CANARY WHARF
GROUP PLC

# BIODIVERSITY ACTION PLAN 2018-2028

## A SUMMARY

MAKING
SUSTAINABILITY
REAL

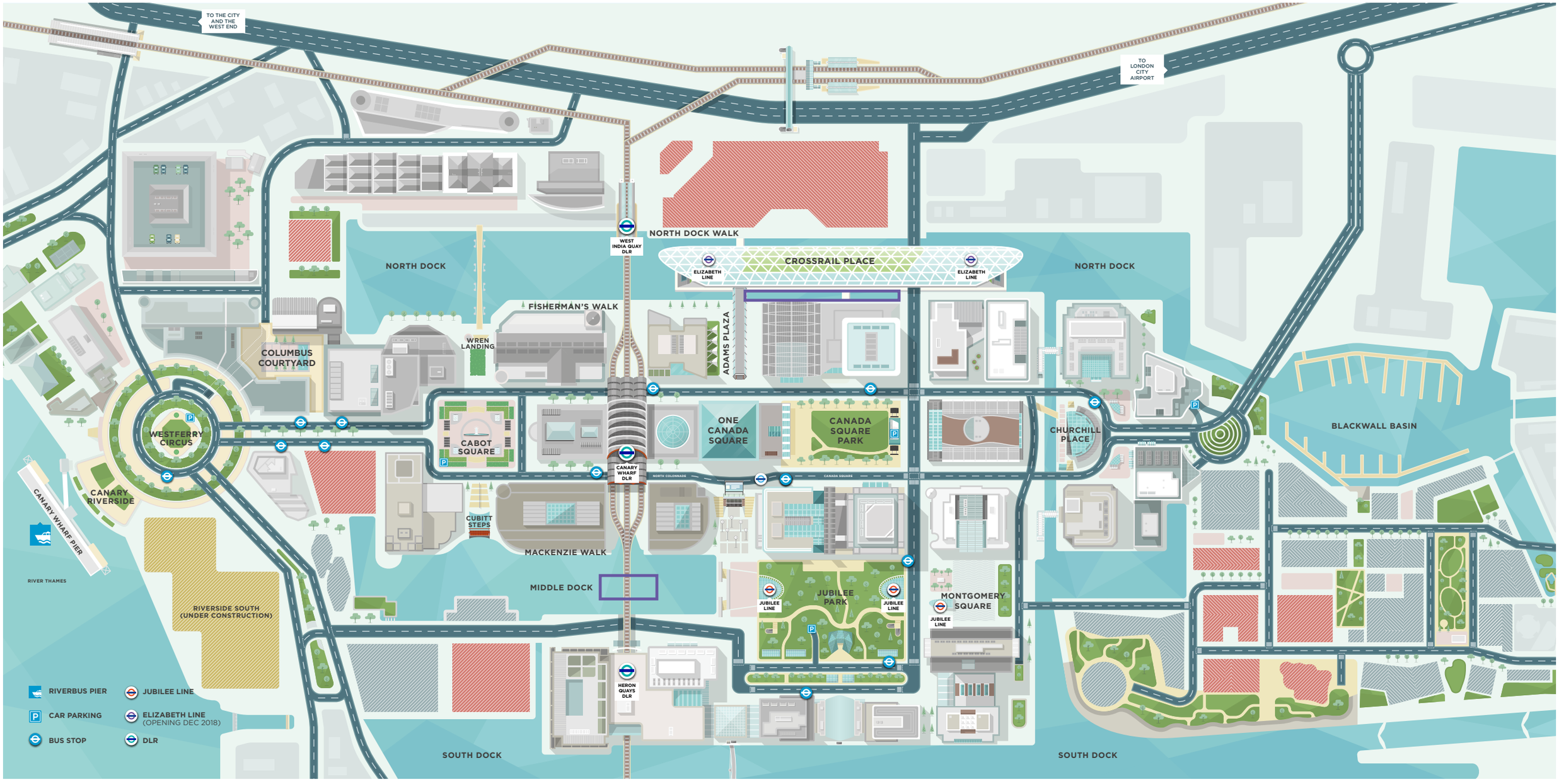
“There is more to biodiversity in Canary Wharf than meets the eye. The Canary Wharf Estate is an integral part of the Thames Estuary and Canary Wharf Group works to promote an integrated green and blue infrastructure approach that maximises the ecosystem service provision. Through time, our urban design has created a suitable living environment for native and threatened species of plants and animals and their establishment has taken place alongside the thriving commercial world of the Canary Wharf Estate.

Looking forward, we have updated our Biodiversity Action Plan (BAP) which aims to establish a precise baseline allowing us to better understand the present ecological value of the Estate. By defining key habitats and species, we are ensuring that current and future developments integrate this knowledge into their design, maximising opportunities to create and augment green corridors that link with the rest of Tower Hamlets and east London. Undertaking an Ecosystem Service Valuation has also allowed us to define the value of the Estate’s biodiversity assets which can then inform estate-wide management and identify areas of ecological priority. Through our BAP, we are working to ensure that we create safe and healthy ecosystems and amenities that promote integrated, pleasant and liveable public spaces where biodiversity and leisure meet.”

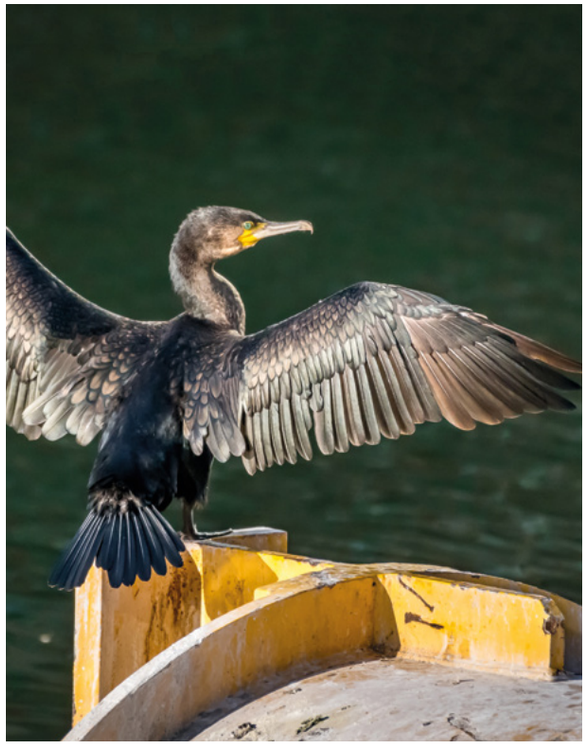
Canary Wharf Group
March 2018

# Estate Map

The map below shows the remit of the BAP and our current Estate boundary at the time of production of this report.



# Our Estate



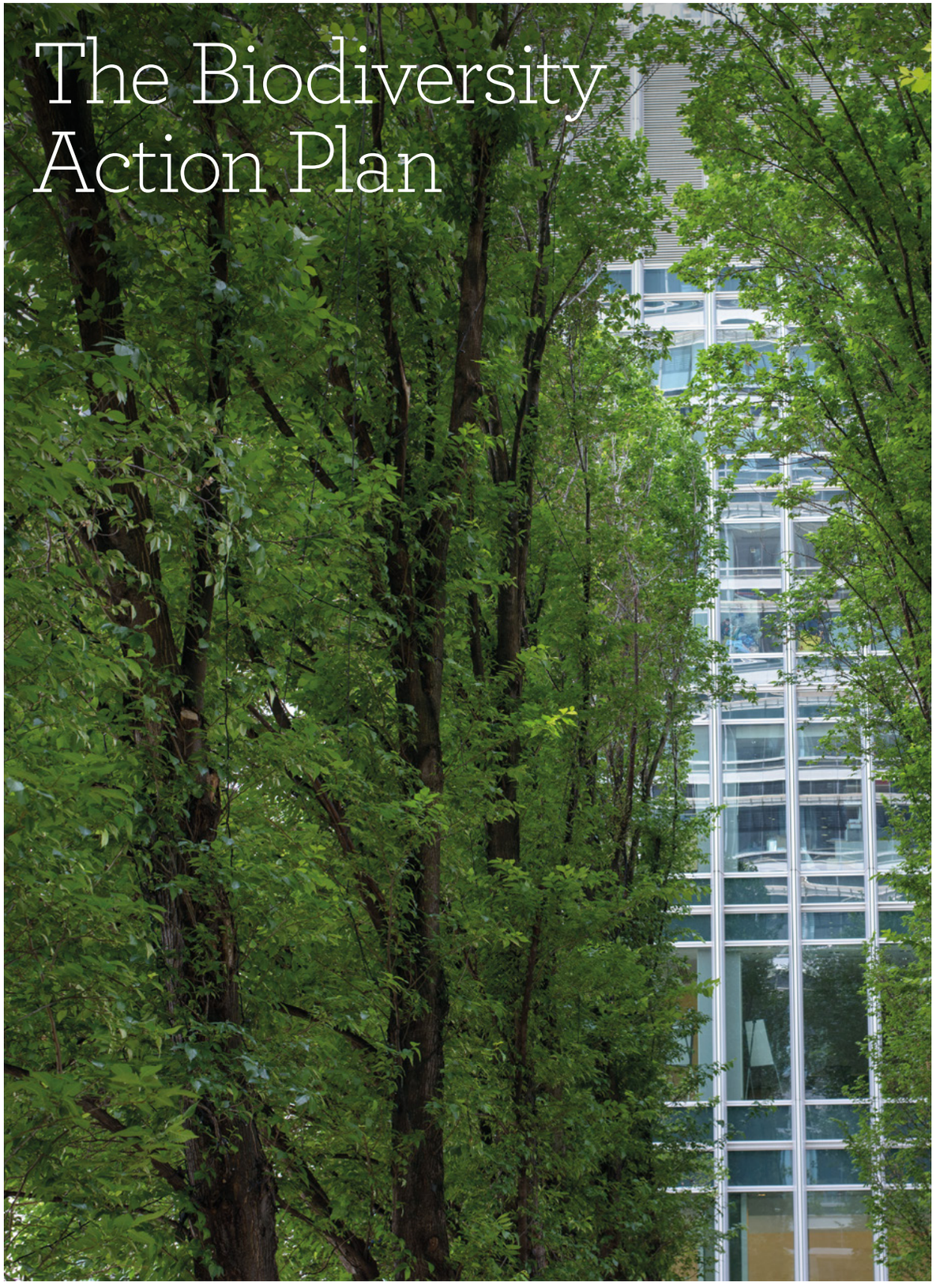
Canary Wharf is inherently a brownfield site; ‘natural’ ecosystems will not have existed in this location since the draining of the Stepney Marshes in the 13th Century. In 2004 Canary Wharf Group was one of the first developers in the UK to create a BAP and to install ecological features such as bird boxes, bat boxes, bee hives, and insect hotels to maximise biodiversity.

Almost 15 years on and the area now supports 5 bat species, a diverse assemblage of fish, a number of priority bird species such as black redstart and kingfisher, and of course the famous Seal!

Today, the 5 hectare Estate comprises four urban parks, 13 buildings with living roofs, and over 650 trees which total;

- 8,000m$^2$ of living roof space
- 24,000m$^2$ of park/amenity space
- 348,000m$^2$ of open water habitat
- 2,000m$^2$ of tree cover with a mix of over 30 species

# The Biodiversity Action Plan



In 2016, a site walk-over and desk-based study was carried out to map our existing biodiversity 'assets' and evaluate their status, condition and relative importance. This included undertaking ecological surveys, undertaking a tree-count and doing an appraisal of the green and brown roofs around the Estate in order to assess their relative health. Beyond creating a baseline, this survey included other interesting findings, such as the discovery of Jersey Cudweed (*Gnaphalium luteoalbum*), a protected plant species listed on schedule 8 of the Wildlife and Countryside Act, 1981 (as amended), growing on the sedum roof on 15 Canada Square.

The baseline also enabled us to map out all of the trees around the Estate and using well-established methodologies, it was concluded that our tree cover provides the following ecosystem services*;

- The tree cover on the Estate amounts to 4.3% of total area which results in a 198m$^3$ reduction in surface water run- off
- Carbon sequestration of 11 tonnes per year
- 154 tonnes of carbon stored
- 29 tonnes of oxygen produced annually

* For the Ecosystem Service Valuation in financial terms, please refer to the full BAP report available on our website.

# Our BAP 2018-2028 has identified 3 main evidence-based objectives for our Estate.

## Objective 1
Embed the biodiversity 'net gains' principle within management and planning decision-making across the Estate;

## Objective 2
Develop and apply actions for climate change resilience;

## Objective 3
Improve ecosystem service value and in particular health, well-being and productivity of Estate users.

Our BAP has carefully considered wider implications of biodiversity in the Estate including impacts on climate change and human health, wellbeing and productivity. This Biodiversity Roadmap is also novel in its approach and demonstrates the following innovative traits;

- Ecologically progressive; includes drive for excellence in design and build quality with respect to ecological design
- Pre-empts emerging policy: embeds the biodiversity net gains approach within Estate-wide policy, as included in the draft New London Plan and the draft National Planning Policy Framework, both due in 2019
- Paradigm for future approach: sets forward thinking and innovative targets that can act as framework for other sites and lead on industry innovation

# Objective 1

## Embed the biodiversity 'net gains' principle within management and planning decision-making across the Estate.

The principle of biodiversity net gain is that a development leaves nature in a quantifiably better state than it was before. This will be calculated through the application of innovative metrics to establish changes in biodiversity value, comparing pre- and post-development conditions. Progressive green infrastructure design standards are provided to help achieve this target, with an overall 75% increase in green infrastructure targeted over the lifetime of the BAP. This approach is integrated in the draft London Plan due for release in 2019 and could potentially become a part of the National Planning Policy Framework.

Examples of initiatives include:

- Improving living roof conditions, street tree conditions and faunal diversity
- Defining clear biodiversity enhancement and management targets for new developments
- Increasing pollinator value in landscaping

# Objective 2

## Develop and apply actions for climate change resilience.

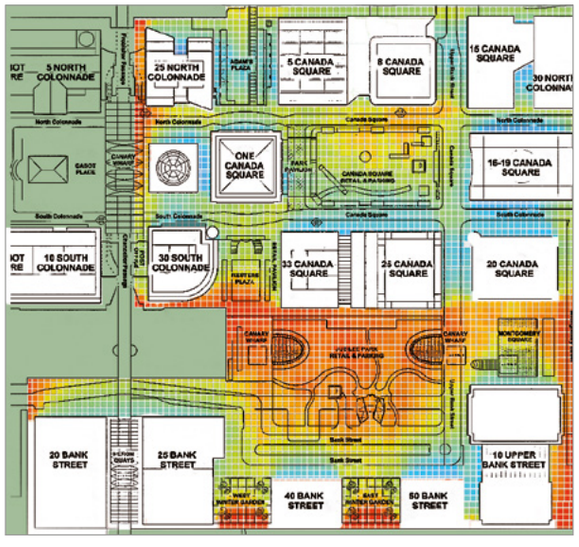
There is near universal scientific consensus that human-caused climate change is happening and will have long term impacts upon the built environment. A 3D model was used to analyse the current conditions of the Estate and to predict climatic conditions over the next 60 years, including future Urban Heat Island (UHI) effect at ground level and roof level of key buildings. This gives an accurate long term view about the different climatic conditions across the site and serves as a reference for decision makers considering the wider recommendations of the design principles.

In areas where high heat stress is indicated, informed decisions regarding drought resistant planting and climate change resilient species can be made and implemented. This also ensures that the wellbeing of visitors to the Estate is not compromised by the changing conditions of our climate.

Mitigation measures will include:

- Improving localised air quality
- Reducing the UHI
- Increasing storm retention and introducing drought tolerant planting

A 3D model of the estate was used to analyse the current and future Urban UHI environment for the spaces at ground level and roof areas of the Estate. The image below shows the UHI model of Canary Wharf (current day).



# Objective 3

## Improve ecosystem service value and in particular health, well-being and productivity of Estate users.

Biodiversity is the foundation for human health and well-being. Exposure to views and images of nature can help to speed up healing and recovery time, boost positive feelings, improve productivity and encourage people to stay and enjoy the environment for a longer period of time. In the built environment, exposure to green spaces helps reduce stress, increase employee productivity and provide a positive experience for visitors. Green spaces also help improve air quality, and absorb carbon, as well as other pollutants on the Estate. Furthermore, green spaces help with human interaction and encourage an active lifestyle. All this will contribute to positive placemaking.

Actions will include:

- Improving public engagement and increasing awareness of the importance of biodiversity
- Attracting occupiers, visitors and increasing productivity through the use of biophilia
- Sharing data and lessons learnt

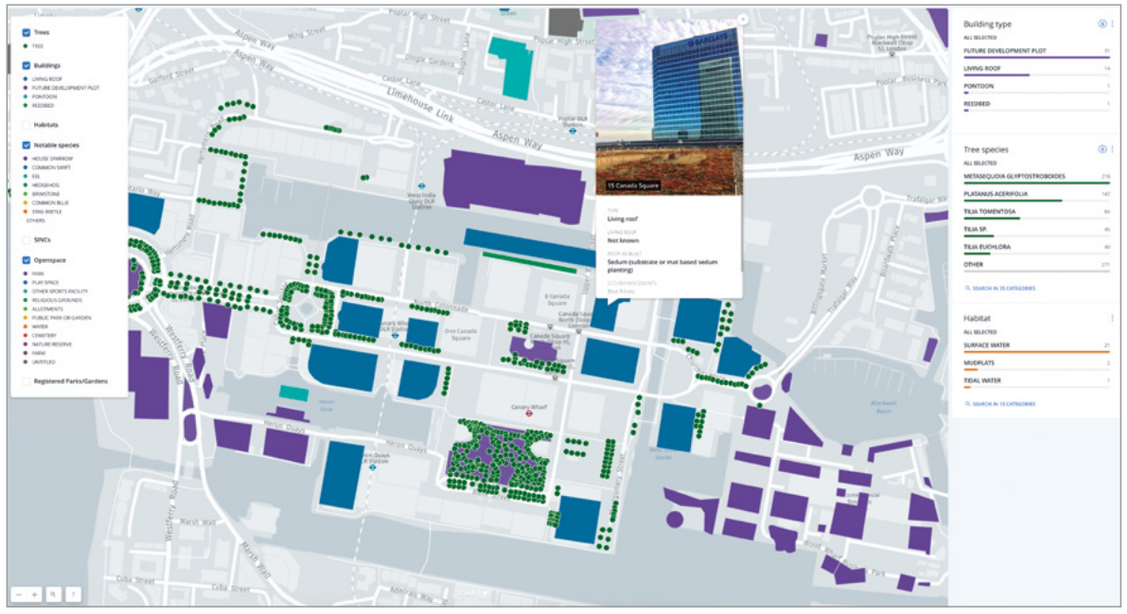
# The Management Plan

To deliver our Objectives, we have defined a set of Key Performance Indicators (KPIs) against which management of existing and future assets will be measured. These targets will be monitored using a design principles framework devised with the aim of streamlining the design, planning and build process. This framework will be used by our design, construction and management teams to ensure that biodiversity is embedded into the design. For a comprehensive list of guidelines and recommendations, please refer to the full BAP report available on our website.

In order to engage a wider audience and make biodiversity accessible to all, a database of all ecological information collected for Canary Wharf and its surroundings has been collated in an interactive online GIS map. This map will be freely accessible and fits within the wider London ecological baseline, thus contributing to other initiatives such as the Mayor's London Tree Map. This map is an iterative tool which is to be regularly updated when new data are collected or made available. It can also be used as a live management tool, guiding maintenance requirements whilst helping to monitor the health of trees on the Estate.

The interactive map currently holds the following information:

- Living roofs with detail on design intention, 'as built' conditions, additional enhancement features and quality;
- Future development plots and design intention;
- Tree locations with information recorded during the arboriculture survey;
- Parks and open spaces; and
- Notable species records.




Interactive online GIS map

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The front cover photo is of a Grey Wagtail, photographed by Christopher Andreou, as part of the inaugural Wildlife Photography Competition in Canary Wharf. For more information, visit canarywharf.com/wildlife-photography-competition/

Grey Wagtails are on the UK Red List for birds wildlifetrusts.org/species/grey-wagtail

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