

B&Q Cricklewood ES Volume I

Chapter 4: Alternatives and Design Evolution

Montreaux Cricklewood Developments Ltd

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4. Alternatives and Design Evolution

4.1 Introduction

- 4.1.1 Schedule 4 of the EIA Regulations¹ requires that an Environmental Statement (ES) includes: ‘A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.’
- 4.1.2 This chapter of the ES sets out how the design of the Proposed Development has evolved up to the submission of the Application in July 2020.
- 4.1.3 A number of designs and options have been studied to explore how best to achieve the requirements of the Site’s allocation in the Brent Cross – Cricklewood Opportunity Area Framework² and in the Cricklewood, Brent Cross and West Hendon Regeneration Area³ (as described in *Chapter 2: Planning Policy Context*) within the constraints of the existing environmental and socio-economic context (as described in *Chapter 3: Existing Site and Surroundings*). This ES chapter identifies the opportunities and constraints influencing the height, layout, massing and other aspects of the general principles of the Proposed Development and provides a summary of the design evolution leading to the current proposals presented in *Chapter 5: The Proposed Development*.
- 4.1.4 Throughout the design process there has been regular consultation with the London Borough of Barnet (LBB), Greater London Authority (GLA) and other statutory stakeholders. In addition, a community engagement programme has been undertaken to inform the design process, as discussed in the Statement of Community Engagement⁴ (SCE) submitted in support of the planning application for the Proposed Development.
- 4.1.5 This chapter has been prepared by AECOM Infrastructure and Environment UK Ltd (AECOM) in conjunction with EPR Architects (the ‘Architects’) and the wider design team. It outlines the vision for the Proposed Development and alternatives studied. Further details can be found within the Masterplan Design and Access Statement⁵ (DAS) and the SCE produced and submitted in support of the planning application for the Proposed Development.

4.2 Vision for the Proposed Development

- 4.2.1 The vision for the Proposed Development is underpinned by core values of high quality design and sustainability and driven by the following key objectives:
- Making optimal use of the Site’s urban characteristics, and responding to its context – Cricklewood Broadway, Depot Approach and via the Railway Cottages Conservation Area;
 - Supporting a local Asset of Community Value - Cricklewood Green, by enhancing public amenity space on the Site;
 - Designing from the ground floor up, and fully considering the spatial requirements of residential and commercial operators, delivering positive socio-economic impact and a vibrant neighbourhood;
 - Responding positively to the residential and commercial demand and price point of Cricklewood and supporting the growth of local businesses;

¹ Her Majesty’s Stationary Office (HMSO), 2017; ‘The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 – As Amended

² GLA, 2014; Brent Cross – Cricklewood Opportunity Area Framework

³ LBB, 2005; Cricklewood, Brent Cross and West Hendon Regeneration Area Development Framework Supplementary Planning Guidance

⁴ CT Group, Icen, 2020; B&Q Cricklewood – Statement of Community Involvement

⁵ EPR Architects, 2020; B&Q Cricklewood – Design and Access Statement

- Provision of a mix of residential dwelling types and sizes, maximising the variety of dwelling types and tenures, including affordable housing;
- Meeting the needs and expectations of existing and emerging communities of Cricklewood, the Borough, and London, and delivering a tailored affordable housing solution;
- Encompassing the comprehensive redevelopment of a centrally located Site, that positively responds to the local context and complements the success of existing retail and commercial businesses within Cricklewood;
- Provision of a hierarchy of publicly accessible open spaces including high quality landscaped public amenity spaces at ground, podium and rooftop levels, supplemented by selected appropriate planting and raingardens at the ground floor level;
- Provision of ancillary flexible commercial and community spaces to animate the new public open space, including a versatile 'Arboretum Square' to be used for flexible uses (i.e. public gathering space, markets, outdoor cinema, seating, curated events etc);
- Providing a proportionate level of parking, which strikes the necessary balance between prioritising the use of public transport, cycling and walking; and
- Creation of a legible, well connected development, giving priority to pedestrian-orientated routes and walkways with retained vehicular access (for servicing only) through the Site from Cricklewood Lane to Depot Approach.

4.3 Public Consultation

- 4.3.1 During the design process, a comprehensive consultation and community engagement strategy was implemented, involving key stakeholders and the community at each stage of the design process. The Statement of Community Engagement (SCE)⁶ sets out the consultation process undertaken by the Applicant, with key stakeholders and the local community, and is submitted in support of the planning application.
- 4.3.2 In total, four formal pre-application meetings were held with the LBB between May 2019 and December 2019, as agreed under a Planning Performance Agreement (PPA) between the Applicant and the Local Authority. One pre-application meeting was also held with the GLA over the same time period.
- 4.3.3 Public consultation events were held on the 2 and 3 February 2020 at Ashford Place, a community centre close to the Site. Both events were well attended by the general public, with a total of 143 attendants across the two events and 39 feedback forms were collected as a result, which included 223 pieces of individual feedback. The event was advertised with 5,250 A6 flyers delivered door-to-door in the local area, emailed directly to key community/resident stakeholder groups who then circulated it to their networks, and left at key community venues.
- 4.3.4 One to one meetings were also held with local resident and community groups to understand their aspirations for the Site, including: Cricklewood Town Team, Cricklewood Community Forum, North West Two Residents Association, The Grove Residents' Association, Fordwych Resident's Association and the Railway Terraces Resident's Association.
- 4.3.5 In terms of positive feedback received, this can be summarised as follows:
- There is a need for high quality public open space, landscaped areas and enhancements to Cricklewood Green, which will be delivered by the Proposed Development;
 - The local population are interested in the potential community uses for the new public square;
 - The local area will benefit from the provision of a new playground for children;

⁶ Icenl 2020. B&Q Cricklewood Statement of Community Engagement

- The Proposed Development will contribute to improvements to the local transport network;
- The Proposed Development considers sustainability at its core, whilst also contributing to enhancement of wildlife and biodiverse habitats on-site;
- Expansion of local cycle network through the provision of new routes throughout the Site;
- Retention and enhancement of the 'Cricklewood Sheep' public artwork; and
- The local area will benefit from the new jobs during construction and after the completion of the Proposed Development.

4.3.6 The key concerns related to the Proposed Development were limited to the following:

- The height of the proposed buildings, particularly the 25 storey building;
- The impact of the temporary demolition and construction activities on congestion levels, which is already perceived as heavily congested;
- The closure of the B&Q store and its associated parking, potentially leading to overspill car parking on the neighbouring streets;
- The possibility of overspill car parking on neighbouring streets as a result of the 'car free' proposals; and
- The capacity of surrounding social infrastructure to accommodate the Proposed Development.

4.3.7 To enable the project team to respond to the main issues raised during the pre-application consultation, questions received by the project team have been answered where necessary. A list of the most common concerns and the project team's response to these issues have been listed in the SCE.

4.3.8 In May 2020, a project update newsletter including a summary of feedback from the drop-in public consultation was emailed to ward councillors, key community groups and residents who attended the drop-in event in February. The project website was also updated in line with this information.

4.4 Alternatives Analysis

4.4.1 The EIA process provides an opportunity to consider alternative development options with their respective environmental effects before a final decision is taken on the Proposed Development design. In accordance with the EIA Regulations and statutory guidance, the ES will describe those alternatives that were considered by the Applicant, project team and architects.

4.4.2 In accordance with this requirement, and following best practice, the sections below present those alternatives to the Proposed Development which have been considered by the Applicant, including:

- The 'No Development'/'Do Nothing' Alternative – the consequences of no redevelopment taking place on the Site; or
- 'Alternative Sites' – the rationale behind choosing the Site; or
- 'Alternative Designs and Design Evolution' – the ES will summarise the evolution of the design of the Proposed Development, the modifications which have taken place to date and the environmental considerations which have led to those modifications. A summary of the main alternatives considered, will be presented together with a summary justification for the final design.

4.4.3 In addition, the alternatives assessment will consider the responses of statutory consultees and the outcomes of public consultation.

The 'No Development' Alternative

- 4.4.4 The 'No Development' alternative refers to the option of leaving the Site in its current state. This option would result in a range of negative effects, including;
- A lost opportunity to increase the residential floorspace availability in the LBB and to improve the quality of housing for existing and new residents through the provision of up to 1,100 exceptional quality residential units split across four residential Development Parcels;
 - A lost opportunity to contribute to the housing objectives set out within the London Plan⁷ of 10,000 new homes between 2011 and 2031 in the Brent Cross – Cricklewood Opportunity Area Framework and the 3,134 annualised average set out within the current London Plan;
 - A lost opportunity to provide diverse and flexible retail, commercial and community floorspace availability in the LBB;
 - A lost opportunity for the Site not to fulfil its employment opportunity, as set out within the London Plan and within the Brent Cross – Cricklewood Opportunity Development Framework which is identified to provide up to 20,000 jobs, during both construction and once complete and operational due to the Site's location;
 - A lost opportunity to deliver high quality new open spaces and public realm, including a hierarchy of publicly accessible open spaces adjacent to Cricklewood Green, including a new Town Square, bisected by pedestrian and cycle pathways, which is needed in the area to improve accessibility and connectivity between Cricklewood Station and the surrounding neighbourhoods; and
 - A lost opportunity to provide biodiverse green roof space, which provides additional habitat for wildlife and helps mitigate against the overheating of cities, known as the urban heat island effect.

Alternative Sites

- 4.4.5 In recent months, there have been a number of schemes emerging/approved that have seen increased massing within the surrounding context, which are outlined in *Chapter 7: EIA Methodology* (i.e the 'Co-op' (Planning Application Ref: 18/6353/FUL) and 'Asda' (Planning Application Ref: 17/0233/FUL) sites adjacent to the western boundary). As such, there are limited sites or plots of land in the surrounding area of Cricklewood which could sustain the large scale, density and landscaping improvements of the Proposed Development which have not already been purchased by property developers, or where schemes are currently being developed in the planning process.
- 4.4.6 This Site presented an opportunity to revitalise Cricklewood Green, and to expand the green space to create a mosaic of habitat suited to the local wildlife and high quality amenity space for residents and the local public to utilise. A succession of open spaces located within the Proposed Development will act as walkways and cycle paths for pedestrians and cyclists respectively, connecting Arboretum Place and Cricklewood Green on the southern aspect of the Proposed Development to Kara Way Playground to the north west of the Site. It also acts as a wildlife corridor, improving habitat connectivity between the site and the surrounding area. As outlined by local residents in the public consultations, public amenity space is severely lacking in the local area, which the Site and Proposed Development are seeking to provide for.
- 4.4.7 Furthermore, the Site is partially situated within the southern aspect of the of the Brent Cross – Cricklewood Opportunity Framework² area. Part of the masterplan included an additional train station on the Thameslink line, as well as major road and public transport improvements. The Proposed

⁷ Mayor of London (2019), Draft London Plan – Consolidated Suggested Changes Version July 2019 [online]. Available at: <https://www.london.gov.uk/what-we-do/planning/london-plan/new-london-plan/draft-london-plan-consolidated-suggested-changes-version-july-2019> (Accessed December 2019).

Development is to support the population of the 10,000 new homes which are to be delivered under the framework between 2011 to 2031. The Proposed Development works towards meeting this objective for Brent Cross and Cricklewood as it provides up to 1,100 residential units, as well as providing up to 1200m² of flexible commercial space and improvements in public realm and public transport measures.

4.5 Alternative Designs and Design Evolution

4.5.1 This section outlines the design evolution process, taking into account the Site constraints and opportunities as previously outlined within *Chapter 3: Existing Site and Surroundings*. The design of the Proposed Development has taken shape and evolved through a continuous consultation process with the design team and a number of key statutory and non-statutory consultees and interested parties, as listed in *Chapter 7: EIA Methodology*.

4.5.2 Alternative designs were considered as part of the evolution of the Proposed Development. For example, alternative massing and layout options were tested to explore how best to achieve the requirements of the Site's allocation in the Brent Cross – Cricklewood Opportunity Area Framework and in the Cricklewood, Brent Cross and West Hendon Regeneration Area within the constraints of the existing context. This section outlines the schemes development from the initial to the current scheme, i.e. the Proposed Development.

4.5.3 The consultation process has resulted in amendments to the design of the scheme and informed the planning application submission. Within this process, there were five main design iterations. These iterations represent how the scheme has evolved through a process of analysis, design testing and consultation. However, a number of key features informed the design and are maintained throughout the interactions. These key features are as follows:

- Sub-division of the Site into a series of Development Parcels with a varied urban grain that together form a comprehensive development. The taller elements of the Proposed Development are situated towards the train station and on the railside of the Site, with a stepped profile decreasing in height as the Site progresses north toward the Cricklewood Railway Terraces, acting as a barrier to the railway whilst providing a focal point and marker buildings for pedestrian way finding;
- Enhancement and better connection to the existing Kara Way play space and Cricklewood Green, improving both quantity and quality of public open space in Cricklewood town centre;
- Introduction of new residential open spaces, protected amenity spaces, green squares and pedestrianised streets;
- Creation of a new civic heart for Cricklewood, a destination and gathering place for local festivals and events, ensuring long term enjoyment by the local community;
- Inclusion of active frontages with a mix of uses at ground level to animate public realm and line the series of public routes and open spaces;
- Provide affordable homes for people of Cricklewood;
- Contribute positively to the local townscape, adding legibility to the district centre and Cricklewood station;
- Deliver a vibrant, aspirational neighbourhood that will benefit new and existing communities; and
- Ease traffic and congestion by removing the existing site access on Cricklewood Lane and enabling locals to take advantage of the close public transport links and cycling and walking routes

Design Iteration 1: Pre-Application Workshop 1, May 2019

4.5.4 Design Iteration 1 was devised after the first of four formal pre-application meetings held with the LBB between May 2019 and December 2019. This initial meeting provided the opportunity for design team introductions and discussions around initial thoughts on the aspirations and objectives, site context, opportunities and constraints and the initial masterplan proposal.

4.5.5 Key items from the discussion consist of the following:

- Acknowledgement that the Site acts as a transition site – creating a sense of arrival and presence key (particularly the pedestrian experience when leaving the train station);
- Improvements to the train station likely required – potential lighting scheme under tunnel (secure by way of Section 106 Agreement);
- Technical practicalities to be mindful of include adjacency of the railway and A5;
- Noise and Air Quality consultant to be appointed to feed into early design development;
- High level exercise in testing a wider masterplan should be carried out with LBB to ensure that the Proposed Development doesn't preclude future development on adjacent sites.
- Engagement and messaging around Cricklewood Green is key, acknowledging that this is an important space for local residents.
- LBB encourage early engagement with the Railway Terrace Conservation Area action group.
- The step down in height towards the north of the Site was broadly welcomed, however the location of marker building was questioned and alternative locations of height to be developed further and informed by testing of key townscapes views to be agreed with LBB.
- Demonstration of the appropriate scale of the public open green spaces and town square to be reviewed to assist LBB to gain a better understanding of scale;
- Commercial uses should support the existing commercial offerings of the town centre and not compete or detract from them;
- A survey of the existing car park is key to better understand existing use and trips;
- LBB highlighted that there is currently a closed underpass which connects the Site to the train station. Suggested that this is noted and a portion of land safeguarded for any possible future access requirements; and
- Travel Plan to account for new TfL guidance and requirements regarding healthy streets.

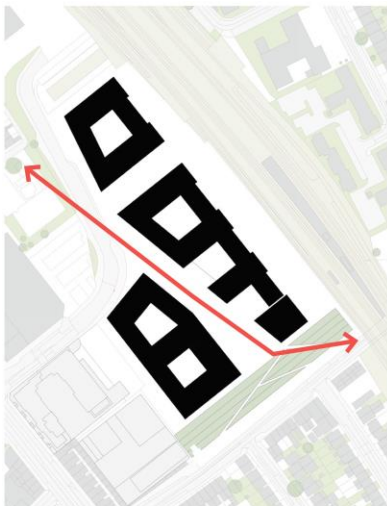
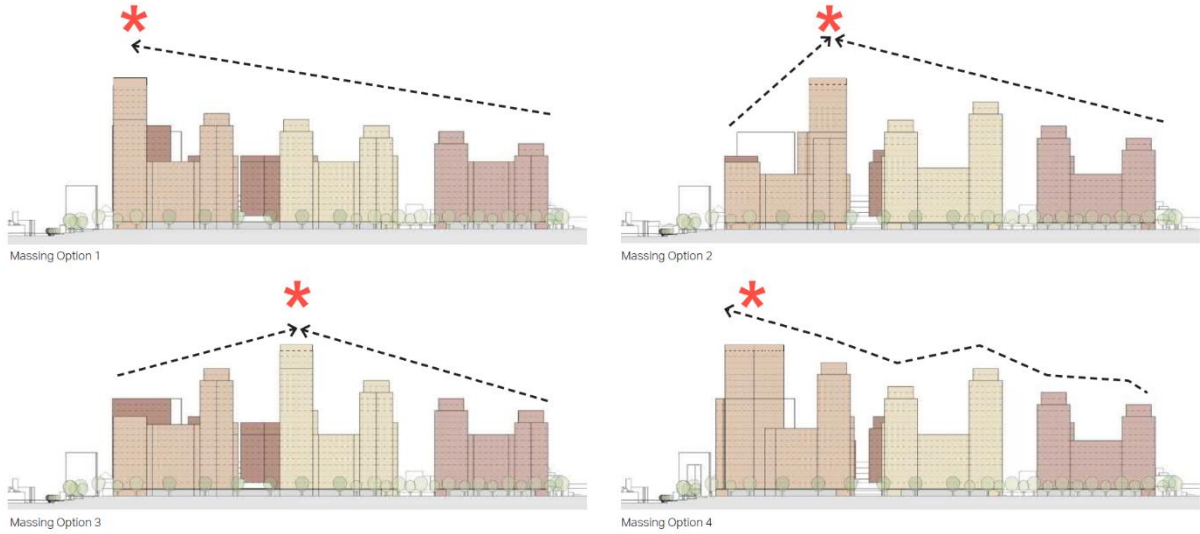
Figure 4-1 Design Iteration 1 - Aspirations



Design Iteration 2: Pre-Application Workshop 2, June 2019

- 4.5.6 The second pre-application workshop meeting resulted in a workshop to review and compare alternative height strategies, as well as comparative townscape key views (as agreed with the LBB following a site visit in June 2019).
- 4.5.7 Higher density options were explored within the Design Iteration 2, with Development Parcels A - D ranging from 3 to 28 storeys, with Development Parcel A containing the tallest element, enhancing the legibility of the scheme and accentuating the step in height from the surrounding Development Parcels. The tall element on Development Parcel A would be rotated in order to open up key views from Cricklewood Station approach, leading up to the town square and commercial elements of the scheme.
- 4.5.8 Development Parcel B underwent a range of transformations, initially consisting of three individual building masses, with a podium facing toward Depot Approach for car parking purposes, to one singular mass again with a car park at the rear. Ultimately, Development Parcel B ended up consisting of three individual massings, connected at the rear by smaller residential units. This would allow podium space to open up in-front of the Development Parcel to help improve the visual connection to podium landscape from central public open space.
- 4.5.9 Development Parcel D received a reduction in height and massing at the closest edge to the Railway Terrace Conservation Area to the north, thus limiting potential adverse impacts upon the heritage assets historic significance and setting.
- 4.5.10 LBB recommended a consolidated area of green space be explored adjacent to the Railway Terraces and Kara Way Play area (which is currently overused) increasing play provision.
- 4.5.11 Building heights would vary and alternate along the eastern boundary adjacent to the railway line, creating an uneven profile, as can be seen in Options 1-4 within Figure 4-2.
- 4.5.12 Ultimately, through consultation with LBB it was decided that Massing Option 4 should be further explored in later design iterations.

Figure 4-2 Design Iteration 2 – Massing Options and Layout Revisions



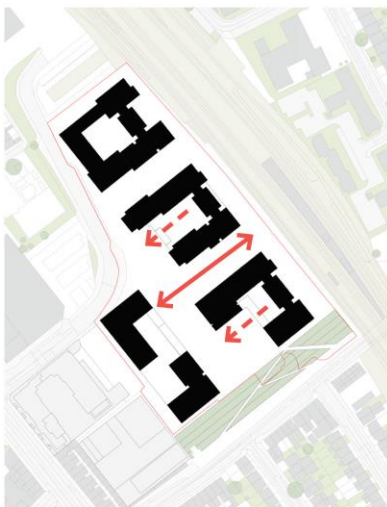
- Build footprints responding to existing and possible future context;
- Strong connection to and from station.



- Establish town square space;
- Linear route through site;
- E-shaped block to respond to sunpath.



- More variation along edge of public green spaces;
- Community building at town square.



- Increase public green space by breaking podium;
- Open up residents' podiums to sunlight.



- Express marker building at town square;
- Further open up podiums.

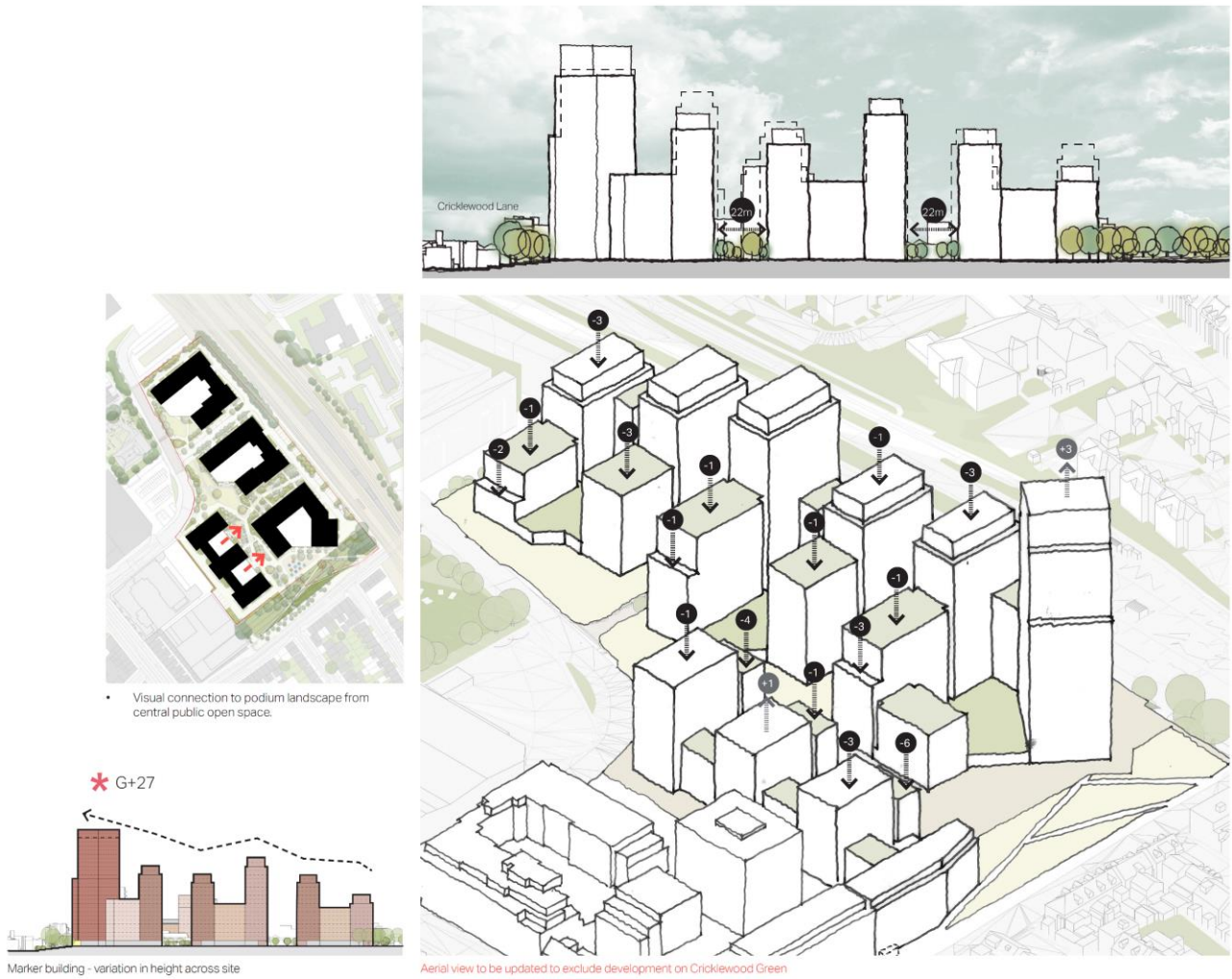


- Rotate key block to open up views from station approach.

Design Iteration 3: Pre-Application Workshop 3, August 2019

- 4.5.13 In August 2019, a subsequent Design Interactions was presented at a pre-application meeting with the LBB, incorporating key aspects from previous discussions held during the June 2019 meeting (see Figure 4-3).
- 4.5.14 As part of Design Iteration 3, Development Parcel D's footprint was revised in order to provide an increase in the area of public realm adjacent to Kara Way Playground, thus providing better permeability through the Site and connectivity to surrounding existing play space.
- 4.5.15 Preliminary daylight and sunlight testing was conducted on illustrative example designs prior to this Design Iteration, where most Development Parcels experienced acceptable levels of daylight provision throughout, with the exception of instances of poorer daylight provisions at certain single aspect habitable rooms within the courtyard facades of all Development Parcels. Distances between the Development Parcels in the previous Design Iteration was also causing poor daylight and sunlight performance levels to certain residential units between Development Parcels A and C, and Development Parcels C and D. As such, the footprints of the aforementioned Development Parcels were adjusted, providing greater separation distances, thus improving daylight and sunlight levels to many facades.
- 4.5.16 Massing height of many of the Development Parcels were reduced across the Site, with a particular focus on Development Parcels to the north of the Site, thus allowing a slight increase in height to be explored within Development Parcel A.
- 4.5.17 Development Parcel B's footprint was revised in order to extend onto Cricklewood Green, thus providing a continuation of the active frontage along Cricklewood Lane from the adjacent development site the 1 - 13 Cricklewood Lane (see *Chapter 7: EIA Methodology* for more scheme details).
- 4.5.18 LBB indicated that the 28 storey tower within Development Parcel A is likely to be a key consideration with members recommending that this aspect of the design be further scrutinized and reviewed, noting that further justification would be required for the scale and massing.

Figure 4-3 Design Iteration 3 – Further Massing Options and Layout Revisions



GLA Presentation, November 2019

4.5.19 A meeting was held with the GLA and LBB with the below key points noted:

- Principle – supported, acknowledging that Site is exact place where GLA would seek to push housing (including affordable);
- Design – acknowledge transitional site with quantum of development and general layout supported. Recommended that the proposed commercial uses are supported by local needs assessment, but no concerns with applying for current flexible range of uses (B1, D1, D2);
- Open space strategy – suggested that this is reviewed to make simpler and ensure corresponds with phasing, as well as overall masterplan;
- Highways – TfL confirmed happy with 10% car parking provision;
- Detailed townscape analysis to be carried out in conjunction with review of daylight, sunlight and overshadowing.

Design Iteration 4: Pre-Application Workshop 04, December 2019

- 4.5.20 The final design iteration (i.e. the Proposed Development) included the following alterations (Figure 4-4).
- Reductions in height of the tallest building element from 28 to 25 storeys;
 - The tapering down of height towards the north rather than the initially suggested variation in height along the railway;
 - The above amendments resulting in a reduction in the number of residential units from up to 1,250 to up to 1,100; and
 - Increase in size of play space and public realm adjacent to Kara Way playground.
- 4.5.21 As a result of the public consultation held to date, concerns were raised about the potential significant impacts upon local townscape, visual and daylight/sunlight provisions as a result of the height of the scheme. As such, Design Iteration 4 reduced the tallest element of the development within Development Parcel A from 28 storeys to 25 in order to help mitigate any potential adverse impacts. Design Iteration 4 would also see, the rest of the tallest elements within each Development Parcel along the railway steadily tapered down towards the Railway Terraces Conservation Area and maintain a consistent shoulder height.
- 4.5.22 Development Parcel D's footprint was further reduced to allow for increased green space at Kara Way. Publicly accessible play space with the potential for ground floor community space adjacent was envisioned, thus creating a centralised hub of community space
- 4.5.23 A succession of open spaces provide a green pedestrian route through the Proposed Development. This is accessible by foot or bicycle and will allow a visual connection with the podium gardens, which are south facing for increased sunlight penetration.
- 4.5.24 Arboretum Place is located immediately south of Development Parcel A, and offers a flexible open space for the public realm and residents to use, alongside a grove of trees and a sculptural play element. This complements Cricklewood Green which lies immediately opposite, providing step free access between the Proposed Development and Cricklewood Lane. Arboretum Place has the potential to be used as for street markets, events and concerts.
- 4.5.25 The Rail Side will be located along the eastern boundary of the Proposed Development, running parallel to the railway. The existing trees are to be retained, whilst additional trees and understory will be planted to create wildlife habitats and a screening between the residents and the railway line. Parking bays will be located along part of the length of the screen.
- 4.5.26 The residential gardens that are situated on the podiums. Communal areas with seating pods and play areas will be situated between planting and the south facing nature of the podiums allow for maximum sunlight.
- 4.5.27 Biodiverse roofs and accessible landscaped roof terraces will be situated on all Development Parcels. These will provide a mosaic of habitat for wildlife, whilst also providing private communal areas for the residents to enjoy with surrounding views of the Proposed Development and further afield.

Figure 4-4 Design Iteration 5, The Proposed Development



4.6 Public Realm, Landscape and Accessibility

Public Realm

- 4.6.1 The Public Realm design for the Site has been developed through each evolution stage alongside the Architects, environmental teams and wider design team.
- 4.6.2 In realising the Landscape Vision and through providing new community, commercial and residential places and spaces, the Proposed Development will provide an outdoor community asset that can be enjoyed by residents, visitors and locals alike. The following objectives provide the overarching aims through the design of the public space design at Cricklewood;
- Community focus - to ensure a high quality finish over the life span of the Proposed Development;
 - An aspirational place to live - to ensure safe and comfortable residence and outdoor/public realm areas that cater to a variety of users;
 - Links and connections through the site - to integrate the Site with its surroundings and provide paths that connect the existing street network with the Site layout;
 - Generous publicly accessible green space - to contribute and enhance the existing green infrastructure network;
 - A succession of spaces and experiences - To showcase a variety of new spatial typology within the LBB;
 - One visible and generous civic space - to provide a public area for a variety of gatherings and events;
 - A green pedestrian route - to encourage active travel and recreation through the Site; and
 - Visual connection with podium gardens – to showcase how the public realm and architecture can be symbolic and provide continued activation at varying levels.
- 4.6.3 The public realm will be divided into a series of Landscape Character Areas. These present an opportunity to create spatial variety within the urban platform. A structured palette of materials will create visual unity across these Character Areas while connecting the ornament of the architecture with the material and activation of the ground plane. For more information on the Landscape Character Areas, please view *Chapter 5: The Proposed Development*.

Landscape Strategy

- 4.6.4 The proposal enhances the overall green infrastructure network by creating a series of interconnected green spaces, including rain gardens, biodiverse amenity beds, green open space and both linear and clustered tree arrangements.
- 4.6.5 The soft landscape palette strategy seeks primarily to create a strong, well-vegetated site character that forms a rich and immersive environment. Species have been chosen from a diverse palette to match the anticipated micro climate and drainage strategy of the proposed planting area. An integrated and considered soft landscape palette seeks to clearly define spaces, soften the appearance of the development, promote sustainable drainage, and enhance ecological diversity, as well as provide visual interest and colour throughout the seasons.
- 4.6.6 Specific consideration has been given to species which are nectar rich, native and provide fruit and seeds for wildlife and foraging humans. The planting palette is non exhaustive and will be developed and agreed via conditions pursuant to a planning consent.
- 4.6.7 Retained trees, along with the addition of several new trees is an important mechanism utilised in the landscape to enhance biodiversity, assist in wayfinding, contribute to the wider green infrastructure network and create a high quality connected and distinctive public realm.

- 4.6.8 Tree species have been selected on the basis of:
- Suitability for the scale of the space and its location;
 - Way-finding strategy with marker trees;
 - Suitability to co-ordinate with character area planting typologies eg: evoke woodland-edge character;
 - Provision of food sources for local fauna; and
 - Seasonal interest and autumn/spring colour and to diversify the age range of species for enjoyment for this generation and the next.
- 4.6.9 The tree palette is non exhaustive and will be developed and agreed via conditions pursuant to a planning consent. For more information, please see the Design Guidelines to be submitted with this planning application.

Accessibility

- 4.6.10 The public realm has been designed to maximise accessibility for all, with paved level access or ramp access directly off the pedestrian streets. Working with the existing site topography, the public realm is designed to encourage free movement for the young and old, the disabled, the visually impaired and those using wheelchairs, prams and bicycles. Main pedestrian circulation routes are proposed to be generous and uncluttered. The use of a limited palette of surface treatments and street furniture will present a coherent and legible public realm design. An east to west route through the Site, known as the Wood Way, has been included within each design iteration, better connecting the Arboretum Place and Cricklewood Green on the southern aspect of the Proposed Development to Kara Way Playground to the north west of the Site. Wood Way will incorporate multi species tree groves, play pockets and trail, playable lawn areas and seating nodes.
- 4.6.11 The Design Guidelines includes the following points on accessibility and legibility:
- All landscape spaces shall be designed to be fully accessible and legible for all users;
 - The detailed design shall address both physical and psychological barriers to access, including the fear of crime and road danger, steep gradients, absence of seating, social exclusion and legibility of the development;
 - Ramps and steps shall be kept to a minimum throughout the development;
 - Thresholds to doorways shall be level and shall be designed to meet Building Regulations and other relevant standards;
 - Priority must be given to pedestrians at vehicular crossovers and surface treatment should contribute to this;
 - Safety considerations, including tactile paving, should be given at all crossovers and level changes within a pedestrian footway; and
 - Views to residential entrances should be identified and kept clear within the sight line.

4.7 Environmental Testing

Acoustic Design

- 4.7.1 Due to the close proximity of the railway lines toward the east of the Development Plots, appropriate glazing and ventilation specifications, and façade insulation design will be incorporated into the design of the Proposed Development, as set out within the Design Guidelines. Through the incorporation of these measures, the impact from both transport noise sources as well as surrounding existing

commercial activities affecting future occupants can be mitigated and the internal ambient noise criteria can be achieved.

Climate Change

- 4.7.2 In order to minimise greenhouse gas (GHG) emissions from the Proposed Development and to promote climate change resilience, materials with lower embodied carbon will be considered during the future Reserved Matters Applications (RMAs), such as locally sourced products, as set out within the Design Guidelines. Furthermore, GHG emissions will be reduced by energy saving elements in building design, and by anticipated reduction in traffic associated with the development
- 4.7.3 The Outline Energy Assessment details several energy saving design elements of the Proposed Development which will reduce GHG emissions from the operational phase. These elements include: improved fabric “U” values; improved air tightness; minimised cold bridging optimising of glazing; communal heating system; high efficiency ventilation systems; low energy lighting; smart meters, and air source heat pumps. The Outline Energy Assessment further states that “*carbon dioxide emissions for the residential elements of the scheme will be off-set through a cash in lieu contribution (of £60/tCO_{2e} for a period of 30 years) to the local planning authority to be ring fenced to secure delivery of carbon dioxide savings elsewhere*”⁸. Further details can be found within *Chapter 10: Climate Change*.

Daylight, Sunlight and Overshadowing

- 4.7.4 The impacts of potential daylight and sunlight to public amenity spaces and surrounding residential properties were a key consideration during the iterative design process. In order to reduce the potential adverse effects on neighbouring daylight and sunlight amenity, the massing was been arranged so as to minimise the impacts on neighbouring properties as well as to allow for good levels of amenity within the proposed accommodation and open spaces. The tallest buildings have been located along the rail tracks, stepping down towards the neighbours and several visual corridors are provided between the blocks to increase daylight and sunlight permeability.
- 4.7.5 The podiums were opened up to face southwards in order to maximise the sunlight provision the residents would receive. It will also ensure that the future occupants of this scheme will have greater access to visible sky and direct sunlight once the Proposed Development is complete and operational.

Ecology

- 4.7.6 The Proposed Development will include biodiverse roofs and ecological features within design, such as raised planters filled with species-rich shrub, grass and herbaceous planting and to provide sufficient soil volume to support healthy plant growth. Furthermore, a selection of multi-species deciduous and evergreen multi-stem trees will be planting to provide increased habitat for biodiversity. The Landscape Strategy⁹ has been developed to improve habitat connectivity between the Site and the surrounding area and to provide a range of native species.

Heritage, Townscape and Visual

- 4.7.7 The use of high quality design and materials and the replacement of an area of low townscape quality with new architecture of high quality will enhance the existing townscape and quality of public realm and mitigate the effect of the taller buildings within the Proposed Development.

Water Resources

- 4.7.8 The Site is currently mainly hardstanding and there does not appear to be attenuation or flow control devices within the Site to restrict runoff rate or runoff volume. The proposed surface water drainage strategy to be submitted alongside this planning application proposes that the surface water will discharge at Greenfield Runoff Rate to the TWUL surface water sewer in Cricklewood Lane which provides significant betterment on existing surface water discharge rate.

⁸ Meinhardt, 2019: Cricklewood Lane Outline Energy Assessment, Draft issue P1 – 28 October 2019

⁹ Exterior Architecture (2020); Cricklewood Landscape Strategy

- 4.7.9 The Proposed Development incorporates Sustainable Urban Drainage Systems (SuDS) to improve water quality, reduce flood risk and provide amenity and biodiversity benefits. The strategy for design of surface water drainage system should respect the hierarchical approach contained within London Plan, and greenfield runoff rates should be implemented in accordance with LBB SuDS Proforma. The external levels of the Proposed Development will be designed to fall away from the building to ensure overland flows are routed away from the building during extreme rainfall events with intensity in excess of the drainage system.

Wind Microclimate

- 4.7.10 Wind microclimate studies for the Proposed Development have been undertaken using wind tunnel testing during the design development process. The results of these studies have allowed recommendations to be made regarding the design of the Proposed Development, as set out within the Design Guidelines.
- 4.7.11 As part of the design evolution and in response to wind tunnel testing, proposed measures, such as architectural and landscape details, to be implemented as part of the Proposed Development at the RMA stage include landscaping, such as the addition of shrubs at least 1.5m high and trees ranging from 3m to 7m high or screens/art work covering an area of 2m² in place of trees. Entrances that are located in areas of unsuitable wind conditions will likely need to be recessed by 1.5m or the addition of side-screens (2m high by 1.5m wide) to ensure users do not encounter unsuitable wind conditions at the entrances. The majority of roof terraces would require balustrade at least 1.5m high with soft or hard landscaping elements distributed on the roof top.

4.8 Construction Alternatives

- 4.8.1 Currently, this ES has identified control measures for construction practices within *Chapter 6: Demolition and Construction*. The principal contractor will be identified within the Construction Environmental Management Plan (CEMP). Once identified, the principal contractor will define the construction methodology which will incorporate mitigation measures set out within this ES to ensure that no additional or significant adverse effects occur.

4.9 Conclusions

- 4.9.1 A full range of alternatives has been considered. The opportunity for a high quality scheme such as B&Q Cricklewood and all the benefits it will bring to the area meant that the Proposed Development design was chosen.

The design team's approach has been iterative, whereby design options and the results of technical analysis have been interpreted and proposed design solutions and refinements have been made. The proposed outline design has been developed through consultation with the public, LBB and other stakeholders, and concerns have been addressed through design development as appropriate.