereby enhancing the experience of visitors to the area.
  - Wanstead Flats is a special place for both its conservation and historical interest. This needs to be communicated more effectively, to engender a sense of the high value of this special place to visitors, just 5.6 miles from the City of London.

### Community

- There are currently no catering facilities or public conveniences available to the general public visiting Wanstead Flats. Instead, visitors are expected to use local cafes, tea rooms and public houses, including the City of London Cemetery tearoom on Aldersbrook Road.
- A fenced children's playground was installed on Epping Forest land with permission from COL by the London Borough of Waltham Forest, near the southern end of Jubilee Pond. At the time,

the land was within the County of Essex, though the playground is now within the London Borough of Redbridge. Nonetheless, according to the licence issued by COL in 1985, the London Borough of Waltham Forest retains responsibility for the maintenance of the playground.

- Fishing is not allowed on Jubilee Pond or Alexandra Lake, nor in any of the small ephemeral ponds within Bush Wood.
- There is a strong tradition of community involvement with Wanstead Flats, with a large number of different community groups. A summary of the most active community groups and charities involved with Wanstead Flats is provided in Appendix 4.
- A fair visits the dedicated Fairground Site close to Jubilee Pond three times a year at Easter, the early May Bank Holiday and the August Bank Holiday weekends. These are popular events with local residents and visitors from further afield.
- Four areas within Wanstead Flats are being considered for hosting public events as per COL's Events Policy (approved by EF &CC, 14 May 2018). These areas are the Fairground Site, Brick Field (The Dell), the Aldersbrook Road football pitches, and the Harrow Road football pitches.

#### Football provision at Wanstead Flats

- In 1890, the London Playing Fields Committee approached the Corporation, asking for part of the Flats to be turned into football and cricket pitches for the benefit of the public. It was agreed that an area of 150 acres could be used. Today, 73 teams play throughout the season. The pitches are serviced by three changing room facilities at Aldersbrook Road, Harrow Road and Capel Road and the amenity value of these football pitches is very high. Four leagues operate at Wanstead Flats and two soccer schools play on the pitches on a weekly basis.
- Pitch bookings are taken by staff at Chingford Golf Course (also Epping Forest).
- The football provision at Wanstead Flats is the second largest provision of football pitches for community use at a single location in Europe. It is vitally important to the health and well-being of the surrounding local communities, with around 3000 players every week during the football season (nearly 90,000 a year) and, as such, footballers are by far the most significant user group on Wanstead Flats.
- The Corporation of London heavily subsidises football provision on Wanstead Flats, with a loss for every pitch booked.
- A number of local and national charitable organisations, football leagues and football clubs are associated with the provision of football pitches at Wanstead Flats; details of these can be found in Appendix 4.
- COL are currently in the process of compiling the data required to enter a bid for Parklife funding for artificial pitches on Wanstead Flats, together with modernised and fully compliant changing facilities. Ultimately the provision of Artificial Grass Pitches will cross subsidise grass pitch provision and reduce or eliminate current subsidy levels.

#### **Anti-social Behaviour**

- Wanstead Flats is adversely impacted by many anti-social behaviour problems. These include:
  - Rubbish bins and litter: Twenty-four rubbish bins are provided at ten locations around Wanstead Flats for use by the public; these are close to car parks, along busy footpaths, adjacent to Jubilee Pond and Alexandra Lake and by the football changing facilities. The rubbish bins are emptied regularly, though at busy times, they can overspill. A large amount of litter is also collected from the football pitches and adjacent areas after



bookings. As noted above, the presence of litter encourages rats, with a consequent negative effect on the population of ground-nesting birds.

- Fly-tipping: Approximately 25% of fly-tips occurring in Epping Forest are on the Flats, despite Wanstead Flats being around 7.5% of Epping Forest by area. This is likely to be in part because it is the first large area of open space that fly-tippers come across when driving out of central London towards the northeast.
- Fly-tipping of bread: There is a particular problem with fly-tipping of bread by Alexandra Lake and Jubilee Pond. Feeding bread to wildfowl causes them health problems; the dumping of bread in the water negatively impacts the water quality and encourages the local rat population to the detriment of ground-nesting birds.
- Wildfires: There have been a number of large wildfires during drought periods over the latter part of the 20<sup>th</sup> and early 21<sup>st</sup> century. Such fires present a number of hazards to public safety and also to the wildlife of the area. Fire hazard reduction and management measures, including access and habitat management, are being enhanced and are included in this ISP.
- Public sex environment: The scrub areas on Manor Park, in the southeast of Wanstead Flats, facilitate a public sex environment (PSE). The PSE is managed by City Corporation and Metropolitan Police Service (MPS) to NPCC (formerly ACPO) guidance, to reduce the impact of the PSE. The Police service is mindful that PSEs can become a focus for prostitution, muggings and hate crime.
- Drug use: Drug-taking of Class A drugs is frequent in and around the areas of scrub on Wanstead Flats. This poses an obvious hazard to the people involved in such activities, but also significant health concerns for staff and visitors. Particular issues of concern are infected needles, which pose a risk from accidental skin punctures following contact with a needle, and the health issues associated with concentrations of human excrement found at heavily used drug-taking locations.
- Rough sleeping: There is a significant amount of rough sleeping in the dense scrub scattered around Wanstead Flats. Staff work actively with a range of government and local services to help vulnerable people rough sleeping on the Forest to find a better outcome.
- Scrub management to reduce anti-social behaviour: In 2018, a Scrub Operations Management Plan for Wanstead Flats (COL, 2018) was prepared by COL in consultation with local stakeholders and its implementation has seen a reduction in the amount of scrub on Wanstead Flats, whilst maintaining a mosaic of scrub habitat for wildlife. The management of scrub in this part of the Flats has resulted in a safer, more pleasant environment for people walking up from Manor Park station to visit the COL Cemetery, just over the road from Wanstead Flats.

### Local Plans

- Local Plans: All the surrounding local authorities within the current 6.2km Zone of Influence (see below and also Epping Forest Visitor Survey 2017, Liley et al., Footprint Ecology) are planning a significant increase in housing and employment space.
- The Redbridge Local Plan 2015-2030, which incorporates most of Wanstead Flats, was formally adopted on 15 March 2018, with a commitment to deliver a minimum of 11,232 new homes from 2015-2025 (London Borough of Redbridge, 2018). The London Borough of Waltham Forest is

---

currently committed to provide for 27,000 additional housing units by 2035, with 18,000 of these by 2030 (London Borough of Waltham Forest Local Plan Regulation 18 Consultation July 2019).

- The London Borough of Newham estimates that under its current Local Plan which runs to 2033 that 445 residential units would be constructed as part of major developments within 3km of Epping Forest SAC (London Borough of Newham Interim Habitats Funding Statement (April 2019)).
- Outer North East London Strategic Housing Market Assessment (SHMA): The London Boroughs of Redbridge, Waltham Forest, Newham, Havering and Barking & Dagenham have cooperated in the production of the Outer North East London SHMA 2016, to assess the overall housing need for the north east London housing market. The SHMA estimated that the LBR's full objectively assessed housing need is 34,296 net additional homes between 2015-2030, more than double the number in the current Local Plan (London Borough of Redbridge, 2019). Similar disparities in housing numbers exist for other London Boroughs and there is pressure from central government to increase the number of new homes created in these London Boroughs, with a likely significant negative effect on the integrity of the Epping Forest SAC, the southern boundary of which is only around 300m north of the northern boundary of Wanstead Flats.
- Recreational Zone of Influence: Natural England, the statutory body responsible for Special Areas of Conservation (SACs), has issued an interim advice relating to the emerging strategic approach for the Epping Forest SAC Mitigation Strategy (Natural England, 2019b). This advice defines the recreational Zone of Influence (ZoI) around the boundary of Epping Forest SAC as being 6.2km, being the distance up to which more than  $\frac{3}{4}$  of visitors will travel to visit Epping Forest SAC (see also the Epping Forest Visitor Survey 2017, Liley et al, Footprint Ecology).
- Epping Forest SAC Mitigation Strategy: There is an Interim Strategy which includes costed Strategic (visitor) Access Management Measures (SAMMs) prepared by the City of London Conservators of Epping Forest. This Interim Strategy was prepared by and approved by Epping Forest District Council in consultation with the wider MoU Oversight Group, which includes LB Redbridge, LB Waltham Forest, LB Newham and LB Enfield as well as the Borough of Broxbourne and Harlow District Council all of which have local governance within the ZoI area. However, it awaits formal approval by the London Boroughs and a final SAC Mitigation Strategy incorporating other mitigation measures for the SAC is still required to be completed. The interim Strategy tariffs, for housing developments for which planning permission is sought prior to the completion of the relevant Local Plan, are likely to change once the full Mitigation Strategy has been completed and costed to address outstanding matters such as air pollution impacts (Natural England, 2019b).
- Open space provision: Wanstead Flats is not within the Epping Forest SAC, but the Flats and the built-up areas surrounding it are within the 6.2km Zone of Influence. It is therefore likely that, as the London Boroughs seek to mitigate the effects of increased house-building on Epping Forest SAC, Wanstead Flats (and the adjacent Wanstead Park, which is also not within the SAC) will come under pressure to accommodate increases in visitor numbers. In this respect, Wanstead Flats may be considered as a possible suitable alternative natural green space (SANG) under any future full SAC mitigation strategy.
- Carrying capacities of Wanstead Flats: In terms of some of the wildlife of the Flats, the distribution of visitors and some activities are affecting the area's carrying capacity for biodiversity. The numbers of ground-nesting Skylarks and Meadow Pipits, for example, are affected by disturbance, particularly by dogs off leads and the numerous pathways dividing the acid grassland areas. The management of scrub and grassland, and the scrub-grass mosaic (as

indicated above) is also affected by the impact of some activities. Nutrient enrichment of some areas of grassland by dog faeces and litter is also impacting on some of the plant species. Around Alexandra Lake there is significant soil erosion. The current carrying capacity of visitors to Wanstead Flats is being overstretched with significant impacts on biodiversity and limited infrastructure to support increases in visitor numbers. Additional visitors and numbers of visits, resulting from increases in local housing numbers, is likely to be detrimental to some of the wildlife of the Flats, and in particular to the populations of Skylarks and Meadow Pipits, which are vulnerable to disturbance from people and dogs.

## WANSTEAD FLATS MANAGEMENT STRATEGY

‘London’s Great Forest’, a strategy and management plan for Epping Forest 2020-2030 sets out five key strategic priorities for Epping Forest, these being:

1. A welcoming destination for all;
2. A beautiful Forest, sustaining internationally and nationally important wildlife habitats in an ancient wood-pasture mosaic;
3. An inspiring space for people’s health, recreation and enjoyment;
4. A range of special heritage landscapes which are protected and celebrated; and,
5. A resilient environment, where challenges are embraced, and opportunities explored.

Within the context of the overarching strategy and management plan for the whole of Epping Forest (above), this ISP identifies a series of local management strategy objectives for Wanstead Flats, to be implemented over the next 5-10 years (Table 1). The City of London Corporation will also discharge its obligations with respect to property management issues, as identified in this ISP.

**Table 1: Management Strategy Objectives for Wanstead Flats**

Wanstead Flats Management Strategy Objectives		Epping Forest Management Strategy Objectives
<b>A</b>	To identify a programme of conservation measures that will contribute towards improving the condition status of the Wanstead Flats SSSI, and improving the condition of the current extent of acid grassland and dependent species across the Epping Forest South SMI.	2, 5
<b>B</b>	To ensure that COL offers a visitor experience to Wanstead Flats that meets the needs of the communities today and into the future, in a sustainable and welcoming way.	1, 3, 4, 5
<b>C</b>	To finance an Infrastructure Improvement Programme from increased income generation originating from Wanstead Flats.	5
<b>D</b>	To further encourage existing local community involvement in the management and enhancement of the environment of Wanstead Flats.	1, 3, 4
<b>E</b>	To seek to mitigate the impact of additional visits from new developments within Epping Forest SAC’s Zone of Influence, through a range of measures including improved landscaping, alternative routes and destinations, alongside more and improved interpretation.	1, 2, 5

**OUTLINE MANAGEMENT PROGRAMMEME FOR WANSTEAD FLATS**

Objective	Action	Timing <sup>1</sup> (ongoing/years/subject to funding)
City Corporation objectives, A, B	<p><i>Site safety</i></p> <ul style="list-style-type: none"> <li>• Continue to undertake COL statutory requirements with respect to site safety . This includes:                             <ul style="list-style-type: none"> <li>○ Managing tree safety and Forest furniture according to relevant City Corporation Policies; and,</li> <li>○ Wildfire management, as advised by fire consultant’s (2019 update) fire management strategy and plan.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Ongoing</li> </ul>
A, D, E	<p><i>Habitat Management</i></p> <ul style="list-style-type: none"> <li>• Agree a programme of conservation measures for Wanstead Flats, including management work funded through Countryside Stewardship. Key targets for the programme will include:                             <ul style="list-style-type: none"> <li>○ No net-loss of the breeding population of Skylark and Meadow Pipits on Wanstead Flats;</li> <li>○ No net-loss of the acid grassland area, both within and outside the SSSI;</li> <li>○ Identifying options to extend and reduce the fragmentation of the areas of acid grassland;</li> <li>○ Developing an aquatic habitat management strategy and plan, including protection of the liner at Jubilee Pond and the restoration of Bandstand Pond as a wetter site;</li> <li>○ Maintaining the area of scrub to a maximum of 25% of the grassland habitat area, while ensuring retained scrub is in a favourable condition (e.g. age structure) for biodiversity;</li> <li>○ Monitor scrub to ensure acid heath of high conservation value is maintained and bird breeding areas are protected.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• (dates to be agreed)</li> </ul>
City Corporation	<p><i>Invasive species management</i></p>	

<sup>1</sup> Ongoing = task is ongoing on cyclical basis in current management of the site, 2019 = first year of new task, subject to funding = additional funding required for task / project to be progressed



Objective	Action	Timing <sup>1</sup> (ongoing/years/subject to funding)
n objectives, A, D	<ul style="list-style-type: none"> <li>• Monitor and control invasive species to ensure we meet statutory and COL agreed policies and guidelines, including:               <ul style="list-style-type: none"> <li>○ Oak Processionary Moth management, nest removal and awareness raising with visitors through signage and other communication methods;</li> <li>○ Management of <i>Massaria</i> disease on London Plane trees, including preparation of a consultation document on the replacement of the London Plane trees as they reach end of life;</li> <li>○ Control of <i>Crassula helmsii</i> in Alexandra pond; and</li> <li>○ Ongoing control of Canada geese on Alexandra Lake and Jubilee Pond.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• (dates to be agreed)</li> </ul>
B, C, D	<i>Access Management</i>	<ul style="list-style-type: none"> <li>• (dates to be agreed)</li> </ul>
	<ul style="list-style-type: none"> <li>• Develop an Access Management Plan for Wanstead Flats. Key themes for this plan include:               <ul style="list-style-type: none"> <li>○ Improving connectivity across the site and beyond to other parts of Epping Forest;</li> <li>○ Establishing sustainable and welcoming access points to Wanstead Flats;</li> <li>○ Protecting sensitive habitats and species; by reducing fragmentation of habitat where possible and,</li> <li>○ Responding to the projected increase in visitor numbers to Wanstead by considering a re-design/re-distribution of the main access points.</li> </ul> </li> </ul>	
City Corporatio n objectives, B, E	<i>Enforcement</i>	<ul style="list-style-type: none"> <li>• Ongoing</li> <li>• 2021</li> </ul>
	<ul style="list-style-type: none"> <li>• Continue to address enforcement issues at Wanstead Flats, including:               <ul style="list-style-type: none"> <li>○ Working with visitors to manage issues around littering, dog control, dog-fouling, fires and alcohol consumption displaced from Town Centre Alcohol Restriction Zones;</li> <li>○ Providing interpretation on positive wildfowl feeding to reduce negative</li> </ul> </li> </ul>	

Objective	Action	Timing <sup>1</sup> (ongoing/years/subject to funding)
	<p>impacts and encouraging tenants to sell floating wildfowl food;</p> <ul style="list-style-type: none"> <li>○ Working with MPS, LBWF and St Mungo's Trust on No Second Night Out (NSNO) ambitions for rough sleepers;</li> <li>○ Working with MPS, LBWF &amp; LGBT Groups to monitor the use of the Public Sex Environment (PSE).</li> </ul>	<ul style="list-style-type: none"> <li>• 2022</li> <li>• Ongoing</li> </ul>
A, B, C, D, E	<p><i>Resourcing</i></p> <ul style="list-style-type: none"> <li>• Develop an Investment Resourcing Plan for Wanstead Flats. To achieve the required site investment, key aspects of the Plan will include: <ul style="list-style-type: none"> <li>○ Identifying investment needs;</li> <li>○ Identifying potential on-site income generation;</li> <li>○ Exploring opportunities for external grant funding, e.g. Countryside Stewardship and Parklife;</li> <li>○ Identifying income opportunities arising from the Epping Forest Mitigation Strategy resulting from the emerging Local Authority Local Plans; and,</li> <li>○ Identifying potential community support opportunities.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <i>(dates to be agreed)</i></li> </ul>
B, D, E	<p><i>Community</i></p> <ul style="list-style-type: none"> <li>• Develop a Community Engagement Plan for Wanstead Flats (or potentially the wider Leyton Flats, Wanstead Park and Wanstead Flats area), in line with the Community Planning Toolkit (<a href="https://www.communityplanningtoolkit.org/">https://www.communityplanningtoolkit.org/</a>).</li> </ul> <p>Key aspects of the Plan will include:</p> <ul style="list-style-type: none"> <li>○ Facilitating local community involvement in the management and future development of Wanstead Flats;</li> <li>○ Identifying community measures to reduce anti-social behaviour on parts of Wanstead Flats, in conjunction with habitat management works; and</li> </ul>	<ul style="list-style-type: none"> <li>• <i>(dates to be agreed)</i></li> </ul>

Objective	Action	Timing <sup>1</sup>
	<ul style="list-style-type: none"> <li>○ Improving communications with existing and future tenants and long-term licence holders.</li> <li>○ Ensuring that the conservation scrub management map links with objectives relating to the reduction in fire risk, anti-social behaviour and the existing Scrub Operations Management Plan for Wanstead Flats (COL, 2018).</li> </ul>	
B, D	<i>Heritage</i>	
	<ul style="list-style-type: none"> <li>• Continue to explain the heritage of the site through interpretation and signage, linking heritage with the natural aspect;</li> <li>• Enable and facilitate the local history group (Leyton and Leytonstone Historical Society) in their production of local history publications;</li> <li>• Review the long-term future of the London Plane avenues and develop proposals for the future management of these avenues.</li> </ul>	<i>(dates to be agreed)</i>
B, C, D	<i>Sports Provision</i>	
	<ul style="list-style-type: none"> <li>• Work within the City of London Sports Strategy and Open Spaces Sports Framework to continue to deliver football, sports events and other recreation on Wanstead Flats; and,</li> <li>• Investigate projects and initiatives that will help deliver sport with greater financial sustainability as well as helping to provide for latent recreational needs such as toilets and refreshment.</li> </ul>	<i>(dates to be agreed)</i>

## POTENTIAL ENHANCEMENT PROJECTS REQUIRING EXTERNAL ADDITIONAL SUPPORT & RESOURCES

- Visitor access infrastructure: Unquantified at present is the long-term development of the visitor access infrastructure to meet changing community needs, linked to future substantial development in the area. Works arising from such developments does not form part of the current site expenditure and additional funding will need to be identified to progress any changes and to develop plans and mitigation proposals.

- Water quality management: The successful management of invasive species in Alexandra Lake does not form part of the current site expenditure and additional funding will need to be identified to progress any changes
- Pond Liner protection: Work to protect the pond liner at Jubilee pond are increasingly urgent and do not form part of the current site expenditure and additional funding will need to be identified to progress any changes
- Species recovery: The Creeping Willow and Skylark projects are potential community-based projects.
- Ancient tree management: A survey of ancient / veteran trees on the Flats could be undertaken by a community partner.
- Litter Management: Residents already support litter management in a significant way and extending and continuing their involvement will be essential to manage the litter at the Flats.

## EXTERNAL OPERATIONAL STAKEHOLDERS

See Appendix 4

## GLOSSARY OF TERMS AND ACRONYMS

Term / Acronym	Definition
Acid grassland	Nutrient poor acidic soils and grassy-mossy vegetation, including sheep's sorrel, tormentil, heath bedstraw, wavy hair-grass and sheep's-fescue. Heathers, such as ling, bell heather and cross-leaved heather, may also be present, and the grassland may be a mosaic of herbs and shrubs.
ACPO	Association of Chief Police Officers (replaced in 2015 by NPCC)
APA	Archaeological Priority Area
Barts Health NHS Trust	A NHS Trust responsible for five hospitals, including Whipps Cross University Hospital in Leytonstone
BGA	Blue-green algae
BSE	Bovine Spongiform Encephalopathy
Chalybeat spring	Also known as a ferruginous spring, is a mineral spring containing salts of iron
COL	City of London Corporation
EA	Environment Agency
EF	Epping Forest
Flats	An area of land with a relatively level surface compared to the surrounding, more undulating or hilly areas.
FORA	Forest Residents Association
Gravel workings	An area using for the extraction of gravel, often in a river valley where the water table is high, so that they may naturally fill with water to form ponds or lakes

Term / Acronym	Definition
High risk	In the context of the Flood and Water Management Act 2010, the Environment Agency classifies water bodies as being 'high risk' if an uncontrolled release of water could result in loss of life.
HLF	Heritage Lottery Fund
HMCTS	Her Majesty's Court and Tribunal Service
ISP	Individual Site Plan
Large raised reservoir	In the context of the Reservoirs Act 1975, a water body is classified as a large raised reservoir if it impounds more than 25,000 cubic metres of water
LBR	London Borough of Redbridge
LBWF	London Borough of Waltham Forest
LGBT	Lesbian, Gay, Bi and Transgender
LIGS	Locally Important Geological Site
MPS	Metropolitan Police Service
NE	Natural England
NPCC	National Police Chiefs' Council (replaced ACPO in 2015)
NSNO	'No Second Night Out' (Mayor London initiative)
OPM	Oak Processionary Moth
PDN	Policy Development Note
PSE	Public Sex Environment
SAC	Special Area of Conservation (European designation)
SMI	Site of Metropolitan Importance – the best wildlife sites in London, as designated in the London Plan (2016)
SSSI	Site of Special Scientific Interest (UK designation)
TfL	Transport for London
Wood pasture	An area that has been management by a long-established tradition of grazing, allowing the survival of multiple generations of trees, characteristically with some veteran/ancient trees

## BIBLIOGRAPHY

Catherine Bickmore Associates (2014). *Epping Forest amphibian survey of ponds: findings and management recommendations*. London, UK.

City of London Corporation (2018). *Forest Operations Development Plan: Scrub Operations Management Plan for Wanstead Flats*. London, UK.

City of London Corporation (2019). *Lime Trail*. <https://www.cityoflondon.gov.uk/things-to-do/green-spaces/epping-forest/sports-events-and-activities/Documents/lime-trail-epping-forest.pdf>

Epping Forest & Commons Committee (14 May 2018). *Agenda item 13: approval of Epping Forest Events Policy*. <http://vmtcapp12/ieListDocuments.aspx?CIId=122&MID=18901>

Fox (2015). *The State of the UK's Butterflies 2015*. Butterfly Conservation, Dorset, UK.



- Fox et al. (2006). *The State of Britain's Larger Moths*. Butterfly Conservation, Dorset, UK.
- GB non-native species secretariat (2019). *Non-native Crayfish species Factsheet*. <http://www.nonnativespecies.org/factsheet/factsheet.cfm?speciesId=2498>
- GB non-native species secretariat (2019): *Canada Goose Factsheet*. <http://www.nonnativespecies.org/factsheet/factsheet.cfm?speciesId=533>
- GB non-native species secretariat (2019): *New Zealand Pigmyweed Factsheet*. <http://www.nonnativespecies.org/factsheet/factsheet.cfm?speciesId=1017>
- GB non-native species secretariat (2019): *Oak Processionary Moth Factsheet*. <http://www.nonnativespecies.org/factsheet/factsheet.cfm?speciesId=3522>
- GB non-native species secretariat (2019): *Ring-necked Parakeet Factsheet*. <http://www.nonnativespecies.org/factsheet/factsheet.cfm?speciesId=2886>
- Historic England (1986). *Register of Parks and Gardens of Historic Interest: Wanstead Park*. <https://historicengland.org.uk/listing/the-list/list-entry/1000194>
- Historic England (2016). *Greater London Archaeological Priority Area Guidelines*. London.
- Liley et al (2017) *Epping Forest Visitor Survey 2017*. Footprint Ecology report to City Corporation and local authority partners.
- London Assembly (2016). *The London Plan*. <https://www.london.gov.uk/what-we-do/planning/london-plan/current-london-plan>
- London Borough of Newham (2018). *Newham Local Plan 2018: A 15 year plan looking ahead to 2033*.
- London Borough of Newham (April 2019). *Interim Habitats Funding Statement*.
- London Borough of Redbridge (2018). *Redbridge Local Plan 2015-2030*. [https://www.redbridge.gov.uk/media/4934/10-redbridgelocal-plan\\_070318\\_web-1.pdf](https://www.redbridge.gov.uk/media/4934/10-redbridgelocal-plan_070318_web-1.pdf)
- London Borough of Redbridge (2019). *Redbridge Local Plan Authority Monitoring Report 2017-18*. <https://www.redbridge.gov.uk/media/6584/131-redbridge-local-plan-authority-monitoring-report-report-appendix-a.pdf>
- London Borough of Redbridge (2019). *Archaeological Priority Areas (APA) within the London Borough of Redbridge*. <https://my.redbridge.gov.uk/map/archaeological-priority-areas>
- London Borough of Waltham Forest (July 2019). *Local Plan Regulation 18 Consultation*.
- London Geodiversity Partnership (2015). *GLA 69: Wanstead Flats*. <http://londongeopartnership.org.uk/wp/wp-content/uploads/2018/08/GLA69.pdf>
- London Geodiversity Partnership (2016). *Consultation on proposals to designate Regionally and Locally Important Geological Sites*. <http://londongeopartnership.org.uk/wp/wp-content/uploads/2018/08/WEB-Candidate-RIGS-and-LIGS-GLA-60-72-proposed-for-consultation.pdf>
- London Geodiversity Partnership (2019). *London Geodiversity Action Plan 2019-2024*. London, UK.

Natural England (2010). *Condition assessment for Compartment 138 (Wanstead Flats)*. Peterborough. <https://designatedsites.naturalengland.org.uk/UnitDetail.aspx?UnitId=1030311&SiteCode=s1001814&SiteName=&countyCode=&responsiblePerson=>

Natural England (2016) Site Improvement Plan: Epping Forest v1.1  
<http://publications.naturalengland.org.uk/publication/6663446854631424>

Natural England (2019a). The Defra and Natural England approach to general licensing for wild birds: General licences and the next steps. Peterborough, England.  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/809100/general-licensing-position-statement.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/809100/general-licensing-position-statement.pdf)

Natural England (2019b). Epping Forest – Natural England Interim Guidance Note: Planning. Crewe, UK.

Newham London (2015). *Detailed Sites and Policies Development Plan Document, Issues and Options: Evidence Base – Archaeological Priority Areas*.  
<https://www.newham.gov.uk/Documents/Environment%20and%20planning/EB10.%20Evidence%20Base%20-%20Archaeological%20Priority%20Areas%20V2.pdf>

Pallet (2017a). *Pond and Fish Survey Results: Alexandra Lake*. London, UK.

Pallet (2017b). *Pond and Fish Survey Results: Jubilee Pond*. London, UK.

Projects Sub (Policy and Resources) Committee (17 January 2018). *Agenda item 17: consideration of Gateway 1 & 2 project proposal (regular) report regarding an artificial grass pitch provision for Wanstead Flats*. <http://vmtcapp12/ieListDocuments.aspx?CIId=168&MID=19369>

Transport for London (TfL) (2019): *Cycle Superhighways Project*.  
<https://tfl.gov.uk/modes/cycling/routes-and-maps/cycle-superhighways>

Waltham Forest Unitary Development Plan (2006). *Schedule 36: Archaeological Priority Zones (Policy BHE 17)*. <http://www.esrcartography.co.uk/lbwf/schedules/sch36.html>

## APPENDICES

1. Detailed Activity Plan
2. Amphibian survey results and management recommendations
3. Jubilee Pond liner specifications
4. Community involvement with Wanstead Flats
5. Figures

## APPENDIX 1: Detailed Operational Activity Plan

Operational Activity	CMPT	Location	Month	Year	Area (Ha)	Cycle	Description	Zone	Team
AW – Anti-social Behaviour Management	38	Wanstead Flats		2020		1	<b>Litter Management:</b> Review community and COL litter management and liaise with local stakeholders on developing proposals for improving litter management across the Flats	S	VOL/K
AW – Anti-social Behaviour Management	38	Wanstead Flats		2020		1	<b>Public Sex Environment (PSE) management:</b> Continue ongoing collaborative working with PSE stakeholders on the management of PSE issues	S	K
AW – Anti-social Behaviour Management	38	Wanstead Flats		2020		1	<b>Rough Sleeper management:</b> Continue ongoing collaborative working with rough sleeping stakeholders on the management of rough sleeping issues	S	K
AW - Pedestrian access infrastructure	38	Wanstead Flats		2021		0	<b>Access Improvement:</b> Define clearly through vegetation management and signage the strategic N/S Forest access route and local links to Wanstead Park and Leyton Flats		HOP/HVS
AW - Pedestrian access maintenance	38	Wanstead Flats:	Jun	2020		1	<b>Forest Furniture Management:</b> Cut back all ground and arboreal vegetation that would impede the visual impact of Gateway and welcome signs.	S	M
AW - Pedestrian access maintenance	38	Wanstead Flats	July	2020		1	<b>Path Management:</b> Ensure all mapped paths meet the Path Maintenance specification	S	Con
AW - Pedestrian access maintenance	38	Wanstead Flats	May	2020		1	<b>Path Management:</b> Ensure all mapped paths meet the Path Maintenance specification	S	Con
LAW - Avenues	38	Wanstead Flats: Plane tree avenues	Sept	2024		0	<b>Tree Avenue:</b> Audit the condition of the London Plane ( <i>Platanus x acerifolia</i> ) avenues and identify improvement needs	S	Con

Operational Activity	CMPT	Location	Month	Year	Area (Ha)	Cycle	Description	Zone	Team
							and the mechanism to progress these.		
NWH - Grass cutting	38	Manor Park	EarlyJuly	2019	5.84		<b>Grassland Management:</b> Cut and collect grass and herbaceous vegetation. Cut as hard into the edges of the site as practical to reduce roadside scrub cover as part of antisocial behaviour management.	S	Con
NWH - Grass cutting	38	Wanstead Flats: SSSI area	Sep	2019	2.6	1	<b>Grassland Management:</b> Cut and collect grass and regrowth including broom. (Cut area to be reviewed 2020)	S	G
NWH - Grass cutting	38	Wanstead Flats	Sep	2019	23	1	<b>Grassland Management:</b> Cut and collect grass and regrowth on non-SSSI areas. Cutting is on a rotation.	S	G
NWH - Grass cutting	38	Bush Wood: Flats and Lime avenue	Aug	2020	1.52	1	<b>Grassland Management:</b> Cut and collect grass from the mapped area including under the Lime avenue and behind the school	S	Con
NWH - Grass cutting	38	Bush Wood North (Green Man)	Aug	2020	0.85	1	<b>Grassland Management:</b> Cut and collect grass from the mapped area.	S	Con
NWH - Grass cutting	38	Bushwood: Quaker meeting house	May	2020	1	1	<b>Grassland Management:</b> Cut and collect grass, bramble and herbaceous vegetation.	S	G
NWH - Maintenance work	38	Wanstead Flats	Oct	2020		1	<b>Grassland Management:</b> On three-year rotation cut and remove coarse grass areas and broom clumps.	S	G
NWH - Maintenance work	38	Wanstead Flats: Creeping Willow stands		2020		0	<b>Survey and monitoring:</b> Map and assess management needs of Creeping Willow stands across the Flats.	S	VOL/HOC
NWH - Pest and disease management	38	Wanstead Flats: Skylark & Meadow Pipit area		2020		1	<b>Pest Control:</b> Rat control undertaken to reduce the population during the season when birds ground nesting. Objective is to reduce predation on birds,	S	Con

## Wanstead Flats

Operational Activity	CMPT	Location	Month	Year	Area (Ha)	Cycle	Description	Zone	Team
							especially Skylark & Meadow Pipit, eggs and chicks		
NWH - Pest and disease management	38	<b>Wanstead Flats:</b> Skylark & Meadow Pipit area		2020		1	<b>Pest Control:</b> Site monitoring for active rat populations in the nesting zone.	S	Vol
NWH - Water body management	38	<b>Wanstead Flats:</b> SSSI area	Dec	2020		1	<b>Ditch management:</b> Annual cut and removal of bramble and woody vegetation in the ditch on the SW corner of the SSSI to favour development of damp herbaceous vegetation. Possible volunteer task	S	G/Vol
NWH - Water body management	38	<b>Wanstead Flats:</b> SSSI area	Dec	2020		0	<b>Ditch management:</b> Initial cut back of the bramble and woody vegetation in the ditch on the SW corner of the SSSI. Future management to favour development of damp herbaceous vegetation	S	G/Vol
NWH - Water body management	38	<b>Wanstead Flats:</b> All ponds		2022		0	<b>Invasive non-native species management:</b> Agree a plan to reduce/remove the risk of <i>Crassula helmsii</i> being able to spread from Alexandra Lake to other ponds on Wanstead Flats	S	HOP
NWH - Water body management	38	<b>Wanstead Flats:</b> Jubilee Pond		2020		0	<b>Planning:</b> Prepare costed proposals for safeguarding the pond liner, including actions to protect the pond margin.	S	HOP/CS
OC- External Advisory	38	<b>Wanstead Flats:</b> Aldersbrook Road yard	Dec	2024		0	<b>Survey and Monitoring:</b> Two buildings are purported to be relicts from World War II. A survey and report will be commissioned to verify the history of these two buildings.		Con
OC- Internal Advisory	38	<b>Wanstead Flats</b>		2021		0	<b>Planning - Community Engagement Plan:</b> Develop a Community Engagement Plan for Wanstead Flats	S	HOP/HVS

Operational Activity	CMPT	Location	Month	Year	Area (Ha)	Cycle	Description	Zone	Team
							as part of a wider Southern EF Community Engagement Plan.		
OC- Internal Advisory	38	<b>Wanstead Flats:</b> Access Management Plan		2022		0	<b>Planning:</b> Prepare an Access Management Plan to improve the welcoming and positive feel at site entrances and reduce the visitor impact on sensitive habitats.		HOP/HVS
OC- Internal Advisory	38	<b>Wanstead Flats</b>		2025		0	<b>Planning:</b> Develop interpretation information on the history and cultural heritage of Wanstead Flats. Ensure that heritage information is linked with information on the natural aspect of Wanstead Flats	S	HVS
OC- Internal Advisory	38	<b>Wanstead Flats</b>		2025		0	<b>Planning:</b> Facilitate local community involvement in disseminating heritage information to visitors		HVS
OC- Internal Advisory	38	<b>Wanstead Flats:</b> Access Management Plan		2022		0	<b>Planning:</b> Identify and cost access improvement investment needs as part of the Access Management Plan	S	HOP/HVS
OC- Internal Advisory	38	<b>Wanstead Flats:</b> Access Management Plan		2022		0	<b>Planning:</b> Identify potential on-site income generation including grant aid and commercial licences		HOP/HVS
OC- Internal Advisory	38	<b>Wanstead Flats</b>		2021		0	<b>Planning:</b> Prepare a Resourcing Plan for Wanstead Flats including, income opportunities arising from the Epping Forest Mitigation Strategy and potential community support opportunities		HOP/HVS
OC- Internal Advisory	38	<b>Wanstead Flats:</b> Skylark & Meadow Pipit area	Oct	2020		0	<b>Planning:</b> Prepare costed Species Recovery Plan for improving the success rate of nesting Skylark (& Meadow Pipit, ) including nest predation reduction and reducing disturbance.	S	HOP/HOC/ K/Vol



## Wanstead Flats

Operational Activity	CMPT	Location	Month	Year	Area (Ha)	Cycle	Description	Zone	Team
OC- Internal Advisory	38	<b>Wanstead Flats:</b> SSSI Grassland		2020		0	<b>Planning:</b> Prepare SSSI grassland management proposals to ensure no net loss of acid grassland, link to CSS proposals	S	HOC
OC- Internal Advisory	38	<b>Wanstead Flats:</b> Becton Desalination Pipeline	Dec	2021		0	<b>Planning:</b> Review maintenance commitments regarding the pipeline. Can these works better align to EF conservation and visitor management needs?	S	HOP/HOC
OC- Internal Advisory	38	<b>Wanstead Flats:</b> Scrub areas		2025		0	<b>Survey and monitoring:</b> Review scrub management and assess whether the abundance, composition, location and age structure is inline with current scrub management guidelines.	S	HOC
SL – Fire Safety Management	38	<b>Wanstead Flats:</b> fire breaks.	Jun	2020		1	<b>Fire Management:</b> Cut and leave grass vegetation along fire breaks. Total of 3500m of cuts at 6m wide cut (See Map ? ). (May need to cut and collect if delayed and conditions give rise for concern)	S	Con
SL – Fire Safety Management	38	<b>Wanstead Flats:</b> fire breaks.	July	2020		1	<b>Fire Management:</b> Cut and leave grass vegetation along fire breaks. Total of 3500m of cuts at 6m wide cut (See Map ? ). (May need to cut and collect if delayed and conditions give rise for concern)	S	Con
SL – Fire Safety Management	38	<b>Wanstead Flats:</b> fire breaks.	Aug	2020		1	<b>Fire Management:</b> Cut and leave grass vegetation along fire breaks. Total of 3500m of cuts at 6m wide cut (See Map ? ). (May need to cut and collect if delayed and conditions give rise for concern)	S	Con
SL – Fire Safety Management	38	<b>Wanstead Flats</b>	Nov	2020		3	<b>Fire Management:</b> Three yearly programme to cut or mulch mature gorse to reduce the fuel available for fires. Arisings to be chipped and left on site on coarse vegetation areas	S	G/A

Operational Activity	CMPT	Location	Month	Year	Area (Ha)	Cycle	Description	Zone	Team
							and away from acid grassland.		
SL-Anti-social behaviour management	38	<b>Wanstead Flats:</b> Jubilee Pond	Nov	2020	0.97	1	<b>Grassland Management:</b> Cut and leave bramble and stump regrowth along roadside edge to keep the understorey open and scrub free to deter rough sleepers and anti-social behaviour.	S	G
SL-Anti-social behaviour management	38	<b>Wanstead Flats:</b> Harrow Road changing Room	Sept	2020	0.25	1	<b>Grassland Management:</b> Cut and leave bramble and stump regrowth to keep the understorey open and scrub free to deter rough sleepers and anti-social behaviour.	S	G
SL-Anti-social behaviour management	38	<b>Wanstead Flats:</b> Jubilee Pond	Jun	2020		1	<b>Grassland Management:</b> Cut and leave cut the open ground around the pond and along the roadside beneath the Plane trees. High public access and need for caution.	S	M
SL-Anti-social behaviour management	38	<b>Wanstead Flats:</b> Centre Road/Sidney Road	Aug	2020	1.41	1	<b>Grassland management:</b> Cut and leave woody and herbaceous vegetation to leave site open to deter anti-social behaviour.	S	G
SL-Anti-social behaviour management	38	Wanstead Flats	Apr	2020		0	<b>Survey and Monitoring:</b> Prepare vegetation management work maps for antisocial behaviour work areas	S	HOP
SL-Ditch and culvert maintenance	38	<b>Wanstead Flats:</b> Jubilee Pond	Dec	2021		0	<b>Ditch Management:</b> Develop and agree plan with City Surveyors for desilting the lake outfall ditch passing through the Cemetery	S	HOP/CS
SL-Ditch and culvert maintenance	38	<b>Wanstead Flats:</b> Alexandra Lake	Dec	2020		0	<b>Ditch Management:</b> Develop and agree plan with City Surveyors for replacing the pond outfall ditch across the Festival Site. Ditch is currently collapsing and	S	HOP/CS

## Wanstead Flats

Operational Activity	CMPT	Location	Month	Year	Area (Ha)	Cycle	Description	Zone	Team
							relatively shallow. Proposed outfall location is Bandstand pond.		
SL-Highway verge management	38	<b>Wanstead Flats:</b> Capel Road/Bandstand pond	Jun	2020		1	<b>Highway Verge Management:</b> Cut and leave the regrowth on the road side bund to keep the sightline open	S	M
SL-Highway verge management	38	<b>Wanstead Flats:</b> Capel Road/Bandstand pond	Nov	2020	1.4	1	<b>Highway Verge management:</b> Cut and leave woody vegetation along the roadside and in the site corner to open up sight lines and to stop it forming woodland. Problem with close parked vehicles and need to be careful with flying debris	S	G
SL-Highway verge management	38	<b>Wanstead Flats:</b>	July	2020		1	<b>Highway Verge Management:</b> Cut sightlines as detailed in the High Way verge PDN	S	A
SL-Highway verge management	38	<b>Wanstead Flats:</b>	Aug	2020		1	<b>Highway Verge Management:</b> Verge cutting undertaken as detailed in the Highway verge PDN.	S	Con
WMM - Ancient tree management	38	<b>Wanstead Flats:</b> Evelyn Avenue		2022		0	<b>Survey and monitoring:</b> Audit of the veteran trees present on Wanstead Flats, including GPS location and condition assessment and inclusion in the COL Veteran Tree Database	S	Vol
WMM - Pest and disease management	38	<b>Wanstead Flats:</b> All ponds		2020		1	<b>Invasive non-native species management:</b> Canada Goose control through humane egg control.	S	K/Vol
WMM - Pest and disease management	38	<b>Wanstead Flats</b>	Apr	2020		1	<b>Invasive non-native species management:</b> Monitoring and control of Oak Processionary Moth (OPM) in line with Forestry Commission guidance.	S	A/C

## APPENDIX 2: Amphibian Survey Results and Management Recommendations

Catherine Bickmore Associates was commissioned on behalf of City Corporation to undertake an amphibian survey of the ponds and lakes of Epping Forest (Catherine Bickmore Associates, 2014). The first objective of the study was to categorise the ponds in terms of importance for amphibians with particular reference to great crested newt. The second was to categorise the ponds according to management priority, with recommendations for management actions for amphibians.

**Table D/1: Summary of results of pond survey for amphibians and management recommendations**

Waterbody name	HIS (Habitat Suitability Index)	Invasive non-native species	Fish present (in 2013) (Y/N)	Other factors affecting suitability	Designation	Amphibians recorded	Importance for amphibians	Priority for management	Management recommendations (Catherine Bickmore Associates, 2014)
<b>Alexandra Lake</b>	0.27	<i>Crassula helmsii</i>	Y	None	Y (SSSI and SAC)	Common Toad, Smooth Newt, Common Frog	Medium	Medium	Implement management to eradicate <i>Crassula helmsii</i> , protect areas to encourage macrophyte growth.
<b>Jubilee Pond</b>	<i>No data – not surveyed in 2013 by Catherine Bickmore Associates (2014) – pond was being relined at the time</i>								

## **APPENDIX 3: Jubilee Pond Liner Specifications**

### **Appendix Three: *Reshaping and installation of new waterproof lake liner***

**Completion Date:** *June 2013*

#### **Overview**

Jubilee Pond is situated on Wanstead Flats, East London in the area of land between Dames Road, Centre Road and Lake House Road. The pond has existed for many years and more recently was lined unsuccessfully with a clay material.

#### **Shape**

The existing clay was excavated and removed from the pond where necessary and the slopes improved to create a 1:3 or less in all areas, including the three islands. Generally the original pond shape has been retained. All excavated material was buried in the ground adjacent to the pond.

#### **Waterproofing**

A new waterproof liner has been installed to retain the original form of the pond, with a few minor alterations to the shape and contours. The pond has a maximum depth of 2.5 metres. The pond has been waterproofed with approximately 12,000 sqm of Firestone EPDM 1.2m Geomembrane, protected on either side with Bontec 300g/sq.m non-woven geotextile. The geomembrane has been jointed in accordance with manufacturers' guideline including pipe penetrations, the positions of which are indicated on drawing no: 0096E/AB/01. Gravel excavated from the adjacent borrow pit was used to surcharge the new membrane.

#### **Under Liner Drain**

In the deeper sections, adjacent to Lakehouse road, a drain consisting of 20mm clean stone has been set into the base of the pond. This leads to a 110mm diameter collection pipe which extends out of the deep area, below ground to a vertical 450mm chamber. This extends to the surface and terminates in a 450x600mm pre-cast concrete access chamber covered with a screw galvanised steel lid. This has been installed to allow for pumping of ground water in the event that levels rise and for use to control ground water should the lake ever require re-lining in the future.

### **Water Feed**

The pond is fed from the existing bore-hole supply via a 50mm MDPE pipe which enters the pond through a small headwall. Next to this headwall is a second headwall containing a 110mm pipe which extends back into the bank to an existing balance chamber. Within the chamber is a probe that automatically shuts off the water feed in the event of over-filling.

### **Road Drainage**

Two 225mm diameter twin wall pipes enter from the direction of Lakehouse Road. These are connected to two existing old clay drain pipes roughly 6 metres back from the pond edge and bring surface water into the pond from Lakehouse Road.

### **Islands**

All three islands feature a perimeter fence just behind the anchor trench. The purpose of the fence is to deter wildfowl from moving in and out of the water to the islands. The fence consists of 100mm half round tantalised timber rails held in place with 100x100mm square tantalised posts. These are held together with galvanised screws and feature an intermediate galvanised wire strand.

### **Dipping Platform**

A 6 x 3m galvanised steel framed cantilevered dipping platform has been designed and installed by Groundsund. The structural calculations for this are included in the Health and Safety File. The unit is held in place by specialist ground anchors, driven directly into the ground outside of the pond. Timber cladding of the structure has been undertaken by others post construction.

### **Oil/Water Separator and Land Drainage**

A Kingspan NSBP class 1 bypass oil/water separator is buried adjacent to the outlet and dipping platform at the south eastern corner of the pond. The inlet for the interceptor takes water from approximately 2000m of land drainage on Wanstead flats and delivers it via a 160mm pipe which enters the pond adjacent to the outlet chamber. The land drain consists of a central 150mm diameter pipe with 100mm diameter laterals; all bedded and surrounded with 20mm clean stone.



### **Top-up**

Replenishing water lost through evaporation and evapotranspiration is achieved by means of a remote switch operated by the City of London. When activated water is pumped from the existing borehole adjacent to the pond. It discharges via a 50mm MDPE pipe and plate headwall into the pond for a specified amount of time which is governed by an Environment Agency abstraction licence. The existing chamber features a new high level probe which is designed to automatically turn off the water supply in the event of an accidental overflow.

### **Flood Control**

Water leaves the pond from the existing 450mm diameter overflow pipe in the south eastern corner of the pond. Water level is defined by means of oak timber boards and a galvanised steel frame held in the existing pre-cast concrete box chamber.

### **Erosion Control**

The perimeter of the pond features a geogrid plastic reinforcement mesh to help reduce erosion caused by wildfowl. One end is anchored in the perimeter trench and the other is buried in the surcharge material on the downslope.

## Operation and Maintenance

Jubilee Pond has no physical operational requirement, as it is a standing body of water. However, there are various maintenance tasks that should be undertaken regularly. These are:

1. Check all grilles are clear of blockage and remove floating litter with a net or rake to help prevent future blockages;
2. Check weir boards have not been tampered with;
3. Check safety signage (and equipment) is in good order and replace if missing or defaced;
4. As the aquatic plants become established, they will need to be managed by cutting them back annually, normally in the autumn. This can be augmented with applications of an appropriate herbicide, suitable for use in and around water. Prior consent will be required from the Environment Agency to apply herbicide in or around water.
5. Inspect the pond for the presence of invasive weeds. These include:
  - a. Australian Swamp Stonecrop (*Crassula helmsii*)
  - b. Parrots Feather (*Myriophyllum aquaticum*)
  - c. Floating Pennywort (*Hydrocotyle ranunculoides*)
  - d. Creeping Water Primrose (*Ludwigia grandiflora*)
  - e. Water Fern (*Azolla filiculoides*)
  - f. Himalayan Balsam (*Impatiens glandulifera*)
  - g. Japanese Knotweed (*Fallopia japonica*)
6. The following plants should also be avoided as they have particularly invasive root systems that have the potential to damage the waterproof membrane:
  - a. Norfolk reed (*Phragmites australis* of *P communis*)
  - b. Galingale (*Cyperus longus*)
  - c. Reedmace (*Typha latifolia*)
7. Control vermin: It is recommended a professional company keeps the rat population around Jubilee pond under control. Rats have the potential to damage the waterproof membrane if left uncontrolled.
8. Control of Canada Geese: It is recommended that the number of Canada Geese is controlled and a programme put in place to stop them from breeding and raising young at Jubilee Pond. It is very difficult to establish grass and aquatic plants when large numbers of geese are present. They cause bank erosion and compound the problem by eating young plants so they cannot establish. This has a negative effect on biodiversity and encourages growth of algae.
9. Annual electrical safety checks to be undertaken by a qualified electrician. Check operation and electrical safety of borehole pump.





**Firestone**  
BUILDING PRODUCTS  
**NOBODY COVERS YOU BETTER.®**

Warranty # EW-GEO 13-267	FBPCO # 13-267	Project Size 12 000 m <sup>2</sup>
Project Owner :	City of London	
Project Identification :	Jubilee Pond	
Project Address :	Dames Road, Forest Gate	
	London	
	United Kingdom	
Installing Contractor :	Kingcombe Aquacare Ltd	
System Description :	Firestone Geomembrane™ EPDM 1.1 mm	

Firestone Building Products Europe Inc. ("Firestone") hereby warrants to the Project Owner ("Owner") that the Firestone Geomembrane™ EPDM lining membrane is free from latent material or manufacturing defects for a period of twenty (20) years.

In the event any leak should be discovered in the membrane, the Owner must give written notice to Firestone within thirty (30) days if deterioration of the membrane is suspected as the cause of the leak. By so notifying Firestone, the Owner authorizes Firestone or its designee to promptly inspect the project installation to determine the cause of same. In the event that Firestone reasonably determines that deterioration due to defect in material or manufacturing workmanship has in fact occurred, Firestone shall at its sole option either provide repair materials for the original sheet material or a credit to be applied towards the purchase of new sheet material.

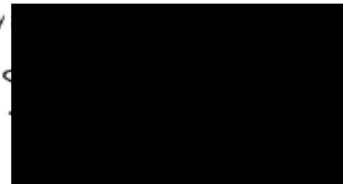
Firestone shall have no obligation under this warranty, or any other liability, now or in the future if a leak or damage is caused by: (a) natural forces, disasters, or acts of God including, but not limited to winds, hurricanes, fires, tornadoes, hail, wind-blown debris, lightning, earthquakes, volcanic activity, (b) insects or animals, (c) negligence, abuse, vandalism, repairs or alterations or attachments or additions to the project, or war or civil disobedience (d) and/or does not directly arise from any defect in material or manufacturing workmanship.

Firestone shall have no obligation under this warranty until Firestone, the Installing Contractor, and material suppliers have been paid in full for all materials, installation, supplies and service, which are included in the project contract.

This is the entire warranty covering the Firestone Geomembrane™ EPDM lining membrane. There are no other guarantees or warranties expressed or implied.

FIRESTONE BUILDING PRODUCTS EUROPE, INC.

By



Dated : 28-06-2013

81204K328LW1012

## APPENDIX 4: Community Involvement with Wanstead Flats

### Charities and community groups

There is a strong tradition of community involvement with Wanstead Flats. A summary of the most active community groups and charities involved with Wanstead Flats is provided below:

- Wren Conservation Group (<https://www.wrengroup.org.uk/home-page/>): This community group exists to further learning and wildlife conservation in East London, centred on Wanstead Park (Epping Forest land), but also including Wanstead Flats. The Wren Conservation Group also undertake wildlife surveys and practical conservation work, and organise local walks. The group is affiliated to the London Natural History Society.
- Wanstead Birding (<http://wansteadbirding.blogspot.com/>): A community group who conduct regular bird surveys on Wanstead Flats and Wanstead Park, compiling species and sightings lists.
- Leyton and Leytonstone Historical Society (<http://www.leytonhistorysociety.org.uk/>): The society exists to research and promote interest in and knowledge of the history of the area of the former Borough of Leyton and its surroundings. The society has published five booklets on the history of Wanstead Flats, as well as three guided walks booklets.
- Friends of Wanstead Parkland (<http://www.wansteadpark.org.uk/>): This community group exists to promote the use of Wanstead Park for the benefit of local residents, to provide and assist in the provision of facilities and opportunities for recreation for visitors, to promote the conservation of the physical and natural environment of the historic Wanstead Park, and to advance public education in the character, archaeology and history of Wanstead Park. The remit of the Friends of Wanstead Park therefore includes parts of Wanstead Flats, as Bush Wood and the avenues on Bush Wood Flats are remnants of the historic Grade II\* Wanstead Park.
- London Playing Fields Foundation (<https://lpff.org.uk/>): The London Playing Fields Foundation is London's leading charitable body for the protection, provision and promotion of playing fields in London, which was established in 1890 when it laid the first football pitches on Wanstead Flats. It works with partners such as the Corporation of London to 'stimulate demand for playing fields and address barriers to participation, such as accessibility, cost, quality, transport and lack of joined up thinking'.
- Football Foundation (<https://www.footballfoundation.org.uk/>): The Football Foundation is the UK's largest sports' charity. Funded by the Premier League, The Football Association and the Government, the Foundation directs £60m every year into grass-roots sport. Its mission is to improve facilities, create opportunities and build communities throughout England. The Harrow Road changing facilities were redeveloped in 2009 with £1.4m from the Football Foundation, London Marathon Charitable Trust and the Corporation of London.
- Bush Wood Residents Association (<http://www.bara.london/>) Based in Leytonstone, East London, E11, it was formed way back in 1979 and now has over 500 member households. BARA encourages community spirit, looks after the environment and supports local amenities for the benefit of all our members.
- Lakehouse Road Association

### Long-standing annual licence holders

Each year, numerous licences are granted to individuals and businesses to operate on Wanstead Flats, the majority of which are one-off. However, there are a small number of long-term licence holders who have

renewed their licence annually for a number of years, and who therefore have an ongoing business interest in the site:

- Wanstead Model Flying Club (<http://wansteadmodelflying.club/>): The Wanstead Model Flying Club is a long-established model flying club based in east London, whose outdoor flying site is located on Wanstead Flats north of the Centre Road car park. The pits area (with private parking) is accessed through the public car park on Centre Road. Flying is permitted from 10.30am till dusk on weekdays (excluding Thursdays) and from 1pm till dusk at weekends.
- Wanstead Flats Parkrun (<https://www.parkrun.org.uk/wansteadflats/>): Parkrun, a volunteer-led charity, organises a free weekly, timed 5km run on Wanstead Flat, with a current average of 242 attendees per week, though the largest attendance recorded at one session to date (1.1.2019) is 359.
- Royal Pigeon Racing Association (<https://www.rpra.org/>): The Association applies for a licence from COL on a yearly basis to release pigeons on Wanstead Flats for the purpose of racing several times a year. The pigeons are usually released from the Fairground site.
- Wanstead Flats Forest School (<https://wansteadflatsforestschool.wordpress.com/>): Wanstead Flats Forest School is a member of the Forest School Association and offers Forest School sessions to babies, toddlers, children and their parents/carers on Wanstead Flats. Their activities are licensed by COL on a yearly basis.
- Be Military Fit (<https://en-gb.facebook.com/pg/LondonWansteadFlats/about/>): Be Military Fit hold a licence, renewed annually, to run three fitness sessions a week on Wanstead Flats.

### Football-related organisations and grant programmes

- Parklife grant programme (<https://www.sportengland.org/funding/parklife/>): The Football Association (<http://www.thefa.com/>), the Premier League and Sport England (<https://www.sportengland.org/>) have developed the Parklife Football Hubs Programme, administered by the Football Foundation, to target areas where pressures on the local game are greatest. The Parklife Vision is ‘to create multi-pitch artificial grass football hubs across England’s major towns and cities, where the need for good quality pitches is greatest, creating a passion and interest in football that lasts a lifetime’.
- 32 Borough Cup: Organised for the first time in summer 2019 by Hackney Wick FC, a two-day tournament on Wanstead Flats aimed at bringing young people together from 32 youth teams across London. The aim of the tournament was ‘to highlight to young people that they are one and the same, and that gang rivalry has to stop’. The organisers wanted ‘to make London feel fluid, with no restrictions on where a young person can travel’. The tournament was a huge success, with a large number of attendees.
- Lovefootball Festival and Inner City World Cup): The Lovefootball Festival has hosted the prestigious Inner City World Cup since 1994, which is a replica World Cup with 32 teams made up from multicultural inner-city communities representing their country of origin in their full national colours. The hugely successful Festival was held at Wanstead Flats over two days in May 2019, with large numbers of attendees.

### Local Football Leagues and Clubs associated with Wanstead Flats

AFC Woodford



Alpha FC

Asianos Reserves

Blackwell Rovers FC

Community Football League (London)

Cowley Boys

East London & Essex (ELE) Junior Football League

East London Ladies FC

Eastern Avenue FC

Iford and District Churches Football League

Kick London Forest Gate Football Academy

Loxford Lions

Lymore Gardens

Newham Wanderers

North East London & Essex Churches Football League (NEL&ECFL)

Peter Hucker Soccer School

Prospect Protégé

Prostar (Youth) FC

R77

Rippleway FC

Senrab FC

St Francis

Wanstead Albion

## **APPENDIX 5: Figures**

Figure 1: Wanstead Flats – named locations

Figure 2: Indicative management plan for Wanstead Flats