

Report

Bird Hazard Management Plan Crown Trading Centre

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Prepared For: JJ Rhatigan & Company

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Landscape masterplan L1115 - 3.1 - 2000 - P3_LANDSCAPE MASTERPLAN

Digital image of completed buildings 2528_001

1 Introduction

1.1 Purpose

The purpose of this Bird Hazard Management Plan (BHMP) is to determine the appropriate control and management measures to reduce the risk of bird strike, due to the proposed development's proximity to the airport, and to advise on the implementation of such measures. The measures outlined aim to ensure birds, both flocks and individuals, do not habituate in the areas of the proposed development during construction and in operation. This will be achieved through appropriate monitoring, landscaping, habitat management, as well as bird control and dispersal methods where necessary.

This BHMP has been prepared by Sweco for JJ Rhatigan & Company and relates to the discharge of condition 14 laid out by Hillingdon Borough Council as part of the planning application 73955/APP/2022/2613 for the mixed use development at Hayes Place, Brickfields, London UB3 1BA. Condition 14 states:

"Prior to above ground works, a Bird Hazard Management Plan shall be submitted to and approved in writing by the Local Planning Authority in consultation with the Heathrow Airport Limited. The submitted plan shall include details of:

- management of any flat/shallow pitched on buildings within the site which may be attractive to nesting, roosting and "loafing" birds. The management plan shall comply with Advice Note 8 'Potential Bird Hazards from Building Design'.

- signs deterring people from feeding the birds.

The Bird Hazard Management Plan shall be implemented as approved on completion of the development and shall remain in force for the life of the building. No subsequent alterations to the plan are to take place unless first submitted to and approved in writing by the Local Planning Authority."

The measures outlined in this report are designed to meet the requirements of Condition 14 whilst also ensuring an adaptable in response to on-going avian assessments due to the relative unpredictability of avian activity. No alterations or amendments to the measures outlined in this report will be made unless they are submitted and approved in writing by Hillingdon Borough Council (HBC), following consultation with the Heathrow Bird Hazard Management Team.

1.2 Background

Bird-strike is a major hazard to aviation, having the potential to cause catastrophic accidents to all types of aircraft as a result of birds moving through aircraft take-off and approach paths and across the aerodrome.

When assessing and managing bird hazards in relation to developments in proximity to aerodromes, a 13km radius from the aerodrome is the internationally accepted safeguarding area. As such, developments within 13km of aerodromes can be subject to Bird Hazard Management Plans (BHMPs) to assess the risk of the development increasing bird numbers, and subsequently the bird-strike risk, in the flight zone.

The development is situated 2.8km north of Heathrow Airport, within the 13km safeguarding zone. The primary concern of the proposed development comprises the construction of large flat roofed buildings which could be used for loafing, resting and nesting birds (e.g. gulls, pigeons, starlings, corvids). Therefore, the construction phase and operational phases of the development provide potential opportunities to encourage collision risk bird species.

2 Design Phase Measures to Avoid Bird-Strike

The landscape and design of buildings can significantly contribute to their use by birds for nesting, roosting and loafing [2]. As such the landscape detailed design for the proposed development will not include ponds or waterbodies as these have the potential to attract birds which will then roost or nest birds in the surrounding environment. The proposed development will include the provision of trees, shrubs and hedgerows; however, these habitats will be managed so as not to become dense. To reduce the attractiveness to large bird species such as pigeons, corvids and gulls, the landscaping has been designed to remove suitable foraging, roosting, and nesting habitats.

The landscape plan has considered the measures outlined in Table 2.1 below.

Table 2.1. Design measures to reduce bird attractant habitats

Measure	Justification
Low quantities of berry bearing shrubs, where present they are maintained short and alongside pathways.	Berry bearing bushes provide foraging opportunities for a range of birds, by keeping the bushes short they never become dense enough to be used by large species for nesting and sited along the main site pathways means they will be subjected to regular disturbance deterring use by large species.
Sterile and cultivar tree species selected.	Sterile and cultivar species have been selected over native species, as they have wide and open canopies making it less suitable for nesting inside, and do not bear fruit so as not to attract birds.
Planting of shrubs and trees will avoid creating significant areas of dense vegetation.	Dense trees, shrub and scrub provide roosting and nesting opportunities. By spreading out these features the suitability for them to support larger numbers is reduced.
Planting of a small hedge and shrubs will take place around the turf and meadow areas of the site.	Planting a small hedge and shrubs around the grass and meadow areas encloses these areas. Enclosed areas are less likely to be used for loafing by larger birds like gulls, corvids and pigeons, as it restricts escape and provides overwatch for predators.
Bird nest boxes are tailored to small passerines like blue tits, great tits, house sparrows, and robins.	Small passerines are significantly less likely to fly at heights aircraft may be operating at, rarely going above 20m. The boxes will be designed to avoid encouraging starling (a hazard species).
Exclusion of green/brown roof in design.	Despite the ecological benefits, the provision of a green/brown roof has been excluded due to the potential to encourage both roosting, loafing and nesting birds.

Measure	Justification
Monitoring of all areas by the principal contractor (and any subsequent management team).	To identify establishment of roosts or other bird colonies.

For details of the landscaping proposals refer to the Landscape masterplan L1115 - 3.1 - 2000 - P3_LANDSCAPE MASTERPLAN.

3 Construction Phase Measures to Avoid Bird-Strike

High levels of activity during site clearance and construction are likely to result in acoustic and visual disturbance to birds; however, there is potential for clearance of the site to also provide suitable habitat for birds [3]. It is therefore important that the construction phase follows immediately after the site clearance, to ensure that a time lag does not allow birds to colonise the site.

3.1 Monitoring of the Site

3.1.1 Schedule

- An initial monitoring survey of the site will be undertaken on the first three days of construction by a nominated member of the construction team. The whole site plus adjacent land will be inspected for signs of flocking birds and potential attractants (such as recently cleared ground, development of open water areas in construction areas due to poor drainage and poor waste disposal). It is expected that this will give an initial idea of how and where birds may use the site if they are present.
- After the first week of construction, monitoring will be undertaken once a month for the duration of construction by construction staff. Again, monitoring for birds will focus on bird flocks and potential attractants.

3.1.2 Observations

- Monitoring of vegetation growth, in particular weeds, during the construction phase will be undertaken. Growth is more likely to occur in areas of site where construction is less active. Growth can be removed manually by digging or mowing, mechanically by churning the ground with plant machinery, or chemically with the application of glyphosate herbicide.
- Certain works, in particular earthworks, may attract birds by providing foraging habitat on disturbed soil. The monitoring outlined below will be undertaken and bird control and dispersal measures, such as those detailed below in the Bird Dispersal on Site section (section 5 below), implemented where necessary by pest control operatives.
- When flocking birds are recorded, a bird control company will be contacted within 24 hours.

3.1.3 Responsibilities

- A member of the construction team will be responsible for monitoring activities. This person should be easily contactable. With contact details for this person provided to Heathrow Bird Hazard Management team. Heathrow Airport Safeguarding team may also undertake audits of the site to ensure that the Bird Hazard Management Plan (BHMP) is implemented and functions effectively.

3.1.4 Additional Measures

- Any skips stored on site will be of a design to exclude birds. Bins will be likewise and emptied frequently before over-flowing occurs, with toolbox talks provided to staff regarding food waste and wildlife.

4 Operation Phase Measures to Avoid Bird-Strike

When operational, the Crown Trading Estates will likely be subject to regular and frequent disturbance outside through both residential and commercial use, as well as use of the outdoor play area and the various walkways around the site. This will likely deter the general use of the site by the large bird species for loafing and resting. Furthermore, with the combination of the shrub planting and height of the buildings, it is considered likely that the landscaping features are unlikely to be used by any large bird species, due to the feeling of potential overwatch by predators. This is also likely to influence birds using the ground landscaping as large species like gulls and pigeons do not like their nests to be visible from vantage points above.

The roofs of the buildings do, however, provide large flat open areas for potential nesting and loafing and therefore the following measures will also be undertaken to ensure the proposed development does not contribute to encouraging birds into the area and thus potentially increasing the risk of bird strike.

4.1 Deterrent Measures

Drawing 2528_001 shows the proposed development and the roof shape of the planned buildings. The planned site consists of two main buildings with covered parking, surrounded by paved walkways, areas of amenity planting, and a children's play area. Of these buildings, both have flat open roof space. To deter pigeons and gulls from nesting and birds like pigeons, gulls and starlings from loafing on the roof, regular inspections will be conducted over all areas of the roofs by an appointed and appropriately trained bird monitor. In order to facilitate this, safe and easy access to all roof areas will be maintained at all times. A specialist pest control team will also fly a falconry bird within the site on a regular basis in order to establish the appearance of a territory.

Photovoltaic panels will cover large areas of the roof space. As well as being a less attractive surface for nesting or loafing, the panels on the roof will require regular maintenance and cleaning every 6-8 weeks to ensure they function to full capacity, which will likely act as some deterrent. In addition to this, appropriate measures to prevent access beneath the panels by nesting birds will be put in place such as brushes, spikes or mesh.

Where disturbance of the roof areas is used as a deterrent measure, whether by maintenance staff or a specialist pest control team utilizing a falconry bird undertaking regular visits to the site, for the duration of the site's life, the results of each visit should be recorded along with the date and any target species present identified for the purposes of demonstrating the effectiveness of measures in place. This will be required as part of an evidence package in the event of an audit by Heathrow Airport Safeguarding team.

4.2 Monitoring of the Site

4.2.1 Responsibilities

JJ Rhatigan & Company or the site management team will nominate an individual as responsible for monitoring the site when it is operational. Their monitoring activities will be logged, timed and dated in a register held by the company on site. The register will include details of bird numbers and species using the site. This register will be made available to JJ Rhatigan & Company or the team responsible for managing the site and to Heathrow Airport who may request the document as part of an audit.

4.2.2 Observations

Monitoring will include an assessment of nesting, roosting and loafing potential of the site alongside looking for evidence of repeated bird use such as frequent bird droppings. In addition, there will be a walk around the site to identify any potential suitable habitat for birds, such as areas of standing water, short grass or shrubs, alongside checking that deterrent measures are still in place and working effectively and that regular raptor flights are occurring (if agreed as part of the deterrent measures). The monitoring will identify any need for any further bird dispersal methods, if the existing measures are not found to be sufficient.

4.2.3 Schedule

As the site will be active most of the time, the monitoring should take place on a weekly basis. These visits will also act as a means determining the effectiveness of the deterrent measures, undertaking any required maintenance or repair if needed, and in themselves providing regular disturbance to the roof area.

4.3 Additional Measures

Another means of deterring birds will be to reduce the potential food sources available from the site. Whilst this is somewhat addressed through landscaping, outdoor lunch areas potentially provide foraging for gulls and corvids via leftover food and rubbish. As such all outdoor waste bins must be of a covered design to prevent birds such as gulls from having easy access. Furthermore, they must be emptied frequently before over-flowing occurs with regular litter picking also occurring. The removal of food rubbish will significantly deter species like gulls and corvids that have learnt to feed on human food waste.

5 Bird Dispersal on Site

The intended design, construction and operational phase measures outlined above mean that dispersal action should never be needed. Dispersal action will be considered necessary and be initiated during operation or construction where a minimum ten gulls, corvids or starlings are observed on site at any one time or if birds start using the roof or any other structure around the site to breed.

5.1 Responsibilities

JJ Rhatigan & Company or their on-site management team will be responsible for monitoring the site and will also be responsible for providing pest control or employing a pest control contractor, if required, to deal with any hazardous species (e.g. gulls, pigeons, starlings, corvids). A pest/bird control contractor will be contacted and required to investigate within 24 hours of the monitoring inspection if dispersal measures are required.

Hazardous bird species found to be roosting or loitering at any time will be dispersed by a suitably licensed person. In the event birds are found to be nesting on the roof, the appropriate licence will need to be obtained from Natural England by the management company/team to remove eggs from nests if required, otherwise this service will be procured from a specialist licensed company. Once obtained the nests will be destroyed and the addition of further netting, wires or spike strips will be employed to prevent future nesting attempts.

In the event these measures are ineffective, the use of distress calls or falconry birds will be considered, only after consultation with the local airport (Heathrow Airport Safeguarding team) should these measures be implemented [4]. Heathrow Airport will also undertake periodic audits of the development as a means of ensuring the BHMP is implemented and functions effectively.

5.2 Measures of Bird Dispersal

Measures of bird dispersal include those outlined in Table 5.2 below.

Table 5.2. Measures of Bird Dispersal and their Requirements

Measure	Justification
Dispersal by humans during monitoring	With access to the roof and throughout the landscaping, the monitoring visits themselves can act as a means of dispersal until hazard has been dealt with.
Removal of eggs/nests	Nest disturbance and predation both deters the current activity and is likely to prevent recurrence. Licence may be required from Natural England (some species covered by general licence). It is otherwise an offence.

Measure	Justification
Addition of bird netting, wires or spike strips over areas birds have been found to breed.	Where nesting has been identified the addition of these measures will prevent further attempts from occurring and only target areas where the birds are using.
Use of distress calls	Distress calls indicate an undesirable location and act as a deterrent to loitering or nesting. Training is required for use close to aerodromes. Approval by the Heathrow Airport Safeguarding team required.
Use of a Falconry Bird	Regular flying of a falconry bird establishes an appearance of territory that birds will not become acclimated to as they would kites or stationary dummy birds of prey. Training is required for use close to aerodromes. Approval by the Heathrow Airport Safeguarding team is also required.

6 Conclusion

This BHMP has been produced in accordance with condition 14, providing the measures outlined within are followed the proposed development should not result in an increased risk of bird strike to the airport.

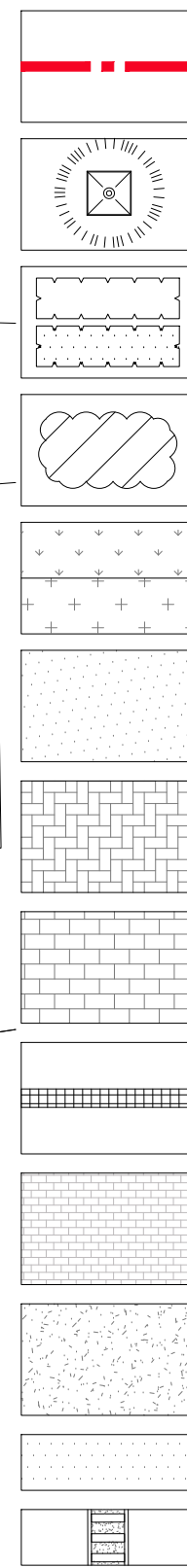
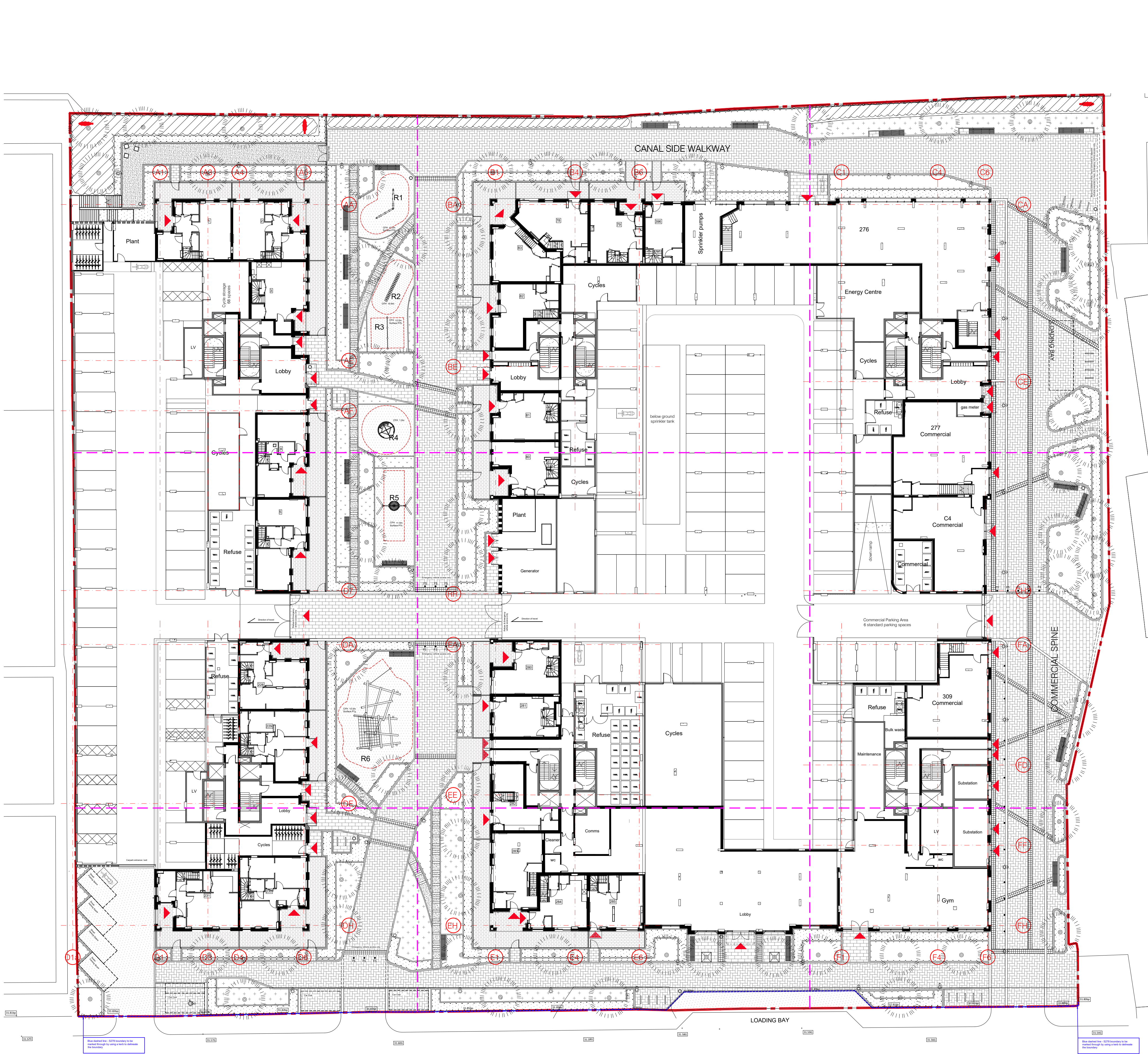
7 References

- [1] Sweco, "Ecological Impact Assessment Template," 2023.
- [2] Airport Operators Association and General Aviation Awareness Council, "Safeguarding of Aerodromes Advice Note 8: Potential Bird Hazards from Building Design," 2008. [Online]. Available: <https://www.aoa.org.uk/wp-content/uploads/2014/02/AN08-Potential-Bird-Hazards-from-Building-Design-August-2006.pdf>.
- [3] Airport Operators Association in association with Civil Aviation Authority, "Safeguarding of Aerodromes Advice Note 3: Wildlife Hazards around Aerodromes," 2016. [Online]. Available: <https://www.aoa.org.uk/wp-content/uploads/2016/09/Advice-Note-3-Wildlife-Hazards-2016.pdf>.
- [4] Civil Aviation Authority, "CAP 772. Wildlife Hazard Management at Aerodromes.," 2017. [Online]. Available: <http://publicapps.caa.co.uk/modalapplication.aspx?appid=11&catid=1&id=2726&mode=detail&pagetype=65>.

Drawings

Landscape masterplan L1115 - 3.1 - 2000 - P3_LANDSCAPE MASTERPLAN

Digital image of completed buildings 2528_001



Planning Boundary

Proposed tree
(with or without tree grille option)

Proposed shrub planting

Proposed hedge planting

Proposed native scrub planting (261m²)

Proposed amenity turf (66m²)

Proposed wildflower meadow (260m²)

P1 - Vehicular carriageway:
Black DBM to Adoptable Standards.

P2 - PCC Permeable Block paver to vehicle & pedestrian areas
Ref: Brett Landscapes - Invicta Flow. Colour: Moonstone (50%) & Pearl (50%);
Herringbone, 215 * 115 * 80mm.

P3 - PCC Permeable Block paver to vehicle thoroughfares & focal entrance areas.
Ref: Brett Landscapes - Invicta Flow. Colour: Onyx.Stretcher; 215 * 115 * 80mm.

P4 - Banding - PCC Tumbled Granite Style Sett.
Ref: Brett Landscapes - Lugano. Colour: Graphite Grey. Size: 105 * 140 * 80 mm,
band edges to be 210 * 140 * 80 mm, Pattern: Stack bond, mortar jointed on mortar
bed.

P5 - PCC paving with natural aggregate finish to private frontages
Ref: Brett Landscapes - Invicta. Colour: Mix of Pearl & Moonstone;
Stretchers; 600 * 200 * 80 mm

P6 - Resin bound gravel to rail feature & path
Ref: Sureset - Stirling Midnight

P7 - Rubber mulch play surface to Central Play Courtyard

P8 & P9 - Faux railway play paving feature

Kerbs and Edgings (Sheet 2057)

K1 - Flush kerb (50mm wide)
K2 - Flush kerb (125mm wide)
K3 - Flush kerb (255mm wide)
K4 - Kerb upstand 125mm (125mm wide)
K5 - Kerb upstand 25mm (255mm wide)
K6 - Timber edging to soft landscape

Boundary Treatments (Sheet 2054)

B1 - Private residential terrace boundary
Ref: 1.2m high metal railing with gate (self-closing - see B3) with rubber softener
B2 - Communal garden boundary adjacent to Grand union Canal
Ref: 2.1m high metal railing with double vehicle gate (fob access)

B3 - Timber Post and 3 Rail fence to canal edge (1.2m high)

Recreation and Play

R1 - Climbing Wall with 2 elements
R2 - Balance Blocks
R3 - Horizontal Bars
R4 - Wildlife Wheelspin
R5 - Cradle Nest Special 7
R6 - Climbing Structure 08

Lighting

Lighting column (4m)

Street Furniture (Sheet 2055)

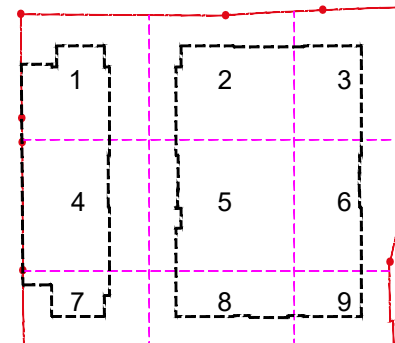
Litter Bin (8nos)
Bench (21nos)
Seat with backrest (3nos)
Cycle hoops (21nos)
Drop down bollards (14nos)
Static bollards (13nos)
Granite cube seats (3nos)
Insect hotel (3nos)

CDM Regulations 2015

ALL current drawings and specifications for the project must be read in conjunction with the Designer's Hazard and Environmental Assessment Record.

notes

- The contractor is responsible for checking dimensions, tolerances and references.
- Any discrepancy to be verified with the Architect before proceeding with the works.
- Where an item is covered by drawings to different scales the larger scale drawing is to be worked to.
- Do not scale drawing. Figured dimensions to be worked to in all cases.



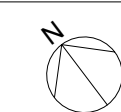
REV	AMENDMENT	DATE
P3	ADDITIONAL VEGETATION - PLANNING COMMENTS	08.08.23
P2	ISSUED FOR PLANNING	24.05.23
P1	ISSUED FOR PLANNING	13.02.23

Client: **GREYSTAR**TM
The Global Leader in Rental Housing

Project:
CROWN TRADING CENTRE,
HAYES, LONDON

Title:
SITE - LANDSCAPE MASTERPLAN

Scale:
1 : 250 | A1



Date FEB 2023
Drawn DT
Checked PW



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Drawing no. L1115 - 3.1 - 2000

Job no. L1115

Revision. P3

