

Colindale Underground Station SPD

Design Concept

February 2019

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1. Introduction

- 1.1 Over the last century the character of Colindale has changed significantly; new housing has replaced industry. Since the 1920's, residential development has changed Colindale and as a result the character is quite varied, low rise and distinct in places. Juxtaposing this are the new developments that are being built now or in the past 20 years. Colindale is therefore characterised by distinct areas. As shown in Figure 1 and Figure 2.
- 1.2 Colindale Avenue is the key east/west link that crosses the Underground line, serves Colindale Underground station and links Colindale to the A5/Edgware Road. Although it is a key 'gateway', its current scale and character does not reflect its importance. Colindale Avenue is identified as a potential location for tall buildings, with Policy CS5 stating that tall buildings will be supported in strategic locations, which includes the Colindale Avenue of change and close to the new public transport interchange and on corners which will aid legibility.
- 1.3 Over the course of preparing the Colindale Underground Station SPD, the design concept for the site has evolved. The initial Scoping Report includes a character appraisal of the wider Colindale area and on that basis, an initial form, density and height of development was established. This Design Report sets out how the scheme has changed assessing the visual impact, height, micro-climate and frontages.

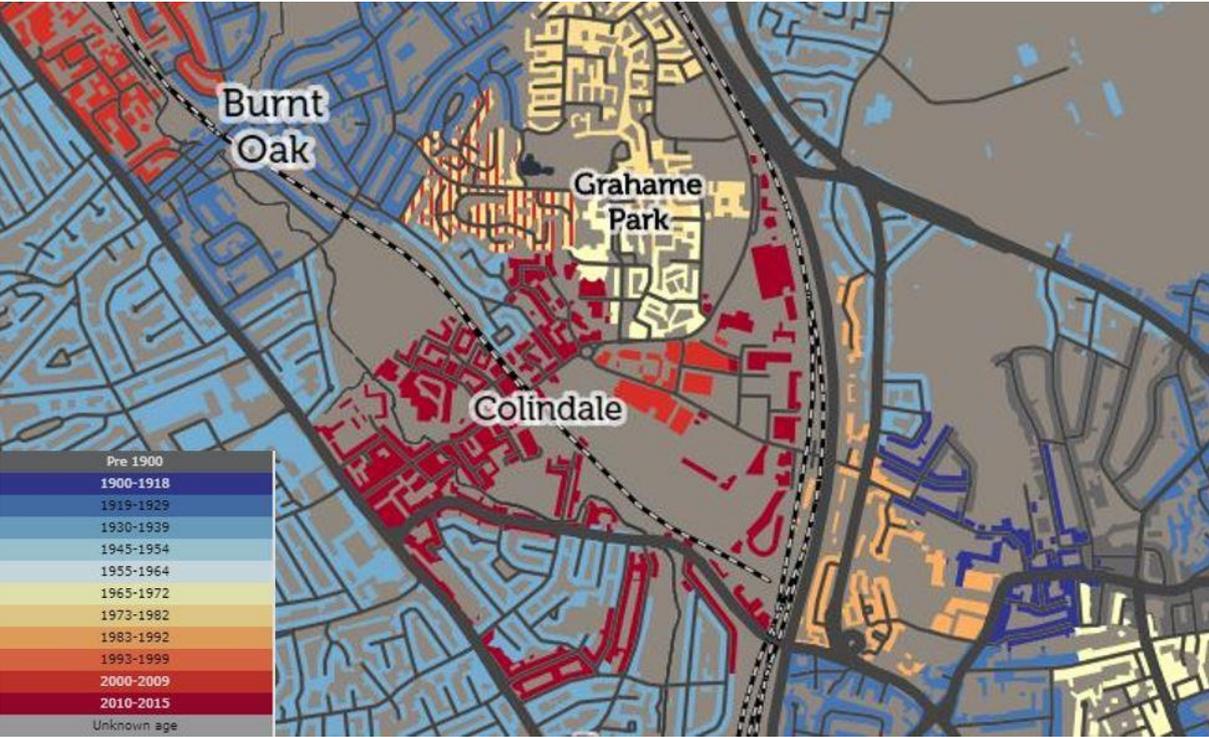


Figure 1 - Building ages



-  Colindale Station area
-  Residential pre-2000
-  Residential post-2000

Figure 2 - Building age Zoom

2. The Design Concept for the SPD Site

2.1 The Scoping Report (July 2018) for the Colindale Underground Station SPD sets an initial framework for development. As with the draft SPD, it divides the site into a series of parcels, and recommends:

- Site A – Replacement of existing tube station with commercial use at ground floor and residential above. The building should be no more than 16 storeys high.
- Site B – New station to be positioned over the rail-tracks with integrated station plaza with potential for over-station development.
- Site C & D – New widened public realm set-back to allow for commercial properties at ground floor with residential above. At the westerly end (current car park site), the building could extend up to 14 storeys dropping down to no more than 9 storeys for the remainder of the site.

2.2 This initial design concept was shared with stakeholders and the Colindale Project Board. Through discussion of the concept, and in the knowledge of new emerging proposals for nearby sites, the draft SPD was published in October 2018, proposing:

- Site A – Replacement of existing tube station with commercial use at ground floor and residential above. The building could be between 20 and 28 storeys in height.
- Site B – New station to be positioned over the rail-tracks with integrated station plaza with potential for over-station development.
- Site C – New widened public realm set-back to allow for commercial properties at ground floor with residential above. The new structure could be between 16 and 20 storeys in height.
- Site D – New widened public realm set-back to allow for commercial properties at ground floor with residential above. The new structure to be no more than 8 storeys in height.
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2.3 Whilst there is no change to the form of development proposed, there are changes in relation to height. The main change included in the draft SPD is

the proposed height of Site A, with more limited change to Site C. Site D is reduced in height. There is no change to Site B.

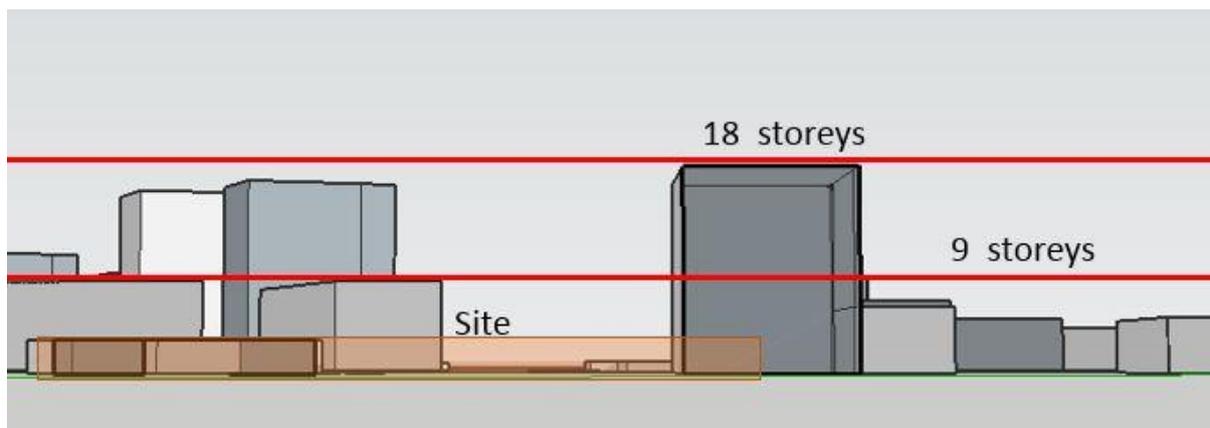


Figure 3- Existing height along Colindale Avenue

3. Height

- 3.1 As set out in Section 2 above, the Scoping Report established initial heights for new development at this location. However, in testing this scheme it became apparent that the new development could have greater visual impact in terms of providing a way-marker for the new station and neighbourhood centre. It also became clear, that redevelopment of this site, provided an opportunity to establish a height strategy and urban form for Colindale which would start to unite the individual developments completed in the wider area into a cohesive urban form.
- 3.2 The site is split into 5 parcels, 4 of which incorporate structures of varying height. The development parcels A, B, C, D are shown in Figure 4.
- 3.3 With regard to Site A, the Scoping Report proposed a building of 16 storeys. This was lower than buildings which had been allowed in the wider area and in developing the concept for the draft SPD it was recognised, would not have provided a visual marker to the centre of Colindale. Also, given the small footprint of Site A, it was recognised that the building could be taller to provide

a slender and elegant building form, with defined visual contrast to the immediately adjoining building (which is 18 storeys in height). A building of between 20 and 28 storeys in height is therefore proposed. This will be the tallest in Colindale with all other buildings tapering down in height.

- 3.4 To reflect the increased height of Site A, Site C has been marginally increased in height from 14 storeys in the Scoping Report to between 16 and 20 storeys in the draft SPD. This height has been increased to provide an urban form, stepping down in height.
- 3.5 Site D is to be no more than 8 storeys in height. This has been lowered from 9 storeys in the draft SPD to fits with the design and height concept for the SPD site and complements the proposed height of development immediately opposite (Peel Centre).
- 3.6 Development of the SPD site provides an opportunity to provide a new development in the centre of Colindale which starts to knit together the individual developments which have been completed in the immediately adjoining area. By creating a high and dense form of development at this location, the centre of Colindale is immediately visually obvious and starts to deliver an urban grain to the area, while stitching together existing and future developments currently in planning stage. In establishing a height strategy with the highest building at the centre (see Figures 6,7), a legible townscape is created, and does not only deliver pleasant long views but also provides a visual marker for the station and the central core of Colindale.

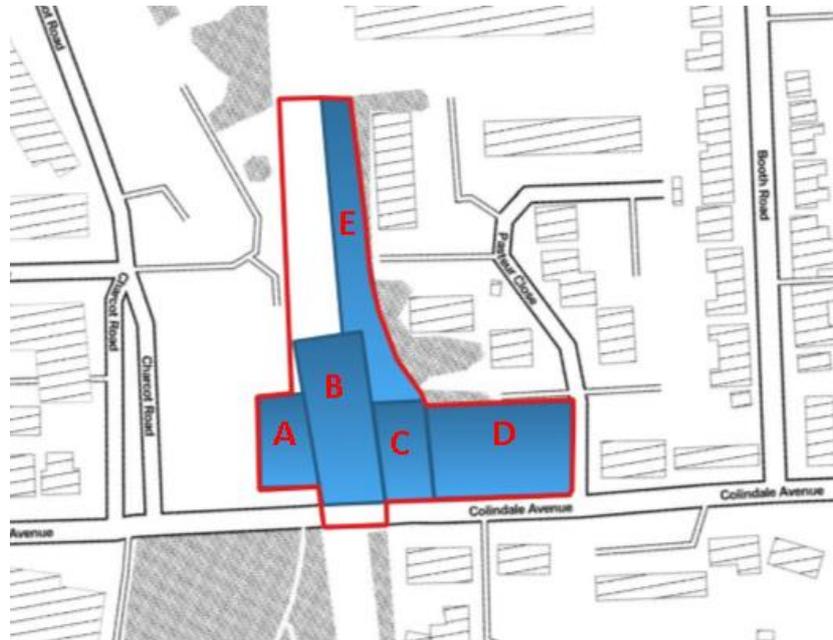


Figure 4 - Development parcels

4. Visual Impact

- 4.1 The site currently has a very low density; undoubtedly any structure over 2 storeys will create change on the townscape. The current environment is not reflecting the true potential of the area. New buildings are an exception but most of the urban fabric around the site is not contemporary. Views are poor in aesthetics and expression despite the age of the buildings. The housing which predates the designation of Colindale as an Opportunity Area comprises a mixture of inter-war housing in the form of two-storey semi-detached properties and mid to late twentieth century, two-storey terraced properties arranged in a collection of cul-de-sacs.
- 4.2 Having said that the site is located within a regeneration area earmarked for dense environments. Controlling the visual impact would rely on architectural expression of form. The station site as the main transport hub in Colindale can act as a visual landmark for the area, marking the station and providing wayfinding ease to pedestrians and commuters. Height and higher density at

this location will also denote the centre of Colindale, providing a visual way-marker to the new neighbourhood centre.

- 4.4 As outlined in Sections 2 and 3 above, two scenarios were studied to access the visual impact of development. To understand how the site can act as a landmark for Colindale the studied scenarios focused on the variation of height and footprint. The adjacent Colindale gardens comprises of buildings spanning up to 21 floors, this was considered when testing the two options as this is a scheme that is in planning stages.
- 4.5 Figure 5 presents a low option which incorporates a continuous frontage on the edge of Colindale Avenue. The height reduces to the eastern part to meet the existing residential environment. This scenario does not mark the site clearly and leaves less ground available for pedestrian facilities and open space. The townscape impact would be illegible as there is no clear marker building and no apparent unifying feature to stitch the upcoming developments and existing environment together.
- 4.6 Figure 6 presents an option of maximum height which also incorporates smaller footprints and breaks between structures to incorporate open space. This option clearly marks the station site as the heart of Colindale and could provide wayfinding guidance to pedestrians and commuters. It is evident in Figure 7 that the Townscape is expressed in height through the pinnacle of the station site. The slender tall elements are working better in providing legibility in long views, marking the station and providing a true epicentre for Colindale expressed through height.
- 4.7 In conclusion due to the location of existing and proposed high buildings on Colindale Avenue, the site can accommodate structures over 8 floors i.e. tall buildings. The existing views from Colindale Avenue allow for additions to the skyline that is now dominated by the existing Stay Club Colindale hotel. The skyline has potential to become more legible through a varied motif that will frame views towards the site, surrounding areas and contain sky exposure. The proximity of the residential environment dictates that views from houses into the development should be tested thoroughly.

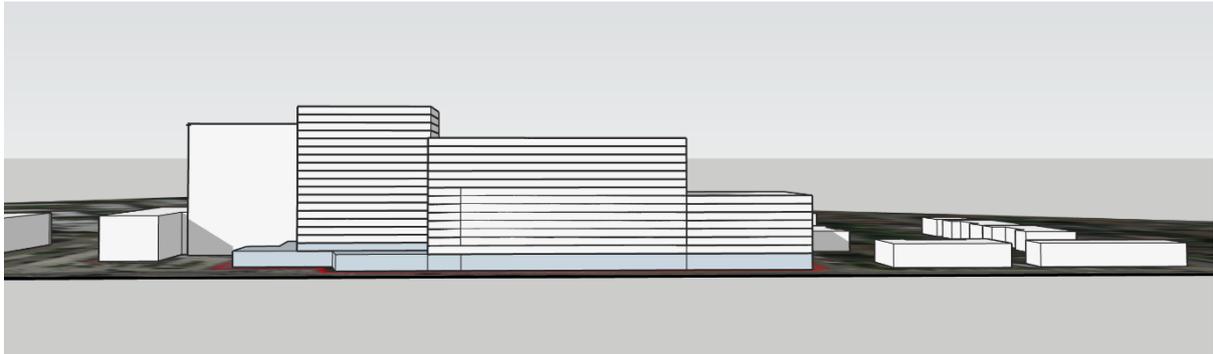


Figure 5 - Maximum Impact Continuous development North section

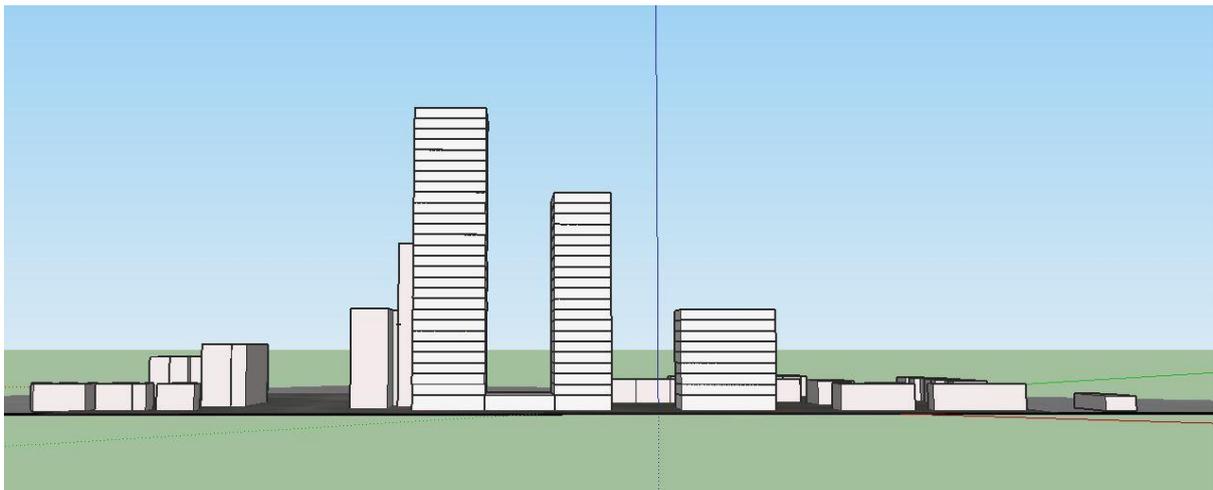


Figure 6 – Better townscape tall slender elements with breaks

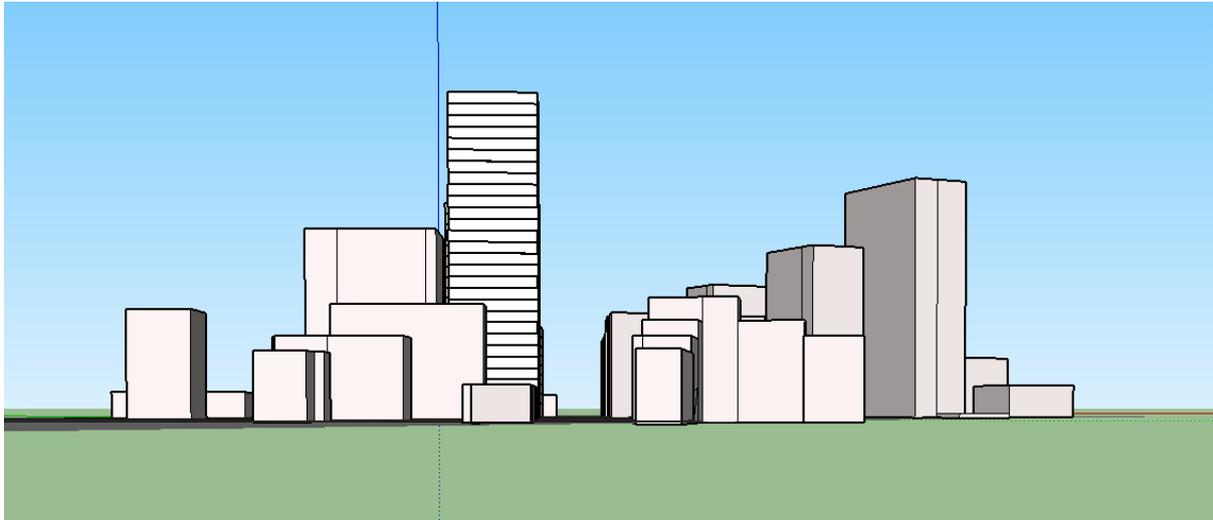


Figure 7 - Townscape view with existing and upcoming developments

5. Shadows

5.1 For overshadowing, the BRE guidance suggests for an amenity area, like a garden, to appear sunlit throughout the year, at least 50% of the garden or amenity area should receive 2 hours of sunlight on 21st March (21st March is the equinox month and is the set day for testing overshadowing in accordance with the BRE criteria).

5.2 The scenario presented in Figure 5 above failed to meet the BRE guidelines due to the lack of breaks in the structure. This scenario cast a single continuous shadow which is seen as detrimental to the existing surrounding amenities.

5.3 The scenario presented in Figure 6 above provides breaks in the buildings which allow for sunlight to penetrate easier. This scenario was thoroughly tested and results can be seen below in Figures 8-16.

5.4 It is important to note that this analysis is based on concept designs and any subsequent development proposals would be more refined to reduce the impact of overshadowing on adjoining properties as much as possible.

5.4 Shadows cast from the proposed structures have been modelled on three dates. 21st of March, 21st of June and 21st of September. 9 AM, 12 Noon and 15:00 PM.

5.5 21st of March: The results indicate that although overshadowing does occur the neighbouring properties get more than 2 hours of sunlight. In addition, to further support the results, more than 50% of the amenity areas (gardens) receive adequate sunlight for more than 2 hours of the day. The overshadowing results to the existing open amenity space show that good levels of sunlight in accordance with the BRE guidelines.



Figure 8 - Colindale Shadows 21 March 09:00 AM



Figure 9 - Colindale Shadows 21 March 12:00 Noon



Figure 10 - Colindale Shadows 21 March 15:00 PM

5.521st of June: The results indicate that although overshadowing does occur the neighbouring properties get more than 2 hours of sunlight. In addition, to further support the results, more than 50% of the amenity areas (gardens) receive adequate sunlight for more than 2 hours of the day. The overshadowing results to

the existing open amenity space show that good levels of sunlight in accordance with the BRE guidelines.



Figure 11 - Colindale Shadows 21 June 09:00 AM



Figure 12 - Colindale Shadows 21 June 12:00 Noon



Figure 13 - Colindale Shadows 21 June 15:00 PM

5.7 21st of September: The results indicate that although overshadowing does occur the neighbouring properties get more than 2 hours of sunlight. In addition, to further support the results, more than 50% of the amenity areas (gardens) receive adequate sunlight for more than 2 hours of the day. The overshadowing results to the existing open amenity space show that good levels of sunlight in accordance with the BRE guidelines.



Figure 14 - Colindale Shadows 21 September 09:00 AM



Figure 15 - Colindale Shadows 21 September 12:00 Noon



Figure 16 - Colindale Shadows 21 September 15:00 PM

6 Micro climate

6.1 The prevailing wind is a south- western one (Figure 17). In the absence of detailed proposals, the impact of new development on micro-climate cannot be fully tested, however, the following mitigation measures should be incorporated into any scheme and testing results be submitted along with any planning application:

- *Wind* – Ensure that potential levels of wind strength around the base of a building and on balconies and roof gardens are taken into consideration. A building might be expected to have adverse impacts if it is significantly taller than adjacent properties, is part of a small cluster of tall buildings or stands alone. The acceptability of windy conditions is influenced by factors such as the existing average local wind strengths, the time of year, air temperature, humidity and sunshine. The Lawson Criteria for Distress and Comfort are set out in Table 2.5.1 within the Sustainable Design and Construction SPD 2016 (<https://www.barnet.gov.uk/citizen-home/planning-conservation-and->

[building-control/planning-policies-and-further-information/local-plan/supplementary-planning-documents/sustainable-design-and-construction/sustainable-design-and-construction-spd-documents.html](#)) and provide a set of principles to follow in terms of acceptable wind conditions for different types of activities.

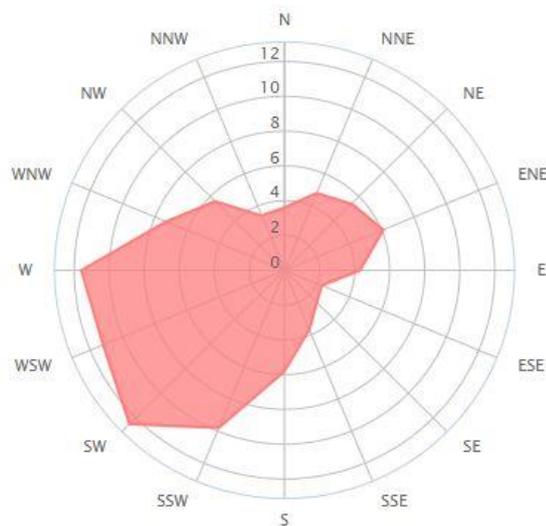


Figure 17 - Prevailing SW wind affecting the site

- *Thermal Conditions* – Ensure that the design of buildings has considered the thermal impact in relation to outdoor spaces and internal glazed spaces. South facing, enclosed or semi-enclosed areas can trap the sun and create pleasant conditions even when the ambient temperature is cool. Such locations however can also be unbearably hot in mid-summer if there is no shade. Locations with wide expanses of tarmac, for instance can be excessively hot and contribute to the urban heat island effect.
- 6.2 For tall buildings above 20 floors, it is necessary to require wind studies at a very early stage of design to ensure that the adverse wind effects can be mitigated through positive massing adjustments.

6.3 The following items are the basic minimum requirements for any type of wind microclimate study

- Use of Lawson Criteria (LDDC version) to present the results of wind study.
- Consideration of more than just the prevailing south-westerly components;
- Combination of long-term London weather statistics (ideally through processing at least 10 years of good quality weather data) with local wind flows obtained from wind tunnel tests or Computational simulations
- Consideration of mean and gust speeds, and reporting of both winter and summer conditions;
- Careful assessment and description of expected pedestrian uses (sitting, standing, walking, etc.) in different parts of the site;

7 Frontages

7.1 There are no active frontages on Colindale Avenue except for the station. The station frontage although active in a technical sense is quite unattractive. The importance of Colindale Avenue is evident to the area. An arterial route should provide strong frontages which incorporate non-residential uses that can line the street and provide legible and navigable edges. This will induce activity, enhance the local economy and potentially make for an attractive edge which will complement Colindale Avenue. There is a proposal for a public square opposite the station as part of the Gateway to the new Peel centre development by Redrow. The environment will be fully mixed use, providing retail and ancillary uses as well as residential uses on upper floors. The overarching principle for Colindale Avenue would be that it can act as a High Street in years to come. It is therefore fitting that the Station site is active and welcoming to complement the area and act as a landmark location on the ground plane as well as through height, stitching together Colindale Avenue.



Figure 18 - Current active frontage