

Assessment

2

2.1 Site Location

Hayes Park Estate

The site is located within the Charville Ward of the London Borough of Hillingdon ('the Council'), who will be the relevant Local Planning Authority for the application.

The site sits within a wider former business park known as 'Hayes Park'. The red line site area which forms the basis of this application is 3.165 hectares and includes the buildings Hayes Park South and Hayes Park Central, along with the surrounding grassland area, and the associated car parking and road areas.

The wider Hayes Park business park site, which includes Hayes Park North and the adjacent multi-storey car park (but does not form part of this application) extends to 5.22 hectares. The site is accessed from the east from Park Lane and from the west from Hayes End Road.



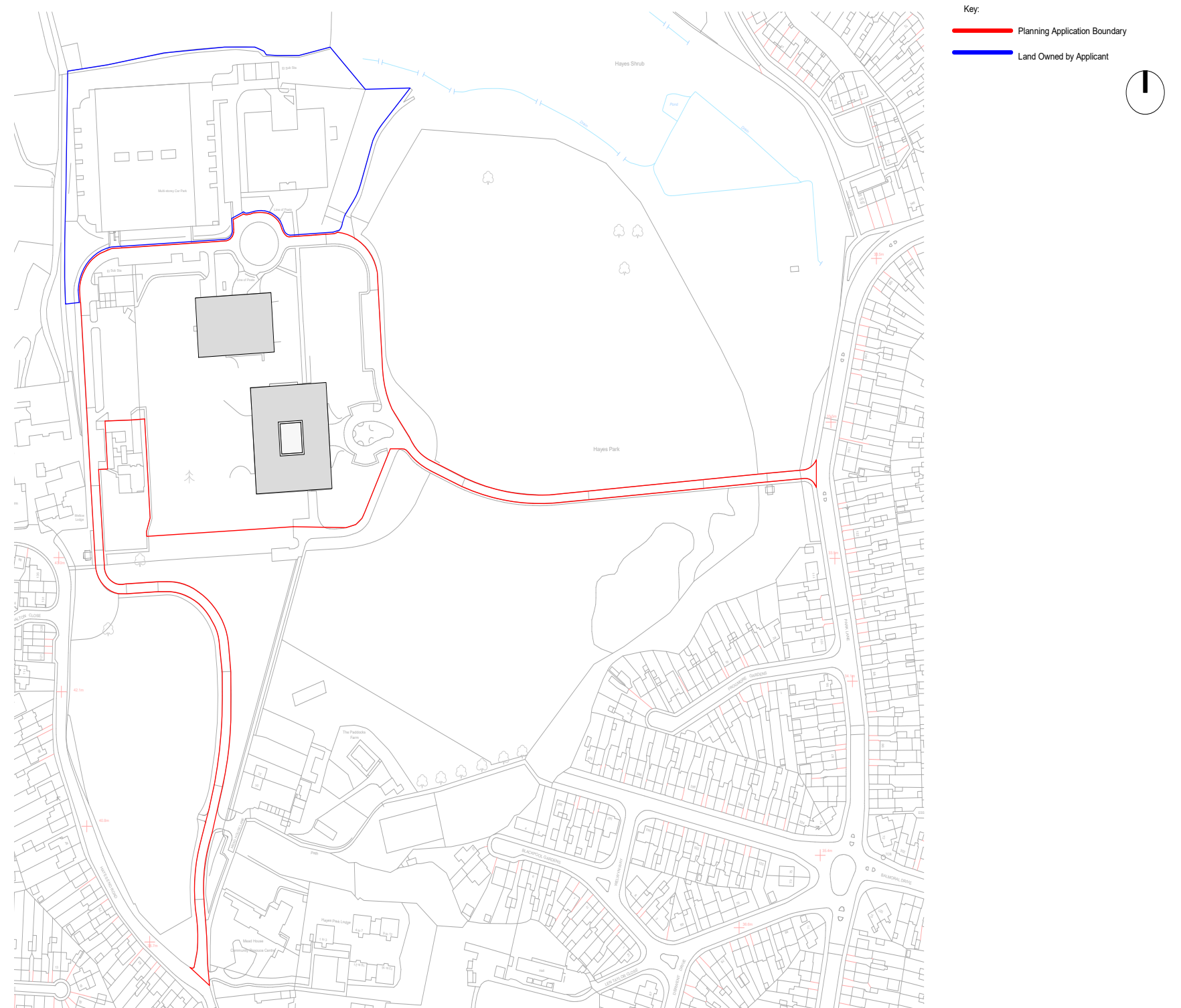
Aerial View with Surrounding Context

The Site

The wider site comprises of three primary buildings and a car park. The site area and buildings are identified on the adjacent plan.

- Hayes Park Central (HPC) is the central building on the site and was completed in 1965 as a 3-storey office and research laboratory. In the 1990s changes were made to infill the double height labs and create more office space. The building is Grade II* Listed.
- Hayes Park South (HPS) is the southern most building. Also built in 1965, the 3-storey administration building includes a central courtyard to allow light into office spaces. The building is Grade II* Listed, under the same listing as Hayes Park Central.
- The two-storey car park was added to the site in the 1990s and provides the majority of parking for the site.
- Hayes Park North (HPN) is the northern most building. Built in the early 2000s as a 3-storey office building.

The current proposals only relate to the area inside the redline boundary and buildings. Hayes Park Central (HPC) and Hayes Park South (HPS).



Planning Application boundary and buildings on site (NTS)

2.2 Site Analysis

Hayes Park Estate Overview

The Hayes Park Central and Hayes Park South buildings are both Grade II* Listed and were designed in the 1960s by American architect Gordon Bunshaft as corporate offices and research laboratories for HJ Heinz UK Limited.

The buildings have been occupied by various different businesses since they were built, but are now both vacant. Hayes Park Central has been vacant since September 2020 and Hayes Park South since Summer 2017. Both buildings are three storeys in height, and HPC includes a basement level used for plant and servicing.

The Site is bound to the east and south by the open parkland, which is private land owned by the Church Commissioners. The western boundary consists of agricultural land and the associated buildings of Home Farm. To the north, the Site is bound by Hayes Park North and the adjacent multi-storey car park, with open farmland beyond that.

The entirety of the Site and the much of the surrounding land is located within the Green Belt. Beyond that, there are large areas of low-density housing. There is a wide selection of parks and leisure facilities in the area, including the Hayes End Recreation Ground, Park Road Green and the Belmore Playing Fields. The nearest town centres are located at Hillingdon Heath Local Centre, 1.6km to the south west, and at Uxbridge Road Hayes Minor Centre, 3.3km to the south east.

Hayes Park Central

Hayes Park South



Existing aerial image of Hayes Park



Illustrative image of the neighbouring amenities and connections to the site

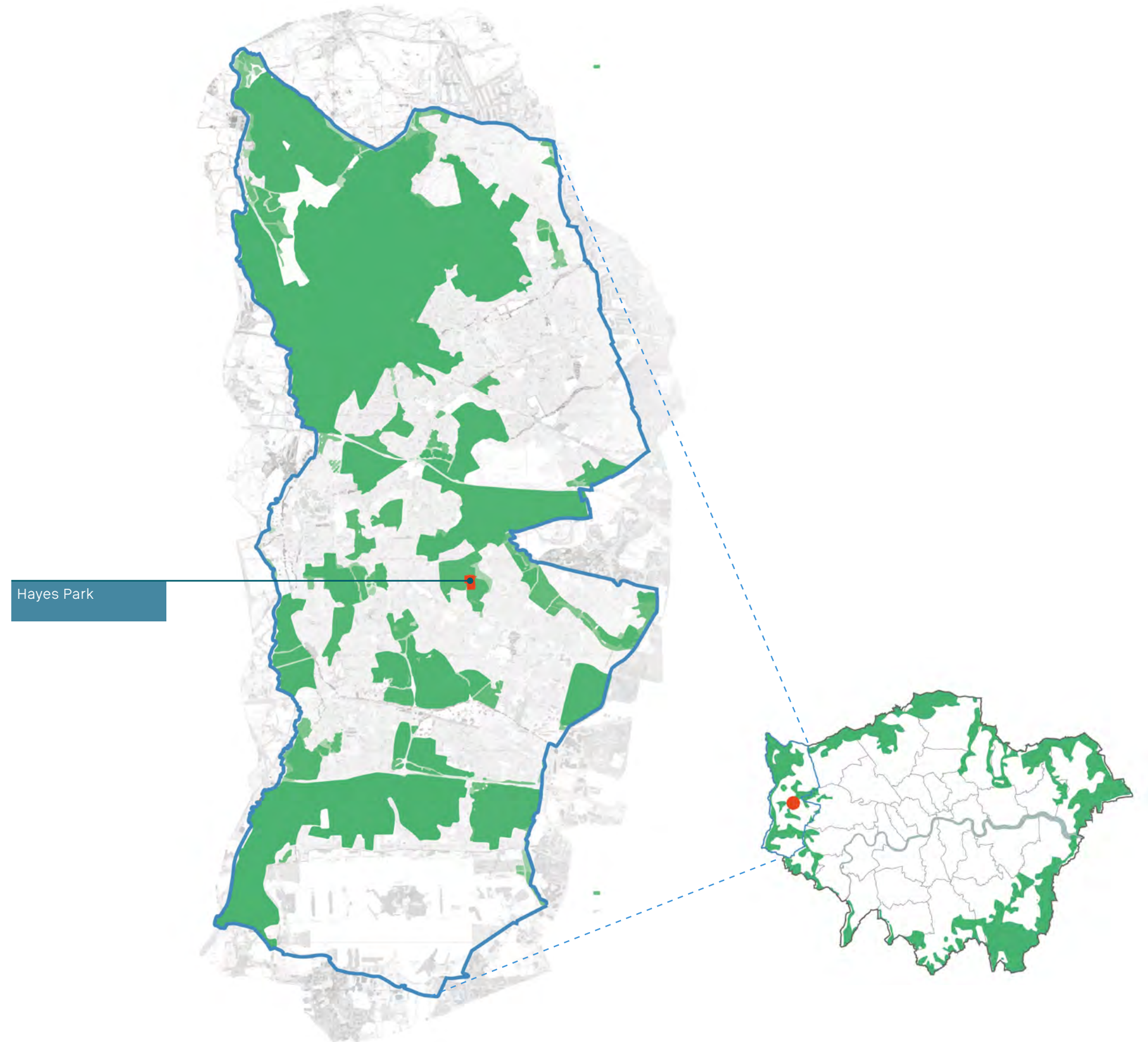
2.3 Site Context

Hayes Park location

The Site is located within the Green Belt. It is part of a network of open green spaces which provide space for people to enjoy nature.

The purpose of the Green Belt is to prevent urban sprawl by keeping land open and free from inappropriate development.

The Green Belt is afforded protection at a national level, as set out in the National Planning Policy Framework. This states that when any new development is proposed on the Green Belt, the Local Authority should consider if the development is inappropriate and, where necessary, ensure that very special circumstances can be shown to justify the proposals.



Existing transport connections

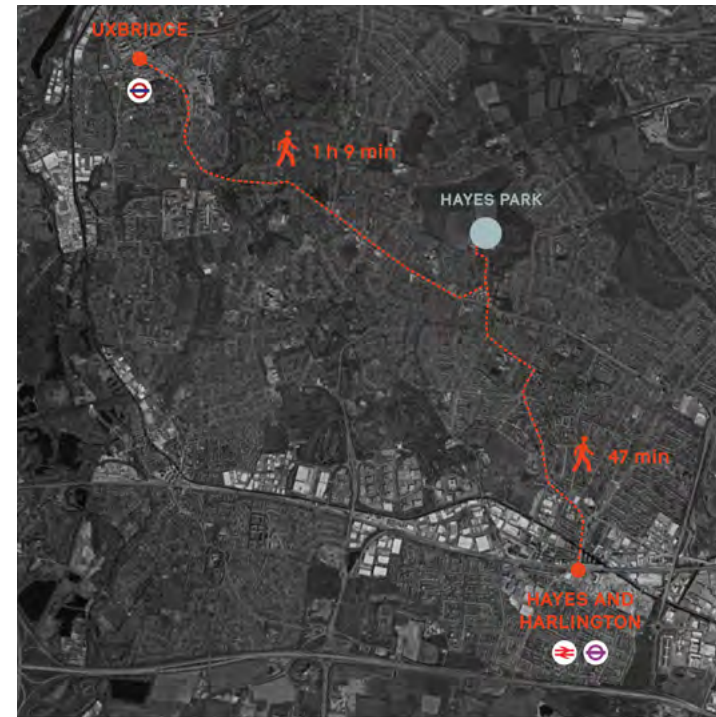
Hayes Park is situated with close access to an abundance of transport routes and methods of movement.

The Site is positioned within 5 miles of three major motorways, M40, M25 and M4, with access to London Heathrow Airport and central London.

The nearest train station is Hayes and Harlington, located 2.5 miles to the south of the Site. The new Hayes & Harlington Elizabeth Line station is now open, providing considerably improved service eastbound into central London, and westbound to Reading and Heathrow.

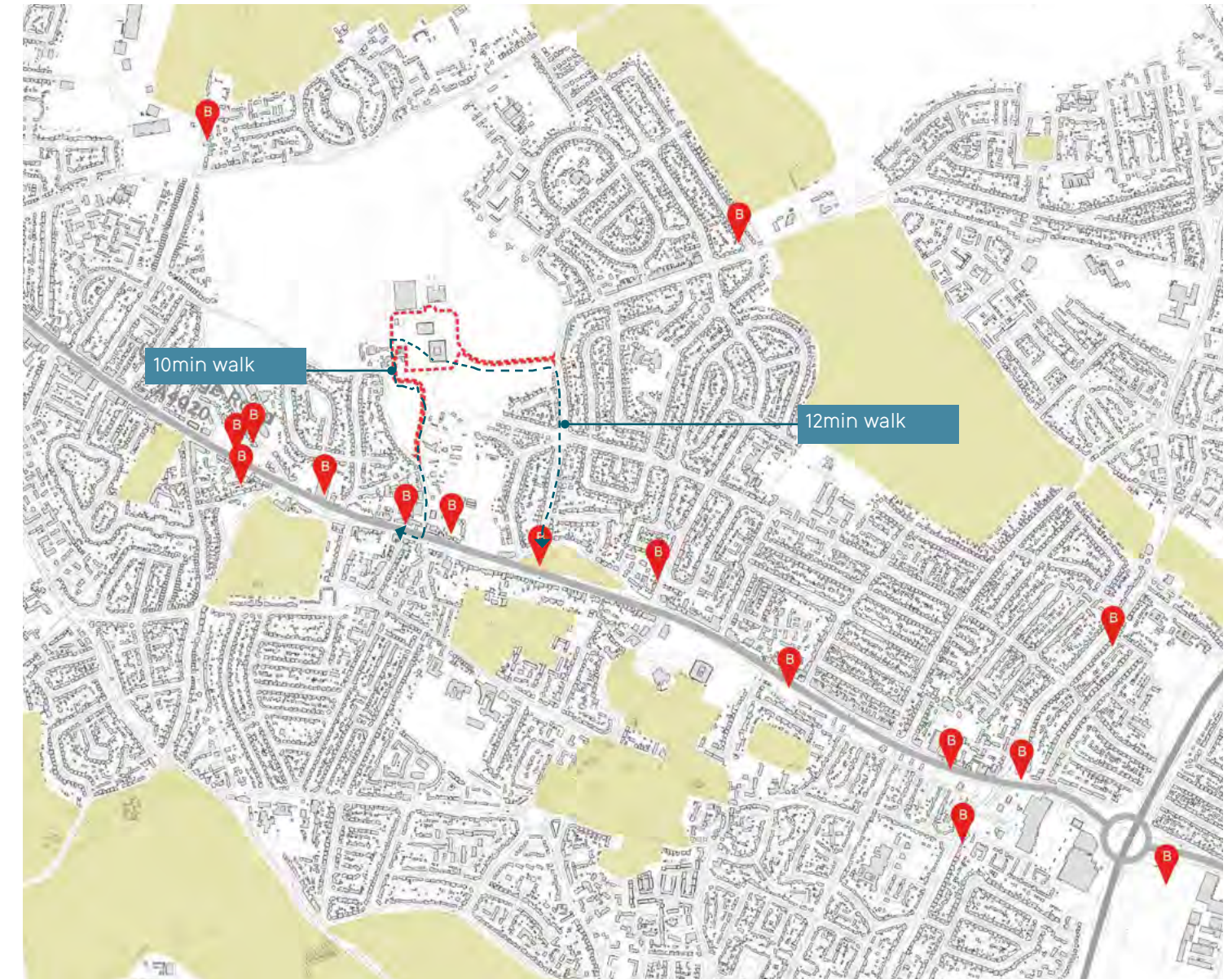
Uxbridge Underground station is located 3.5 miles to the west of the Site providing Piccadilly and Metropolitan line services. This makes the site a desirable location to live, being near the urban centre whilst also benefiting from a natural parkland setting.

Locally however, the site is remote from its surrounding environments with a 1-2 PTAL rating. It is a 520m walk to the nearby bus connection from the main gate. There are a few nearby amenities including shops, parks and green areas, schools and colleges.

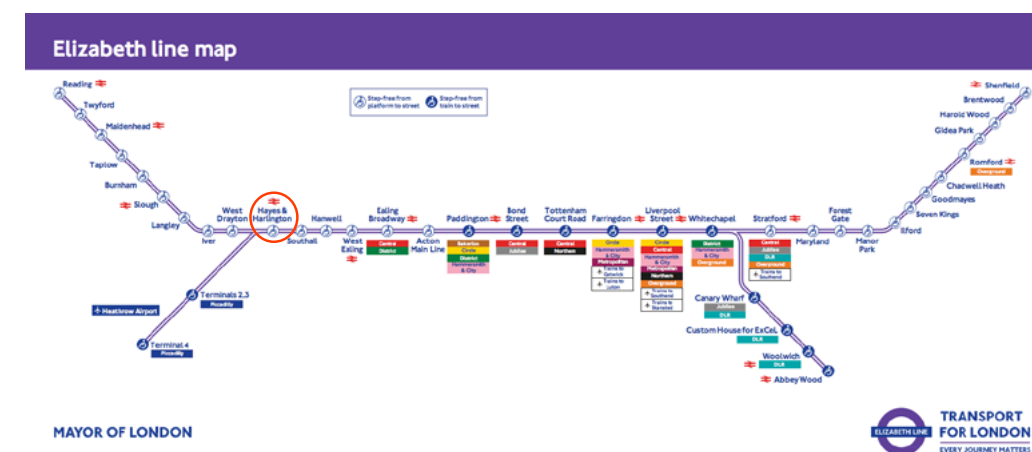


Map of the wider area with closest train/tube stations

- - - Site boundary
- - - Walk to closest bus stop
- Existing Bus stops



Local bus stops near by to Hayes Park site



Elizabeth Line Map

Local connections

There are amenities including shops, parks and green areas, schools, and colleges in the wider area.

Within 1km of Hayes Park Site there are 7 primary schools, 4 secondary schools, 1 nursery and 1 school for children with special needs.

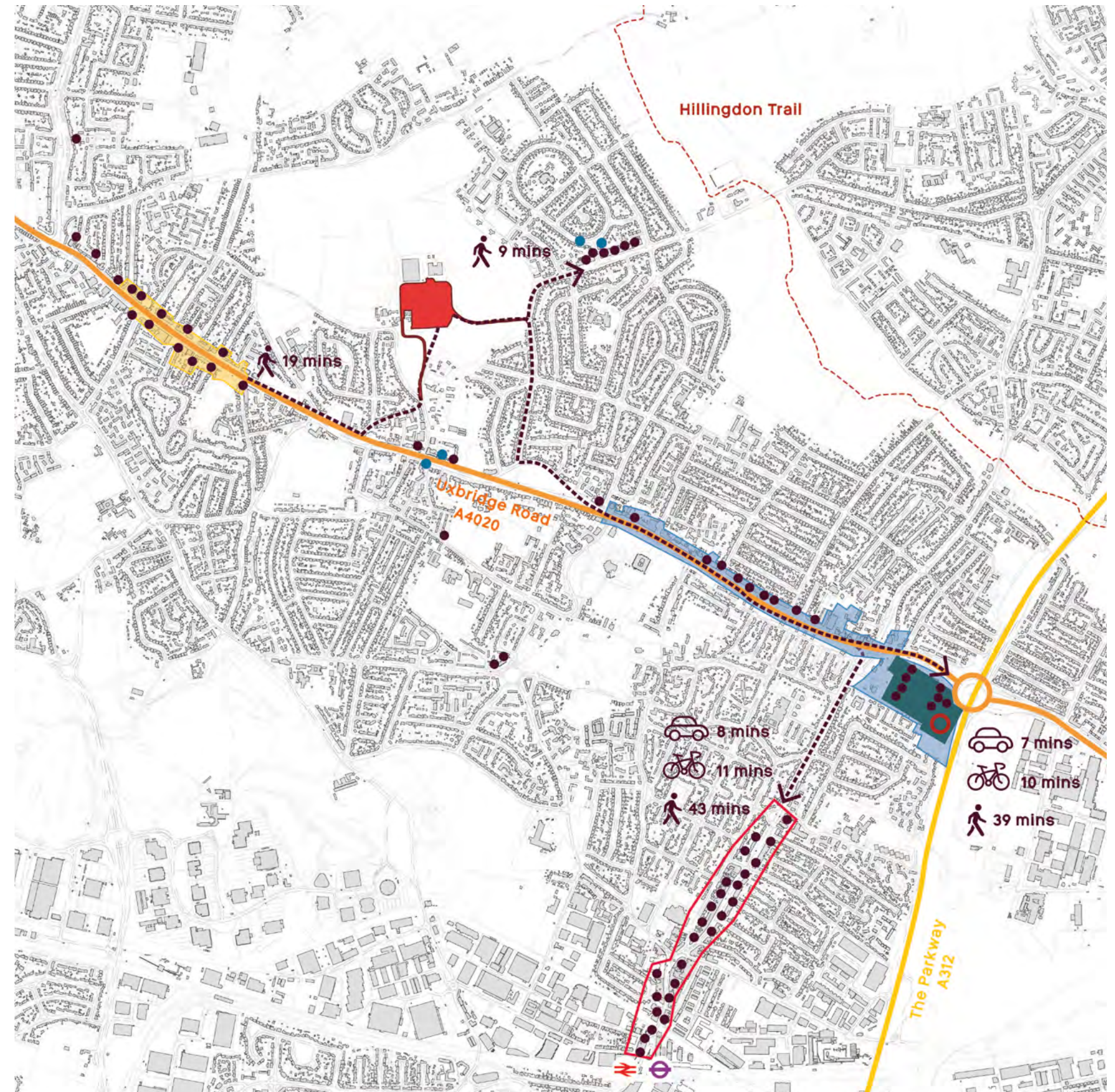
The Site is located in close proximity to the Hillingdon nature trail.

The location of the Site within the Green Belt and close to parks and nature trails offers a desirable setting for residential inhabitation.



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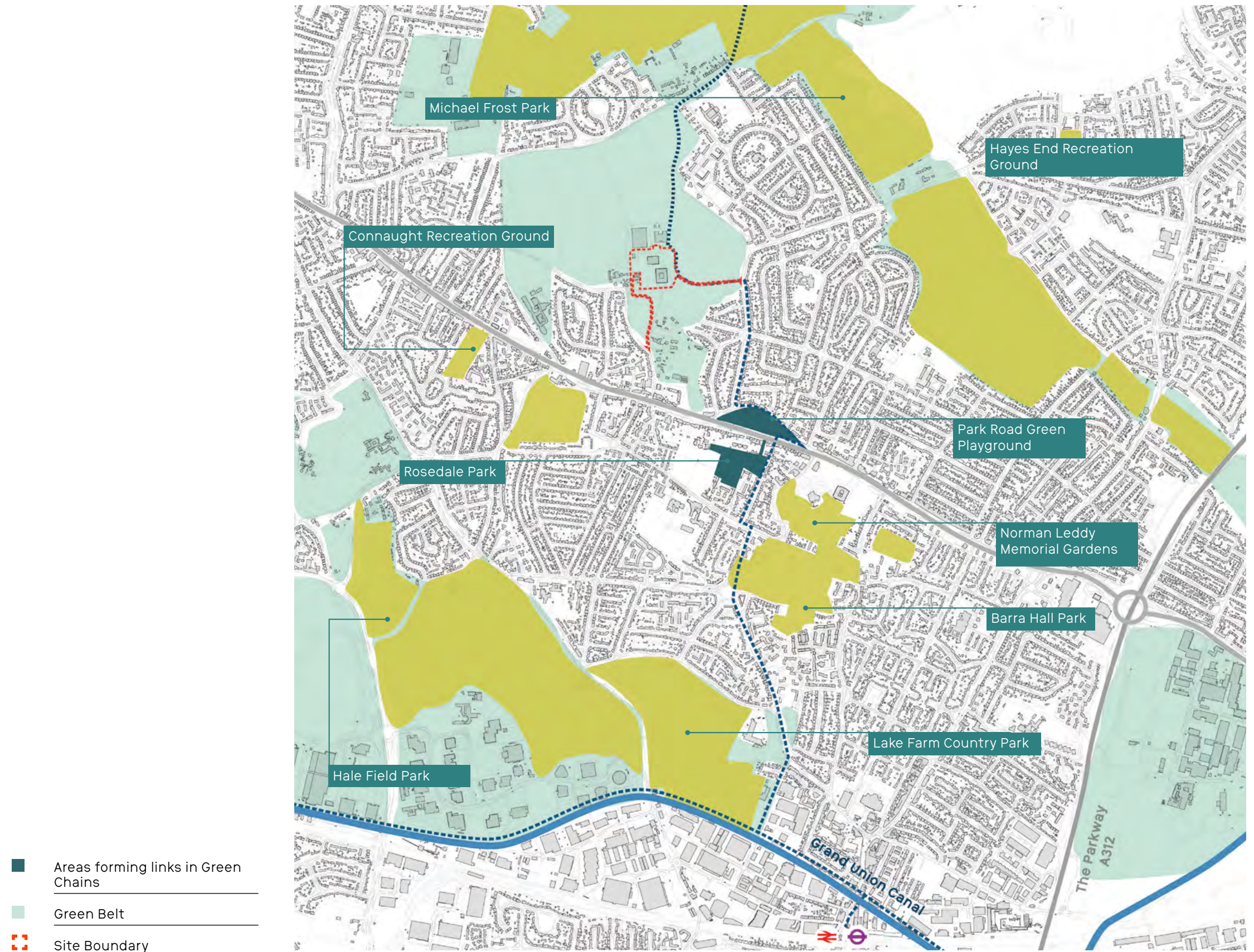
- Local centre
- Town centre
- Hillingdon Trail
- A312 Road
- A4020 Road
- Site boundary
- Lombardy Retail Park
- High Street
- Large Shops
- Small Local shops
- Existing Bus stops



Existing open spaces and amenity

The Site itself sits within a generous parkland, which is located within the wider green belt land. There are a number of other existing parks and gardens within walking distances of the site.

The diagram to the right shows the existing green and open spaces within close proximity of the site.







Site plan showing the open spaces and green belt around the site

Existing Constraints

The primary constraint is the Listed nature of the buildings, however there are a number of other constraints which are to be addressed in the proposals.

1. Due to the Site's location a 1:1 parking to housing ratio is required.
2. Existing underground services running from the substation to the buildings are to be retained and reused where possible.
3. The flood risk map identifies that the Site is located in Flood Zone 1, and as such has a low probability of flooding. Some surface water flooding is noted around entrances.
4. The buildings have sat derelict for a number of years and numerous attempts have been tried to market the office space over the years with little interest. Therefore an alternative use is proposed for the buildings to reinvigorate them.
5. The Site sits within land owned by the Church Commissioners and therefore there are limited changes which can be made to the access.
6. The Site is located within the green belt - careful consideration needs to be given to how the proposals relate to this designation.
7. Heritage status of the buildings - careful consideration needs to be given to how the proposals relate to this designation.
8. Existing landscape structures including landscape cutouts and retaining walls were designed at a time when buildings were offices and do not facilitate residential use.
9. Existing fabric of the building no longer meets the modern sustainability standards - in particular the curtain wall glazing.
10. Existing landscape and ecology within the parkland.
11. The topography of the Site rises dramatically to the east. This creates a sense of enclosure within the Site and enables a high level of visibility towards the fields beyond, overall enhancing the Site's landscape setting. The landscape drops down more slowly to the east, therefore, the suburban residential development is mostly hidden from the Site. The Site itself has an undulating landscape which has been crafted with the building as detailed further in the Site description.

- | | |
|---|-----------------------------|
|  | Surface flooding |
|  | Key trees on site |
|  | Land owned by the applicant |
|  | Site Boundary |

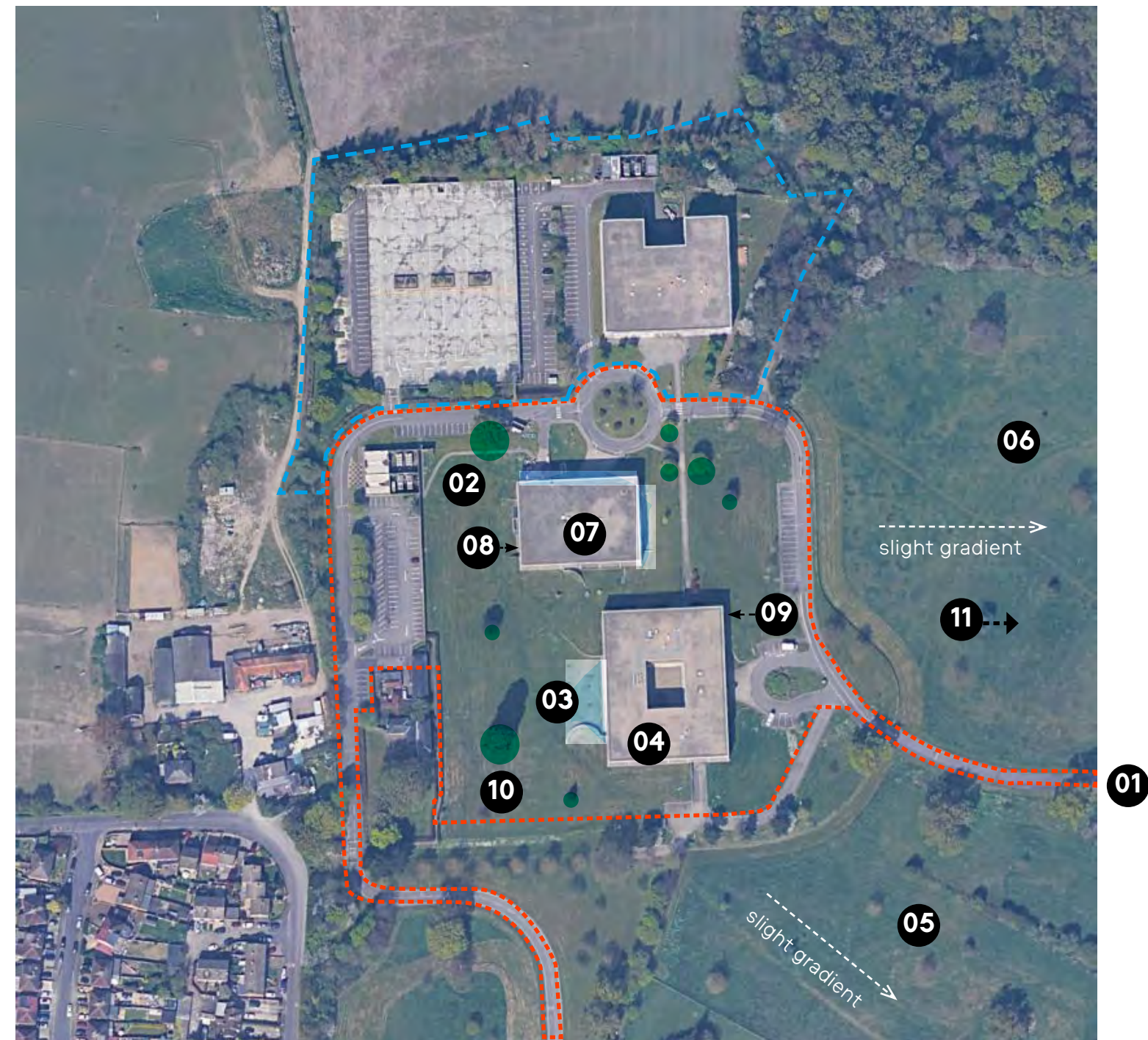


Diagram showing the constraints on site

2.4 Site History

Site development up to 1965

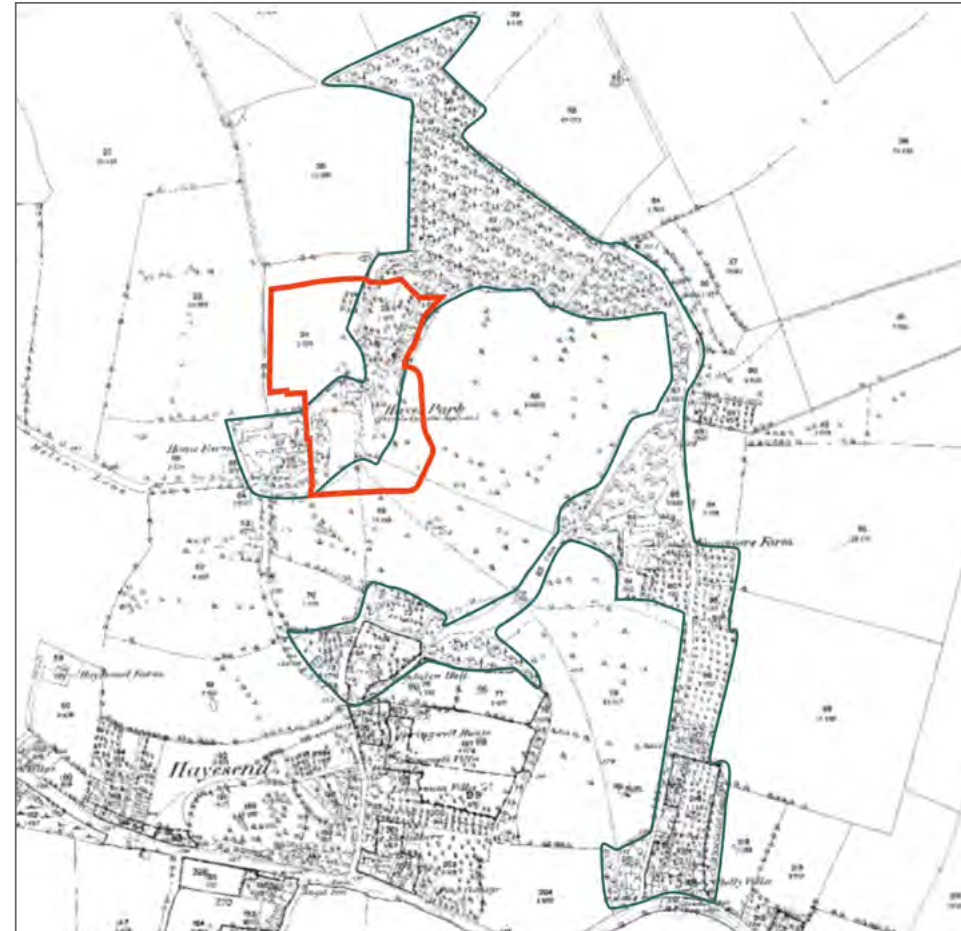
The Hayes Park Site has evolved over time from rural farm land to a corporate head office and business park.

An analysis of the historical maps shows that the area was predominantly rural with three farms near the site in 1870. The Blencowe family-owned Hayes Park and house from 1829 to 1858, then in around 1850 it was a private asylum. In 1868 it was a private nursing home retaining the original 60 acres of surrounding parkland.

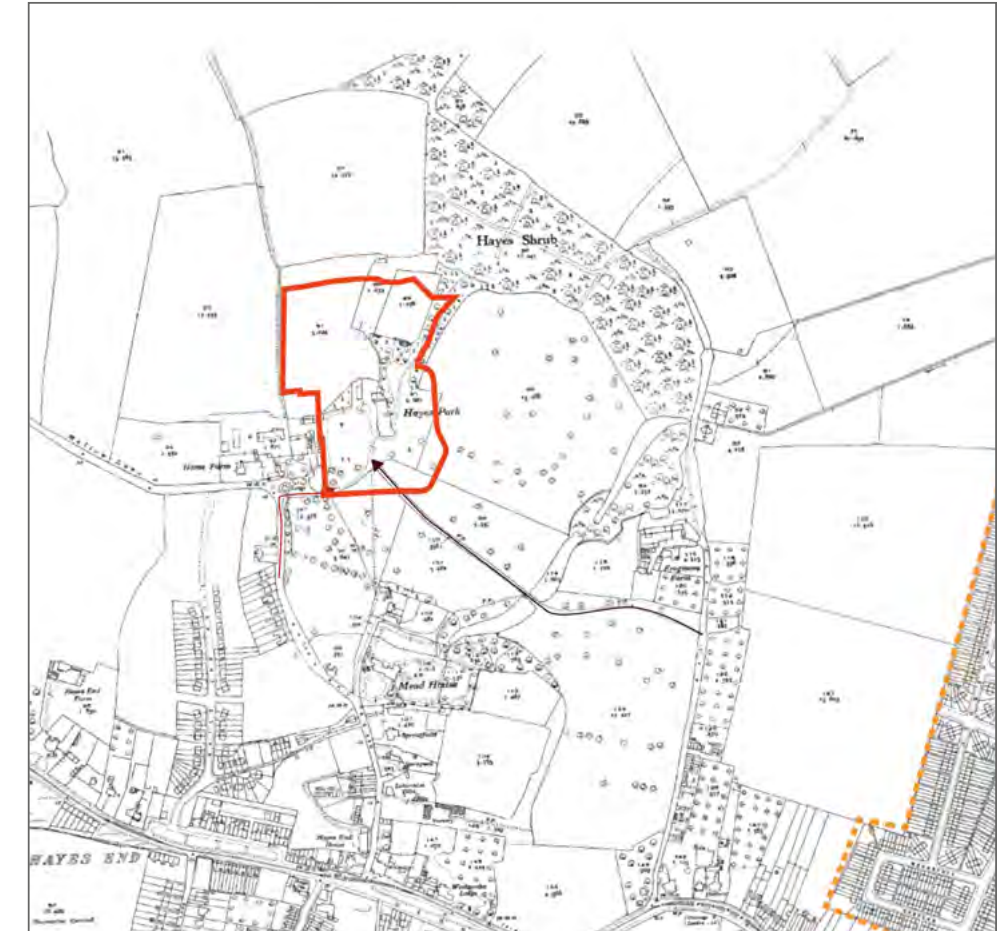
Notable landscape elements on the historical maps include: the woodland to the north, some axial pathways across the park, and a walled garden. To the north and east of the Site, the extensive woodland area known as the Shrub is a Nature Conservation Area for the Borough.

There was some encroaching urban development to the south of Hayes Park by the 1930s. After the Second World War, there was a substantial expansion of sub-urban housing to the south and west, essentially enclosing the park. Most of this housing is two storey and semi-detached.

Hayes Park was bought by the American food company Heinz in 1959, the original Victorian house that had been in poor condition was demolished in 1952. In 1964 Gordon Bunshaft designed a masterplan, consisting of two buildings and a surface car park.



1880 - Historical Site Plan



1930 - Historical Site Plan



1960 - 1965 - Historical Site Plan



1965 - Historical Site Plan

2.5 Planning Context

Hayes Park is located within the London Borough of Hillingdon.

The following planning policies have been considered.

The statutory Development Plan for the London Borough of Hillingdon, and in turn the proposed development, consists of:

- The London Plan (2021);
- The London Borough of Hillingdon Local Plan Part Two (2020);
- The London Borough of Hillingdon Site Allocations and Designations (2020); and
- The London Borough of Hillingdon Local Plan Part One (2012).

There are a number of other relevant adopted and emerging planning policy documents published nationally, regionally and by the Council that represent material considerations in determining this planning application, including:

The National Planning Policy Framework (NPPF);

- The National Planning Policy Guidance (NPPG);
- The Mayor's Housing Supplementary Planning Guidance (SPG);
- The Mayor's Play and Informal Recreation Supplementary Planning Guidance (SPG); and
- The London Borough of Hillingdon Planning Obligations Supplementary Planning Document (SPD).

Hayes Park is located within the Green Belt. There are no other site-specific policy designations on the Site; however, the Site is adjacent to an area designated as a Nature Conservation Site of Borough Grade II or Local Importance.

A number of applications have been made on the site over the last few decades. Refer to Planning Statement submitted for further detail.



Site plan showing the open spaces and green belt around the site

2.6 Listed Buildings

Hayes Park South & Central

The noted American corporate architect Gordon Bunshaft designed the Administration Building, Hayes Park South (HPS), and the Research Laboratory, Hayes Park Central (HPC) in 1961-2.

Despite the different building uses, they share the same architectural language. The two buildings were completed in 1965 to a very high specification for office and laboratory design of the period.

The two buildings were Listed in 1995 for the following attributes:

- Architectural quality: the buildings are sophisticated and sculptural; an interplay of positive and negative space related through form, structure and a refined palette of materials applied with quality of detail and achieving a high-tech finish,
- Authorship: this is the only British example of the work of Gordon Bunshaft, the most influential American office designer of the 1950s and 1960s, and one of only two buildings by him in Western Europe.
- Historic interest: it is an important example in Britain of a headquarters complex in a greenfield site.

Heinz and Bunshaft imported the concept of the Administration building within the natural landscape from America. Supported by growing car ownership in Britain at the time, Hayes Park followed the concept of the General Life Insurance Building in Connecticut (1952-7) by SOM and Bunshaft. The natural setting was seen to benefit the workforce and to free them from their commute to the congested city centre. They sought to define a new corporate pastoral setting for business. With its good connections to Heathrow, Hayes Park was the ideal setting for Heinz.

The sculptural external concrete frame defines the perimeter of both buildings and the inset building envelope in a curtain wall is said to be based on a 'Greek Temple.' The form of the external concrete frame is claimed to be based on the bending moment diagram, with the hinge points defining points of contra-flexure (no bending moment).

These high quality sculptural forms were pre-cast and finished with Cornish Granite to provide a uniform finish. The curtain wall system was likewise designed to a high specification, with a four foot eight inch module, and glazing that had a reflective coating to prevent overheating. The internal space was air conditioned and had a fully lit ceiling. HPS has an internal courtyard with a minimalist reflective pool and a tree in the south west corner.



Photograph of High quality concrete columns and framing



Photograph of the original entrance to Hayes Park South

2.7 Gordon Bunshaft

Gordon Bunshaft - Overview of his previous work

Hayes Park is the only British example of the work of Gordon Bunshaft from SOM.

Gordon Bunshaft (1909 to 1990) was educated MIT, and secured a European Scholarship 1935-37. He worked at SOM for over 40 years. It is claimed he met Heinz at New York World Fair in 1937.

Bunshaft was instrumental in developing the rural Headquarters building that was part post-war American growth, car ownership and emerging suburban condition.

Two prominent examples of his early works are:

- Connecticut General HQ, 1957,
- American Can HQ, 1970.

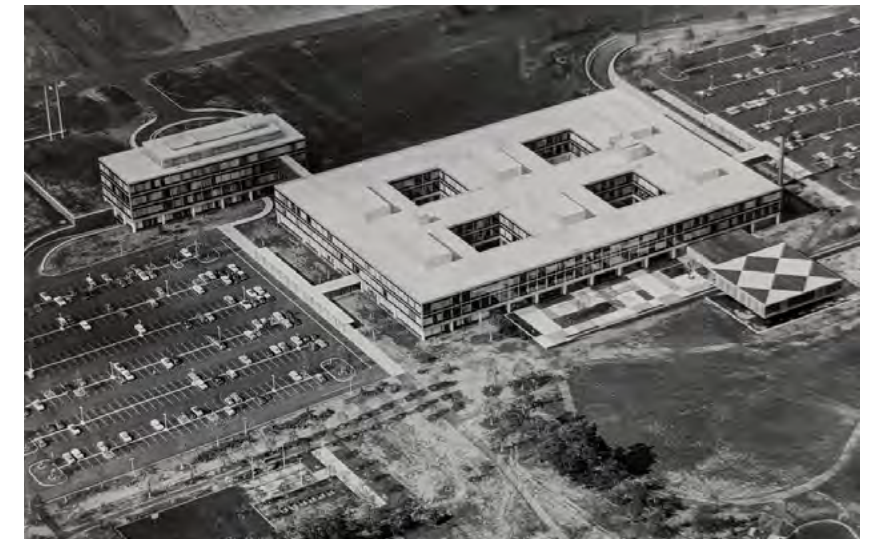
These offices are placed in the landscape but without a direct connection. Later work experimented with plastic exposed concrete form and structure:

- John Hancock Building, Kansas (1963),
- Banque Lambert, Brussels (1965)

Following precedents in the United States, Bunshaft brought his vision of a headquarters office in the pastoral landscape to Britain.



Gordon Bunshaft and Adams' Book



Connecticut General Headquarters (1957)



Connecticut General Headquarters (1957)



John Hancock Building (1963)



American Can Company (1970)



Banque Lambert (1965)

2.8 Historical Landscape Setting

Landscape history

The architectural firm SOM, had a strong commercial focus, using a global International Style Modernist language. Use of strong geometric forms, modern materials, modular planning and technical innovation. Closely allied to commercial and international clients. Architecture could be viewed as controlling and a representation of American commercial values.

Bunshaft was a private person, and famously stated: 'he wanted the buildings to speak for themselves' (Adam, p2). Looking at his American schemes we can infer a few themes:

- Forms raised above the landscape. The primary office floors were above the ground, cantilevering over the access roads and opening out to the distant landscape.
- A controlled relationship with nature. Defined pathways and routes around the buildings did not allow the fuller landscape to be experienced.
- A car orientated ground. The out of town headquarters building for the Connecticut General Headquarters (1957), Emhart Manufacturing Building (1962), America Can Company (1970) were based on widespread car ownership and growing suburbanization. Consequently the near landscape to these buildings are dominated by access roads and car parks.



Emhart Manufacturing Building (1962)



America Can Company (1970)



Connecticut General Headquarters (1957)

Landscape history cont.

At Hayes Park, the relationship with the landscape is controlled. Authors have comment on the landscape setting of Hayes Park:

Adams notes a delicate buildings set on the landscape, (Adams, p135). ‘the sense of rural tranquillity at the site and the modestly scaled buildings recall British eighteenth century country houses’ (Adams, p136). Yet, contemporary critics at the opening noted there was sense of a ‘historicized landscape’ (Adams, p136).

Whereas Fraser claims, it is ‘a self-conscious arcadian setting, one which sought to retain – and improve in the manner of Lancelot ‘Capability’ Brown’ (Fraser, p233). ‘Yet, in truth the Heinz headquarters only demonstrated the out-of-town campus office, whether in America or Britain, was a chimera.

There wasn’t actually genuine interaction between the design and its surrounding natural surroundings’ (Fraser, p233), with an ‘artificial separation between the interior and the exterior’ (Fraser, p233).

Reflecting on this history, our landscape strategy is to enhance the setting for the two listed buildings. Our landscape design is based on:

- Retaining and enhancing existing trees and landscape features,
- Transforming manicured lawn into pastoral meadow through changes to the landscape maintenance strategy, which will lead to more diverse flora to increase the site’s long-term biodiversity.
- Subtle restructuring of pathways and open space to encourage more social spaces and opportunities for an intimate connection with nature.



Hayes Park South with cows grazing, historical image



Hayes Park South and central within long grass landscape

2.9 Key Features of its Listing

Details within the Listing

A number of key materials, and features are noted within the Official List Entry for the Heinz Administrative Headquarters and Former Research Laboratories - No: 1242724

Materiality - the buildings are formed of an externally-expressed reinforced-concrete frame. The external columns and slab edges are pre-cast and have a granite aggregate finish; the remainder of the frame is cast in-situ. Walls are fully glazed.

Layout - the buildings have three storeys and flat roofs with the lowest storey sunk into the ground to clerestory height. They are both rectangular in plan, with South Building having a central open courtyard.

Exterior features - all elevations have roof and floor slabs projecting forward of the fully-glazed walls, linked by columns formed of two tapered sections which meet in an expansion joint. It is the sculptural rhythm of these vertical columns and horizontal floor slabs which give the buildings their defining aesthetic. Behind the columns is full-height continuous glazing in vertical sheets with blue opaque glass infill to the lower sections on the upper floors. The glass is held in a slender aluminium framework.

North Building (refer to as Hayes Park Central for the purposes of the application) . This building was the former research laboratories. It has 6 structural bays to the north and south elevations and 5 structural bays to the east and west elevations. To the north the main entrance (originally the service yard) approaches the building at grade (as does a new service yard which has been created to the west of the entrance). To the west the ground has been cut back around the lower ground-floor to create an outdoor seating area adjacent to the new canteen. To the south is a staff entrance where steps cut down to the entrance door.

South Building (refer to as Hayes Park South for the purposes of the application) Was once the home to the administrative headquarters of Heinz. It has 6 structural bays to the north and south elevations and 9 structural glazed bays to the east and west elevations. The elevations of the internal courtyard are treated to match the external elevations. Much of this courtyard is taken up by a shallow reflection pool with an off-centre island; these features remain but the pool is now in-filled with loose pebbles. The main entrance to the building is to the east, where curved retaining walls expose the lower ground-floor of the building, which is at grade with the main approach road. A retaining wall originally stretched across

the lower level of the building, screening the interior, and was broken only by the revolving door which provided the main entrance. The wall has now been pulled back, away from the building to reveal a glazed reception lobby. The sight-line through the building, from the entrance lobby through the courtyard and canteen to the landscape beyond, has been preserved.

There are staff entrances to the north and south (where the ground is ramped down), and to the west the ground is cut away between curved retaining walls for five bays to provide outside seating for the canteen.

As little of the interiors remain intact these are noted as not of special interest. The underground tunnel connecting the two buildings is also not of special interest.

The proposal looks to retain and enhance the existing materials and features noted within the Listing.

2.10 Building History - Layout

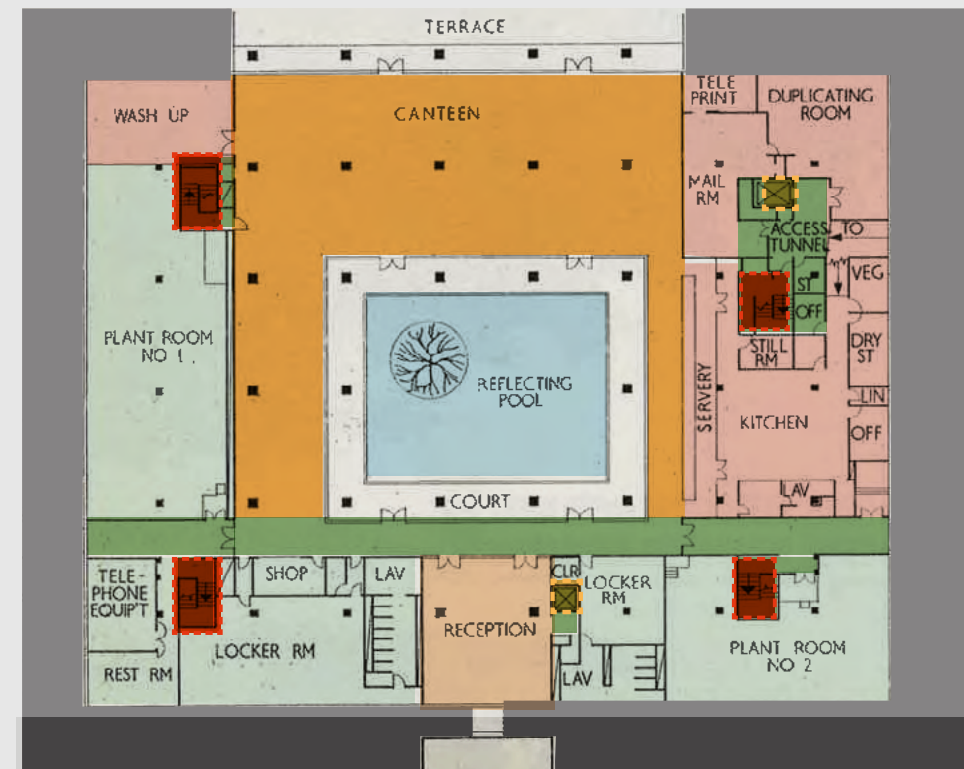
Hayes Park South (HPS) - Past and Present

The Administration building completed in 1965, now called Hayes Park South (HPS), was designed as a two storey building with a sunken third floor to overcome the Green Belt Planning restrictions.

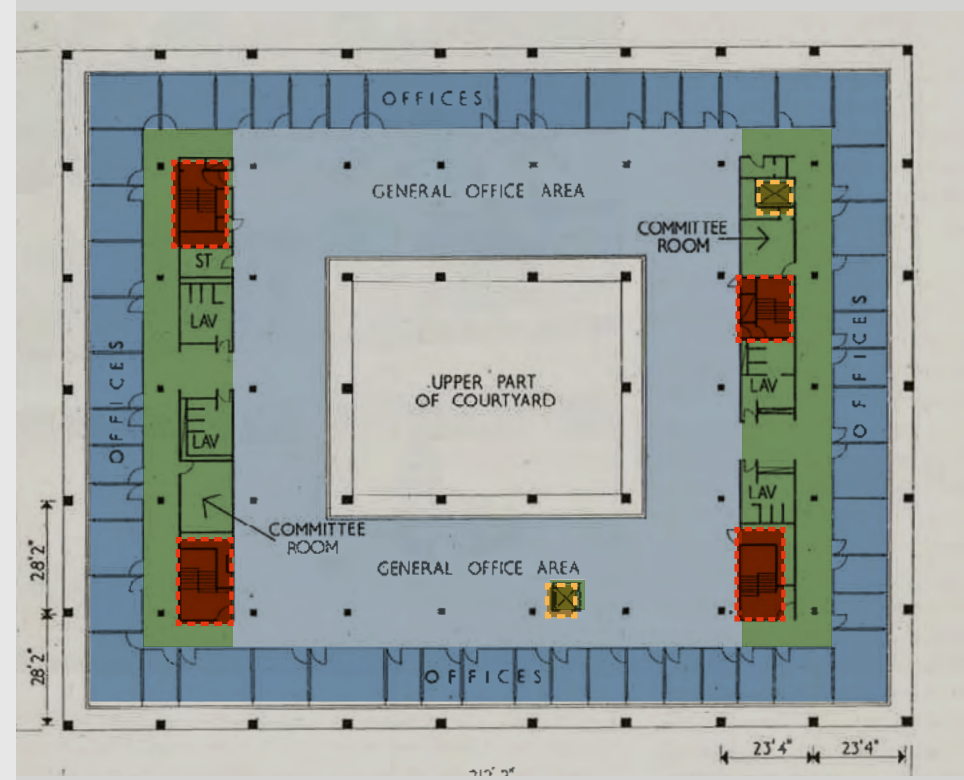
The form is simple and symmetrical with an inner courtyard and pool. The office attempted to provide an open plan arrangement but most of the managers occupied the perimeter, whereas the inner area around the courtyard and pool were open plan. This office design was seen to be progressive for the period.

The office building was substantially altered around 1990's, with the internal cores being moved, and a fully open plan office arrangement. This resulted in the loss of the original solid wall at the entrance and all the interior elements.

Original Layout

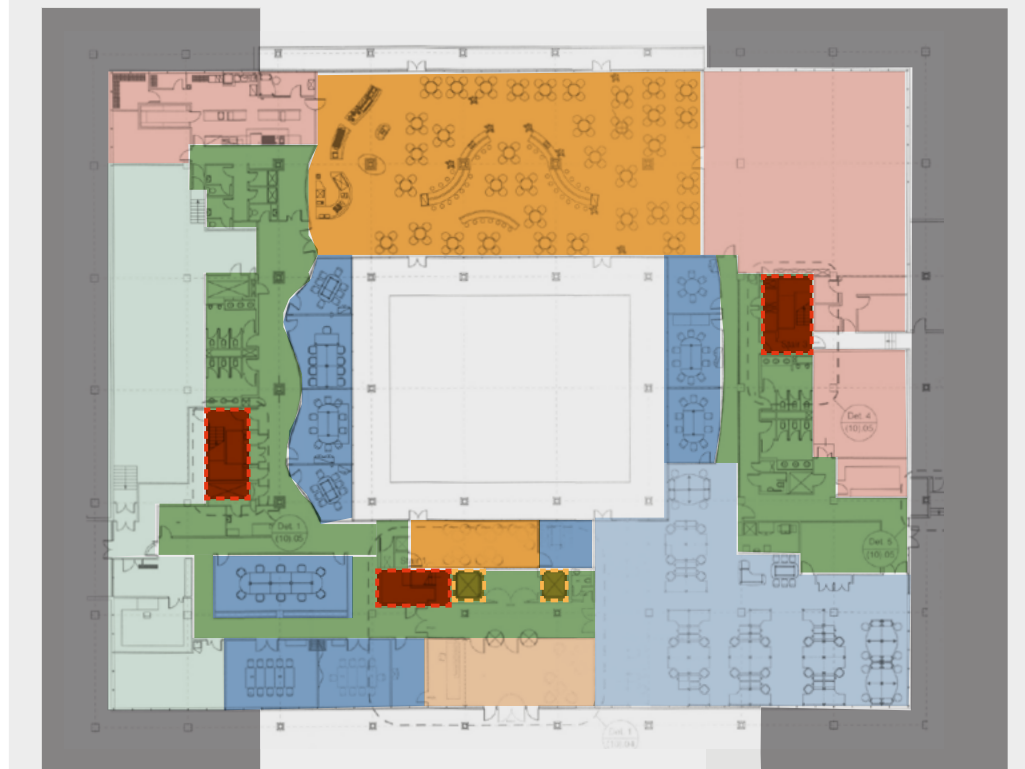


Original Ground Floor

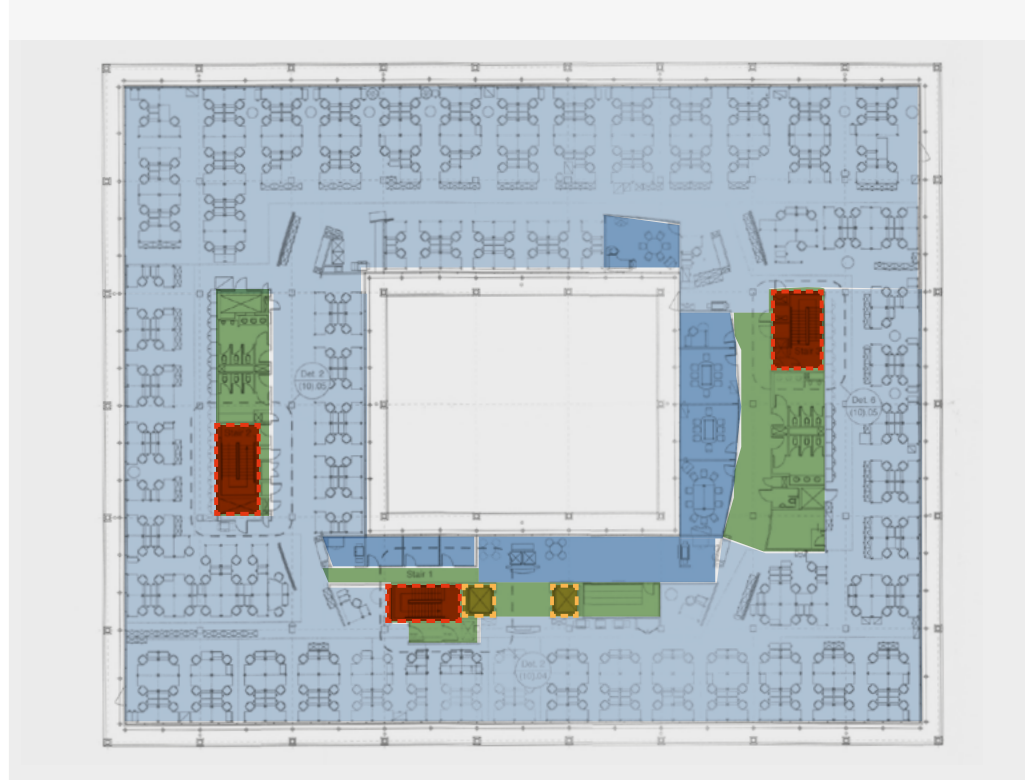


Original Second Floor

Current Layout



Current Second Floor



Current Second Floor

Hayes Park Central (HPC) - Past and Present

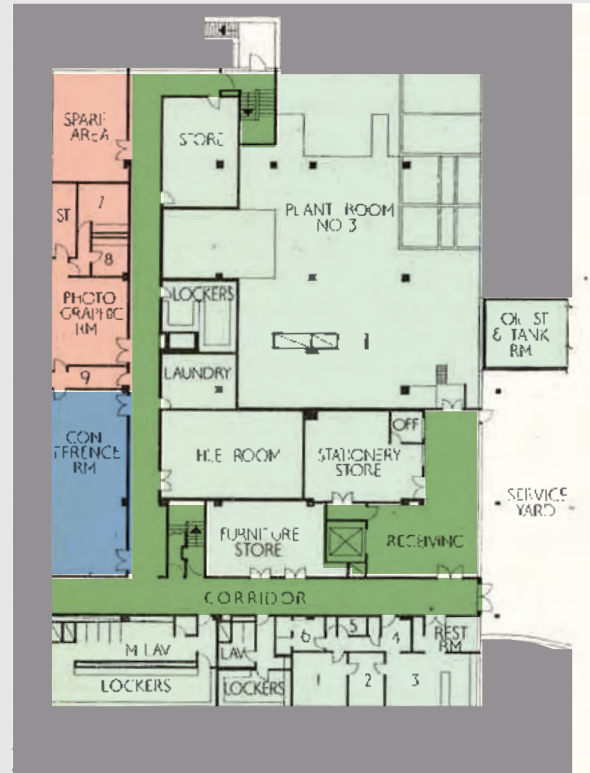
The Research Laboratory, currently known as Hayes Park Central, was conceived to develop new food products for Heinz.

The symmetrical form and its relation to the ground is similar to the Administration building. However, the Research Laboratory is smaller in size and has no internal courtyard. The external appearance of both buildings are similar, but the Research Laboratory is set back behind the main Administration building on a diagonal axis, reminiscent of Japanese 'flying V' plan.

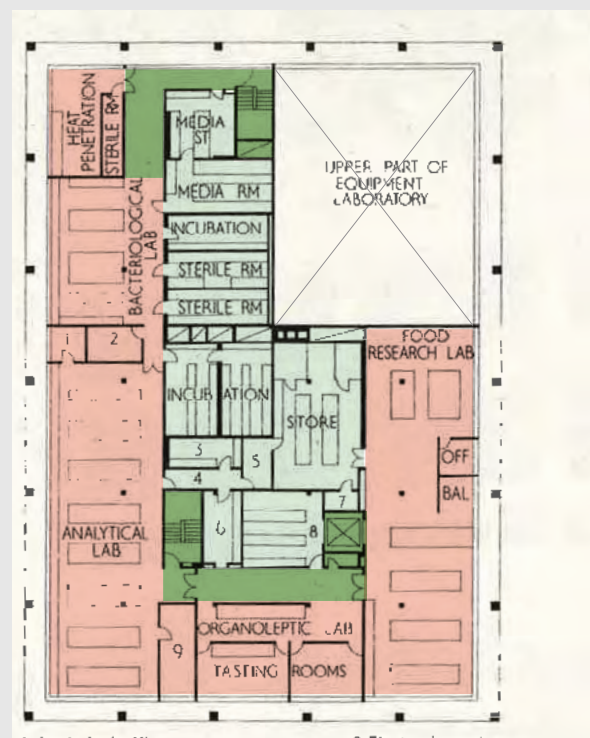
The internal planning of the Research Laboratory building was more fragmented and lacked the clear allocation of spaces noted in the Administration building. Each room has a different purpose and a number of support facilities in other rooms. There was a two storey height space to allow for heavy laboratory plant.

In the 1990s the Laboratory was changed to an office. Consequently, the two storey space was in-filled to provide a consistent floor plate.

Original Layout

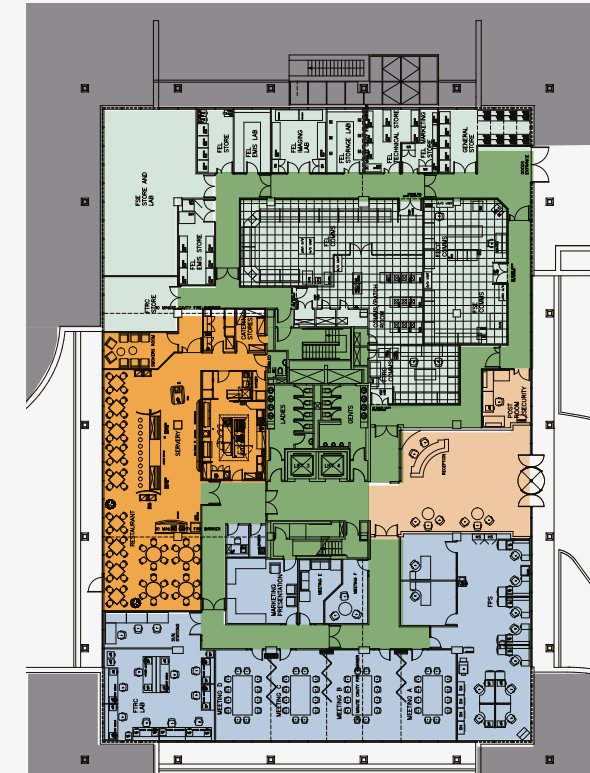


Original Ground Floor

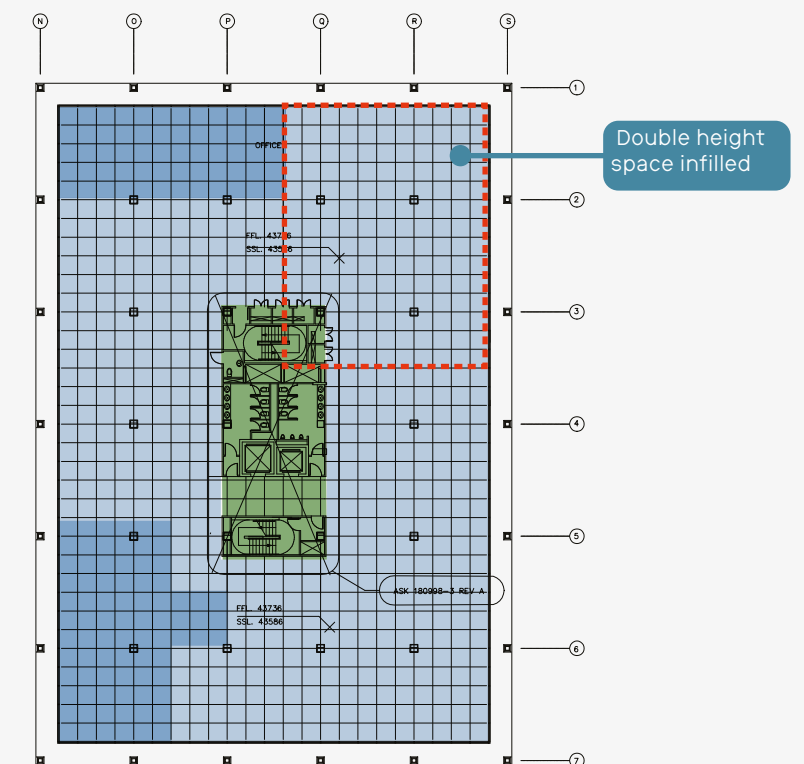


Original Second Floor

Current Layout



Current Ground Floor



Current Second Floor

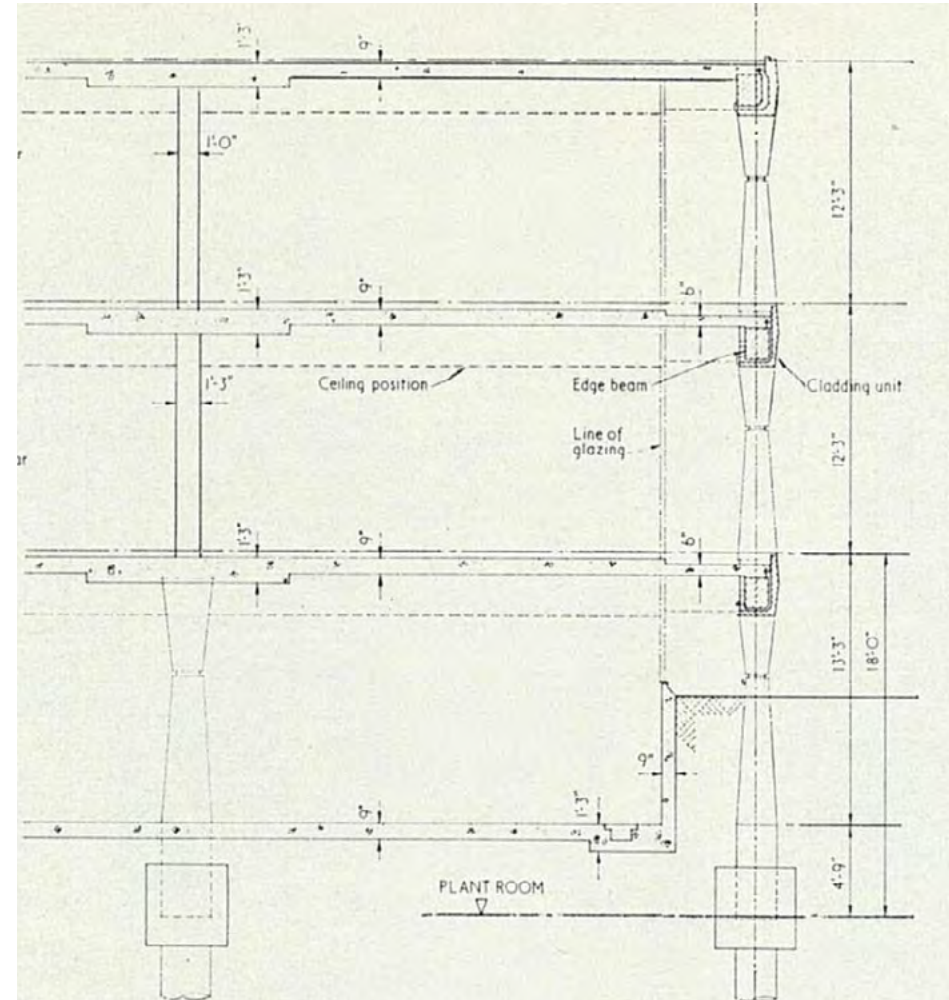
External alterations made over time

A number of external alternations have been made to the buildings over the years. The most recent of which were in the 1990s.

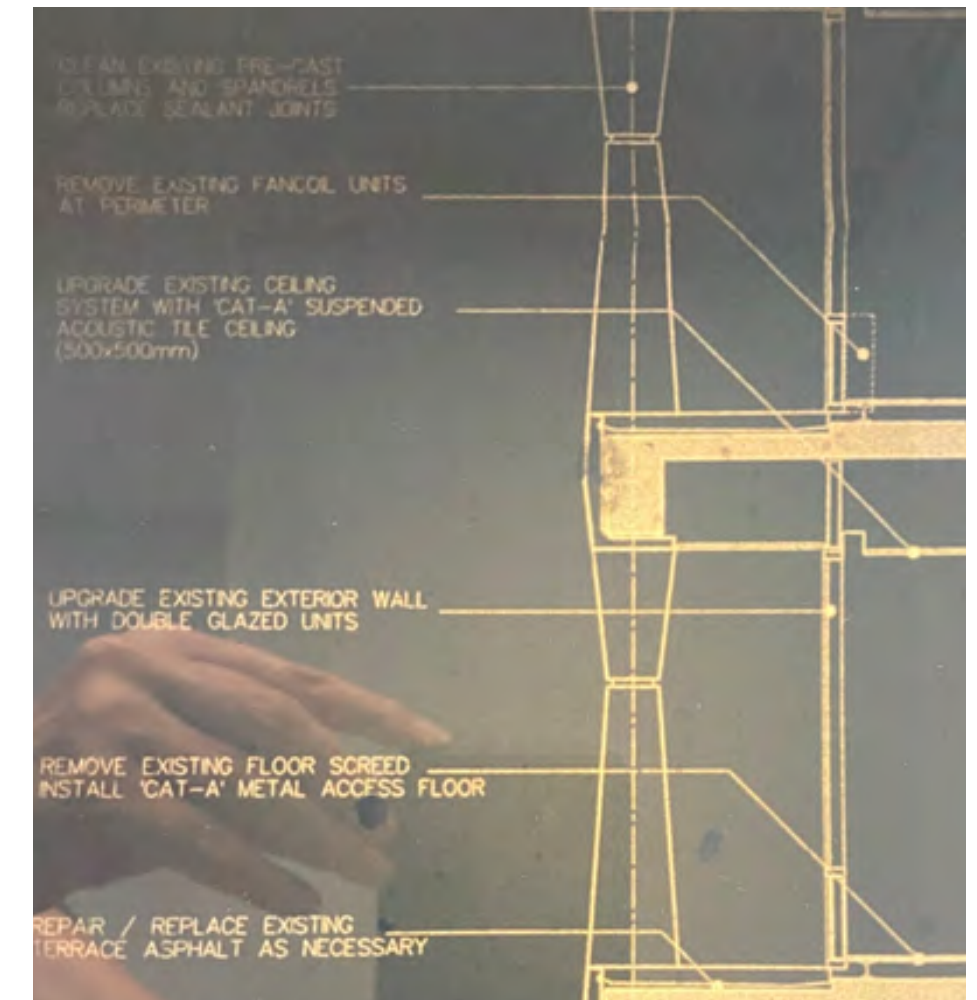
Many of the alterations were internal at this time and are noted later in this section. However a number of external alterations were made.

It is thought that all the glazing was replaced for double glazing as shown in the details to the right of this text. Also alterations were made to the retaining walls within the landscape parking. The most notable retaining wall removed was the wall to the main entrance at HPS and the glazing was brought down to ground, as shown in the images at the bottom of the page.

The diagrams on the next page explain the changes made to the landscape at this time.



Original Hayes Park elevations and drawings. Note the grey coating to the glazing, giving a dark / black appearance



Section from Planning applications 12853/W/96/1667 & 1670, note the new doubled glazed units



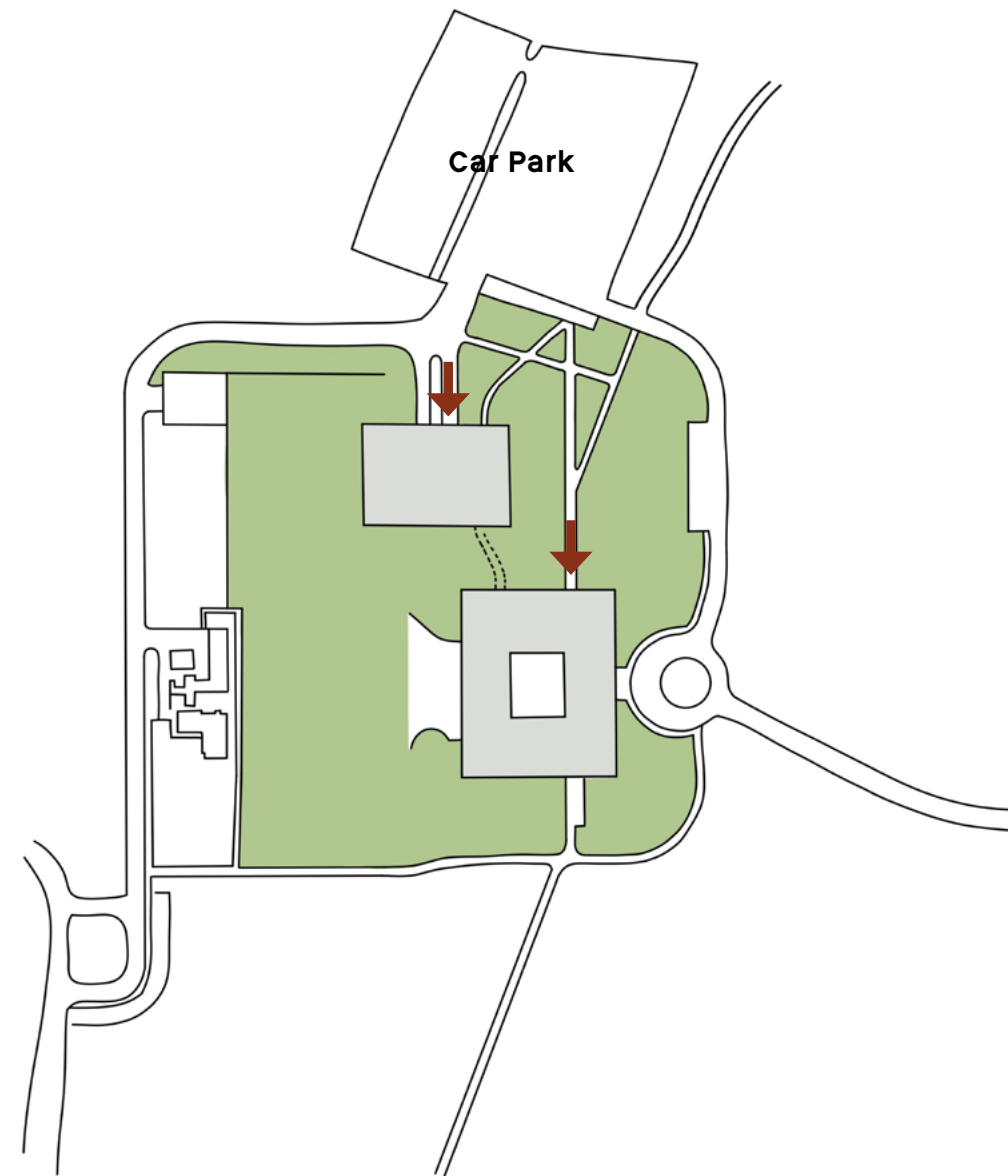
Original external view of Hayes Park South



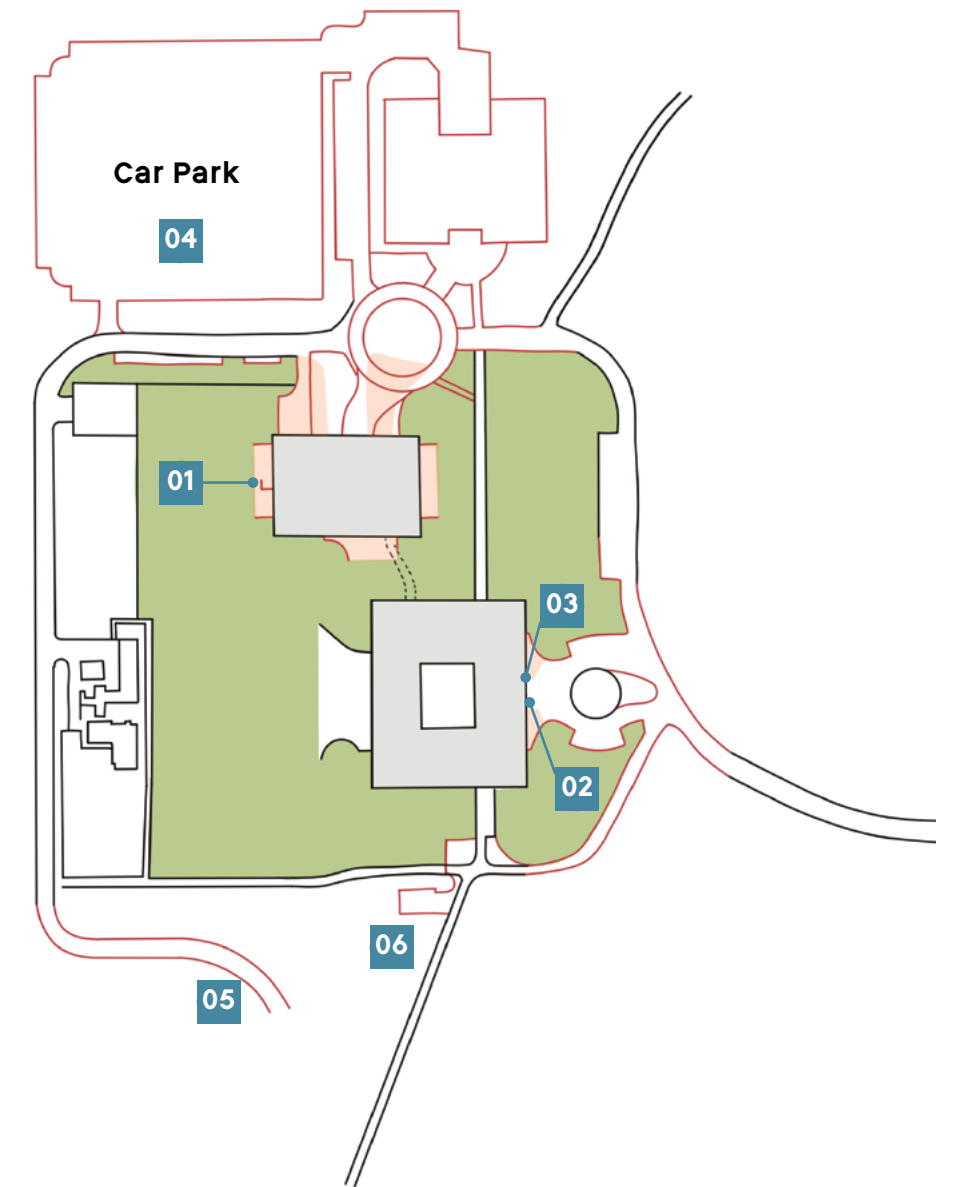
Current external View of Hayes Park South with new glazed entry from 1990s

External alterations to the facade

1. Courtyards formed and full height glazing introduced to some of the facades.
2. Retaining walls removed and full height glazing introduced to the entrance to HPS.
3. Entrance to HPS is relocated to the east.
4. Carpark deck is built, along with Hayes Park North.
5. Exiting road is realigned.
6. Servicing turning head to south introduced.



1960s - Original Proposal



1990s - Planning applications 12853/W/96/1667 & 1670



Image of 1990's renovations works to Hayes Park

Internal changes made to the buildings

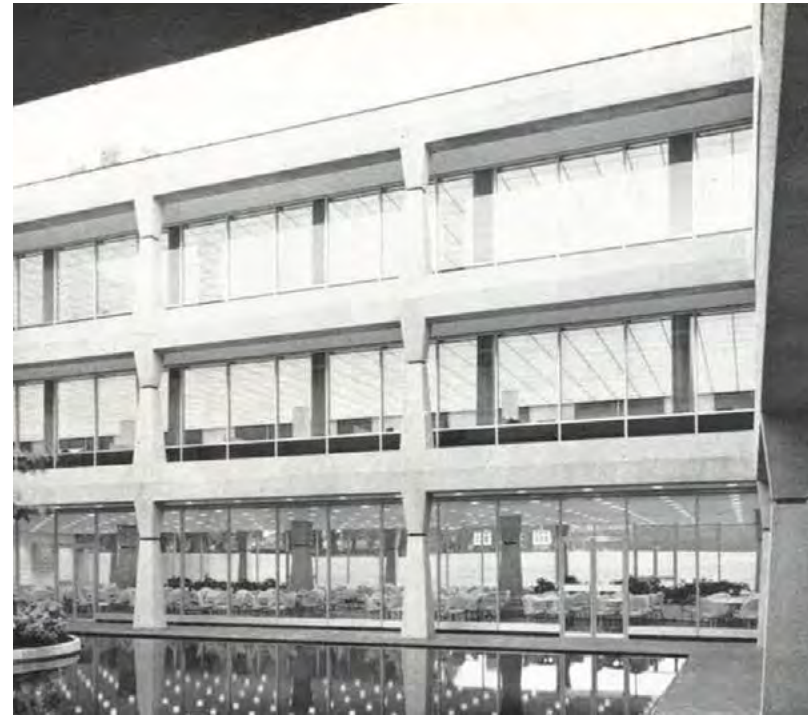
In the 1990s there were significant changes to the external entry, the internal courtyard and the internal columns. The following changes were made:

All the original interior features, such as the cellular offices, labs and interior finishes were removed and a modern 1990s open plan office was built.

Within the central courtyard, the original pond was removed and replaced with loose pebbles. The central island has remained.

The internal supporting columns, were boxed in. The condition of the existing internal columns is not known.

In addition, HPC and HPS were originally linked at a 'lower ground' level by a subterranean corridor, which has now been blocked up.



Past view of the Courtyard in Hayes Park South



Current view of the Courtyard in Hayes Park South



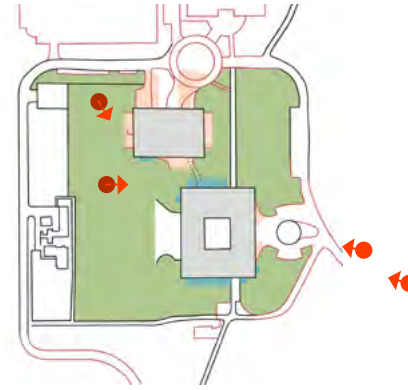
Past view of the Ground Floor of Hayes Park South



Current view of the Ground Floor of Hayes Park South

2.11 Site and Buildings Today

External Site photos 2022/2023



Hayes Park external view looking west from estate road



Between the buildings looking in an easterly direction

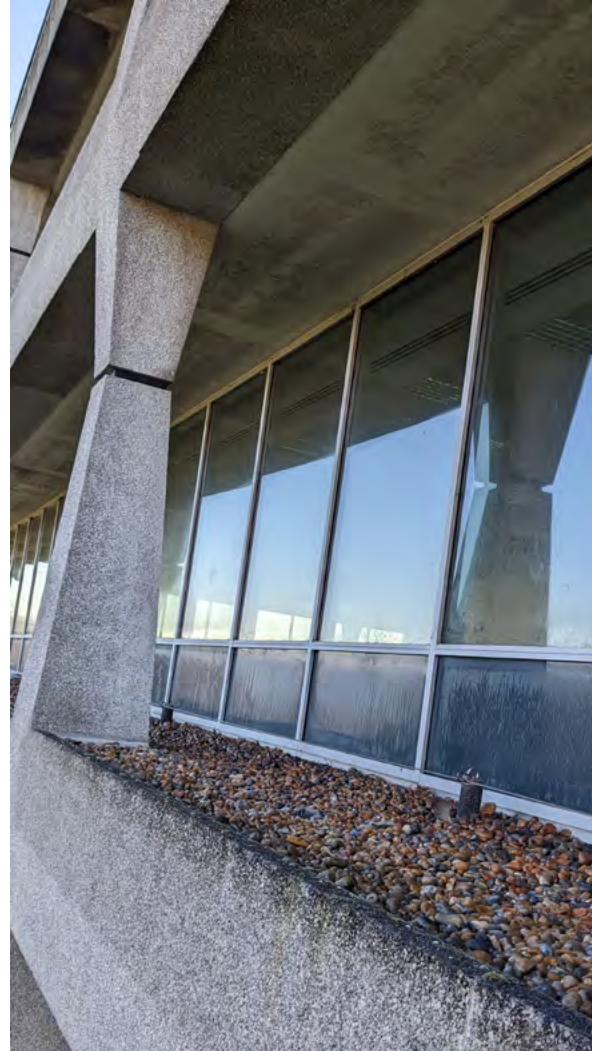
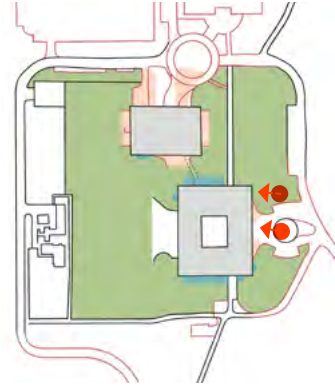


Hayes Park external view looking west from estate road



Between the buildings looking south/east direction

External (detail) Site photos 2022/2023



Images showing some the existing features such as the rotating door, existing door pulls and concrete facade systems



Image showing the existing feature columns



Image showing the existing corner details

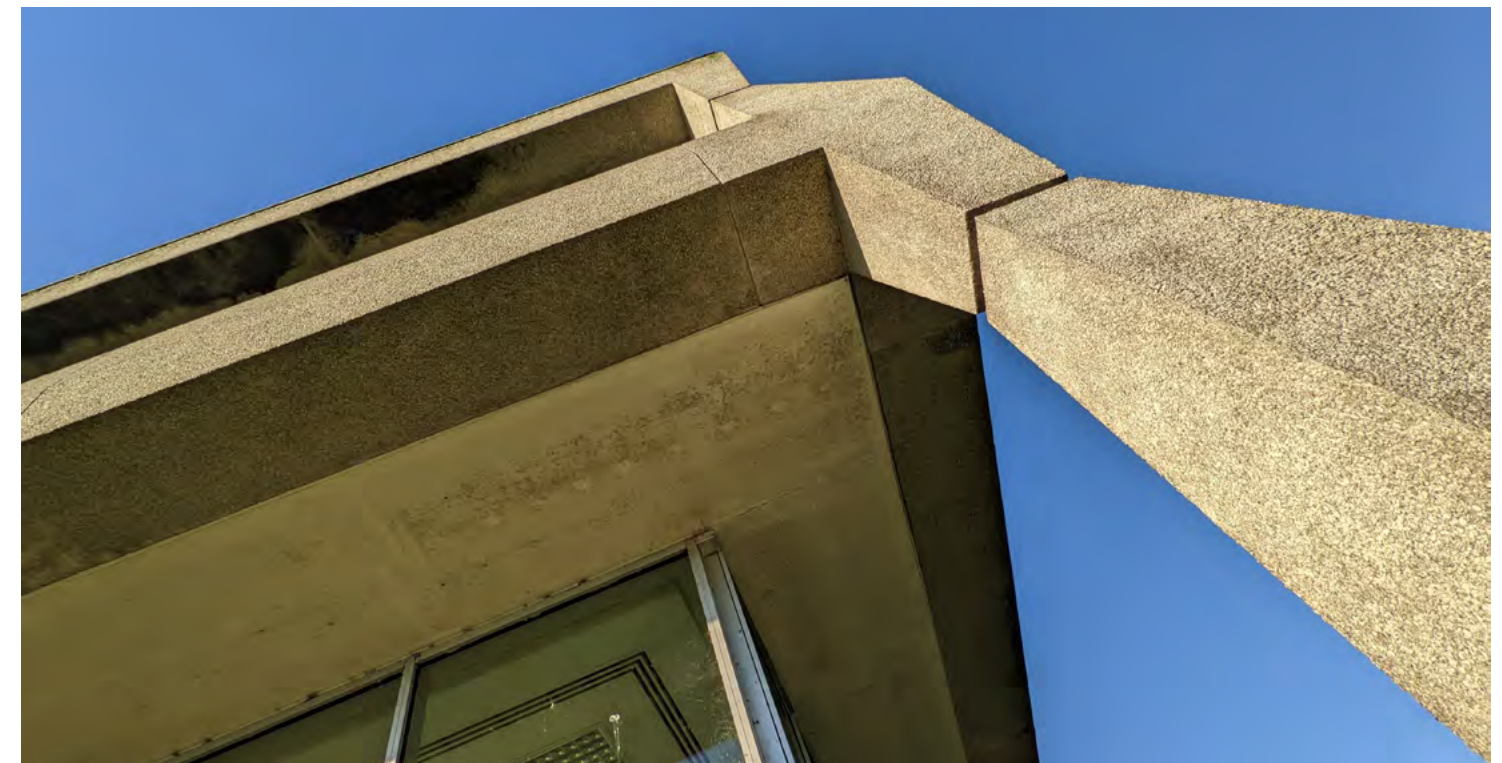
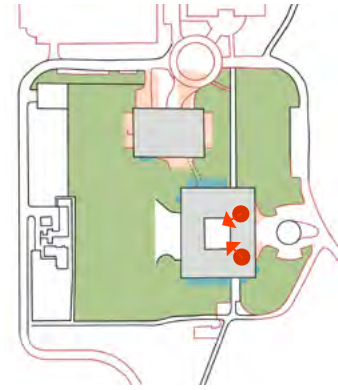


Image showing the existing feature columns and soffit condition



Images showing courtyard within Hayes Park South



Images showing opening glazing panels overlooking the courtyard



Images showing concrete overhang and feature columns

Condition of existing structure

Following a preliminary review of the concrete condition undertaken by Whitby Wood, it is confirmed that the buildings appear to have no apparent defects and remain in a similar condition to when they were constructed.

Some staining was noted but there was limited presence of cracking or spalling to suggest water ingress within the structural elements, especially to the reinforcement layer.

It is noted that the original aluminium covers to the joints of the exterior precast columns corroded after 20 years and were replaced with painted steel covers. The administration block was re-roofed in 1986.

Hayes Park Central and Hayes Park South are both three storeys, with the ground floor being partially sunk below ground level. Each lowered ground floor has a tunnel, which was blocked in the 1990s. The buildings are rectangular in plan with a rigid internal column grid. Hayes Park South is the larger of the two and includes an external atrium with courtyard at ground floor.

The concrete frames comprise flat slabs and drop heads with large precast elements to the façade. There are limited internal RC walls – some of these were added as part of the 1990s renovations.

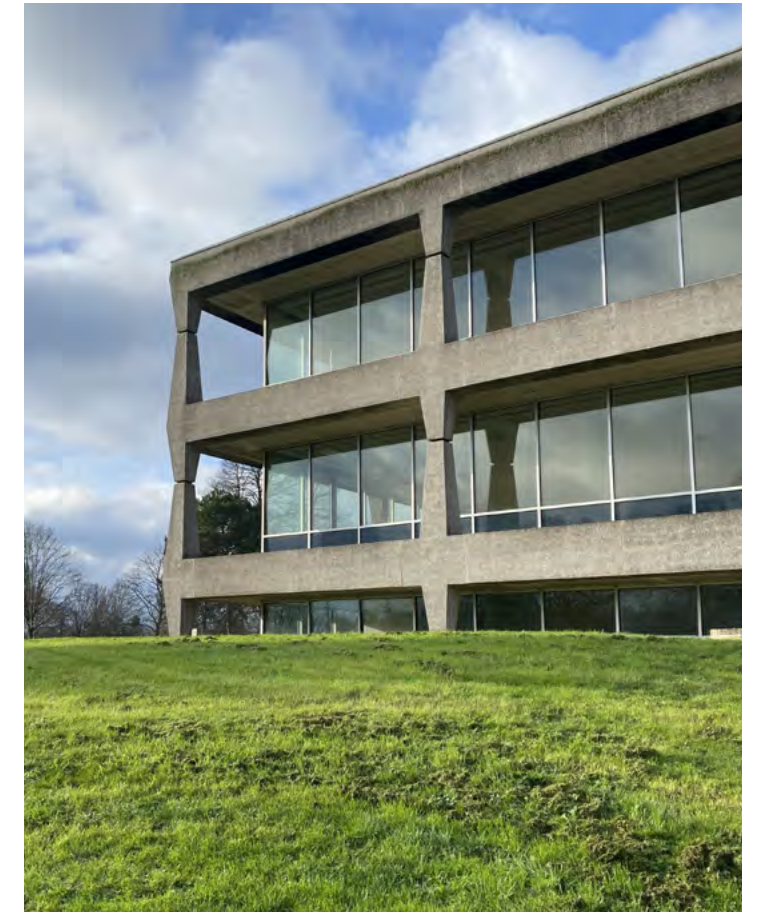
Other interventions undertaken as part of the renovations included infilling previous slab areas and demolishing areas of slab to form new vertical circulation. New RC walls also required new piled foundations, and parts of the basement were infilled.

The existing façade is formed of large precast concrete elements that create the strong aesthetic identity of the building. The external columns that form part of this façade are loadbearing and match the grid of the internal columns. These are assumed to form the stability system of the building to resist lateral load.

The foundations are believed to be a series of piles beneath each of the columns.

This summation is derived from limited record drawings and the foundations have not been seen on site.

A series of investigations are proposed to the structure following the planning submission to investigate the existing structure. These can be found within the Whitby Wood submission as part of this application.



Hayes Park South and Central concrete examples

Condition of existing glazing

Hutton+Rostron Environmental Investigations Limited carried out glazing investigations at Hayes Park on 01.12.22 and 16.01.23.

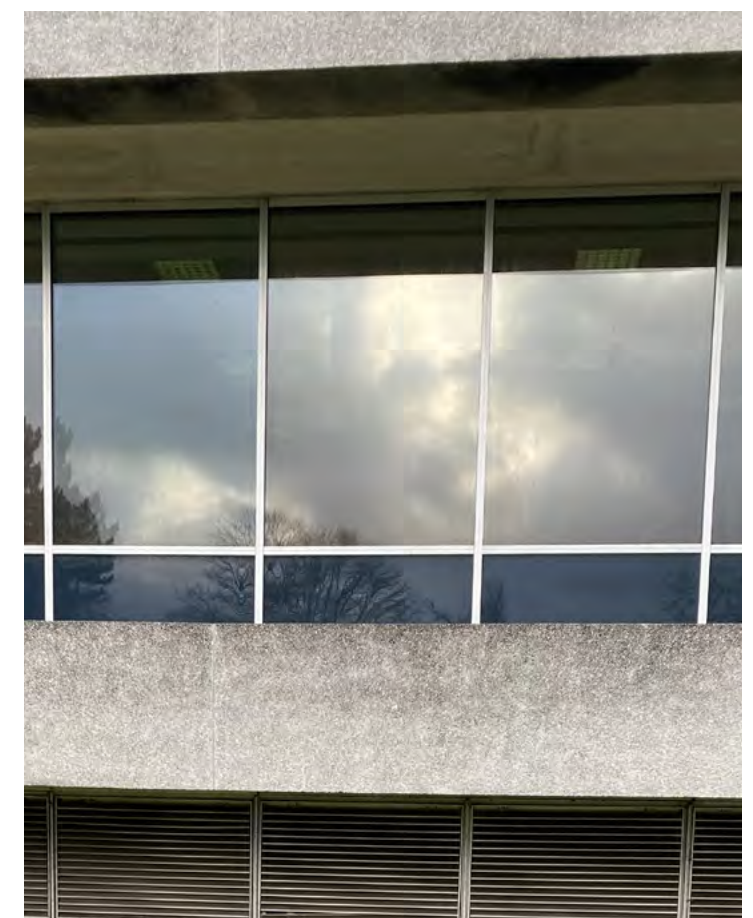
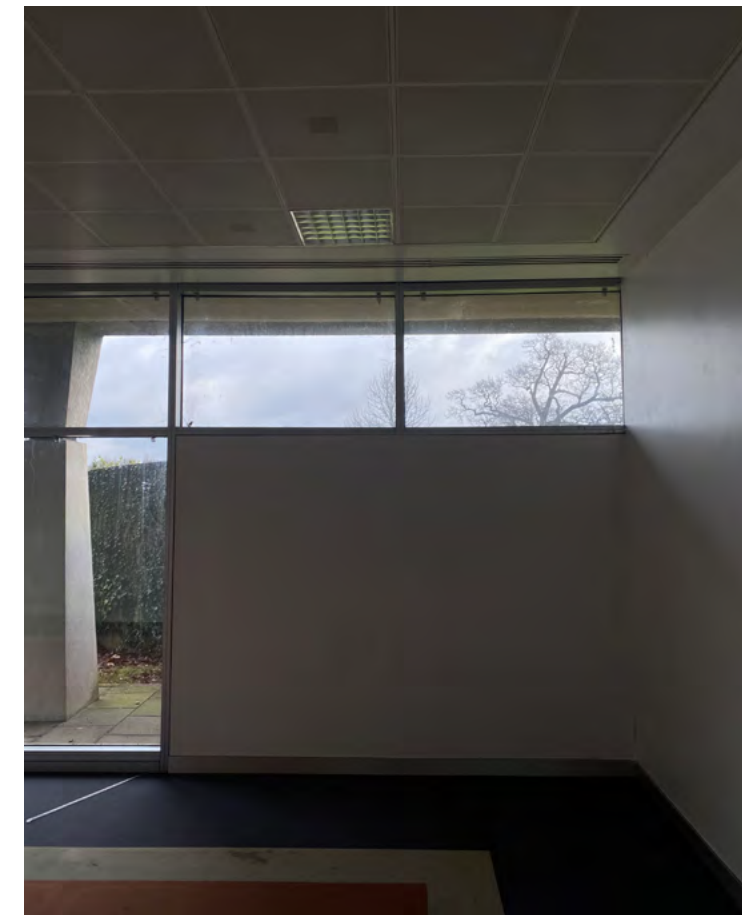
The aim of this survey was to investigate the condition and build-up of representative examples of glazed elements at Hayes Park Central (HPC) and Hayes Park (South) so as to determine remaining service life, suitability and to provide cost effective recommendations for remedial works, as necessary.

The shortened summary below highlights the points made following the survey:

1. Preliminary U-value calculations of the Double Glazed Units (DGU) build-ups suggest a lack of compliance with the LETI Constrained Retrofit standard as per the aims of the Design team.
2. Apparent variability in the use of Low Emissivity coatings, including some examples of glazed panes where none was detected, would likely have a detrimental impact on the system as a whole.
3. At least 4no. glazing build-ups to DGUs were noted from selected locations across both buildings, with variation in both the depth of inner and outer glazed leaves, as well as air cavities.

- Inconsistency in spacer bar designs, which in themselves did not reliably correspond to glazing build-ups, also indicated several phases of replacement since the building's construction.
4. Significant air volumes between the panes likely contribute to their reduced thermal performance.
 5. Preliminary thermographic survey results appeared to indicate thermal bridging at the interface of DGUs and frame elements.
 6. Window surrounds were of a lightweight metal construction which apparently allowed for a minimal amount of thermal or acoustic insulation within the mullions.
 7. Whilst glazed elements generally appeared to be in sound condition, a lack of compliance with Approved Document K, particularly Requirement K4, was of concern. (Which is a consideration for refurbished buildings.)
 8. The small number of casements windows across the building were in variable states of operability. Frame construction appeared to be robust although inconsistent tilt/turn functionality appeared to be putting undue stress on the frames and not part K compliant.
 9. The effects of wind-driven rain appeared to have been mitigated to a large degree by the overhanging nature of the exterior decks, within no evidence of water ingress noted at the time of inspection. However, the provision for the shedding of water away from frame elements could not be determined.

Following these recommendations the design team felt that full replacement was required in order to comply with the required building regulations Part B, K and L. Therefore similar modern systems have been investigated.



Hayes Park South and Central existing glazing images



Aerial image of the site from February 2023