2007 Masterplan

Above Image of the 2007 masterplan

Planning Authority
The NSC and Crystal Palace Park sit within the London Borough of Bromley. Although it falls within Bromley's planning authority, it also closely borders onto the boroughs of Southwark, Lambeth, Lewisham and Croydon, and serves the residents of all five boroughs.

2007 Masterplan
In 2007 the London Development Agency developed a masterplan for Crystal Palace Park which sought to redevelop the park, reinstating many of the concepts of Paxton's historic design whilst also addressing current and future needs. It aimed to re-establish the park's national significance.

The masterplan was granted outline planning permission in 2010. However, it was costed at £67 million, and funding issues have prevented any significant progress on site.

The masterplan's main aims for the NSC site were to:
- Restore the historic Paxton Axis route at ground level.
- Improve the setting of the NSC within the park.
- Re-establish and improve historic and key views and improve physical and visual links between the NSC and the wider park.

As part of the masterplan, conservation area consent was granted for the demolition of several structures in the NSC boundary, including the Lodge buildings, houses, stadium stands, raised walkway, 25m pool and bar/indoor 5-a-side building. An outline proposal for a new 'regional sports centre' built into the slope on the site of the existing West stand was consented.
This study takes into consideration the 2007 masterplan proposals.

Listed structures
Crystal Palace Park is a Grade II* registered park. There are a number of structures of heritage significance within the NSC site:
- Main NSC building: Grade II* listed
- Stadium: Locally listed
- The Lodge: Locally listed
- Houses: Locally listed.

The site also sits within the Crystal Palace Conservation Area, and along with the rest of the park is designated Metropolitan Open Land.

For further detail on the planning and heritage context of this study, refer to section 7 and Appendix 2.

3 Site analysis & appraisal
3.5 Work to date

Along with the 2007 Masterplan, a number of other studies carried out to date have informed this feasibility study.

2018 Sporting Facility Assessment
A Sporting Facility Assessment of the NSC was carried out by Neil Allen Associates on behalf of the GLA and completed in June 2018, in order to inform this study. The report assessed the current facilities in terms of physical condition, sporting need, supply and demand, user analysis and management and revenue and set out recommendations towards a future sporting vision for the NSC. It involved consultation with the local community, users, clubs and sporting National Governing Bodies.

The recommended vision in the report is to 'develop the NSC as a multi sport centre focussed on club and sports development and events to serve the South London area'. The report notes that to achieve this vision the site needs investment with new provision in certain areas and reduction in provision where the scale is no longer in line with the vision.

The report concludes by acknowledging that 'there will be balances to be struck in terms of the delivery of the vision, needs and long term sustainability'.

This feasibility study builds on the findings of the Sporting Facility Assessment, and tests the recommendations through further investigation and consultation. This findings of this study demonstrate that, in the context of the GLA's strategic sporting, health and wellbeing objectives, more priority needs to be given to community sport and physical activity in the broadest sense, in comparison to the sports club-based approach recommended by the Sporting Facility Assessment.

2015 CSM Study
CSM Strategic, on behalf of the GLA, carried out a development options appraisal study for the future of the NSC site in 2015. The study concluded that significant capital investment was required along with long-term management commitment to the improve of the facilities.

The study was not taken forward to the next stage, and a number of limitations have been identified:
- The study was undertaken in parallel to the development of plans by ZRG to rebuild the Crystal Palace. This proposal is now redundant and Bromley are developing a new park regeneration plan with a different outlook.
- The study considered accommodating a significant education use programme on the site. Due to a change in priorities this is no longer required.
- A robust sporting need assessment to support the proposals was not undertaken.
- The study involved limited community consultation.
- The study was business case led and gave little consideration to design options.

Regeneration Plan
A Regeneration Plan is being prepared by Aecom on behalf of LB Bromley, which builds on the 2007 masterplan and the improvement works that have taken place and aims to identify an achievable plan that can be delivered within the resources available. It is anticipated that the Regeneration Plan will be brought forward as an outline planning application in the near future.

The scope of the Regeneration Plan does not extend into the NSC site as it is under separate GLA ownership. However, it does make some suggestions, which build on the masterplan proposals:
- Create a parkland setting for the sport facilities.
- Restore any areas released from the refurbished NSC back to the park.
- Improve access to the NSC and connections with the park.

This study responds to proposals of the Regeneration Plan, and further engagement with Bromley will be required at the next stage to ensure proposals for the NSC site are fully integrated with plans for the wider park.

Capel Manor
Capel Manor College has a base at Crystal Palace Park, with facilities housed in the Jubilee Stand building and a stand-alone building on the southern edge of the park known as Crystal Palace Park Farm. Proposals are currently being developed, separate to this study, for the relocation of Capel Manor's facilties from the Jubilee Stand to sites elsewhere in the park including expanding the Crystal Palace Park Farm site. A planning application is expected to be submitted for these proposals in 2019.

The proposals made in the study are based on the assumption that the Capel Manor facilities will be relocated out of the Jubilee Stand as planned. As directed by the GLA, the re-location of Capel Manor facilities from the Jubilee Stand is not included in this study.

3 Site analysis & appraisal
3.6 Previous consultations - key outcomes & observations

The diagram below summaries key findings of some previous consultations undertaken in relation to the NSC and the Park:

- The 2017 Bromley Regeneration Plan
- The 2015 NSC Options Appraisal
- The 2015 Architecture 00 study 'Joining the Dots in Crystal Palace'

The park should host live arts and cultural events and festivals, run by and for the local community

Restoration of Paxton's axis is supported, but it's the least prioritised aspect of the masterplan

CSM proposals went against desires to get people into sport, and ignored the legacy

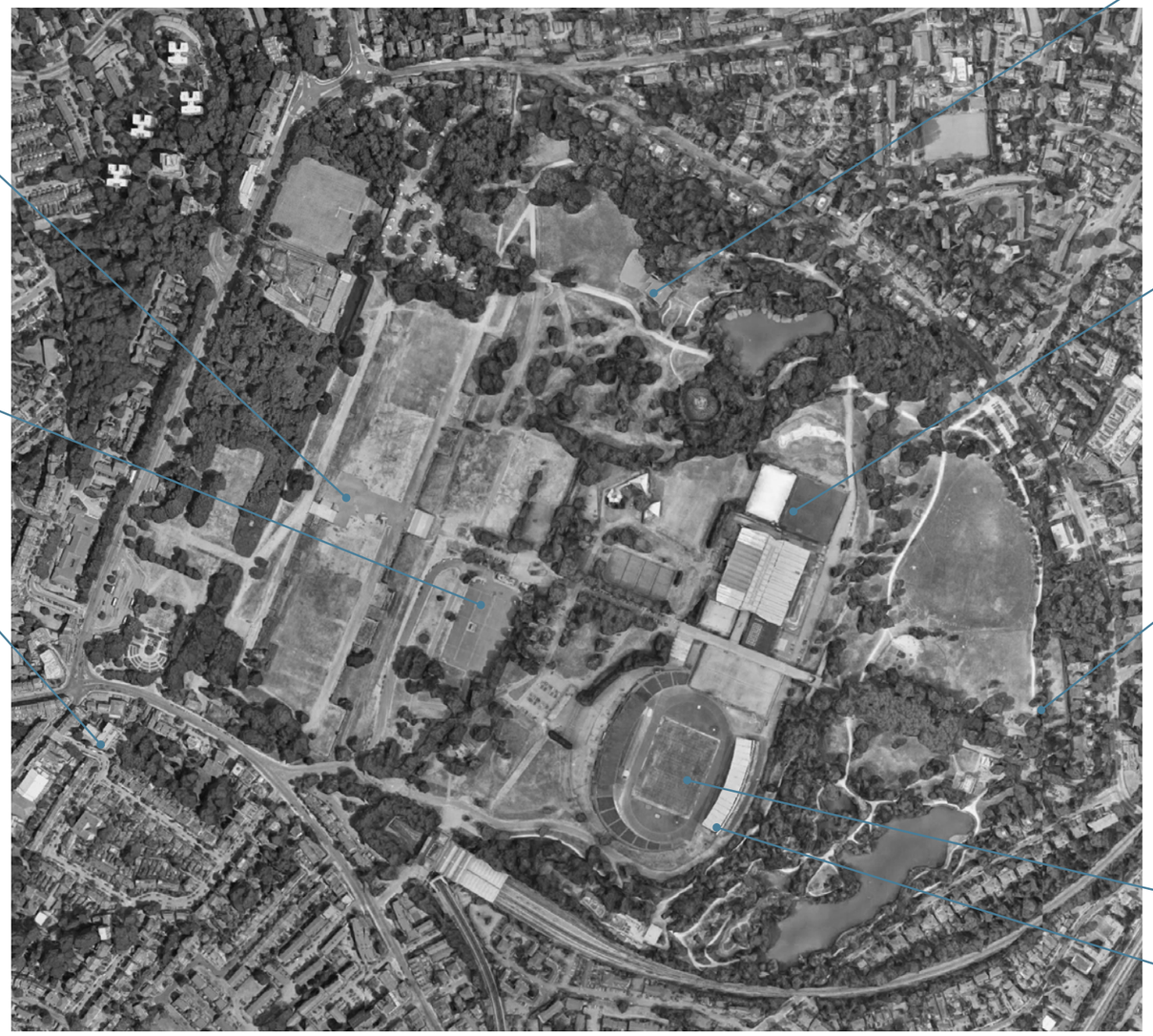
Remove the car-parks from the centre of the park

There's a concentration of cyclists in the area, with popular meeting points and services between Upper Norwood Triangle and the park.

There's a demand in Crystal Palace for creative flexible workplaces. The area attracts young professionals and creatives and has a high concentration of homeworkers.

Create a range of refreshment outlets around the park

Improve views and remove visual intrusions



Restore and use the concert stage/bowl

CSM proposal for a primary school on NSC site was not popular

Keep gymnastics - 25yr training history, 200+ members

The football use is important, especially for Crystal Palace Ladies

The London Youth Games are important to Crystal Palace

Good maintenance and renovation is needed - and removal of 'ugly' parts

Any plans for the roads should consider the Park Run

We need to support grass-roots young athletes. Without these facilities, they might give up.

Create new accessible community spaces

The legacy of athletics is important

Cycling routes should be less obstructed

N

Key

- Retail High Street
- Train Station
- Play / Leisure / Sports venue
- Education

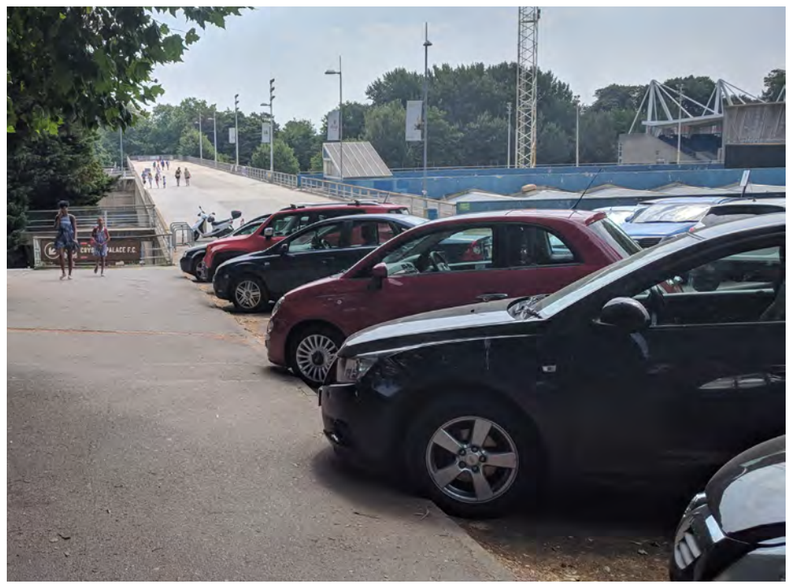
As well as providing facilities for sports users from south London, Kent and Sussex, the sports centre must also connect to the existing communities and offer activities that complement the surrounding urban centres.

The NSC can distinguish itself from existing sports and park facilities elsewhere in the neighbourhood by providing mutliple sports in one place, with other activities that encourage visitors to stay for the day.

The map shows that there are numerous schools and colleges within walking distance of the NSC. Whilst some clubs at the NSC do run successful outreach programmes with schools, there is an opportunity for the NSC to reach out at a wider level with sports and education programmes and events.

Crystal Palace NSC is an integral part of the local landscape. As the adjacent neighbourhoods develop and change, the NSC has continued to serve the sporting community.

1. Lack of clear/ safe route to NSC site for pedestrians from Crystal Palace station.

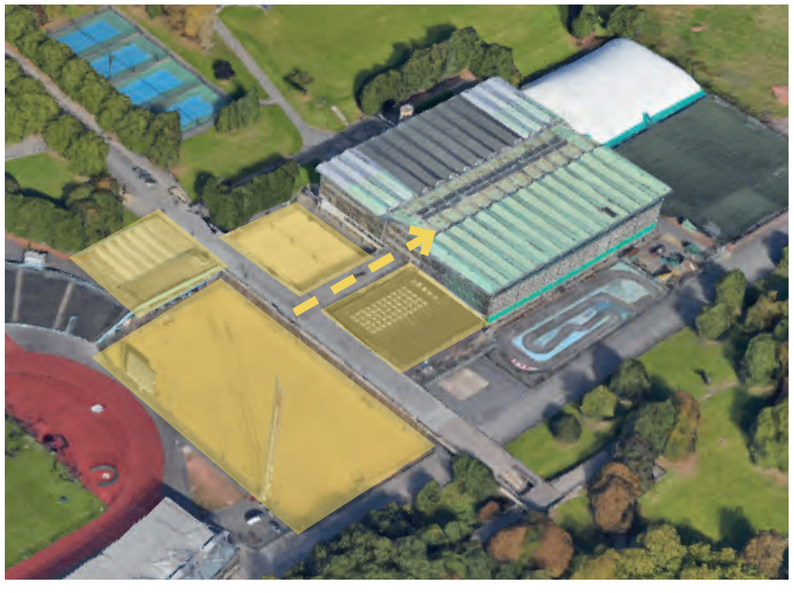


2. Parking dominates central areas.

3. Entrance to stadium no longer used for athletics or sporting purposes. High fencing encloses the area used for motorcycle training.

4. The Lodge and housing in poor condition and disrepair. Not appropriate infrastructure for park context.

5. Central axis should be cleared and restored.



6. Lack of breathing space around entrance; diminishing from the architectural quality and setting of the listed building.

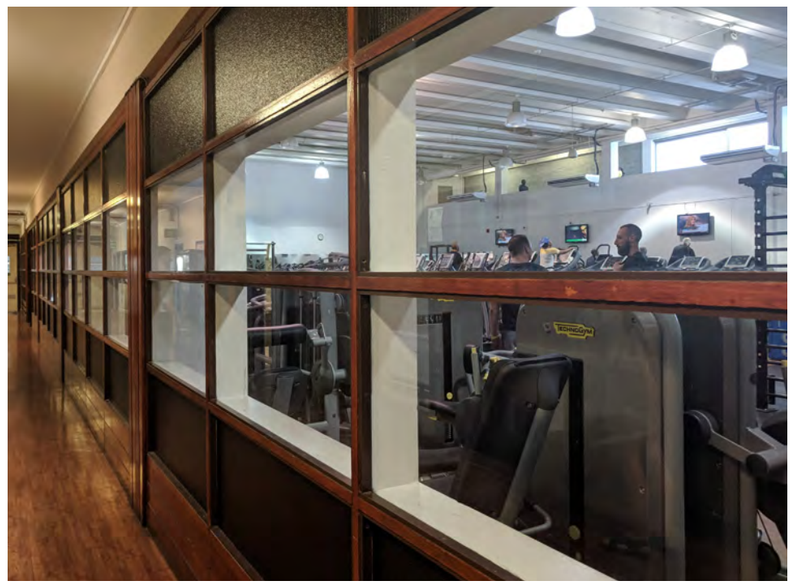
7. Hockey pitch blocks connection of main building to stadium.

8. Unclear route/ connection of raised walkway to park.

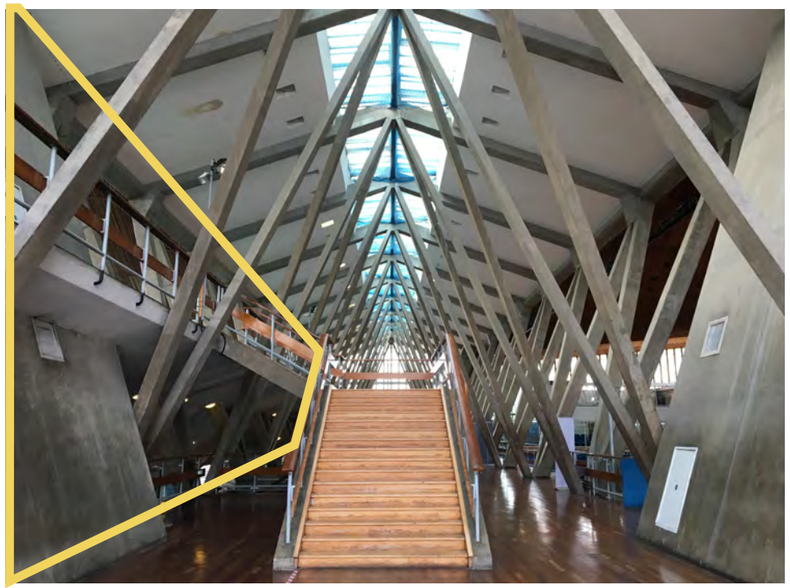
9. Stadium seating capacity in excess of demand.

10. Bar building in disrepair and unused.

11. Increase active frontage of main building and facilities.



12. Lack of visibility of gym space.



13. Improve user comfort by resolving issues caused by pool and main sports hall in same open space.

15. De-clutter / re-arrange entrance to create a welcome threshold to the main building.

3 Site analysis & appraisal
3.9 Access and connections
3.9.1 Key routes

N

Key

- Rail / Overground Station
- Bus stop
- Pedestrian entrance
- Car park
- Car route

The central east-west axis is the main circulation route directing users to the sports centre.
Secondary north-south routes are less clear.

Access by car appears to be prioritised, with mulitple parking locations in the centre of the park.

Lighting is poor and pedestrian and vehicle routes are shared, leading to unsafe routes. Initial community consultation along with our own design team experience has shown that this discourages visitors to the NSC from using public transport or forms of active travel to make the journey to the NSC. This then leads to more cars, which exacerbates the parking issues further.

3 Site analysis & appraisal
3.9 Access and connections
3.9.2 Existing road infrastructure and parking

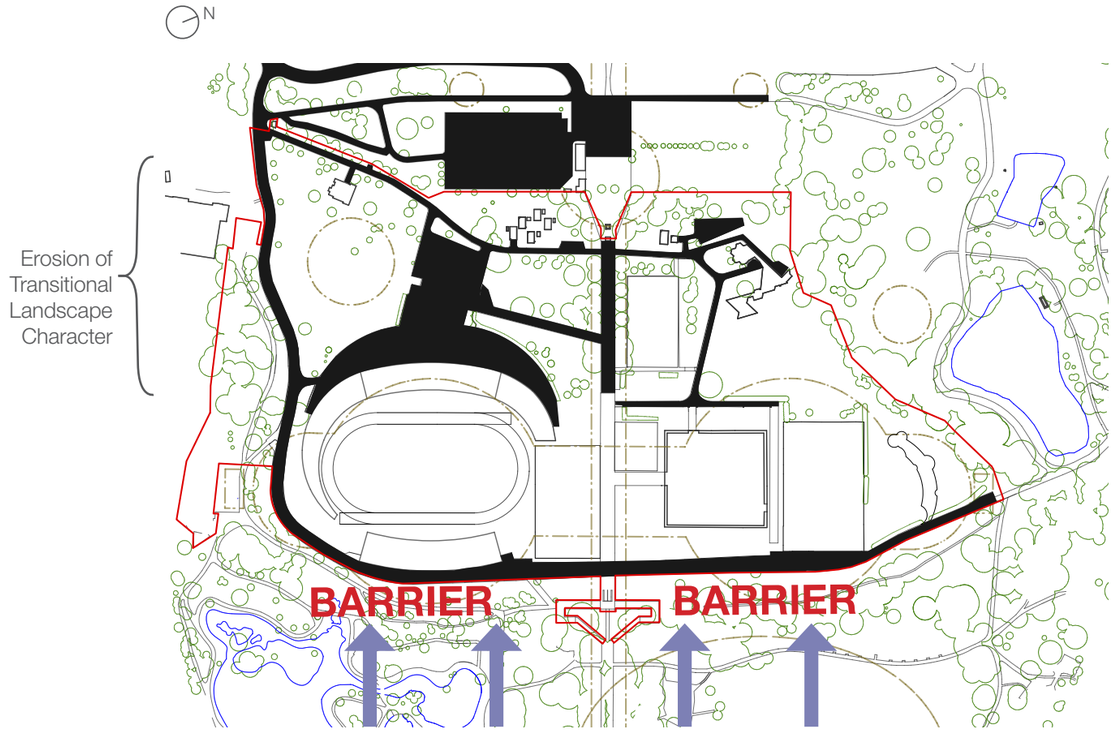
The road infrastructure that serves NSC, the Lodge and the housing on site takes a large area of parkland and has a significant impact upon the park by:

- Negatively influencing parkland character of transitional landscape
- Creating a barrier to the east that attracts anti-social behaviour
- Routes generally are vehicle dominated.

The negative influence of the road infrastructure is highlighted in the Crystal Palace Park Conservation Management Plan which states:

“Much of the topography has been altered to accommodate parking, access roads and structures associated with the NSC (student Lodge, houses etc). This has resulted in loss of much of the former parkland quality”

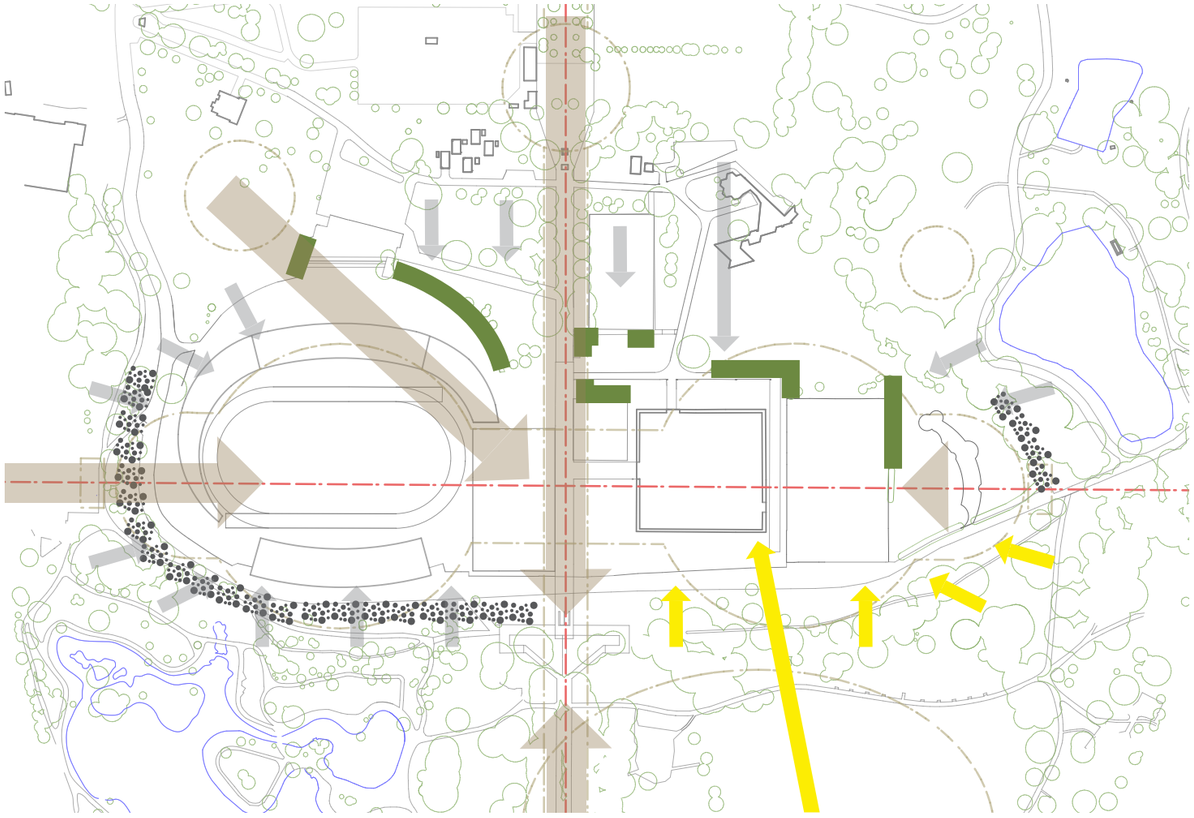
Both the 2007 Masterplan by Latz and Partners and the 2017 Aecom Regeneration Plan prioritise the removal of parking from the centre of the park. Although neither considers the sporting needs of the NSC they set an important goal of removing parking from the centre of the park and relocating it to the perimeter.

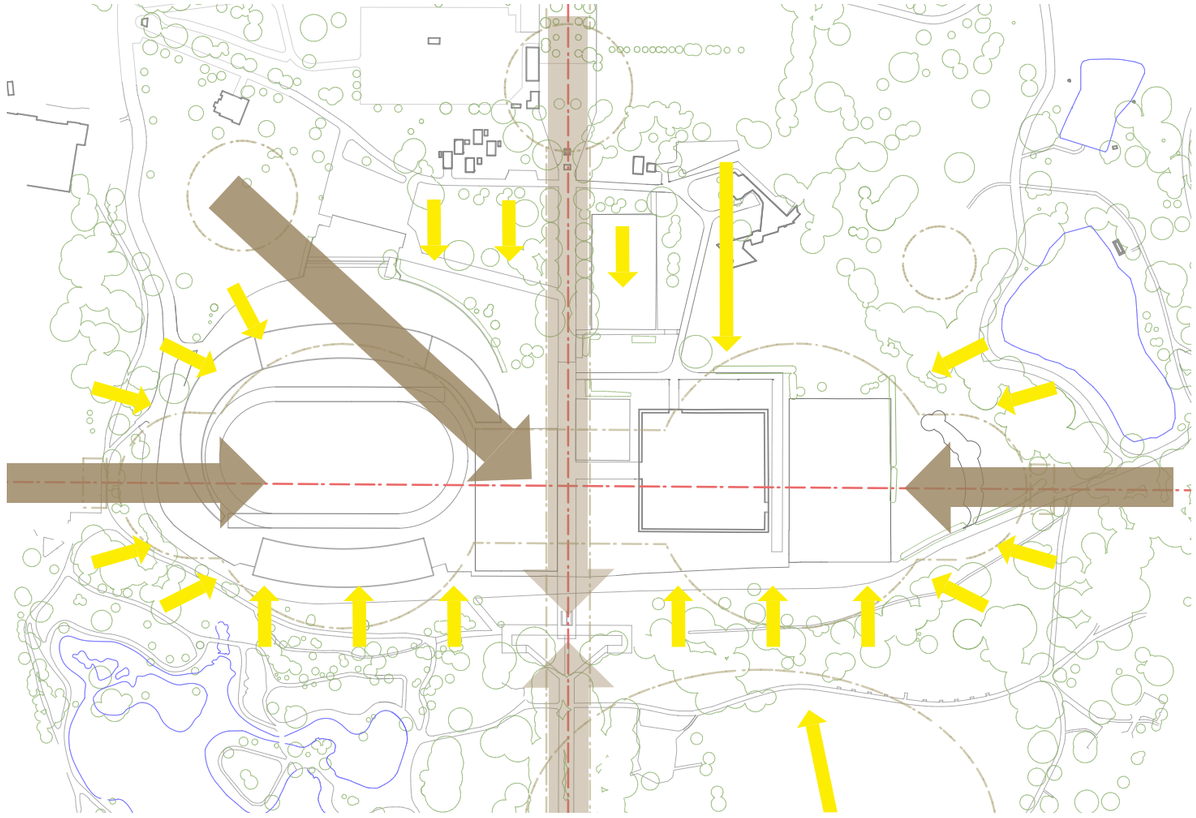


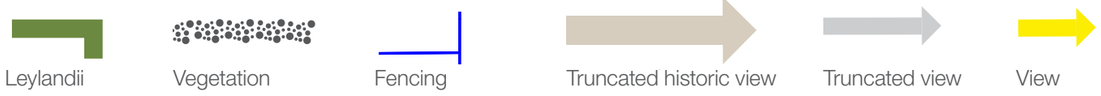
Top
Plan showing existing vehicle infrastructure within the park and the barrier to movement created by the access road to the east of the NSC

Right
Vehicle dominance in the Transitional Landscape

3 Site analysis & appraisal
3.10 Visual connections
3.10.1 Existing and proposed views







Existing views
There are a series of blockages which affect legibility, visual connections and historic views within the park. Many of these such as Leylandii and fences are later piecemeal additions that reflect how the park and the NSC have become, overtime, separated.

The following pages demonstrate how simple moves can open up many of these views making the whole park more legible allowing the NSC building to become a wayfinding element within the park.

Proposed views
There are some ‘easy wins’ that will greatly improve views, orientation and increase the prominence of the NSC building within the park. Both as a building of quality and as an element of wayfinding.

Easy wins in conjunction with LB Bromley include:

- Removal of Leylandii
- Removal of fences separating the NSC from the wider park
- Clearing of under-storey vegetation and canopy lifting

3 Site analysis & appraisal
3.10 Visual connections
3.10.2 View from the Rosary mound

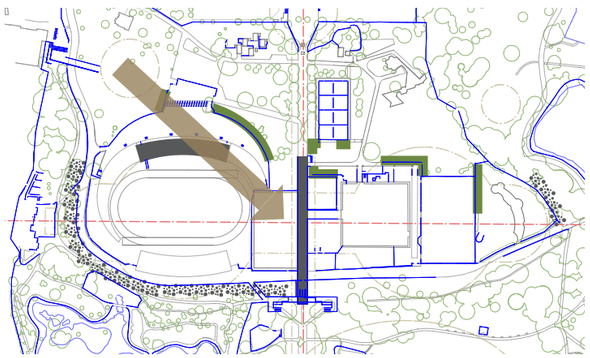
The landform of the historic Rosary mound has been destroyed by the construction of the roads, however traces of it still remain as an elevated mound on the edge of the site. The mound form could be reinstated and the many obstructions that form part of the 'ad-hoc growth' of the NSC could be reduced to re-instate the panoramic aspect across the park.

1. Leylandii and fences obstruct view
2. Jubilee stand obstructs view
3. Lighting columns make strong vertical distracting the eye
4. Alignment of road previous road infrastructure visible in the landform

Top
Existing view from the site of the old Rosary Mound

Bottom right
Historic open view across the park from the Rosary Mound

Below
Key diagram showing historic view the Rosary Mound



Key plan

3 Site analysis & appraisal
3.10 Visual connections
3.10.2 Basin Axis View - North

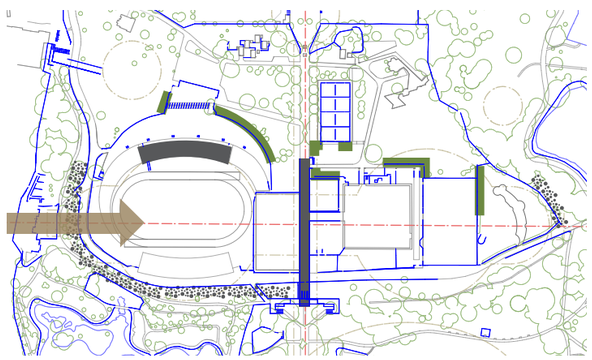
These images show the condition of the historic view across the fountain basin axis facing north across the stadium to the main building.

The sketch illustrates one option for how reducing the stadium capacity, integrating it into the landscape, clearing unmanaged undergrowth and removing fencing could create a much more open view across the site.

Top
Existing historic view across the Grand Fountain Basins from the south

Below
Key diagram showing historic view along axis of fountains

Bottom Right
Proposed historic view across the Grand Fountain Basins from the south where the NSC building becomes the focal point



Key plan

3 Site analysis & appraisal
3.10 Visual connections
3.10.3 Basin Axis View - South

These images show the condition of the historic view across the fountain basin axis facing south to the NSC building. The sketch illustrates how, through clearing unmanaged undergrowth and removing fencing, the visual connection could be restored.

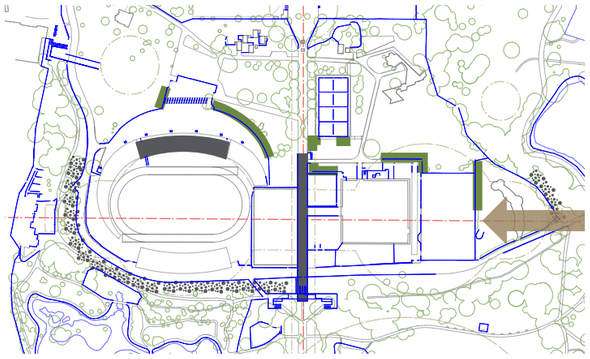
An inflatable 7-a-side football pitch dome currently obscures the view of the listed building from the south.

Right top
Existing historic view across the Grand Fountain Basins from the north

Right bottom
Proposed historic view across the Grand Fountain Basins from the north where the NSC building becomes the focal point

Below top
Existing dome containing indoor football pitches which interrupts views of the NSC building

Below bottom
Key diagram showing historic view along axis of fountains



Key plan

3 Site analysis & appraisal
3.11 Park and sports centre integration
3.11.1 ‘Park Max’ and ‘Sport Max’

Top
Aerial view image from the 2007 masterplan proposals

Bottom
Current aerial view

These images illustrate two contrasting approaches to the NSC within Crystal Palace Park.

The top image is an extract from the 2007 Masterplan and could be described as ‘Park Max’. It removes the raised walkway returning the central axis to ground level and removes all external sport offer with the exception of the athletics track.

The lower image is the current NSC which could be described as ‘Sport Max’. Here sport predominates, without any positive spatial or visual relationship to the park. In this current situation the NSC is a barrier to views and movement within the park.

This section looks at the key moves to address both the perimeter and then the external spaces that form the NSC, from a landscape perspective. This can be broken down into 6 principles within two categories which are explored further throughout this report.

Category 1: Boundary and context

1. Establish landscape character and clarity (Transitional Landscape, Rosary, NSC / Fountain Basin, Axis).
2. Improve views and permeability.
3. Remove car infrastructure from the centre of the park.

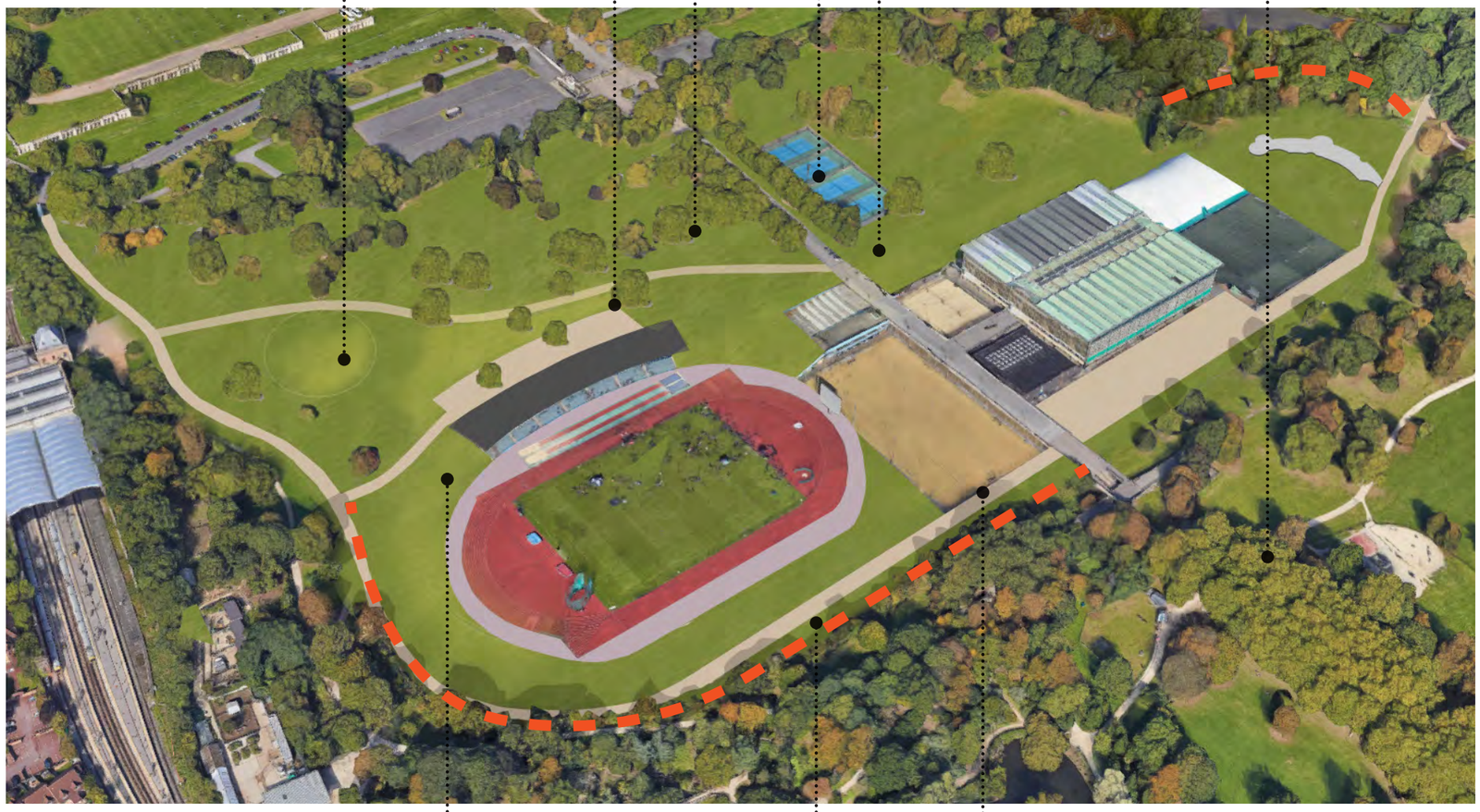
Category 2: Spaces within the NSC

4. Open up axis removing built form and high fences between NSC building and athletics track.
5. Create a coherent central axis that is activated with cultural, playful and sporting activity.
6. Play to be in proximity to and encourage participation in formal sport.

3 Site analysis & appraisal
3.11 Park and sports centre integration
3.11.2 Sports centre boundary and park context

This diagram shows the action to deliver the first 3 key principles that relate to the NSC boundary and context.

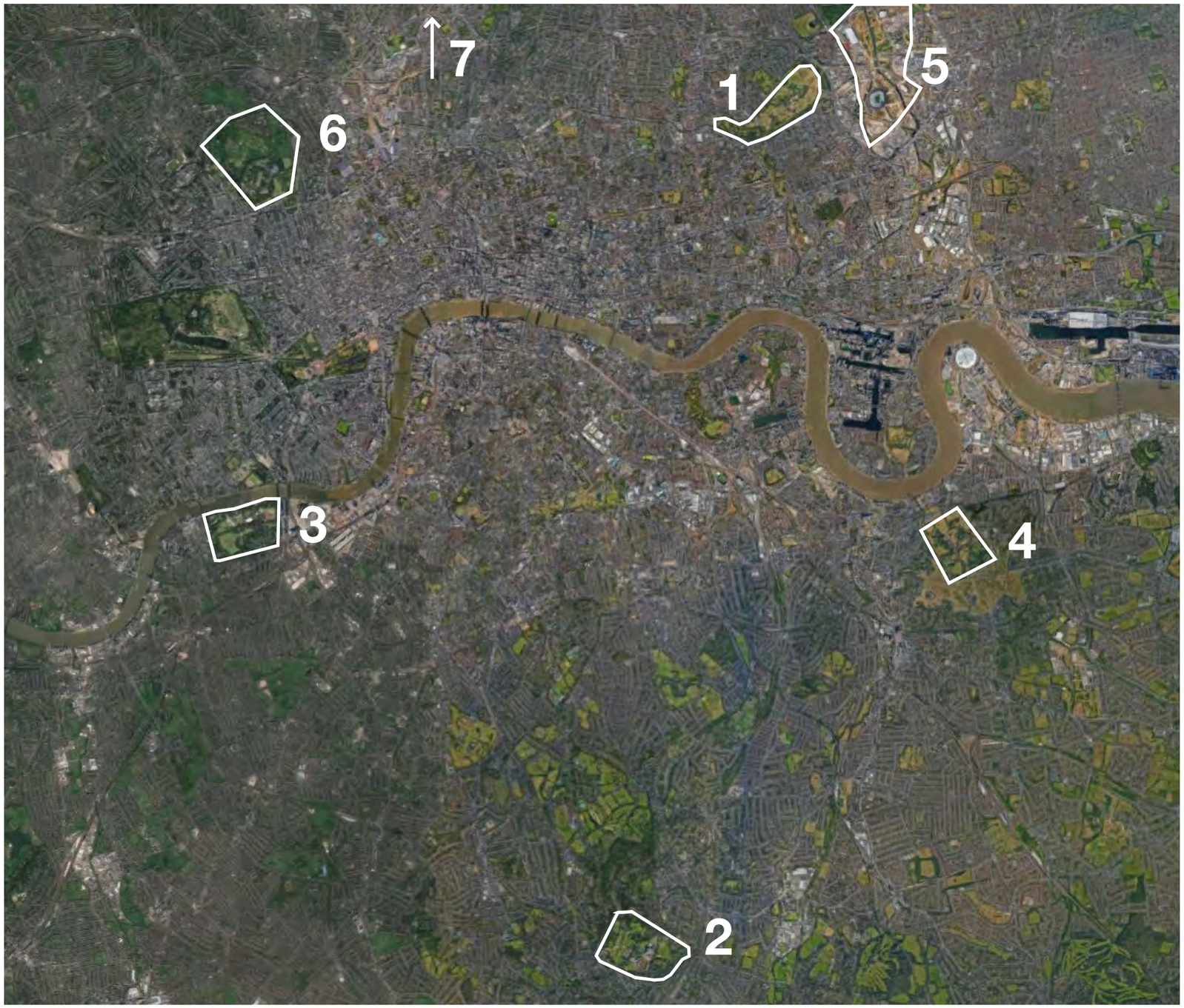
1. Establish landscape character and clarity (Transitional Landscape, Rosary, NSC / Fountain Basin, Axis)
2. Improve views and permeability
3. Remove car infrastructure from the centre of the park.



3 Site analysis & appraisal
3.11 Park and sports centre integration
3.11.3 Sports centre site

This diagram illustrates the key principles that relate to the landscape spaces within the NSC:

4. Open up axis removing built form and high fences between NSC building and athletics track
5. Create a coherent central axis that is activated with cultural, playful and sporting activity
6. Play to be in proximity to and encourage participation in formal sport



1. Victoria Park
2. Crystal Palace Park
3. Battersea Park
4. Greenwich Park
5. Queen Elizabeth Olympic Park
6. Regents Park
7. Alexandra Palace

The study undertaken on the following pages demonstrates that Crystal Palace park is unique in the variety and quality of sports facilities it offers - for both recreational and club use. But this could be complemented by other community space and activity - more play, leisure and food and beverage facilities. Other parks of a similar scale have multiple play and cafe offers. These complementary uses should be considered within the development of the NSC.

This will be improved with the opening of the new café and community space in spring 2019. There is an opportunity to expand on this offer with improved complementary facilities on the NSC site. Any new offer proposed for the NSC site should not work in direct competition with the new café, but should target a different audience, either with a sports / health / wellbeing angle or different opening hours.

The study also shows the park as having a high proportion of car parking space within the central areas of the park. The Bromley Regeneration Plan for the park recommends re-locating a large amount of this central parking to the perimeters of the park. This will be considered in the development of this study.

Note: This analysis is based on a high-level desktop comparison and identifies the number and range of facilities in parks of comparable sizes. It does not take into account the scale or usable area of the facilities.

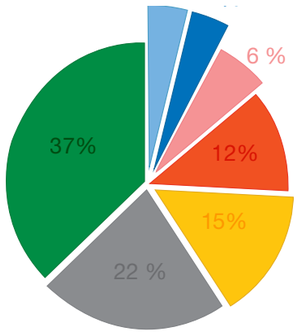
3.12 Comparison of park size and density of facilities

Key

- Food/beverage
- Sports
- Cultural / Entertainment
- Play / Leisure
- Landmark
- Health

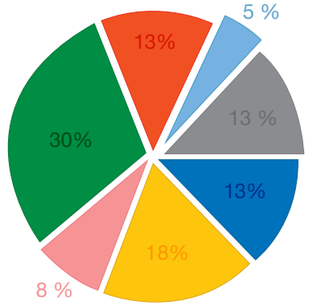
Crystal Palace Park
81 hectares

- Cafe & visitor's centre
- NSC café
- Fishing lake
- Capel Manor College and children's farm
- Maze
- Crystal Palace Museum
- Caravan and Motorhome Club
- Children's play area
- Skatepark
- Athletics Stadium
- Swimming Pool
- Gym
- Indoor Running Track
- Squash Courts
- Sports Hall
- 3 Beach Volleyball Courts
- Football & hockey pitches
- Climbing Wall
- Tennis Courts
- Dry diving
- Phoenix Motorcycle Training
- Italian Terraces
- Geological Strata
- Prehistoric monsters
- Subway
- Crystal Palace Physio Group
- Car Parking (Penge Entrance)
- Car Parking (The Lodge)
- Car Parking
- Car Parking
- Car Parking
- Coach Parking



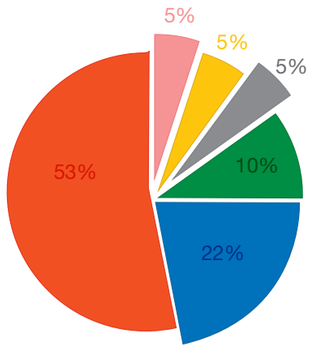
Battersea Park
83 hectares

- Tea-terrace kiosk
- Pier Point Cafe
- Pear Tree Cafe
- Battersea Evolution
- Pump house gallery
- Children's zoo
- Boating lake
- Go Ape
- Childrens Playground
- All-weather sports ground
- Football ground
- Cricket Pavilion
- Multi-sport courts
- Millenium arena
- Bike hire
- Bowling green
- London Peace Pagoda
- Bandstand
- Fountain display
- Battersea Park Physiotherapy
- Car Parking (Albert Gate)- 150
- Car Parking (Rosary Gate)- 360
- Car Parking (Chelsea Gate)- 180



Greenwich Park
74 hectares

- Pavilion Tea House
- Coffee Cabin
- White House Cafe
- Playground seasonal cafe
- Boating pond
- Children's playground
- Tennis centre
- Cricket pitch
- Queen Caroline's bath
- Bandstand
- Sports Pavilion
- Royal Observatory Greenwich
- Peter Garrison Planetarium
- Queen Elizabeth's Oak
- Roman temple ruins
- Anglo Saxon tumuli
- Shepherd Gate Clock
- One Tree Hill
- Car Parking (Station)



3 Site analysis & appraisal

3.12 Comparison of park size and density of facilities

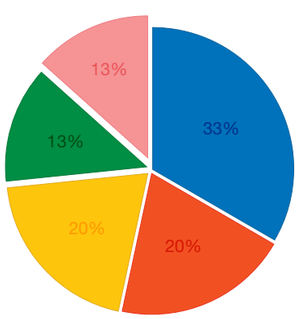
Key

- Food/beverage
- Sports
- Cultural / Entertainment
- Play / Leisure
- Landmark
- Health

Regents Park

170 hectares

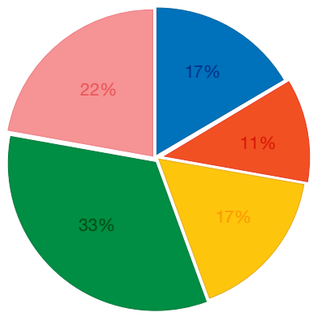
- The Hub Cafe
- The Regents Bar and Kitchen
- Ice cream kiosk
- Espresso Bar
- The Boathouse Cafe
- London Zoo
- Open air theatre
- Boating Lake
- Marylebone Green Playground
- Hanover Gate Childrens Playground
- Regents Park running track
- 12 tennis courts
- English Garden
- Queen Mary Rose garden
- Triton Fountain



Victoria Park

86.16 hectares

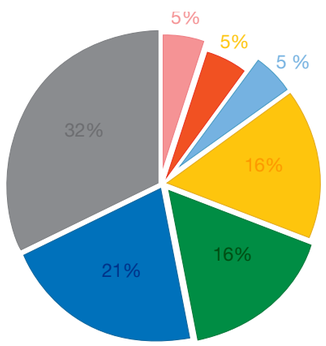
- Park Cafe
- Pavilion Cafe
- Hub building community room and cafe
- West boating lake
- East fishing lake
- Model boating lake
- V&A playground
- East Playground
- Skate park
- Splash Playground
- 5 football winter league pitches
- 2 football summer league pitches
- 3 artificial cricket wickets
- 3 cricket practice nets
- 4 tennis courts
- Bowling green
- Chinese Pagoda
- Bandstand



Alexandra Palace Park

196 hectares

- Pheonix Bar & Kitchen
- Lakeside Cafe
- The Grove Cafe
- Alexandra Palace market
- Boating Lake
- Rose Gardens
- Alexandra Palace Ice rink
- Alexandra Park Playground
- Alexandra Park Cricket and Football Club
- Skateboard Park
- Go Ape Alexandra Palace
- Alexandra Palace
- The Laboratory spa & Health club
- Pavillion Carpark
- Dive Carpark
- Paddock Carpark
- Fairground Carpark
- East Carpark
- Grove Carpark



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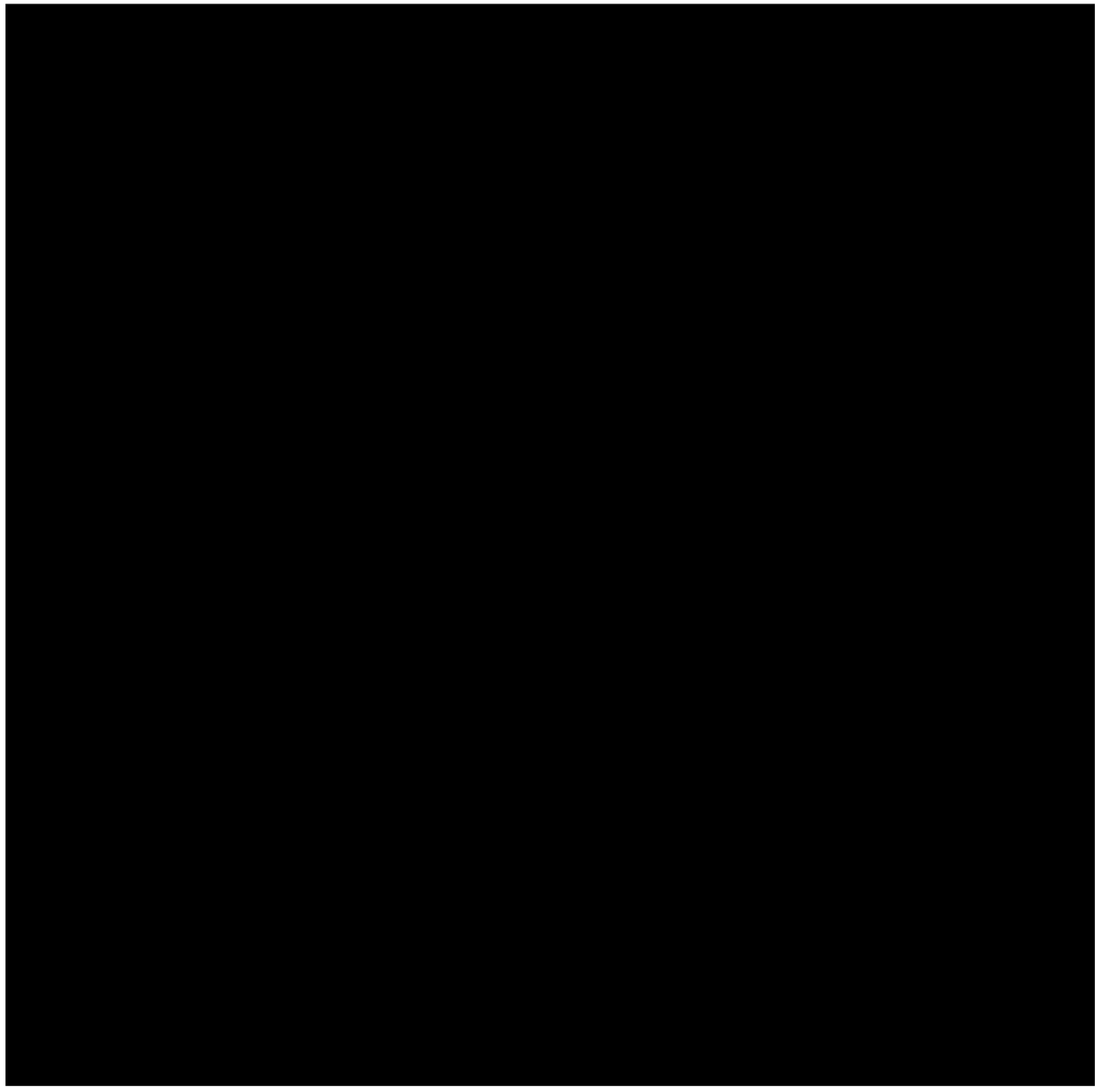

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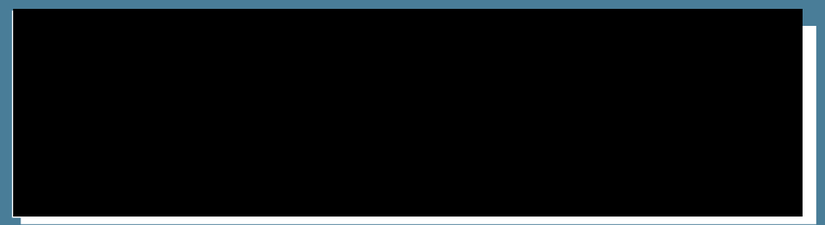


5 Project vision & objectives

5.1 Project objectives

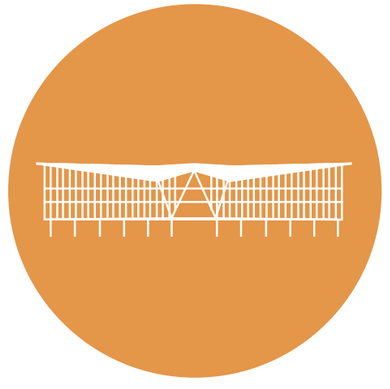
Project aim

Create a vision to provide a space for sports & recreation, health & well-being, that meets the needs of both sports communities and local people

A centre for everyone
Make the Centre a place you want to stay all day, with high-quality spaces and activities for all ages and abilities. Increase participation and levels of physical activity for residents of the five boroughs and London.

Become part of the park
Integrate the Centre into the wider park, creating a parkland setting that recognises the heritage of the site.

A secure financial future
Enhance and review the existing facilities to improve affordability so that the Centre can continue as a leading centre for sport in London.



Protect and improve the landmark building
Help the main building work better to provide an accessible and comfortable environment for physical activity whilst celebrating the architecture.

Enhance connectivity
Improve connectivity between the Centre and the surrounding park and communities.

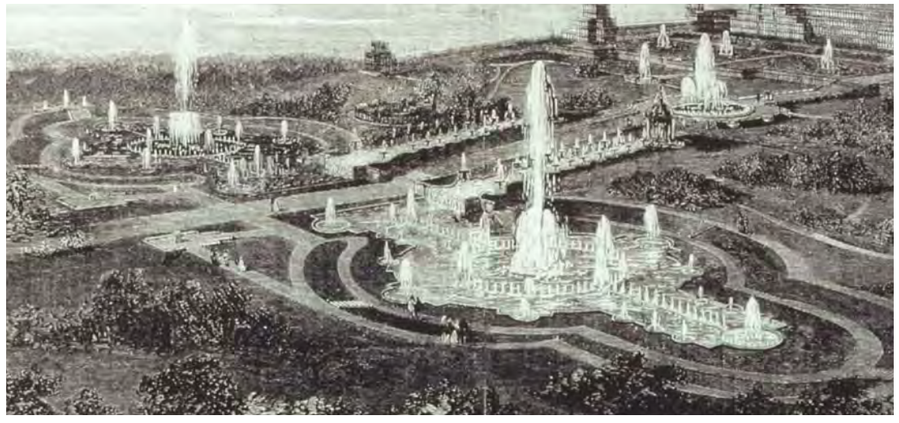
5 Project vision & objectives
5.2 The essential ingredients

As described in section 3.2.3, the two identities of Crystal Palace Park - the Victorian park and the 1960s NSC have both been eroded over time by the ad-hoc growth that has occured in the park - unmanaged vegetation growth, car parking, hard surfaces and new structures.

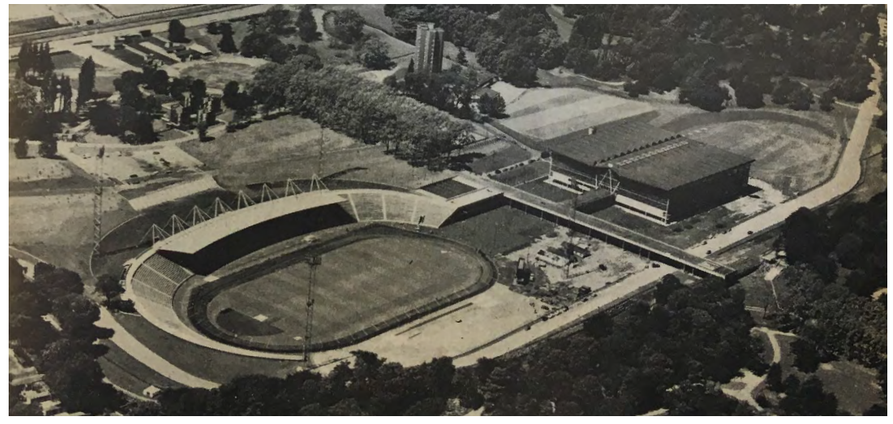
The essential ingredients of both the Victorian park setting and the 1960s NSC built form still exist, and should be enhanced. The vision for the future of the NSC should look to unpick this ad-hoc growth in order to bring back the simplicity, clarity and ambition that both schemes provided. Both identities need to be respected, and should sit side by side.

Both schemes shared common ambitions which should be carried through to the future vision:

- To impress and inspire visitors.
- To provide new facilities that were innovative in terms of new technologies, new typologies and sheer scale.
- To promote health and wellbeing through outdoor activity.
- To promote education through activity.
- To create a vibrant and exciting place by providing a wide range of facilities and activities on one site.



The Paxton park



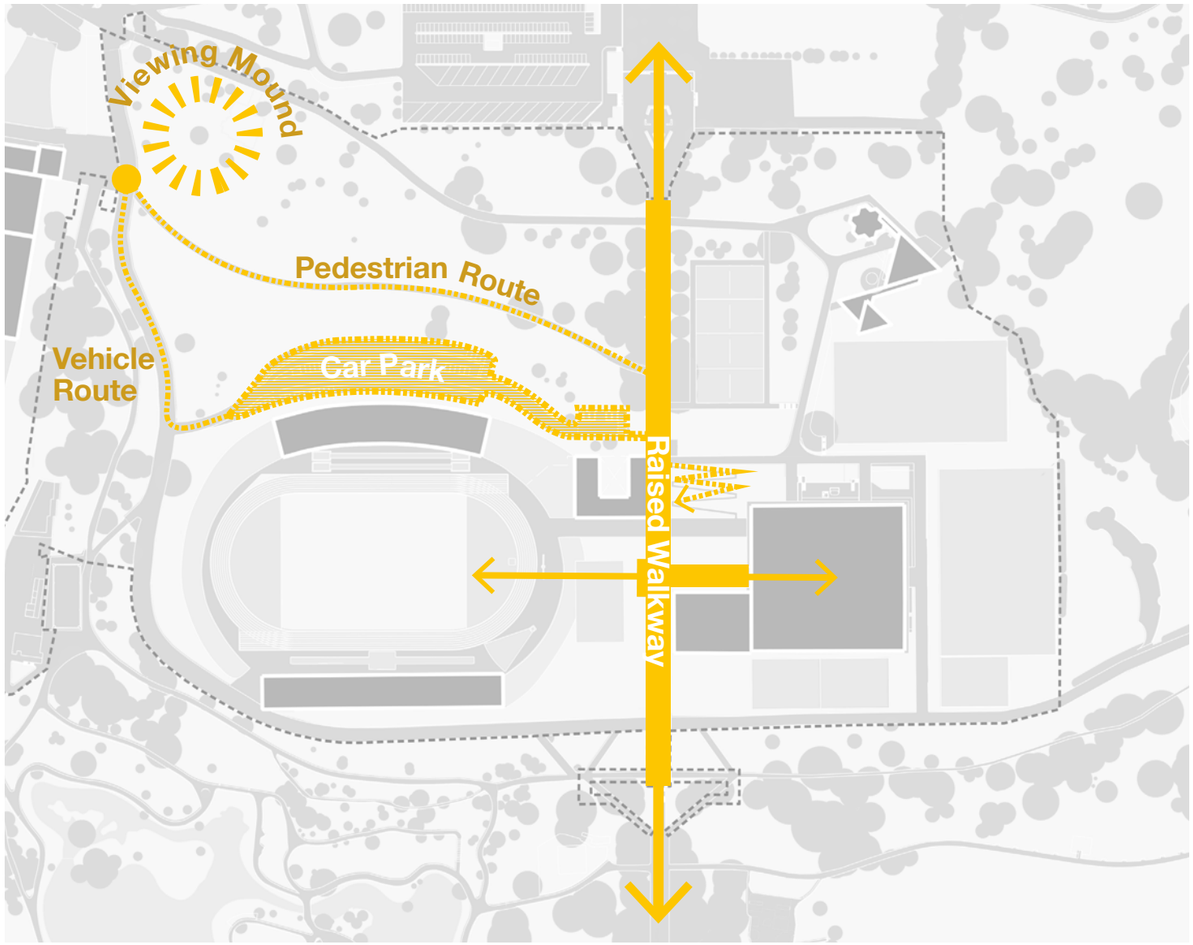
The 1964 NSC

Park setting

NSC built form

5 Project vision & objectives
5.3 Key moves
5.3.1 Access, legibility and connectivity

The diagrams on the following pages describe the key moves that need to be made in order to achieve the vision and objectives set out in section 5.1.



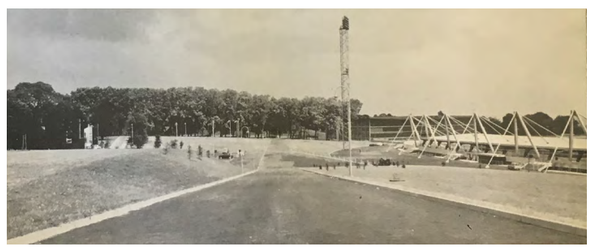
Access, legibility and connectivity

– Create a new accessible pedestrian route.
– Relocate car-parking to one location, behind the West stand.
– Integrate the raised walkway better with the Paxton Axis and the wider park, making it more permeable and accessible.
– Re-instate the historic Rosary mound as a viewing mound, providing panoramic views of the NSC and the park.

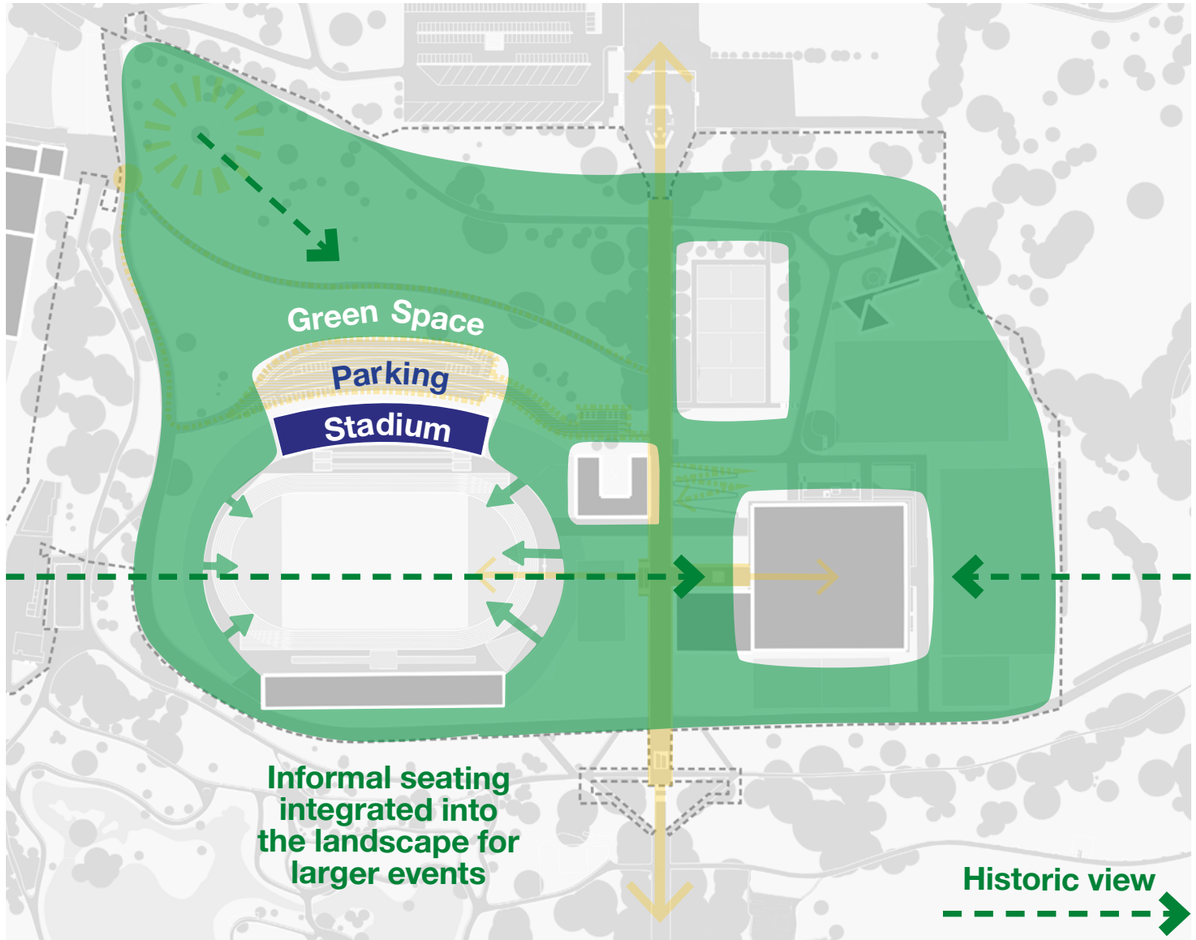
Currently, there is poor accessibility across the site and legibility of routes to the centre. Feedback from the ABCE workshops, Design Studies workshops and On Your Marks online questionnaire has been that people find it difficult to get to the centre, particularly on foot.

Routes, permeability, lighting and views need to be improved to draw visitors towards the centre and create a sense of arrival.

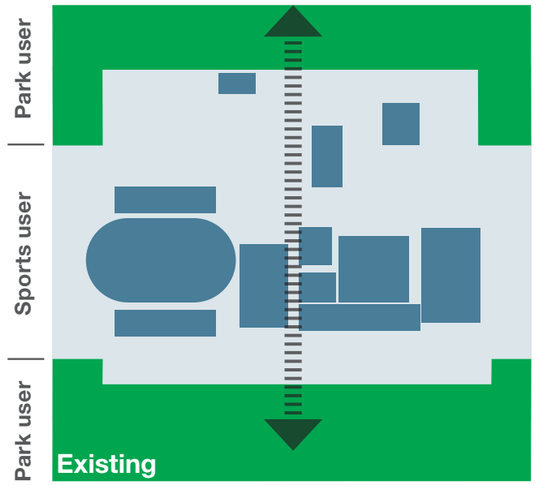
The image below shows the current view on exiting the station towards the NSC. The NSC itself is not visible behind the various visual barriers - trees, fencing, the West Stand. The routes are unlear with uneven surfaces, and signage is minimal.

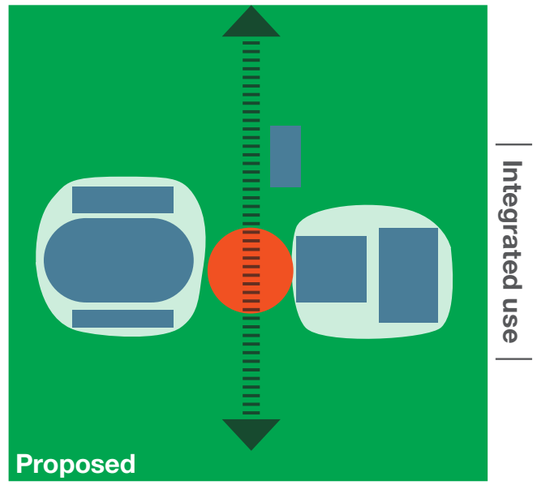


The image above shows that before the Leylandii were planted, the main NSC building was visible along a direct route from the station.



There are currently clear boundaries between the NSC site and the rest of the park, making it difficult for visitors to move freely between the two. The fencing, hard surfaces, lack of soft landscaping and planting within the NSC site clearly distinguish it from the rest of the park as being for 'sports' users. This should be addressed in order to create a more enjoyable and inviting environement, opening up the NSC site to a wider audience, encouraging informal visits, first-time users, and create a more appropriate 'park' setting for the NSC in line with the wider park masterplan.





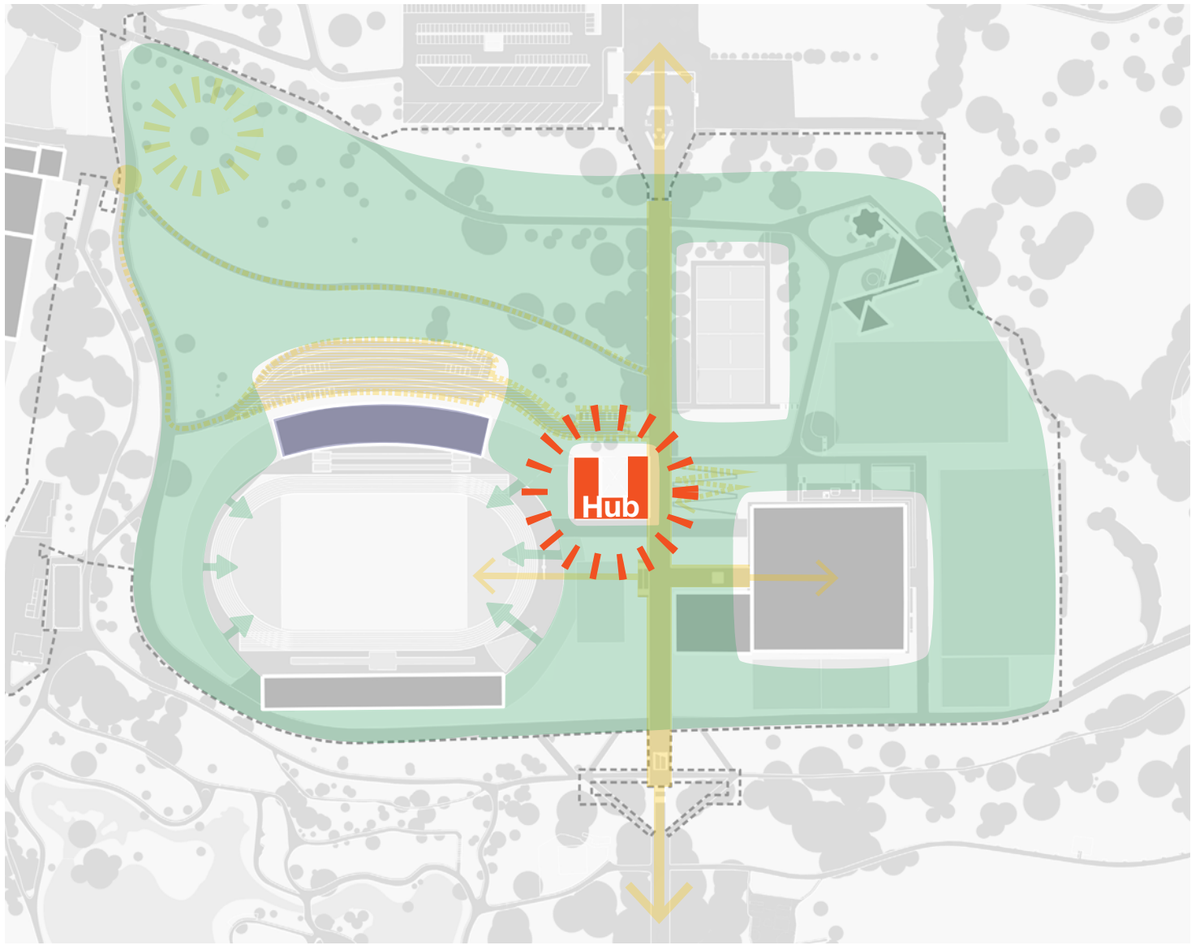
Integrate the NSC into the park setting

- Reduce the number of permanent seats in the stadium to create a more flexible, sustainable and affordable facility.
- Retain the West Stand and the seating below. Remove the remainder of the fixed seating and re-grade as grass slopes, for informal seating integrated into the landscape.
- Remove the Jubilee Stand, relocate tenants.
- Provide a new indoor athletics facility on the site of the Jubilee Stand to create a coherent athletics zone. This allows the space below the walkway to be opened up as part of the outdoor hub.
- Increase permeability across NSC site boundary.
- Improve views across the park.
- Improve the setting of the sports centre structures.

5 Project vision & objectives

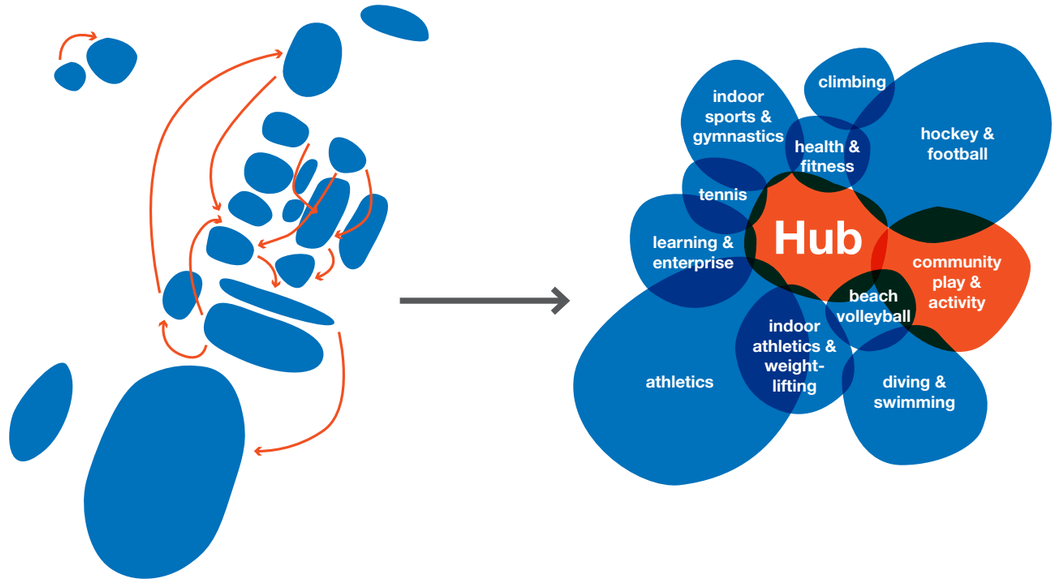
5.3 Key moves

5.3.3 Consolidate activity around one central space



The hub

The NSC has grown organically over time, in a piece-meal way that has resulted in multiple individual indentities and ‘hubs’ that people identify with differently depending on their sporting activity. The centre is missing a core identity in the form of a central hub that links all sport activity and all users can identify with. Feedback from public consultation events is that the provision of a bar, club room, or communal social space could address this, and would encourage visitors to stay longer, socialising before or after participating in sport.



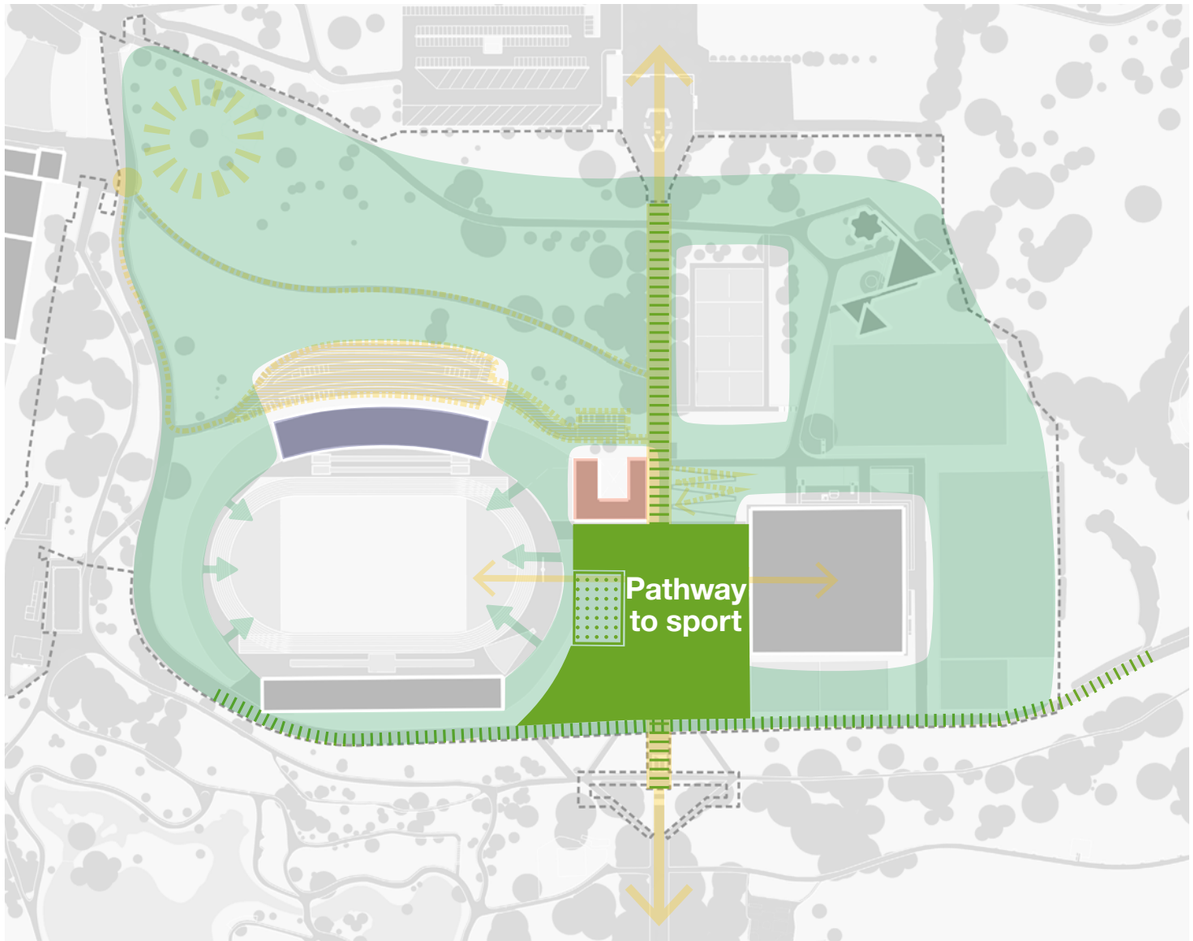
Consolidate activity around one central space, ‘The Hub’

- Provide a new facility with a bar/café, club rooms and social space to create a social heart of the centre that all users identify with.
- Rearrange sports around the hub.
- Improve wayfinding and circulation.
- The hub acts as a shopfront to the centre and strengthens the centre’s identity.
- Brings different sports together and allows them to share facilities.
- Brings back the social aspect of sports, teams and training.
- Could be entrance point for outdoor sports. Main hall remains entrance for indoor sports.

Current: mutliple individual identities make up the NSC.

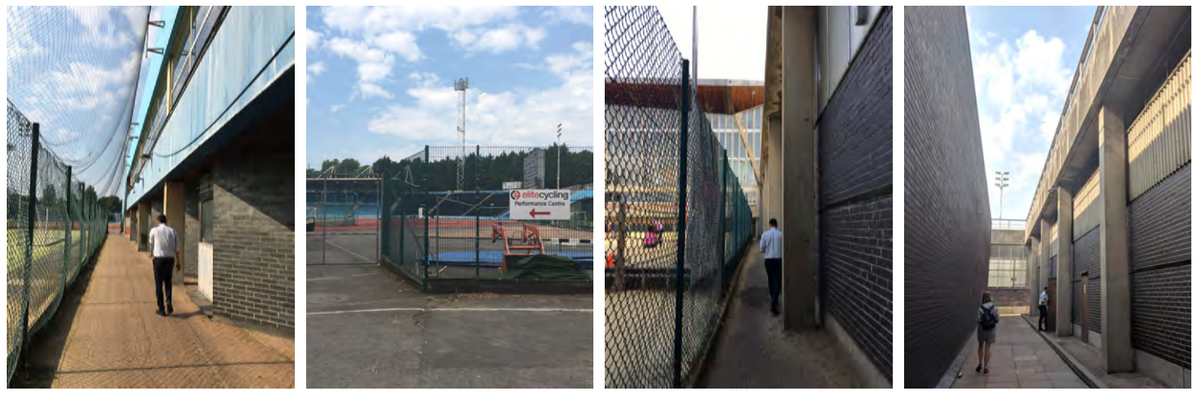
Proposed: individual sporting activies associated with a central identity.

5 Project vision & objectives
5.3 Key moves
5.3.4 Create a shared space and programme



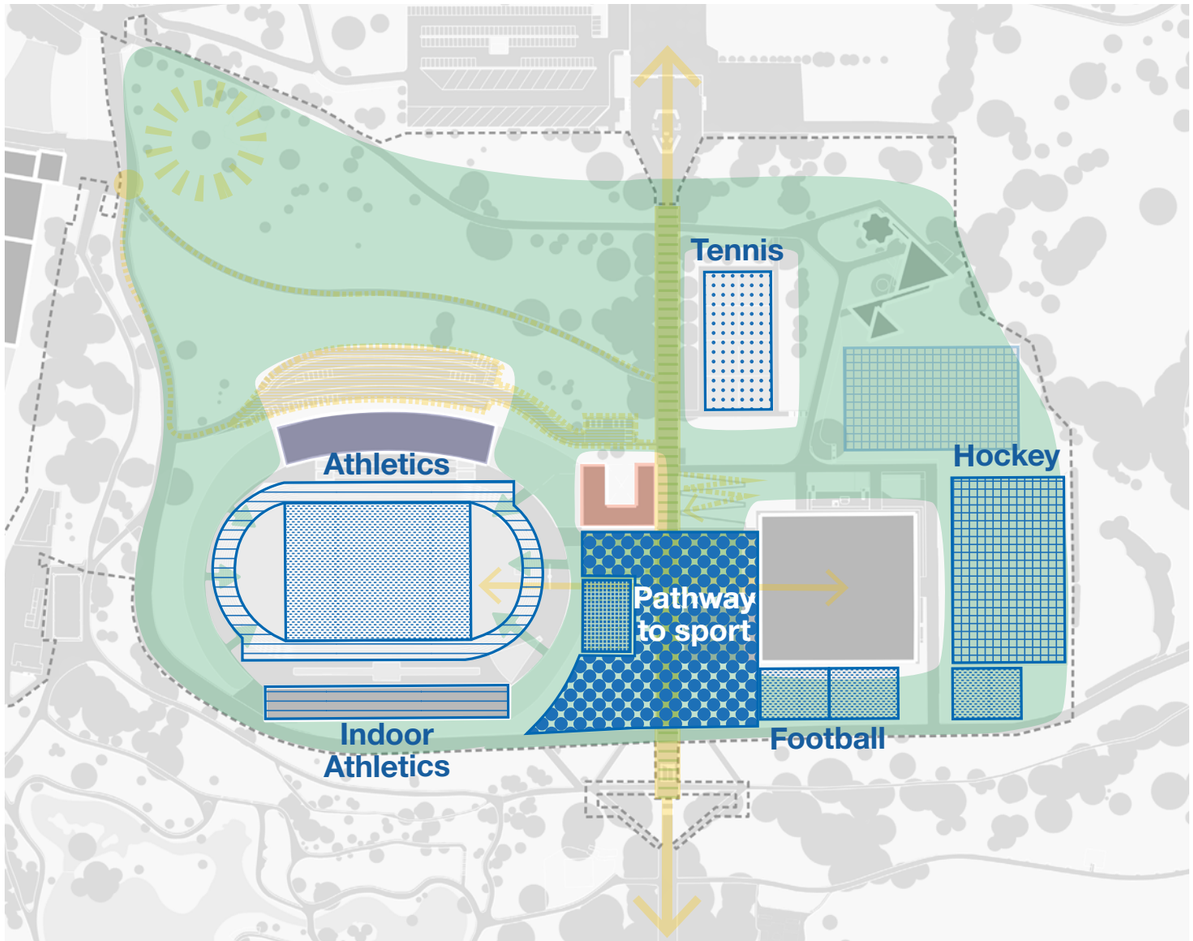
A central orientation space
The centre of the site is dominated by the hockey pitch and indoor athletics facility, which act as spatial blockages, preventing the flow of people and activity around the site. Again, feedback from consultation events has been that wayfinding within the site is poor and visitors find it difficult to navigate around the centre. This should be addressed by creating a central external orientation space, which could be an environment that also encourages informal physical activity, acting as a soft threshold between the park and the NSC.

The images above illustrate the lack of permeability in the centre of the site. High fences, narrow passages and dead ends create an environment that is uncomfortable, un-inviting, and difficult to navigate, particularly for new visitors.



Above
Photos showing the current conditions around the central area of the site.

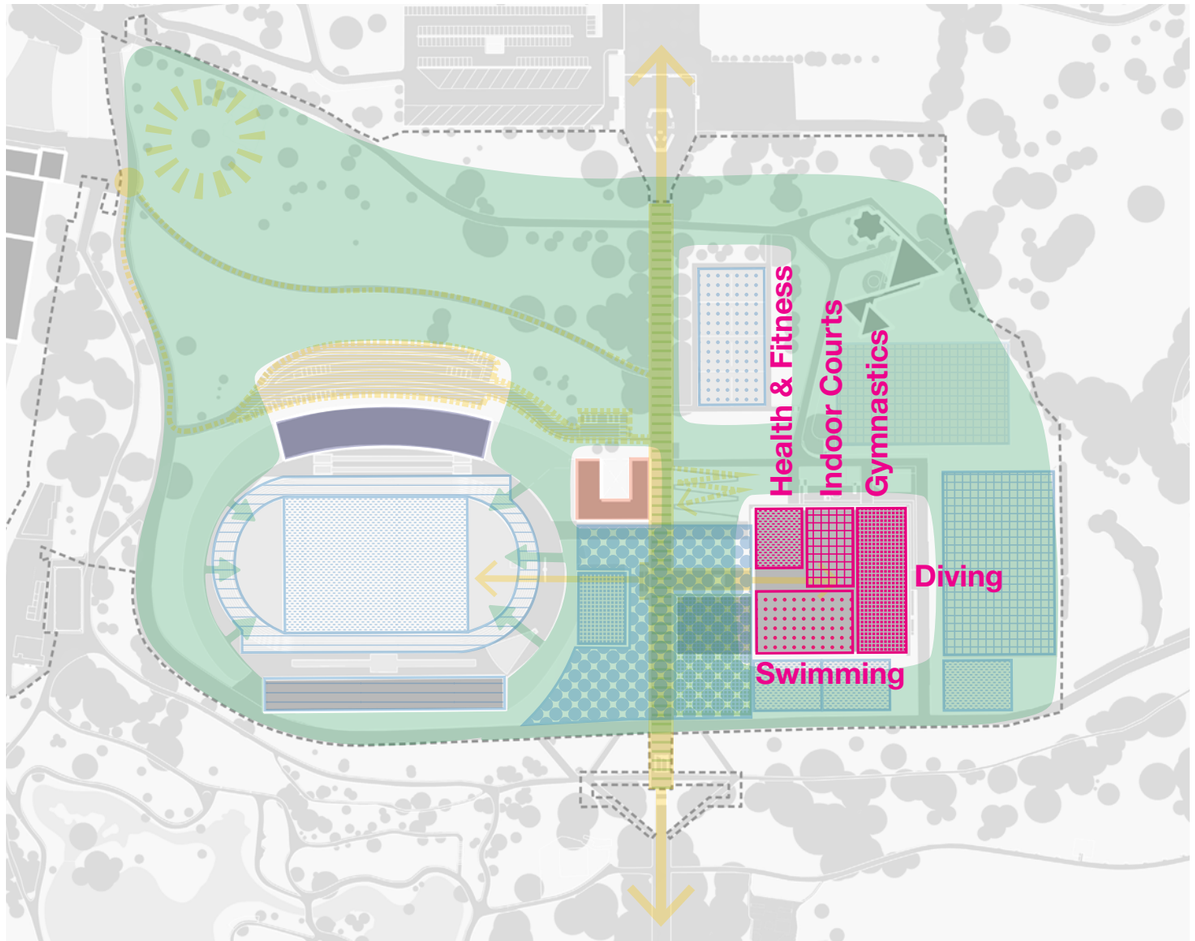
Create a shared space and programme
- Create central open orientation space around the hub - the ‘outdoor hub’.
- Relocate the indoor athletics facility to open up the underside of the walkway as part of the outdoor hub, improving permeability across the site.
- Animate the outdoor hub with activities and features that encourage informal physical activity and play as a pathway into sport.
- Link the outdoor hub into the wider park, acting as a green spine through the site.
- Create a more accessible space.
- Create a better balance between community and club use, through spatial arrangement and more efficient programming.
- Attract a new crowd.
- Encourage existing users to use the facility in different ways and stay longer.
- Encourage wider family use.
- Encourage informal and leisure users to enter the facility.



Organise outdoor sports into clusters

– Cluster sports to improve wayfinding.

– Relocate large pitches to the edges of the site to allow for a more permeable centre to facilitate easier navigation.



Organise indoor sports into clusters and divide wet and dry spaces. Bring community uses to the front of the main building and improve the legibility of indoor spaces and circulation.

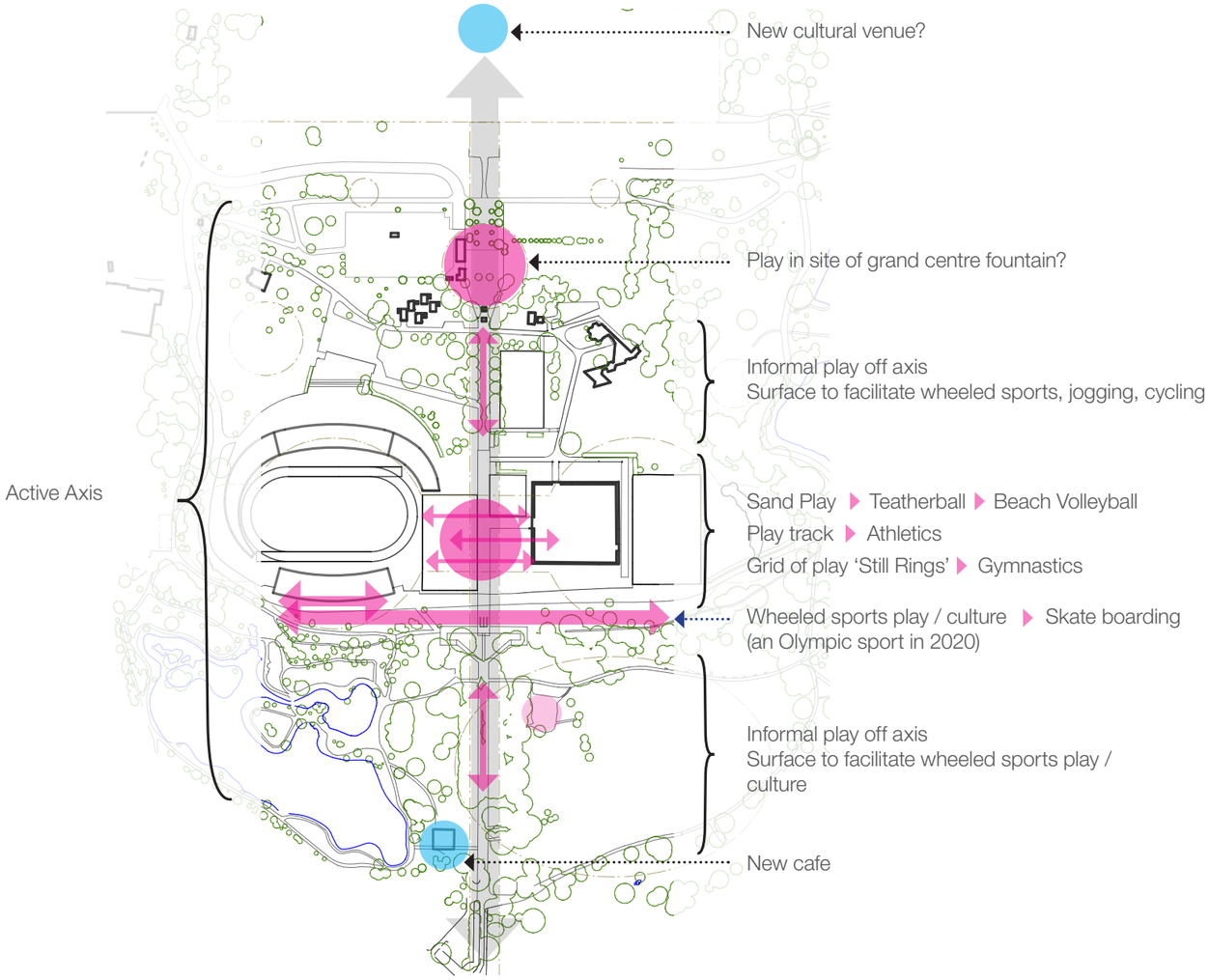
– Relocate all gym and fiitness facilities to the front of the building, where it has better visibility to attract new members.

– Relocate dry diving to the back of the building, where it is adjacent to the diving pool to improve wayfinding and provide a safer environment for young divers.

5 Project vision & objectives
5.4 Active programme
5.4.1 Active axis

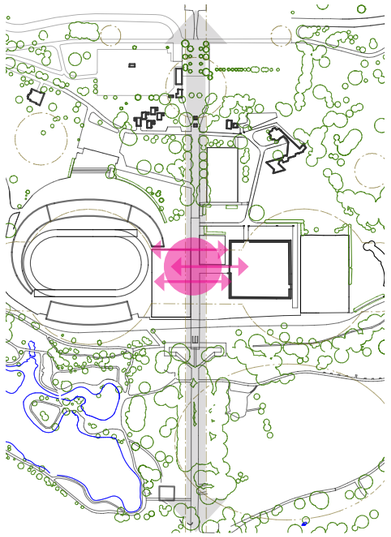
The isolation of the NSC from its context is reflected in the sporting programmes which currently have little relationship to wider activity in the park. Re-looking at the offer of the NSC affords a unique opportunity to connect the NSC and the park through an active programme, within which relationships and proximities of sport and play create a gateway to sport.

For the NSC this interpretation of its sporting programme through play will serve to increase participation as well as dwell time in and around the outdoor hub. For the wider park it offers the opportunity to reinvent the Paxton Axis as an Active Axis between cultural venues at each end.



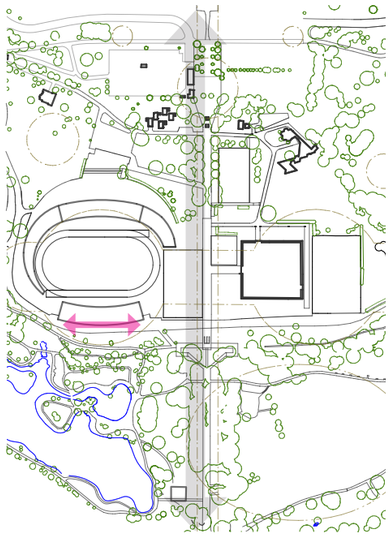
Plan showing potential existing play into sport programming

5 Project vision & objectives
5.4 Active programme
5.4.2 Play as a pathway to sport

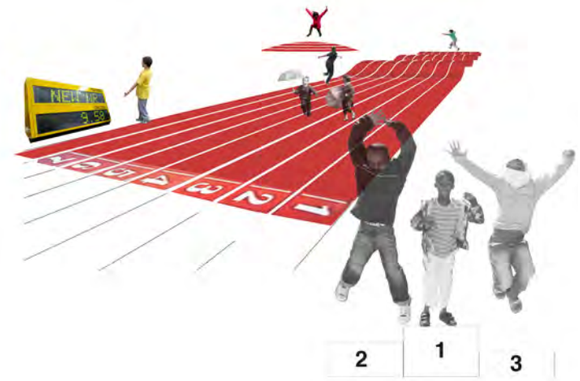


The outdoor hub space and parkland surrounding the NSC should encourage physical activity at all levels. Providing opportunities for play in proximity to sport inspires new users and non-sports visitors to try new skills and build confidence, which may eventually lead to participation in sport.

Active hub: Sand play to sport
Sand is an intrinsically playable surface and brings much play value without the need for lots of equipment. It also provides a route from sand play to sand sport. This is one example of how sand play, in proximity to beach volleyball, may inspire a new generation of volleyball players.



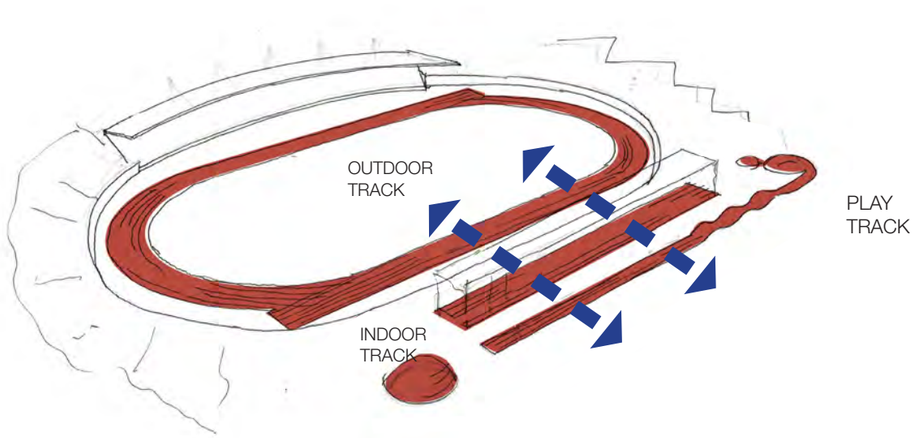
Eastern edge: Athletics play to sport
Crystal Palace Park is synonymous with athletics. Connecting the track with the training facilities and with a play track (made of rubber crumb play surfacing) would allow the park to celebrate athletics as a centre piece, while encouraging more grass roots involvement in athletics through play.



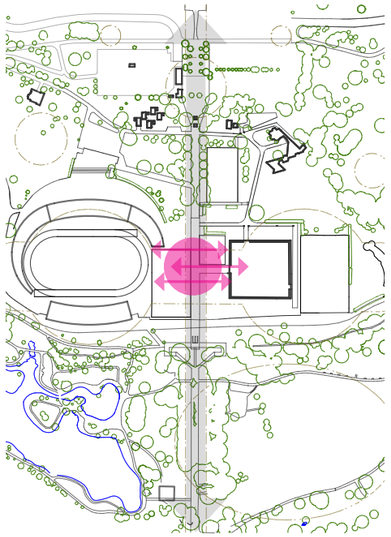
PLAY
in proximity to sport

GAMES
build confidence and key skills

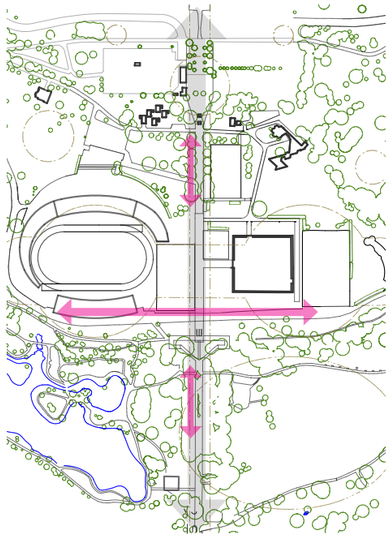
SPORT
build confidence and key skills



5 Project vision & objectives
5.4 Active programme
5.4.3 Informal and unprogrammed activity



Active hub: informal activity
The outdoor hub around the raised walkway provides an opportunity to create an inviting and exciting environment that softens the threshold between the park and the sports use by encouraging informal physical activity, freely accessible. A range of surfaces and objects could be curated to encourage interaction through climbing, bouldering, gymnastics, parkour and inventive play. Meanwhile, improvements to the park setting would create a better environment for walking, jogging and cycling around the park.



Eastern edge: Wheeled sports culture
Wheeled sports culture offers the chance to activate the whole eastern edge of the NSC transforming the existing service road into the an active edge that connects the NSC to the park.
This proposal builds on the successful new wheeled sports area north of the existing football pitches and offers a route into wheeled sports including skateboarding which is set to become an Olympic Sport in 2020.

5 Project vision & objectives
5.5 Social & community impact

5.5.1 Introduction

The future vision for the NSC should extend far beyond the site boundary and beyond the park, and should consider the wider social and community impacts an improved facility would have in the surroundign 5 boroughs. This section analyses these potential impacts in more detail.

When developing facilities for sport and physical activity it is important to consider the demographic characteristics and population of the local area that the facility will serve. This helps to ensure that the facility best meets the needs of local people and provides a viable and sustainable offer. Ensuring that any investment decision for the development of facilities are based on robust needs and evidence base allows for the long term strategic planning of facilities, their future use and helps to engage partners and stakeholders by demonstrating the potential impact improved facilities can have against a wide range of outcomes.

This section of the report provides an outline analysis of the local area profile and includes the London Boroughs of Bromley, Croydon, Lewisham, Lambeth and Southwark all of which are considered within the catchment of Crystal Palace National Sports Centre (CPNSC). The analysis will set out the demographic breakdown of the local area, health statistics, population projections and current levels of participation in sport and physical activity. The information presented supports the need to redevelop CPNSC, highlighting the potential impact the redevelopment will have on the local area.

A range of research tools have been used to fully understand the needs of the local population, these will include latest research from the Office of National Statistics, Public Health, Borough Health Profiles and Indices of Multiple Deprivation. In addition, sports specific research tools have been used to provide information on activity rates and the economic value of sport including Sport England's Active Lives Survey and Local Sports Profiles.

The research and data presented in this section, have been analysed to help inform the potential development of CPNSC. The analysis will also serve to engage funders, partners and stakeholders to support the potential development.

5.5.2 Location

Crystal Palace National Sports Centre (CPSNC) is located in Crystal Palace Park, in the London Borough of Bromley. The centre borders inner and outer London, and the perimeter of Crystal Palace Park directly bounds the London Boroughs of Croydon, Lambeth, Lewisham and Southwark. CPNSC is located in the north-east of Upper Norwood close to Crystal Palace town centre.

5.5.3 Demographic Profile

Demographic and social indicators such as population change, deprivation levels and health outcomes are important considerations when profiling a local area and determining needs associated to sport and physical activity. This section provides an overview of the issues in Bromley, Croydon, Lewisham, Lambeth and Southwark and highlights areas in which the development of CPNSC can improve the overall quality of life for local people.

5.5.4 Population

Any facilities which are developed at CPNSC will need to meet the needs of CPNSC future catchment area population as well as it current population. Data regarding the current population of the 5 boroughs which CPNSC currently borders and future population projections of these boroughs has been drawn from the Office of National Statistics (ONS) and can be seen in figure 5.1. Population projections until 2041 have been produced based on ONS 2016 national population projections published in October 2017.

Figure 5.1 demonstrates that the total population of the 5 boroughs surrounding CPNSC will increase by a total of by over 1,948,000 people (14.9%) from 2019 to 2041. The largest population growth is projected to be in the borough of Bromley (18.3%) followed by Lewisham (17.8%), Southwark (14.7%), Croydon (13.5%) and Lambeth (10.5%), with the projected population growth in Bromley higher than the projected population growth in London which is set to increase by 18.2% by 2041. The population growth of 4 of the 5 boroughs is also expected to be greater than the percentage increase nationally which is estimated to be 12.1%.

In addition, within the next 6 years, the total projected population growth for the 5 boroughs is expected to increase by 4.8% by 2025, compared to projected growth of 4.7% regionally and 3.3% nationally over the same period. This growth indicates that there will be an increase in demand for sport, physical activity and recreation facilities in the coming years resulting in addtional pressure on exsisting faciltiies to service the demand. Sport England and the GLA have noted this within the Faciliies Planning Model and it is therefore important that addtional and improved facilities are provided to cater for and meet the needs of the local population as this continues to grow. This can be achieved through the redevelopment of CPNSC and improving the capacity and quality of the offer.

Area	2016	2019	2025	2030	2035	2041
Bromley	327.6	338.0	358.6	373.1	385.7	399.7
Croydon	383.3	393.6	411.5	423.2	434.1	446.8
Lambeth	323.1	330.7	339.7	345.5	354.5	365.6
Lewisham	298.9	311.0	329.9	342.2	353.4	366.4
Southwark	311.7	323.0	337.9	348.1	358.6	370.4
London	8,769.7	9,056.8	9,484.6	9,767.6	10,036.7	10,346.0
England	55,268.1	56,357.5	58,224.9	59,548.8	60,691.4	61,952.1

Fig. 5.1
Projected population growth (figures in thousands, to one decimal place. (Office for National Statistics – Population projections for local authorities 2016)

Indicator	Bromley	Croydon	Lambeth	Lewisham	Southwark	London	England
Life Expectancy: Male	81.4	80.4	78.7	79.0	78.9	80.5	79.6
Life Expectancy: Female	85.3	83.7	83.5	83.7	84.4	84.3	83.1
Healthy Life Expectancy: Male	65.7	61.1	59.4	61.9	62.4	63.9	63.4
Healthy Life Expectancy: Female	67.2	61.1	66.3	64.3	70.8	64.6	63.8
Under 75 Mortality rate: Cardiovascular diseases (per 100,000)	52.3	71.0	98.3	80.7	77.4	73.2	72.5
Under 75 Mortality rate: Cancer (per 100,000)	116.3	120.5	147.0	146.7	138.7	123.6	134.6
Diabetes Diagnosis (aged 17+)	5.6%	7.0%	5.5%	6.4%	6.2%	6.5%	6.8%
Excess Weight (aged 18+)	57.2%	59.0%	50.0%	57.8%	58.8%	55.2%	61.3%

Fig. 5.2
Health indicators
(Public Health England – Local Authority Health Profiles 2018)

5.5.5 Health

It is also important to understand the health profile of the catchment for CPNSC, to appreciate the wider health benefits that redeveloping CPNSC will have for the local population. Key health indicators were drawn from Public Health England's Local Authority Health Profiles (2018) and Child Health Profiles (2019). The data demonstrated in figure 5.2 shows that whilst both male and female life expectancy is above the average for England in each of the 5 key boroughs, male life expectancy is below the London average in 4 of the 5 boroughs and female life expectancy lower in 3 boroughs. With regards to healthy life expectancy (the years a person can expect to live in good health), data shows that healthy life expectancy for males is only better than the regional (63.9 years) and national

averages (63.4 years) in Bromley (65.7 years), with the healthy life expectancy of males in these other 4 boroughs below both theses averages. There is also a significant difference in the number of years males can expect to live in good health across the 5 boroughs, the average in Lambeth is 59.4 years compared to 65.7 in Bromley. With regards to healthy life expectancy for females only Croydon (61.1 years) has a lower average than England (63.8 years) with Lewisham (64.3 years) and Croydon, having a lower healthy life expectancy than London (64.6 years).
Figure 5.2 further demonstrates that the mortality rate for cardiovascular diseases and cancer for residents under the age of 75, living in Lambeth, Lewisham and Southwark is higher than both the London and England averages.

In addition to the statistics in figure 5.2 which outlined health indicators for adults, figure 5.3 draws on key heath indicators for children. It is evident from figure 5.3 that the prevalence of overweight children aged 4-5 is greater than the London average in 3 of the 5 boroughs (Croydon, Lambeth and Lewisham) with 2 of these boroughs demonstrating higher levels of overweight children aged 4-5 than the national average. The percentage of children aged 10-11 that are classified as overweight is also greater than both the London and England averages in 4 of the 5 boroughs (Croydon, Lambeth, Lewisham ad Southwark). There is also a similar outcome when looking at the number of children that come from low income families with 3 of the 5 boroughs (Lambeth 23.4%, Lewisham 22.6% and Southwark 23.2%) having a higher percentage than both the London (18.8%) and England averages (17.0%).

Statistics from the health indicators evidence in both figures 5.2 and 5.3 further demonstrate the need to protect and redevelop CPNSC to continue to provide facilities and opportunities for people to be active. There are number of indicators in which the 5 boroughs perform adversely in comparison to both regional and national averages. The redevelopment of CPNSC will provide the opportunity to provide facilities that will support both formal and recreational activity and support the need of the local population to help contribute towards improving the overall health and wellbeing of the residents within these 5 boroughs.

5.5.6 Deprivation

Additionally to the population projections and health statistics previously outlined, when assessing the need to redevelop a facility for sport and physical activity it is important to consider deprivation levels within the catchment area. Deprivation affects the propensity and ability of the catchment population to access and use facilities, so an awareness of how deprivation affects a local population can help a facility to ensure a greater community impact.

Figure 5.4 illustrates where each of the 5 boroughs is ranked regionally and nationally according to the 2015 Indices of Multiple Deprivation. Whilst it is noted that levels of deprivation vary across different areas of each borough, the overall ranking for each borough has been assessed. It is clear than there are significant contrasts in the levels of deprivation throughout the 5 boroughs, with Bromley the 4th least deprived borough in London compared to Lambeth which is the 8th most deprived London Borough (ranked out of 33 London Boroughs). At a national level Lambeth, Lewisham and Southwark are all categorised within the 20% most deprived unitary authorities in England. This also correlates with the figures in figure 5.3 which indicate that higher percentages of children from these boroughs come from low income families compared to both regional and national averages.

The deprivation statistics evidence that there is large potential audience across the 5 boroughs that would benefit from affordable access to quality facilities and increased opportunities to take part in sport and physical activity which will be offered and enhanced at CPNSC.

5.5.7 Participation Overview

Consideration also needs to be given to the propensity of the local population to undertake sport or physical activity. It is important that any redeveloped facility not only caters for those that are currently active and use the existing facilities but also creates opportunities and targets those who are currently inactive in order to have a sustained impact on the activity levels and overall health of the local population.
In order to assess current activity rates, Sport England's Active Lives Survey has been used as the tool to provide an overview on local activity levels. Data from the Active Lives Survey (November 2018) provides a comprehensive summary of activity levels (adults aged 16+) across the country at both a regional and local authority level.

Indicator	Bromley	Croydon	Lambeth	Lewisham	Southwark	London	England
Reception Children (age 4-5) Prevalence of overweight (inc obesity).	19.7%	21.9%	23.8%	17.6%	25.4%	21.8%	22.4%
Year 6 Children (age 10 -11) Prevalence of overweight (inc obesity)	28.2%	37.9%	39.5%	37.9%	39.8%	37.7%	34.3%
Children from low income families (under 16)	13.2%	16.1%	23.4%	22.6%	23.2%	18.8%	17.0%

Fig. 5.3
Health indicators for children
(Sport England Active Lives Children and Young People Survey (November 2018))

Local Authority	Regional Rank	National Rank
Bromley	30/33	220/326
Croydon	19/33	91/326
Lambeth	8/33	22/326
Lewisham	10/33	26/326
Southwark	9/33	23/326

Fig. 5.4
IMD ranking
(IMD Stats (2015))

Area	Active (150+ mins per week)	Fairly Active (30-149 mins per week)	Inactive (Less than 30 mins a week)
Bromley	63.8%	11.8%	25.3%
Croydon	63.0%	11.8%	25.3%
Lambeth	70.8%	11.4%	17.8%
Lewisham	68.4%	13.3%	18.3%
Southwark	72.3%	11.2%	16.5%
London	64.5%	11.8%	23.7%
England	62.6%	12.3%	25.1%

Fig. 5.5
Activity levels (adults aged 16+)
(Sport England Active Lives Adult Survey (November 2018))

Area	Active (60 mins + a day)	Active Across the Week (Average of 60 mins a day but not every day)	Fairly Active (30 – 59 mins every day)	Inactive (Less than 30 mins every day)
Bromley	No Data	26.0%	24.8%	29.1%
Croydon	No Data	30.3%	27.7%	28.9%
Lambeth	No Data	No Data	No Data	No Data
Lewisham	No Data	No Data	No Data	No Data
Southwark	15.8%	24.5%	26.9%	32.9%
London	16.8%	26.5%	23.3%	33.4%
England	17.5%	24.5%	26.9%	32.9%

Fig. 5.6
Activity levels (children aged 5-16)
(Sport England Active Lives Children and Young People Survey (November 2018))

Figure 5.5 shows that current levels of activity amongst adults fluctuates across the 5 different boroughs, but with all 5 boroughs achieving higher levels of activity than the national average, and 3 of the 5 boroughs (Lambeth, Lewisham and Southwark) achieving greater activity levels than the London average. With regards to inactivity rates, as would be expected, the 3 boroughs with the highest levels of activity (Lambeth 17.8%, Lewisham 18.3% and Southwark 16.5%) also have the lowest levels of inactivity which are below both the regional (23.7%) and national (25.1%) averages. However the inactivity rates for Bromley and Croydon (both boroughs have inactivity rates of 25.3%) are higher than these both the regional (23.7%) and national averages (25.1%), meaning that over a quarter of each boroughs population is inactive. When this is considered alongside the population projections provided in figures 5.1 this indicates that over 85,000 residents in Bromley and 99,000 residents in Croydon are inactive and undertaking less than 30 minutes of activity each week.

When comparing current activity levels with all 33 London boroughs, within CPNSC catchment area Southwark is the highest ranked Local Authority in terms of activity, ranking as the 5th most active borough and 8th for inactivity (rank 1 has the lowest levels of inactivity). In comparison Croydon is the 17th most active borough and ranked 18th for inactivity. CPNSC membership base has a higher percentage from Bromley and Croydon and the proposed redeveloped facility at CPNSC would provide the opportunity to impact upon and increase participation across 5 boroughs as opposed to having a single borough impact.

In addition to the data provided in figure 5.5, figure 5.6 outlines activity levels amongst children aged 5-16. Whilst it should be noted that data was not available for all levels of activity for each borough, the data that is available suggests that inactivity levels are below both the London and England averages.

With regards to the proportion of children that are active, whilst the data for Southwark shows that 15.8% of children are active for 60 mins+ per day, this is below both the regional (16.8%) and national averages (17.5%). Levels of activity across the week do however equal or exceeds the national average. Whilst it is clear from the Active Lives Data that large proportions of the population, both adult and children, throughout the 5 boroughs already have the propensity to be physically active, there are significant differences in levels of activity amongst adults across the 5 boroughs, which is particularly evident in the inactivity rates for both Bromley and Croydon. The development and improved facilities provided at CPNSC will not only help to further meet the needs of this relatively active population but also help to reduce alarming levels of inactivity and positively impacting on the health and wellbeing of these residents.

5.5.8 – Economic Value of Sport

Sport and Physical activity can contribute significantly to a local economy with a total £20.3 billion being contributed to the English economy in 2010. Figure 5.7 demonstrates that value of sport to each of the 5 boroughs using data from Sport England's Local Sport Profiles (2016).

In total the direct economic value of sport across the 5 boroughs total £424m. Participation generates a value of £314.2m (74%) and non-participation related activity generates £109.8m (26%). Whilst it is clear that sport contributes significantly to local economies, further insight from the Local Sport Profiles estimates that physical inactivity costs the national economy £7.4billion in healthcare, premature deaths and sickness absence per year. With regards to a local picture inactivity across the 5 boroughs costs £24.2m per year (Croydon £.5.5m, Bromley £5m, Lambeth £4.9m, Lewisham £4.4m and Southwark £4.2m). The redeveloped facilities at CPNSC will not only help to increase the already significant investment in sport and physical activity across the 5 boroughs, but the identified need and importance of providing a diverse offer through the redeveloped facility will also help towards reducing the sizeable costs of inactivity for local communities.

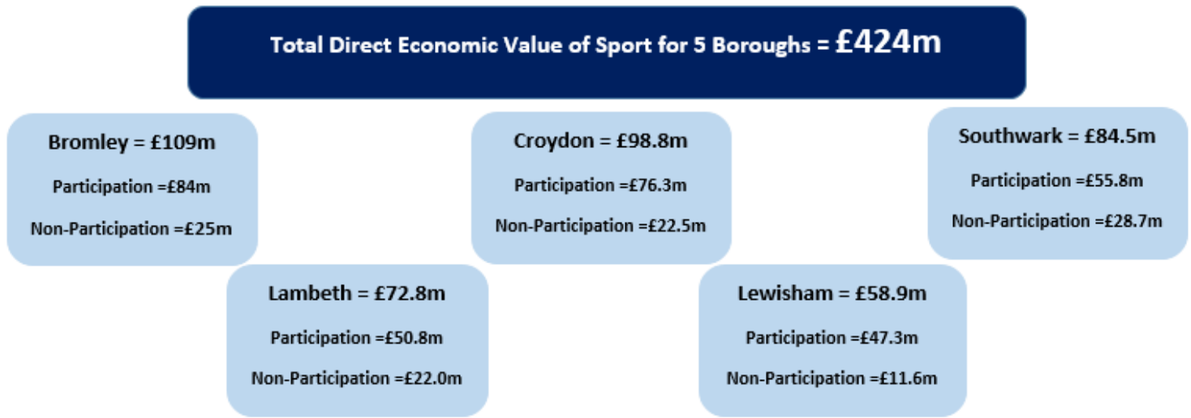


Fig. 5.7
Sports contribution to the local economy
(Sport England Mini Sport Profiles (2016))

5.5.9 Wider Strategic Impact of CPNSC

Alongside the statistics associated with improved levels of physical activity and the overview presented earlier within this section the Consultant Team have also undertaken an outline review of the strategic impact of any redeveloped CPNSC under a number of key headings which are explored further below. CPNSC has for many years struggled to define its role and its wider impact, and the options presented within this feasibility study of a more vibrant, inclusive and diverse offer will have a marked impact on the wider health and wellbeing of residents in the 5 boroughs and South London overall.

5 Project vision & objectives
5.5 Social & community impact

The Behaviour Change Journey
Tackling inactivity, increasing the number of people with a regular activity habit and sustaining participation among those who are already active will undoubtedly deliver multiple benefits to health, wellbeing, social and economic outcomes. But behaviours are hard to change and the behaviour change journey is multi-faceted.

People dip in and out of being active at different stages in their lives. Some have negative associations with physical activity and sport and are harder to engage than others. People move through the journey at different paces, face different challenges and require different levels of support. The ambition and vision for this feasibility study is to ensure that a renewed CPNSC helps to make people feel motivated, able and supported to change their behaviours and lead more active lives. Fgure 5.8 illustrates the behaviour change journey based on the transtheoretical model fo behaviour change.

At present, due to a combination of factors at CPNSC such as the poor condition of the facilities, perceptions of the centre being for elite sport and the programming and management, the centre serves very much the more motivated participants already having chosen sport and physical activity as a priority. Opening up and widening the offer for physical activity and sport, improving the quality of the facilities, improving the openness and permeability of the site (as presented within the design proposals) will contribute to a wider range of people interested and motivated to use the site and for many, introduce physical activity to their daily lives.

Capability, Motivation and Opportunity
Sport England's research shows that people's behaviours are driven by their **perceived capability** (physical and psychological), **motivation** and the opportunities they feel **they have to be active**. It illustrates that:

- Amongst active people, enjoyment is their single biggest motivation.
- Amongst inactive people, perceptions of their own capability (physical and psychological abilities) is the main barrier to activity.
- Active people are more likely than inactive people to feel they have opportunities to be active.

The proposed changes to CPNSC will continue to serve those active people and generate further opportunities however the measure of its success and wider impact will be to draw in inactive people who feel that the new facilities will enable them to participate and reduce the perceived barriers that exist.

The redevelopment of CPNSC has been considered within the main summary diagram that follows under the following leading headings which are discussed further below.

Health and Wellbeing
Each of the local authorities have developed a Joint Strategic Needs Assessment which sets out the leading priorities for each borough which look at health inequalities, a leading issue for their local communities. The JSNA for a local authority assesses the health, wellbeing and social care needs of the local community. It is an ongoing process that involves identifying present and future needs of the local population across a number of priority areas including health, education and housing.

Key leading outcomes from the JSNAs of relevance for the surrounding 5 boroughs include, improving people's mental health, achieving a healthy weight, delaying social care impact and dependency, prevention and positive lifestyle changes and improved levels of physical activity.

Physical Activity
3 out of the 5 boroughs that surround CPNSC have a current Physical Activity Strategy which sets out their priorities for improving levels of physical activity.

Physical activity and sport can contribute towards a wide range of socio-economic outcomes. The health and wellbeing benefits associated with being physically active are both wide-reaching and irrefutable. Figure 5.9 provides a summary of the positive impacts of physical activity. The reduction in inactivity is a key focus of the local authorities as well as key agencies such as Sport England.

Sport England has developed a significant amount of research and data highlighting the wider impact of being physically active. The evidence suggests that good mental wellbeing outcomes are every bit as important as the physical benefits from taking part in sport, and evidence is clear on the mental as well as physical health benefits of meeting Chief Medical Officer (CMO) guidelines.

Sport England data also includes measuring Individual

Fig. 5.8
Behaviour change journey based on the Transtheoretical model of behaviour change
(Source: Sport England)

Fig. 5.9
Summary of the impact of improved physical activity

Development with physical activity also linked to evidence of improved educational attainment, either directly (improved grades, school engagement, behaviour and reduced absenteeism), or indirectly (by enhancing skills such as self-control and concentration, team working and time management). The Consultant Team are aware of the improvements to Lewisham and Southwark College course and pupil results through the use of Crystal Palace delivering courses and activities on the one site.

Positive impacts on employability include greater employment opportunities, earnings, job performance and job satisfaction. The evidence around young people not in education, employment or training shows the positive impact of taking part in sport or volunteering in terms of employability.

Evidence also shows a positive association between sport and physical activity and self-efficacy (for example motivation, goal setting and commitment), for groups including elderly people and disaffected young people. Other evidence includes an increased willingness to volunteer and the development of soft skills, such as integrity, responsibility and leadership. These are all key outcomes associated with some of the current work that happens in CPNSC at present with the proposed enhancements to facilities looking to improve the wider impact, particularly on young people at CPNSC.

Given the importance of water space at Crystal Palace not only to the current operations and future business planning for the centre and the wider strategic needs for swimming in London, Swim England's recent research with the NHS provides a very valuable insight into the role of both swimming and the positive impacts of physical activity.

It is clear from the evidence presented in the research that being able to swim, swimming regularly, and swimming as a part of daily community life can have considerable health and wellbeing benefits. For instance, research has identified that any amount of swimming participation compared to those who engaged in none was associated with a 28% and 41% reduction in all-cause and cardiovascular disease cause mortality respectively. Refer to figure 5.10.

The role that CPNSC has to positively impact on levels of physical activity and the subsequent health benefits for this area of South London are considerable. This wider role of health related impact is a central part of the case for investment into an improved CPNSC offer.

Community Development and Social Cohesion
It is evident that that people who volunteer in sport are more likely to feel they belong in their area, and people who take part in sport are likely to enjoy stronger social links with other people. As well as developing individuals, sport can help build stronger communities by bringing people together, often from different backgrounds, to make them feel better about where they live, improve community links and cohesion and build social capital.

As detailed in the community consultation section within this feasibility report, CPNSC plays a critical role in the local community and for South London bringing together people from all of the wide and diverse communities in South London for the sole purpose of positive activity either as a participant, coach, leader or in a supporting role of parents and family members.

Each of the 5 boroughs also have community strategies or sustainable community strategies which provide a vision for their boroughs as better places to learn, live and work, improve the opportunities for everyone and improve the infrastructure, connectivity, the voluntary sector, better green spaces, quality infrastructure, health and wellbeing and generally improving the quality of life for their residents,

CPNSC has a huge contribution to make towards each of the 5 boroughs' aims and objectives for improving the lives, experiences, opportunities and aspirations of their residents. The centre provides an important resource for the residents across each of the boroughs and with the plans proposed will have a greater impact in the future as part of a vibrant community sport and health and wellbeing centre within the park.

Given the breadth of the impact across the 5 neighbouring boroughs, the overview is summarised and presented within a diagram on the following page to show the wider impact across all of the key policy areas.

The impact of a newly developed CPNSC, a more accessible and open centre that continues to provide for high quality sport but also for greater and more diverse opportunities for local people is something that should remain a priority for the GLA. The proposed options strike a clear chord with the Mayor's own leading strategic documents on sport and activity, reducing health inequalities, social cohesion and investment into community infrastructure.

Sport England, following their leading outcomes from their national strategy (and in turn the government's strategy), set out what individual projects or developments should look to achieve by way of guidance to prospective applicants or those planning to develop a project. The scale and importance of Crystal Palace as a driver for social change, increased levels of activity and health and well-being has the potential to address so many of these key headings and they too are included within the summary diagram that follows.

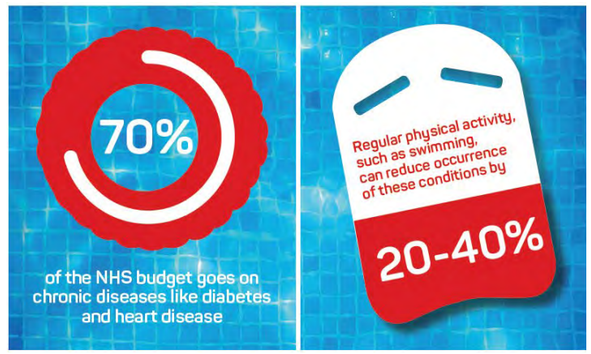
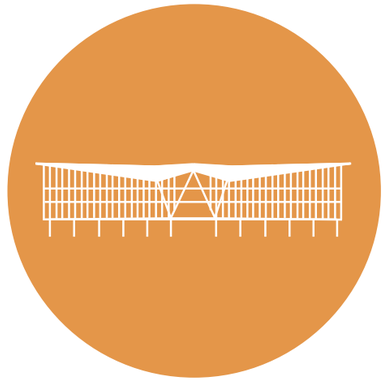


Fig. 5.10
The Health and Wellbeing Benefits of Swimming
(Source: Swim England June 2017)

Health and wellbeing
- London Mayor's Health Inequalities Strategy 2018
- Lambeth JSNA
- Southwark JSNA
- Croydon JSNA
- Bromley JSNA
- Lewisham JSNA

Community development and social cohesion
- All of Us – London Mayor's Social Integration strategy
- Croydon's Community Strategy
- Building a Better Bromley
- Lewisham Sustainable Communities Strategy
- Lambeth Sustainable Communities Strategy



Physical activity and sport
- Sport England – Towards an Active Nation
- Sport for Us All – The Mayor's Strategy for Sport in London
- Active Lambeth - Lambeth Physical Activity and Sports Strategy
- Southwark's Sport and Physical Activity Strategy 2019-2022

Facility needs
- Sport England Facilities Planning Model and GLA Analysis for Pools, Halls and AGPs
- Lambeth Facilities Strategy
- Croydon Facilities Strategy
- Southwark Playing Pitch Strategy

What a refreshed CPNSC can achieve – National Policy Priorities

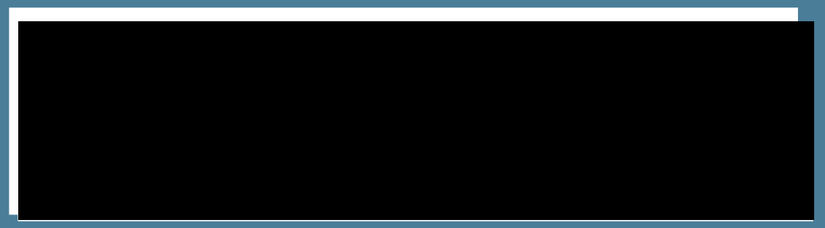
Physical Well Being
- The prevention of medical conditions
- Management of medical conditions
- Maintenance of strength, balance and motor skills
- Healthy development in early years.

Mental Wellbeing
- Enjoyment and happiness
- Improved self-esteem
- Reduced anxiety, stress and depression
- Improved cognitive functions
- Dementia prevention and treatment.

Individual Development
- Impact on employment opportunities
- Improved confidence and self-esteem
- Development of soft/social skills
- Educational behaviour and attainment
- Increased self-efficacy
- Reductions in anti-social behaviour.

Social and Community Development
- Promoting social trust
- Reducing isolation
- Bringing people from diverse backgrounds together
- Volunteering and social engagement
- Helping new migrant communities to integrate.

Economic Development
- Employability and employment
- Sport tourism
- Health sector savings
- Economic value of crime reduction
- Increased economic activity
- Savings through prevention of public sector spending.



6 Design studies
6.1 Introduction

Design studies
This section describes the design studies that have been undertaken on different areas of the site. For some areas, such as the Hub and Lodge, various studies are presented as there are multiple ways to address the issues. For others, such as the outdoor pitches, only one preferred option is presented - this is because the design team feel, following analysis and appraisal of the site, context, sporting and other issues, that there is really only one option that meets the project objectives and merits further investigation.

The elements studied in this section are:
- The main building and pools
- The Hub
- The Lodge
- Athletics
- Raised walkway
- Outdoor pitches
- Climbing / bouldering
- Access & connections.

Studies of the differerent areas can be combined in different ways to provide different overall visions for the NSC.

The ideas explored in these studies were presented to stakeholders and the local community at the 'On Your Marks' Design Studies Workshops held by Pidgin Perfect in October. Feedback from these workshops is given in section 11 and Appendix 3.

A heritage and planning review of the studies can be found in section 7 of this report.

Flexible spaces
Some areas in the studies are indentified as 'flexible spaces'. These are spaces which could be occupied by a number of different uses, depending on the operator's preferences, current market patterns and the final overall business plan and vision. Uses identified for these spaces are:
- Workspace. This could provide space for the current tenants in the Jubilee Stand, particularly Crystal Palace Physio, which has been identified as an important complementary offer to the sports facilities. Alternatively, or in parallel, depending on space requirements, it could offer start-up workspace for small sports-related local enterprises, or flexible workspace for the community.
- Soft play. Soft play, or toddler's play, is currently offered on the North Balcony in the main building. However, this requires the gymnastics equipment to regularly be removed from the balcony which leads to damage of the equipment. There is also insufficient storage for the equipment and so it causes clutter on the walkway. A dedicated soft play facility would introduce an additional revenue stream for the centre, helping to improve financial sustainability. It would be an attractive addition for local families and parents with multiple children taking part in different activities around the centre.
- Climbing / bouldering. The climbing facility at the NSC has recently been refurbished, however it is relatively small and feedback from community consultation events suggests there is a potential opportunity to provide a larger climbing centre. A number of spaces are identified as having the potential to host a climbing centre.
- Healthcare. There may be an opportunity to provide community healthcare facilities on the site to complement the overall health and wellbeing vision.
- Retail. Further market testing is required to establish whether retail provision on this site would be appropriate as an additional revenue stream for the centre.

Development scenarios
The Capital Cost Plan Options have been prepared based on the Design Studies set out in section 6.

The studies have been arranged into a range of development scenarios which form the basis of the Capital Cost Plan, Operational and Maintenance Costs, Management & Governance Overview and Business Plan in later sections of this report. These scenarios are described in section 6.2.

It should be noted that for all areas, retention of the facilities in their current form and configuration is an option, and this has been included in the Cost Plan as the 'Status Quo' and 'Minimum Enhancements' scenarios. These options have not been presented in this section, as visually they would appear similar to the current facilities.

Scenario A: 'Status-Quo'
This sets out the costs associated with maintaining the NSC in its current state and configuration, including necessary works to allow it to run for a further 25 years. All existing buildings are retained.

Scenario A1: 'Minimum Enhancements'
As per Scenario A, all existing buildings are retained. But additional works are included to upgrade the facilities to current standards, improve conditions and increase efficiency, and reconfigure internal spaces in the main building.

Scenario B: Proposal study with Lodge and 25m pool retained
In this scenario, the NSC is reconfigured and upgraded, including:
- West stand retained
- Jubilee stand demolished and new indoor athletics and strength & conditioning facility constructed in its place
- Main building reconfigured, swapping gym and dry diving and with new dividing screen between wet and dry areas
- Outdoor pitches relocated to create central 'outdoor hub' around raised walkway
- Low-level Lodge building retaining. Tower demolished and replaced with new 2-storey hostel
- 25m pool retained
- Hub refurbished, with indoor 5-a-side pitch retained.

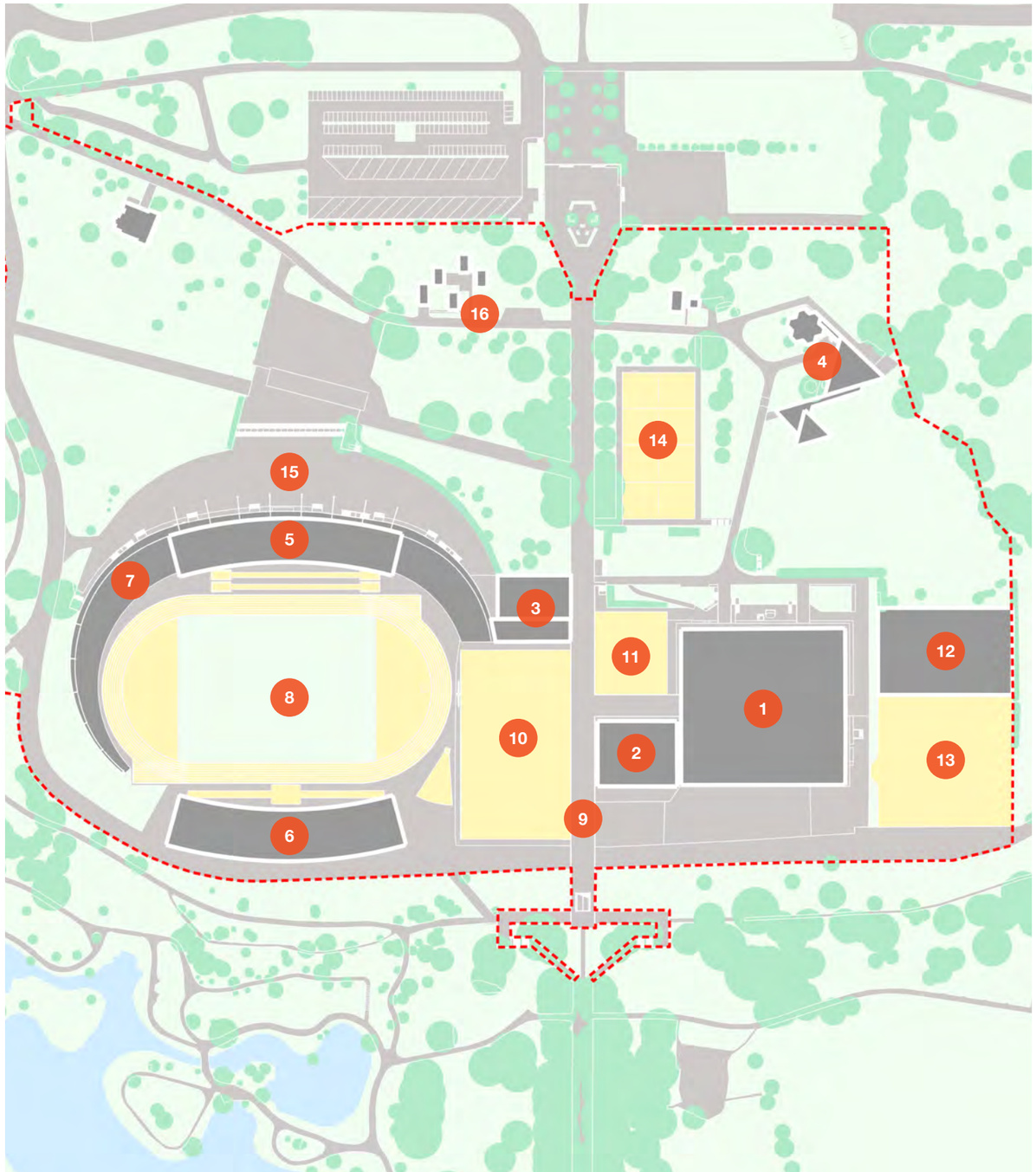
Scenario B1: Proposal study with Lodge retained and 25m pool removed
As per Scenario B, but with 25m pool removed and 50m pool reconfigured with movable floor and boom.

Scenario C: Proposal study with Lodge and 25m pool removed
As per Scenario B1, but with Lodge removed as well as 25m pool building.
- Lodge buildings demolished. Lodging, education and community/conference facilities provided in new courtyard hub building
- 25m pool demolished and movable floor and boom installed in 50m pool

Scenario C1: Proposal study with Lodge removed and 25m pool retained
As per Scenario C, but with 25m pool retained.

These scenarios are not based on a scale of minimum to maximum costs, but set out the different approaches to the site and consolidation of facilities. All scenarios except for Scenario A are based on providing the same standard of facility, but in different configurations and scales.

6 Design studies
6.2 Development scenarios
6.2.1 Scenario A: ‘Status Quo’



Scenario A: ‘Status Quo’
This involves maintaining the NSC in its current state and configuration, including necessary works to allow it to run for a further 25 years. All existing buildings are retained.

This scenario is not proposed but is included as a benchmark in this feasibility study to demonstrate the capital costs, ongoing lifecycle costs, management and operational models and sporting and community outputs associated with keeping the NSC ‘ticking over’ in its current state for the next 25 years. This is then compared against scenarios that involves more up-front investment but improved financial sustainability over time, and an increase in community and sporting output.

Main building & 25m pool
1. Main building retained in current configuration with existing facilties, and refurbished. Main refurbishment interventions include:
- Installation of a glazed screen, separating swimming pools from main sports hall to improve environmental conditions and building efficiency. Refer to study 6.3.5.
- Repairs and replacement of external building envelope, including roof, façade (glazing and concrete mullions), openable windows and blinds, fire exit doors.

2. 25m pool building and facilities retained and fully refurbished.

Hub
3. Hub building stripped out and refurbished as bar and clubrooms. Adjacent outdoor changing refurbished. Indoor 5-a-side pitch retained. Refer to study 6.4.1.

Lodge
4. Lodge retained and refurbished:
- Tower retained, including major structural works to provide step-free access to 1no. room per floor, and installation of sprinklers and smoke vents. Refer to study 6.5.1.
- Low-level Lodge buildings retained and refurbished, but interventions to improve accessibility not included.
- Repairs and replacement of external envelope of both buildings, including roof and façade.

Stadium & athletics
5. West Stand retained and refurbished.
6. Jubilee Stand retained and refurbished.
7. Stadium seating retained and refurbished.
8. Athletics track and infield pitch retained in current location.

Raised walkway
9. Raised walkway retained and refurbished in current configuration, with indoor athletics below.

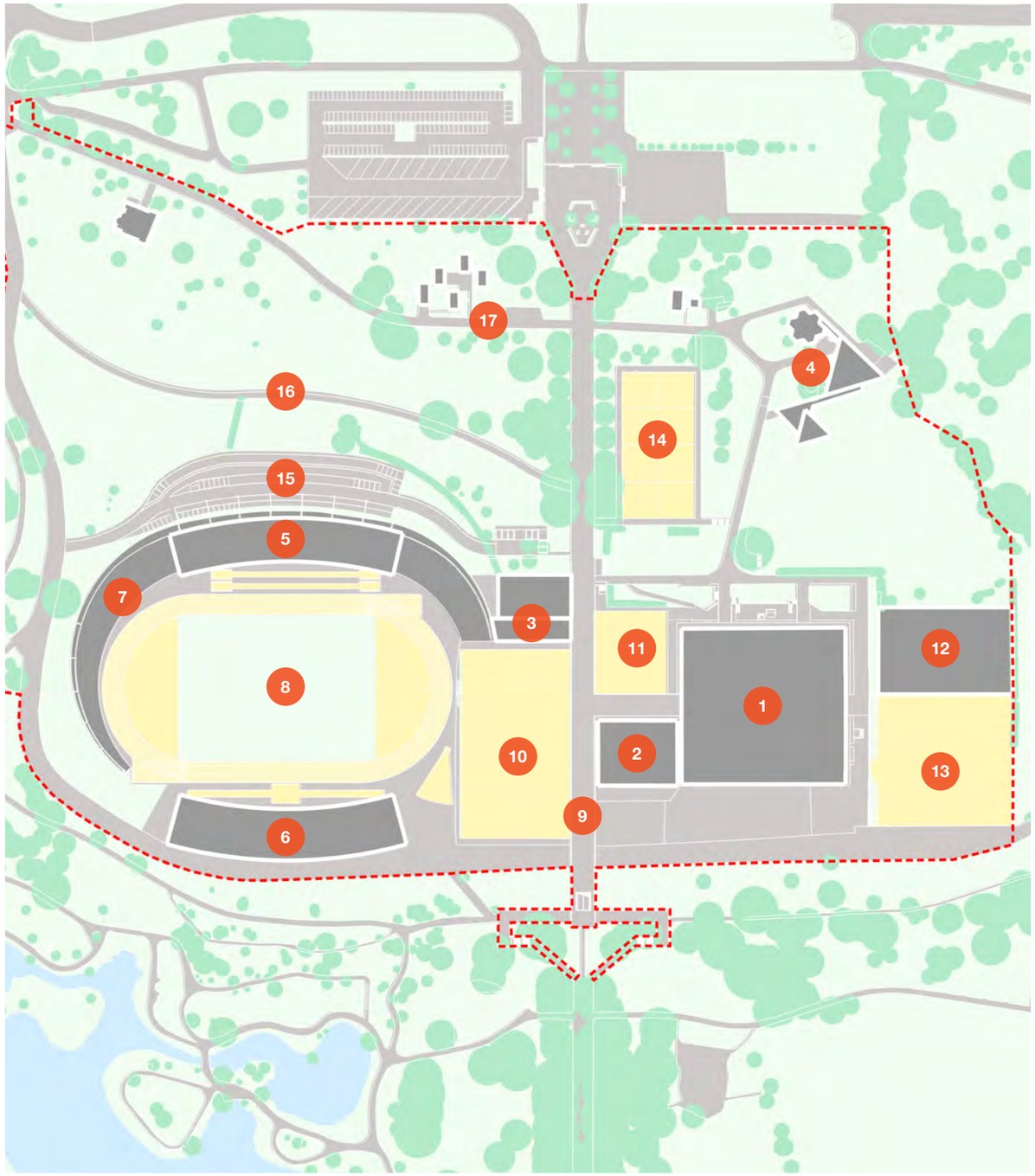
Outdoor pitches
10. Hockey pitch retained in current location.
11. Beach volleyball courts retained in current location.
12. Football dome retained.
13. Football pitch retained in current location.
14. Tennis courts retained in current location.

Climbing & bouldering
Retained as existing.

Access & connections
15. Existing car-parking, hard-standing and access routes retained and refurbished.

Other
16. Existing houses retained and refurbished.

6 Design studies
6.2 Development scenarios
6.2.2 Scenario A1: ‘Minimum Enhancements’



Scenario A1: ‘Minimum Enhancements’
This scenario involves the minimum enhancements that are recommended to improve the NSC facilties and increase performance over the next 25 years. As per Scenario A, all existing buildings are retained. But additional works are included to upgrade the facilities to current standards, improve conditions and increase efficiency, and reconfigure internal spaces in the main building.

Main building & 25m pool
1. Main building retained with existing facilties, reconfigured and refurbished. Main interventions include:
- Installation of a glazed screen, separating swimming pools from main sports hall to improve environmental conditions and building efficiency. Refer to study 6.3.5.
- Repairs and replacement of external building envelope, including roof, facade (glazing and concrete mullions), openable windows and blinds, fire exit doors.
- Gym and dry-diving facilities locations swapped. Additional mezzanine floors constructed to house gym studios. Refer to study 6.3.1 and 6.3.2.

2. 25m pool building and facilities retained and fully refurbished.

Hub
3. Hub building stripped out and refurbished as bar and clubrooms. Adjacent outdoor changing refurbished. Indoor 5-a-side pitch retained. Refer to study 6.4.1.

Lodge
4. Lodge retained and refurbished:
- Tower retained, including major structural works to provide step-free access to 1no. room per floor, and installation of sprinklers and smoke vents. Refer to study 6.5.1.
- Low-level Lodge buildings retained and refurbished, including major structural interventions to improve accessibility. Refer to study 6.5.1.
- Repairs and replacement of external envelope of both buildings, including roof and façade.

Stadium & athletics
5. West Stand retained and refurbished.
6. Jubilee Stand retained and refurbished.
7. Stadium seating retained and refurbished.
8. Athletics track and infield pitch retained in current location.

Raised walkway
9. Raised walkway retained and refurbished in current configuration, with indoor athletics below (façade replaced).

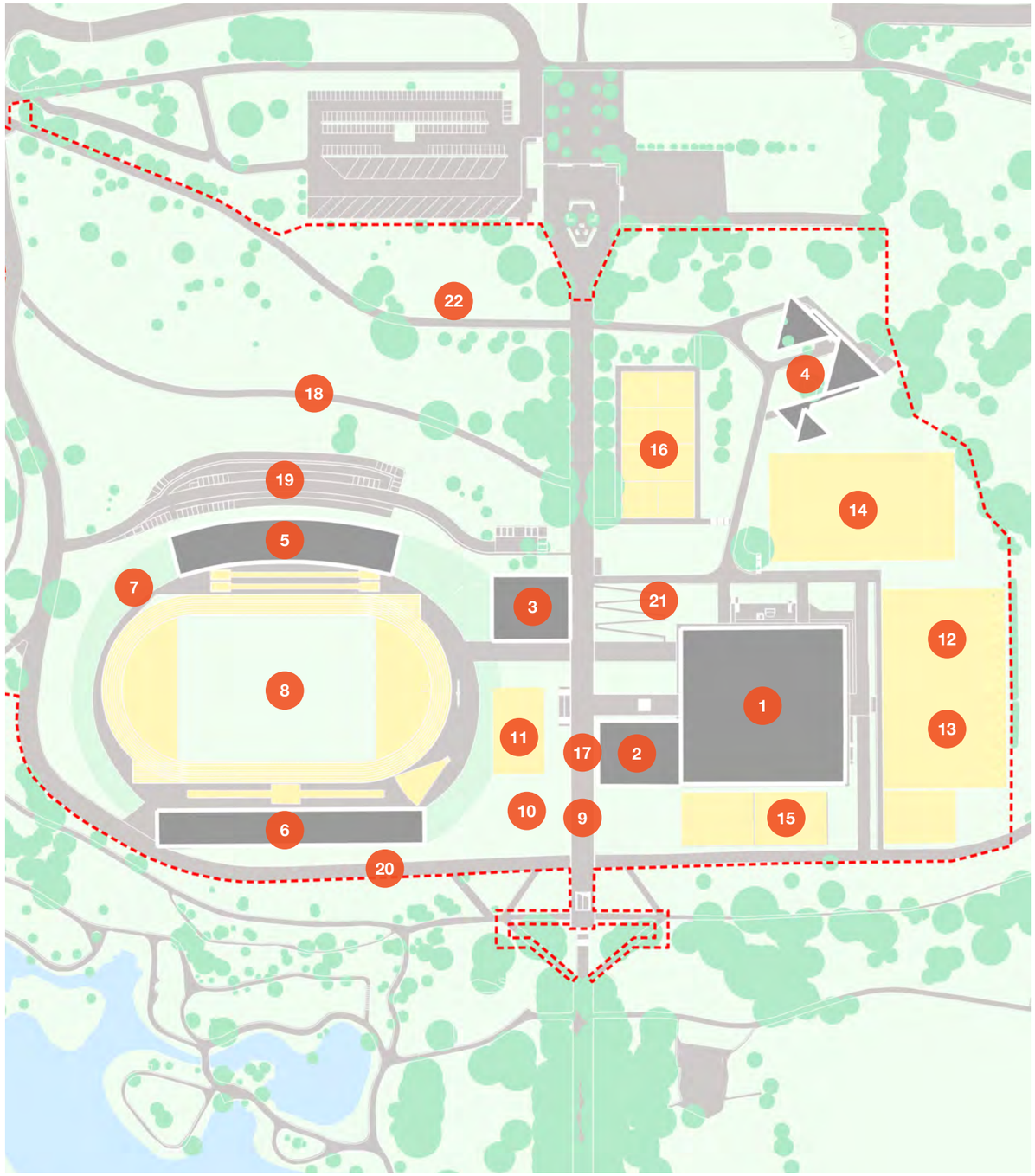
Outdoor pitches
10. Hockey pitch retained in current location.
11. Beach volleyball courts retained in current location.
12. Football dome retained.
13. Football pitch retained in current location.
14. Tennis courts retained in current location.

Climbing & bouldering
Retained as existing.

Access & connections
15. Car-parking relocated to behind West Stand.
16. Existing car-parking and hard-standing removed and area returned to parkland. New accessible pedestrian and cycle path constructed, with lighting.

Other
17. Existing houses retained and refurbished.

6 Design studies
6.2 Development scenarios
6.2.3 Scenario B



The following scenarios involve more significant interventions into the existing facilities, structures and landscape in order to align with the key moves set out in section 5. They aim to deliver a new vision for the NSC, with enhanced sporting and community outputs, better integration into the park, and modern facilities with improved opportunity for additional revenue streams.

Scenarios B, B1, C and C1 are all based on the same overall principles and key moves and providing the same standard of facility, but in different configurations. The key differences centre around the removal or retention of both the Lodge and 25m pool buildings.

Scenario B: Lodge and 25m pool retained

Main building & 25m pool
Refer to study 6.3.1 - 6.3.5.
1. Main building retained, reconfigured and refurbished. Main interventions include:
- Installation of a glazed screen, separating swimming pools from main sports hall to improve environmental conditions and building efficiency. Refer to study 6.3.5.
- Repairs and replacement of external building envelope, including roof, façade (glazing and concrete mullions), openable windows and blinds, fire exit doors.
- Gym and dry-diving facilities locations swapped. Additional mezzanine floors constructed to house gym studios. General reconfiguration of facilities to improve wayfinding.
- New small spa facility installed.

2. 25m pool building and facilities retained and fully refurbished. Teaching and studio space within the building refurbished as flexible space, to be used for educational purposes or other, dependant on demand. Façade refurbished and opened up with new glazing.

Hub
Refer to study 6.4.1 (note: indoor athletics facility in this study to be replaced with flexible space as per study 6.4.2).
3. Hub building stripped out and refurbished as bar and clubrooms. Adjacent indoor 5-a-side football pitch and outdoor changing refurbished.

Lodge
Refer to study 6.5.2.
4. Lodge low-level building retained and refurbished, tower removed and replaced with new low-level hostel building.

Stadium & athletics
Refer to study 6.6.2.
5. West Stand retained and refurbished.
6. Jubilee Stand removed and replaced with new single-storey indoor athletics and strength & conditioning facility.
7. Stadium seating not below West Stand canopy removed and replaced with grass banks.
8. Athletics track and infield pitch retained in current location.

Raised walkway
Refer to study 6.7.4.
9. Raised walkway retained and refurbished, and reconfigured with new staircases and access points.

Outdoor pitches
Refer to study 6.8.
10. Outdoor hub space created around raised walkway.
11. Beach volleyball courts relocated.
12. Football dome removed.
13. Hockey pitch relocated to north of main building.
14. Additional hockey pitch constructed.
15. New small-sided football pitches constructed.
16. Tennis courts retained in current location.

Climbing & bouldering
Refer to study 6.9.
17. Existing indoor athletics and strength & conditioning relocated from below walkway (see 6), and new bouldering facility constructed below part of walkway.

Access & connections
18. Existing car-parking and hard-standing removed and area returned to parkland. New accessible pedestrian and cycle path constructed, with lighting.
19. Car-parking relocated to behind West Stand. Refer to study 6.10.3.
20. Eastern access road re-surfaced, parking and retaining wall removed.
21. New accessible ramps constructed from walkway level to outdoor hub. Refer to study 6.10.2.

Other
22. Existing houses removed and area returned to parkland.