



Planning for Growth in Bromley

Biggin Hill Study

Final Report

UNITED
KINGDOM &
IRELAND



February 2015

Prepared for: LB Bromley



REVISION SCHEDULE					
Rev	Date	Details	Prepared by	Reviewed by	Approved by
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1 INTRODUCTION

London Borough of Bromley (LBB) commissioned URS and DTZ to provide a critical assessment of the growth capacities of Biggin Hill, alongside a similar study of the Cray Business Corridor. The work is to help inform the development of planning policies and identify enabling infrastructure requirements.

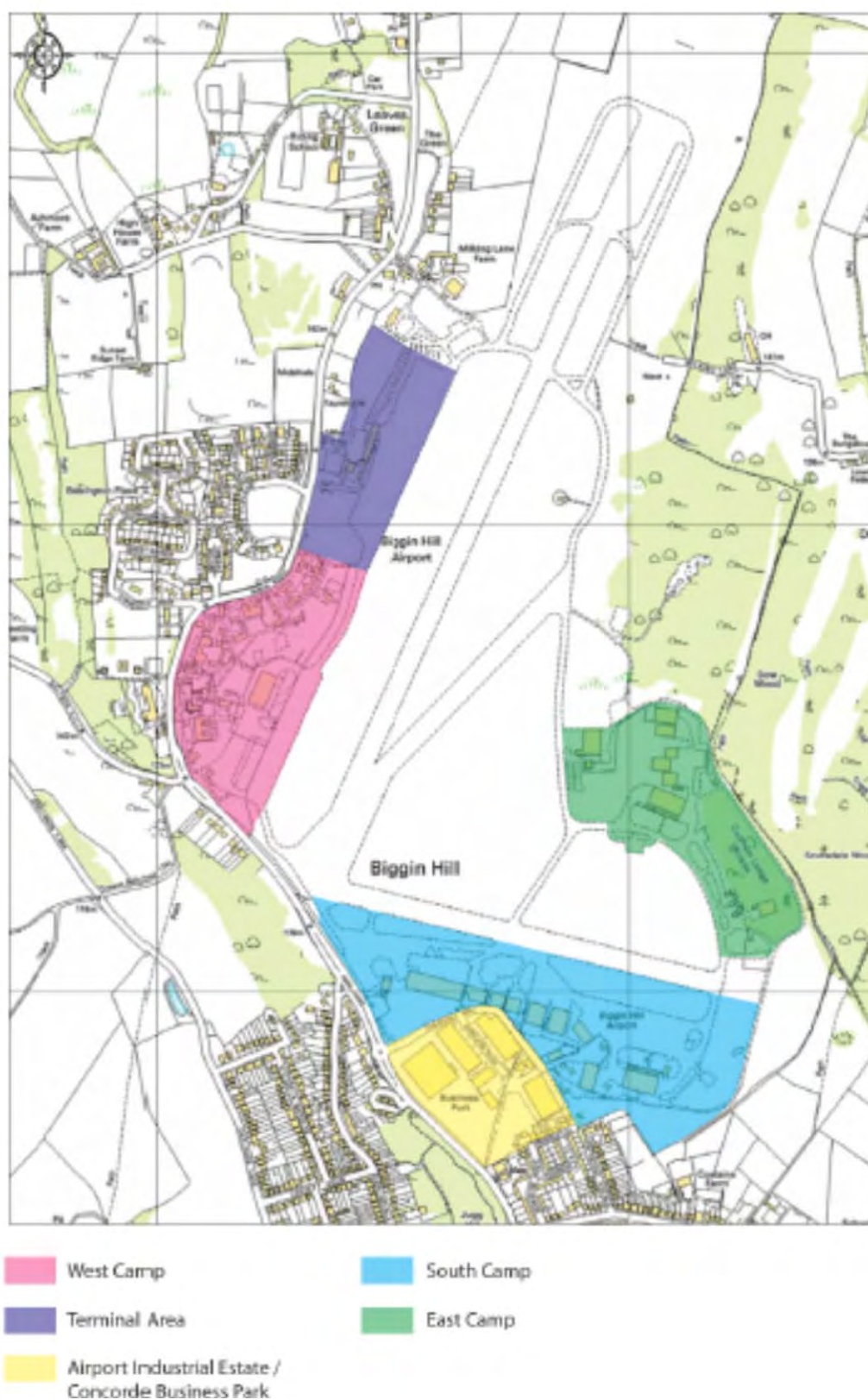
This report focuses on Biggin Hill. Key aims are to:

- Undertake a critical evaluation of the various strategic masterplan proposals put forward by Biggin Hill Airport Ltd and the Locate Partnership between 2012 and 2014¹.
- Consider the implications of growth proposals on the Green Belt and Strategic Outer London Development Centre (SOLDC) designations.
- Evaluate the business case supporting the strategic masterplans.
- Review the previous urban design and heritage assessments of West Camp and undertake a new heritage appraisal in response to new proposals.
- Undertake a transport impact assessment of the proposed land use options.
- Provide a market assessment, deliverability and investment plan focusing in particular on emerging proposals for West Camp

Biggin Hill Airport is located in the south of the borough directly north of Biggin Hill settlement and east of the A223. Figure 1.1 identifies the site location and existing development areas adjacent to the airport.

¹ Listed under Section 3.1 of this report.

Figure 1.1 - Site Location Plan and Existing Development Areas



Source - NLP

2 PLANNING POLICY AND MASTERPLAN APPRAISAL

2.1 Introduction

To help inform production of the London Borough of Bromley's Local Plan a planning appraisal has been conducted to identify all relevant policy considerations pertaining to future commercial growth at Biggin Hill. To appraise the potential for growth a number of tasks have been undertaken:

1. A review of the national, regional and local policy with particular consideration afforded to the Strategic Outer London Development Centre (SOLDC) and Green Belt designations;
2. An assessment of the Locate partnerships emerging proposals, and Local Plan representations (incorporating discussions with Biggin Hill Airport Ltd and the Locate partnership's appointed planning consultants); and
3. Examination of the potential for new development at Biggin Hill under the existing policy framework and legislation (incorporating a high-level desk based Green Belt commentary).

2.2 National Policy

To pass examination the Local Plan will need to be in general conformity with both the National Planning Policy Framework (NPPF) and Greater London Authority's London Plan (2011) and the further alterations to the London Plan once adopted. The Local Plan in combination with the London Plan will form the Development Plan for the borough. This section outlines the key extracts from the NPPF insofar as they relate to the proposals being put forward for Biggin Hill. Key extracts are underlined (our emphasis) with regard to their relative importance to Biggin Hill.

Achieving sustainable development

Paragraph 7 sets out the three pillars of sustainability and discusses the importance of economic development:

7. ...contributing to building a strong, responsive and competitive economy, by ensuring that sufficient land of the right type is available in the right places and at the right time to support growth and innovation; and by identifying and coordinating development requirements, including the provision of infrastructure

Objectively assessed need

Paragraph 14 of the National Planning Policy Framework sets out the importance of meeting objectively assessed needs (including commercial needs):

14. At the heart of the National Planning Policy Framework is a presumption in favour of sustainable development, which should be seen as a golden thread running through both plan-making and decision-taking. For plan-making this means that:

- *local planning authorities should positively seek opportunities to meet the development needs of their area;*
- *Local Plans should meet objectively assessed needs, with sufficient flexibility to adapt to rapid change, unless:*
 - *any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole; or*

— specific policies in this Framework indicate development should be restricted²

Airports/Aviation

The NPPF includes policies for airports and aviation which place the onus on local planning authorities (LPAs) to support infrastructure, investment and growth at the local level:

31. Local authorities should work with neighbouring authorities and transport providers to develop strategies for the provision of viable infrastructure necessary to support sustainable development, including large scale facilities such as...transport investment necessary to support strategies for the growth of...airports or other major generators of travel demand in their areas...

33. When planning for...airports and airfields that are not subject to a separate national policy statement, plans should take account of their growth and role in serving business, leisure, training and emergency service needs. Plans should take account of this Framework as well as the principles set out in the relevant national policy statements and the Government Framework for UK Aviation.

Core Planning Principles

Two of the twelve NPPF core planning principles are of relevance to Biggin Hill, those regarding economic growth and Green Belts:

17. Within the overarching roles that the planning system ought to play, a set of core land-use planning principles should underpin both plan-making and decision-taking. These 12 principles are that planning should:

- *proactively drive and support sustainable economic development to deliver the ...business and industrial units, infrastructure and thriving local places that the country needs. Every effort should be made objectively to identify and then meet the...business and other development needs of an area, and respond positively to wider opportunities for growth. Plans should take account of market signals, such as land prices and housing affordability, and set out a clear strategy for allocating sufficient land which is suitable for development in their area, taking account of the needs of the residential and business communities;*
- *take account of the different roles and character of different areas, promoting the vitality of our main urban areas, protecting the Green Belts around them, recognising the intrinsic character and beauty of the countryside and supporting thriving rural communities within it..*

Building a strong, competitive economy

Paragraphs 18-22 set out national planning policy for the economy and commercial development. LPAs have to ensure they 'plan proactively' to ensure no stone is left unturned when assessing potential for economic growth in local areas.

18. The Government is committed to securing economic growth in order to create jobs and prosperity, building on the country's inherent strengths, and to meeting the twin challenges of global competition and of a low carbon future.

19. The Government is committed to ensuring that the planning system does everything it can to support sustainable economic growth. Planning should operate to encourage and not act as an impediment to sustainable growth. Therefore significant weight should be placed on the need to support economic growth through the planning system.

² For example, policies relating to sites protected under the Birds and Habitats Directives and/or SSSIs; **Green Belt**, Local Green Space, AONB; designated heritage assets; and locations at risk of flooding.

20. *To help achieve economic growth, local planning authorities should plan proactively to meet the development needs of business and support an economy fit for the 21st century.*

21. *Investment in business should not be over-burdened by the combined requirements of planning policy expectations. Planning policies should recognise and seek to address potential barriers to investment, including a poor environment or any lack of infrastructure, services or housing. In drawing up Local Plans, local planning authorities should:*

- *set out a clear economic vision and strategy for their area which positively and proactively encourages sustainable economic growth;*
- *set criteria, or identify strategic sites, for local and inward investment to match the strategy and to meet anticipated needs over the plan period;*
- *support existing business sectors, taking account of whether they are expanding or contracting and, where possible, identify and plan for new or emerging sectors likely to locate in their area. Policies should be flexible enough to accommodate needs not anticipated in the plan and to allow a rapid response to changes in economic circumstances;*
- *plan positively for the location, promotion and expansion of clusters or networks of knowledge driven, creative or high technology industries;*
- *identify priority areas for economic regeneration, infrastructure provision and environmental enhancement; and*
- *facilitate flexible working practices such as the integration of residential and commercial uses within the same unit.*

22. *Planning policies should avoid the long term protection of sites allocated for employment use where there is no reasonable prospect of a site being used for that purpose. Land allocations should be regularly reviewed. Where there is no reasonable prospect of a site being used for the allocated employment use, applications for alternative uses of land or buildings should be treated on their merits having regard to market signals and the relative need for different land uses to support sustainable local communities.*

Green Belt

Chapter 9 of the NPPF provides the national policy on Green Belt land and replaces PPG2. Paragraphs 79 and 80 set out the aim and purpose of Green Belt:

79. *The Government attaches great importance to Green Belts. The fundamental aim of Green Belt policy is to prevent urban sprawl by keeping land permanently open; the essential characteristics of Green Belts are their openness and their permanence.*

80. *Green Belt serves five purposes:*

- *to check the unrestricted sprawl of large built-up areas;*
- *to prevent neighbouring towns merging into one another;*
- *to assist in safeguarding the countryside from encroachment;*
- *to preserve the setting and special character of historic towns; and*
- *to assist in urban regeneration, by encouraging the recycling of derelict and other urban land.*

Paragraphs 83 to 85 guide how LPAs with existing Green Belt in their areas should approach making alterations to the Green Belt boundary (if necessary):

83. *Local planning authorities with Green Belts in their area should establish Green Belt boundaries in their Local Plans which set the framework for Green Belt and settlement policy. Once established, Green Belt boundaries should only be altered in exceptional circumstances, through the preparation or review of the Local Plan. At that time, authorities should consider the Green Belt boundaries having regard to their intended permanence in the long term, so that they should be capable of enduring beyond the plan period.*

84. When drawing up or reviewing Green Belt boundaries local planning authorities should take account of the need to promote sustainable patterns of development. They should consider the consequences for sustainable development of channelling development towards urban areas inside the Green Belt boundary, towards towns and villages inset within the Green Belt or towards locations beyond the outer Green Belt boundary.

85. When defining boundaries, local planning authorities should:

- ensure consistency with the Local Plan strategy for meeting identified requirements for sustainable development;
- not include land which it is unnecessary to keep permanently open;
- where necessary, identify in their plans areas of 'safeguarded land' between the urban area and the Green Belt, in order to meet longer-term development needs stretching well beyond the plan period;
- make clear that the safeguarded land is not allocated for development at the present time. Planning permission for the permanent development of safeguarded land should only be granted following a Local Plan review which proposes the development;
- satisfy themselves that Green Belt boundaries will not need to be altered at the end of the development plan period; and
- define boundaries clearly, using physical features that are readily recognisable and likely to be permanent.

Paragraphs 87 to 90 are of most relevance to future development at Biggin Hill. The NPPF is a material consideration for any planning applications and LPAs also have to ensure their Local Plans are in general conformity with national policy. Crucially paragraphs 89 and 90 outline what development is permissible on land designated as Green Belt:

87. As with previous Green Belt policy, inappropriate development is, by definition, harmful to the Green Belt and should not be approved except in very special circumstances.

88. When considering any planning application, local planning authorities should ensure that substantial weight is given to any harm to the Green Belt. 'Very special circumstances' will not exist unless the potential harm to the Green Belt by reason of inappropriateness, and any other harm, is clearly outweighed by other considerations.

89. A local planning authority should regard the construction of new buildings as inappropriate in Green Belt. Exceptions to this are:

- ..the extension or alteration of a building provided that it does not result in disproportionate additions over and above the size of the original building;
- the replacement of a building, provided the new building is in the same use and not materially larger than the one it replaces;
- limited infilling in villages..; or
- limited infilling or the partial or complete redevelopment of previously developed sites (brownfield land), whether redundant or in continuing use (excluding temporary buildings), which would not have a greater impact on the openness of the Green Belt and the purpose of including land within it than the existing development.

90. Certain other forms of development are also not inappropriate in Green Belt provided they preserve the openness of the Green Belt and do not conflict with the purposes of including land in Green Belt. These are:

- mineral extraction;
- engineering operations;
- local transport infrastructure which can demonstrate a requirement for a Green Belt location;
- the re-use of buildings provided that the buildings are of permanent and substantial construction; and
- development brought forward under a Community Right to Build Order.

Conserving and enhancing the historic environment

West Camp is within a Conservation Area, as such heritage policies within the NPPF will also have to be reflected in any emerging Local Plan policy for Biggin Hill.

126. Local planning authorities should set out in their Local Plan a positive strategy for the conservation and enjoyment of the historic environment, including heritage assets most at risk through neglect, decay or other threats. In doing so, they should recognise that heritage assets are an irreplaceable resource and conserve them in a manner appropriate to their significance. In developing this strategy, local planning authorities should take into account:

- the desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation;*
- the wider social, cultural, economic and environmental benefits that conservation of the historic environment can bring;*
- the desirability of new development making a positive contribution to local character and distinctiveness; and*
- opportunities to draw on the contribution made by the historic environment to the character of a place.*

137. Local planning authorities should look for opportunities for new development within Conservation Areas and World Heritage Sites and within the setting of heritage assets to enhance or better reveal their significance. Proposals that preserve those elements of the setting that make a positive contribution to or better reveal the significance of the asset should be treated favourably.

138. Not all elements of a World Heritage Site or Conservation Area will necessarily contribute to its significance. Loss of a building (or other element) which makes a positive contribution to the significance of the Conservation Area or World Heritage Site should be treated either as substantial harm under paragraph 133 or less than substantial harm under paragraph 134, as appropriate, taking into account the relative significance of the element affected and its contribution to the significance of the Conservation Area or World Heritage Site as a whole.

2.3

Regional Policy

A key piece of evidence that fed into the London Plan (2011) was the work of the Outer London Commission (OLC). The OLC was established by the Mayor of London to advise how Outer London can play its full part in the city's economic success. The OLC is currently chaired by William McKee CBE and includes representatives of business, the boroughs, the development industry and the voluntary sector. The OLC published its First Report in June 2010. The concept of strategic outer London development centres (SOLDCs) was first mooted in this report. SOLDCs are areas that offer unique opportunities for economic growth.

The OLC report found that there was scope for smaller increments to existing capacity (and improvements to quality) in some competitive locations with distinct types or scales of activity (or mix of activities). The OLC recommended that to avoid compromising the viability of capacity in other centres, these would have to be of more than sub-regional importance and with the potential for further development both within the centres themselves and in their hinterlands. This concept could be applied to a wider range of business clusters than the office based 'super-hubs' concept included in the First Report, including leisure/tourism, media, logistics, industry, higher/further education and retailing. The OLC recommended that its initial list of these clusters be left open to be refined through the Draft Replacement London Plan preparation process.

London Plan

The London Plan transposed many of the OLC recommendations into policy in 2011 including within the Outer London vision:

Policy 2.6 Outer London: vision and strategy

Strategic

A The Mayor will, and boroughs and other stakeholders should, work to realise the potential of outer London, recognising and building upon its great diversity and varied strengths by providing locally sensitive approaches through LDFs and other development frameworks to enhance and promote its distinct existing and emerging strategic and local economic opportunities, and transport requirements.

The OLC's comments regarding the enhancement of employment areas of more than sub-regional importance is reflected in the below economic policy:

Policy 2.7 Outer London: economy

Strategic

A The Mayor will, and boroughs and other stakeholders should, seek to address constraints and opportunities in the economic growth of outer London so that it can rise above its long term economic trends by:

- a. enabling existing sources of growth to perform more effectively, and increasing the competitive attractiveness of outer London for new sectors or those with the potential for step changes in output*
- b. identifying, developing and enhancing capacity to support both viable local activities and those with a wider than sub-regional offer, including strategic outer London development centres (see Policy 2.16)*
- c. improving accessibility to competitive business locations (especially town centres and strategic industrial locations) through: making the most effective use of existing and new infrastructure investment; encouraging walking, cycling and public transport use; and enabling the labour market to function more efficiently in opening up wider opportunities to Londoners*
- d. providing strategic and local coordination within development corridors, including across the London boundary, to enhance competitive advantage and synergies for clusters of related activities and business locations, drawing on strategic support through opportunity area planning frameworks as indicated in Policy 2.13*
- e. ensuring that appropriate weight is given to wider economic as well as more local environmental and other objectives when considering business...development proposals*
- f. prioritising improvements to the business environment...; improving access to industrial locations; ...and ensuring high quality design contributes to a distinctive business offer*
- g. consolidating and developing the strengths of outer London's office market through mixed use redevelopment and encouraging new provision in competitive locations, including through the use of land use 'swaps'*
- h. identifying and bringing forward capacity in and around town centres with good public transport accessibility to accommodate leisure...providing recognition and support for specialist as well as wider town centre functions*
- i. managing and improving the stock of industrial capacity to meet both strategic and local needs, including those of small and medium sized enterprises (SMEs), start-ups and businesses requiring more affordable workspace*
- j. co-ordinating investment by different public agencies to complement that of the private sector and promoting the competitive advantages of outer London for public sector employment, especially for functions of wider than sub-regional significance*
- k. supporting leisure, arts, culture and tourism and the contribution that theatres and similar facilities and the historic environment can make to the outer London economy, including through proactive identification of cultural quarters and promotion and management of the night time economy (see Policy 4.6)*
- l. ensuring that strategic and local marketing of outer London's visitor attractions are effectively co-ordinated and that account is taken of its capacity to accommodate large scale commercial leisure attractions, especially in the north, east and south sectors*
- m. ensuring that locally-driven responses to skills needs in outer London also help address strategic Londonwide objectives*

- n. *identifying and addressing local pockets of deprivation, and especially the strategic priorities identified in this Plan as regeneration areas (see Policy 2.14)*
- o. *establishing 'tailored' partnerships and other cross-boundary working arrangements to address particular issues, recognising that parts of inner London also have 'outer' characteristics and vice versa, and that common areas of concern should be addressed jointly with authorities beyond London*
- p. *ensuring the availability of an adequate number and appropriate range of homes to help attract and retain employees and enable them to live closer to their place of work in outer London.*

Biggin Hill's remote location means that transport improvements will need to accompany growth in jobs and commercial floorspace. Below is the London Plan policy steer for transport in Outer London:

Policy 2.8 Outer London: Transport

A The Mayor will, and boroughs and other stakeholders should, recognise and address the distinct orbital, radial and qualitative transport needs of outer London in the context of those of the city region as a whole by:

- a. enhancing accessibility by improving links to and between town centres and other key locations by different modes and promoting and realising the improvements to the rail network set out in Policy 6.4 and the Mayor's Transport Strategy
- b. integrating land use and transport planning in outer London to ensure the use of vacant and under-used land is optimised
- c. ensuring that the rail, bus and other transport networks function better as integrated systems and better cater for both orbital and radial trips, for example through the provision of strategic interchanges
- d. improving the quality, lighting and security of stations to agreed quality standards
- e. supporting park and ride schemes where appropriate
- f. working to improve public transport access to job opportunities in the Outer Metropolitan Area, supporting reverse commuting, and enhancing the key role played by efficient bus services in outer London
- g. encouraging greater use of cycling and walking as modes of choice in outer London
- h. more active traffic management, including demand management measures; road improvements to address local congestion; car parking policy and guidance which reflects greater dependence on the private car; closer co-ordination of transport policy and investment with neighbouring authorities beyond London; and greater recognition of the relationship between office development and car use
- i. maximising the development opportunities supported by Crossrail.

Biggin Hill is recognised as a SOLDC for transport related functions, this provides a strong policy steer for the London Borough of Bromley on how to approach a future planning framework at Biggin Hill:

Policy 2.16 Strategic outer London development centres

Strategic

A The Mayor will, and boroughs and other stakeholders should, identify, develop and promote strategic development centres in outer London or adjacent parts of inner London with one or more strategic economic functions of greater than subregional importance (see para 2.77) by:

- a. co-ordinating public and private infrastructure investment
- b. bringing forward adequate development capacity
- c. placing a strong emphasis on creating a distinct and attractive business offer and public realm through design and mixed use development as well as any more specialist forms of accommodation
- d. improving Londoners' access to new employment opportunities.

B The Mayor will work with boroughs and other partners to develop and implement planning frameworks and/ or other appropriate spatial planning and investment tools that can effect positive change to realise the potential of strategic outer London development centres.

Table 2.1 - Potential strategic outer London development centres (Further Alterations to the London Plan – Intend to Publish, December 2014)

Strategic function(s) of greater than sub-regional importance	Potential outer London development centres
Leisure/tourism/arts/culture/sports	Wembley, parts of Greenwich, Richmond/ Kingston, Stratford, Royal Docks, the Lower Lee Valley and the Upper Lee Valley, Hillingdon and the Wandle Valley, Crystal Palace
Media	White City, parts of Park Royal, Hounslow (Great West Corridor)
Logistics	Parts of Bexley, Barking & Dagenham, Enfield, Havering, Hillingdon, Hounslow, Park Royal
Other transport related functions	Parts of Hillingdon, Hounslow, Royal Docks, Biggin Hill
Strategic office	Croydon, Stratford, Brent Cross/ Cricklewood (subject to demand)
Higher Education	Uxbridge, Kingston, Greenwich. Possibly Croydon, Stratford, Havering, White City
Industry/green enterprise	Upper Lee Valley, Bexley Riverside, London Riverside, Park Royal
Retail	Brent Cross, Stratford, Wembley

The London Plan places the onus on the boroughs to promote these SOLDCs, provide adequate development capacity and maximise opportunities for jobs growth. Other key policies within the London Plan, of relevance to Biggin Hill, are the Mayor's policies for aviation and Green Belt:

Policy 6.6 Aviation

Strategic

A Adequate airport capacity serving a wide range of destinations is critical to the competitive position of London in a global economy. Airport capacity serving the capital and wider south east of England must be sufficient to sustain London's competitive position.

B The Mayor:

...supports improvements of the facilities for passengers at Heathrow and other

London airports in ways other than increasing the number of aircraft movements, particularly to optimise efficiency and sustainability, enhance the user experience, and to ensure the availability of viable and attractive public transport options to access them...

Planning decisions

D Development proposals affecting airport operations or patterns of air traffic (particularly those involving increases in the number of aircraft movements) should:

a give a high priority to sustainability and take full account of environmental impacts (particularly noise and air quality)

b promote access to airports by travellers and staff by sustainable means, particularly by public transport.

A key aim for the Locate partnership is to improve the facilities, capacity and economic performance of the Airport (airside and non-airside) whilst maintaining the existing aircraft movements. However, Locate partnership's appointed planning consultants have highlighted the inherent risks associated with promoting development through the planning system for areas washed over by the Green Belt. Mayoral policy on Green Belt requires all applications to demonstrate that they conform with national policy and demonstrate 'very special circumstances' where they do not.

Policy 7.16 Green Belt

Strategic

A The Mayor strongly supports the current extent of London's Green Belt, its extension in appropriate circumstances and its protection from inappropriate development.

Draft Town Centres Supplementary Planning Guidance

In addition to the statutory London Plan policies, the Town Centres Supplementary Planning Guidance (SPG) provides non-statutory implementation guidance for the identified SOLDC areas and sets out criteria that may be used to guide development in the future. The SPG will be a material planning consideration for applications at Biggin Hill. The SPG notes that the considerable potential of the SOLDC concept whilst cautioning that it should not undermine the economic prospects of neighbouring town centres including those in adjacent boroughs. Development of the SOLDC concept in the identified locations should support:

- the principles in the vision and strategy for outer London (Policy 2.6 Outer London: vision and strategy – see above); and
- the economic and transport policies in the London Plan for outer London (Policies 2.7 Outer London: economy and 2.8 Outer London: transport).

The SPG states that the role of SOLDCs must be developed to safeguard the economic strengths of different types of business location including town centres, other office locations such as those indicated in the London Plan and industrial areas. The SPG recommends that details can be developed at the local level, allowing boroughs the flexibility to respond to local need and circumstances. Similarly it encourages Boroughs to engage the GLA at an early stage of Local Plan preparation to secure Mayoral support for SOLDC development and in developing strategic infrastructure plans to support them, and the importance of planning frameworks to deliver them. Boroughs and other partners are encouraged to develop complementary linkages with other types of business locations, for example town centres, office locations and development corridors extending beyond London.

The SPG recognises that implementation of London Plan SOLDCs will involve actions from a range of partners in light of local circumstances on matters including (but not exclusively):

- planning policy (local and neighbourhood, where appropriate) and frameworks (including Opportunity Area Planning Frameworks, local Area Action Plans, Town Centre strategies etc)
- strategic infrastructure plans
- new development and refurbishment
- transport accessibility and capacity upgrades
- other infrastructure
- management and investment (including Business Improvement Districts)
- improvements to the business environment and public realm
- promotion, branding and marketing.

Appendix I of the SPG includes more specific SOLDC implementation guidelines for Biggin Hill:

- *Look at strategic function in 'other Transport Related Functions'*
- *Explore potential to support specialist and engineering firms working in the business and general aviation sector. Airport businesses have plans to expand, increase jobs and attract foreign investment*
- *Recognise the economic role of the airport and adjoining business areas whilst enhancing environmental performance in line with London Plan Policy 6.6*
- *Balance economic and business roles of the airport with environmental factors including Green Belt (London Plan Policy 7.16), noise, access and local amenity*
- *Seek opportunities and capacity to create high quality business and training premises*
- *Explore potential for development of aviation academy, airport heritage centre and a hotel/leisure hub of a scale appropriate to serve the airport and wider cluster.*

Whilst the SPG is not statutory policy it represents regional guidance which should be utilised for the production of new local level statutory plans or non-statutory policy interventions such as masterplans and/or SPDs.

2.4 Local Policy

The saved policies in the UDP for Biggin Hill Airport and Environs reviewed for the purposes of this report include:

- BH1 Local Environment
- BH2 New Development
- BH3 South Camp
- BH4 Passenger Terminal/Control Tower/West Camp (Area 1)
- BH6 East Camp (Area 3)
- BH7 Safety
- BH8 Noise-Sensitive Development

The above policies reflect the Airport's location mainly within the Green Belt and adjoining Site of Interest for Nature Conservation, Tree Preservation Orders and the proposed World Heritage Site³; previous Government Airports Policy (at the time of the UDPs adoption - since superseded); and the operational arrangements and other requirements, set down in the lease to Biggin Hill Airport Ltd.

Under these saved policies limited infilling and redevelopment is permissible within the identified Major Development Sites within the Green Belt (MDS), provided development leads to improvements in appearance/facilities and it is balanced with: environmental factors, such as air quality and noise; the designation of Public Safety Zones and safeguarding area; preservation or enhancement of the character and appearance of heritage areas/assets; alignment with transport proposals identified in the Local Implementation Plan; and the need to minimise surface access journeys. The saved UDP policies are currently provided for a series of broad development areas. Below is an analysis of how these policies conform with current national and regional policy frameworks.

BH1 Local Environment

When considering all development proposals at, or relating to, Biggin Hill Airport, the Council will seek to the maximum possible extent to protect the amenities of those affected by airport operations, and to ensure that harm and disturbance to the environment generally is minimised.

Strengths <ul style="list-style-type: none"> Overarching headline policy stance / principles clearly set out 	Weaknesses <ul style="list-style-type: none"> Repetition of national and regional policies for amenity
Opportunities <ul style="list-style-type: none"> The thrust of the policy intent could be incorporated into the new Local Plan's context section or a reasoned justification. Incorporate updated Noise Contours and Public Safety Zones into a Local Plan inset map 	Threats <ul style="list-style-type: none"> Paragraph 154 of the NPPF states that: <i>Only policies that provide a clear indication of how a decision maker should react to a development proposal should be included in the plan.</i> To pass the tests of soundness a new Local Plan policy of this nature will have to be more instructive to the decision maker.

³ Darwins Landscape Laboratory has been placed on the new Tentative List of UK sites wishing to be inscribed for World heritage status. Darwin's Landscape joins the 2012 list as one of the 2 sites still being considered by UNESCO

BH2 New Development

The Council will expect new development requiring planning permission to be located either:

- (i) in the area South of Runway 11/29 (South Camp); or
- (ii) within Areas 1, 2 or 3 of the Major Developed Site (MDS) as identified on Map BH1.

Within Areas 1, 2, and 3 of the MDS limited infilling or redevelopment will be considered appropriate providing that it accords with PPG2, in particular the relevant criteria set out in Annex C.

The Biggin Hill MDS comprises three areas of land, as identified on Map BH1 of the UDP, namely:

- Area 1 – Passenger Terminal/Control Tower and West Camp
- Area 2 – Former RAF Married Quarters
- Area 3 – East Camp

Strengths <ul style="list-style-type: none"> • The saved policy provides a statutory steer on location preference, and it breaks the Airport down by intelligible character areas • This approach reinforces national policy and applies a local interpretation 	Weaknesses <ul style="list-style-type: none"> • NPPF policy on Green Belt no longer includes reference to MDS • The current extent of the MDS are misaligned with the Locate partnership's requirements in the emerging Concept Plan • A development control style policy with blanket support for only 'infilling' and 'redevelopment' without guidance for what this may mean in the context of each development area. This is arguably too open for interpretation and introduces unnecessary planning risk.
Opportunities <ul style="list-style-type: none"> • Update the policy and revise the character areas for the SOLDC using the Locate partnership's Concept Plan to inform the final boundaries based on the Airport's requirements and aspirations for future growth • Make explicit support for the SOLDC and growth (in line with NPPF policy) • Tailor the Local Plan policy to reflect the opportunities and constraints present in the character areas 	Threats <ul style="list-style-type: none"> • Absence of locational preferences for particular forms of development will create uncertainty for applicants • Without a clear policy for each development area the Airport could develop in an ad hoc manner and fail to exploit the opportunities afforded by the SOLDC designation

BH3 South Camp

Within the area indicated on the Proposals Map to the south of Runway 11/29, development will be restricted to airport-related uses. Proposals for other land uses will not normally be permitted unless the applicant can demonstrate a lack of market demand for airport-related uses, or unsuitability for operational purposes leading to long-term vacancy. In such

circumstances, the Council may be prepared to consider favourably proposals for business uses B1 and B8 of the Use Classes Order 1987 (as amended).

The reasoned justification states that this approach has “*potential for airport business and executive uses, including the provision of a hotel/restaurant facility*”, which remains relevant today. It states that: “*for such activities, the relationship to the airport- related business should be explicitly justified and be of an appropriate scale. Some scope for land use flexibility is allowed, however, in circumstances where airport-related demand or other operational considerations demonstrate that it is not possible to use the land for airport-related uses*”.

Strengths <ul style="list-style-type: none"> • Restriction for airside uses to airport/aviation is still relevant in light of NPPF aviation policy and London Plan SOLDC designation 	Weaknesses <ul style="list-style-type: none"> • Lack of flexibility with regards to B2 uses for non-airside areas. Market evidence provided by the Locate partnership demonstrates that some B2 may be required in non-airside locations • It is unclear how long the marketing exercise should be undertaken in the wording of the saved policy
Opportunities <ul style="list-style-type: none"> • There is scope to transpose the broad majority of the policy into the Local Plan • The Local Plan process affords the Council the opportunity to reassess Biggin Hill's potential to release new land for development • The provision of place based diagrams for each of the camps indicating where particular uses would be acceptable and identifying features such as the airside zone, desirable changes in layout, road network could be brought forward in a new Local Plan policy. 	Threats <ul style="list-style-type: none"> • Uncertainty around the policy and marketing requirements could negatively impact future investment and deter applicants • South Camp would appear to offer a sustainable location for intensification/growth although reconfiguration and decanting may be challenging without flexibility of revised policy framework

BH4 Passenger Terminal/Control Tower/West Camp (Area 1)

Development within Area 1 will be restricted to airport-related uses. Within West Camp, proposals for development will be required to:

- (i) form part of a comprehensively planned development for the site;*
- (ii) retain the open ‘campus’ nature of the site;*
- (iii) facilitate the integration of the western taxiway into the Airport’s operational control; and*
- (iv) preserve or enhance the character or appearance of the RAF Biggin Hill Conservation Area.*

Proposals for other land uses in West Camp will be considered only where it can be demonstrated that a lack of demand for airport-related uses would lead to a long term vacancy of the buildings, or where the use would contribute to the conservation and historic interest of the area.

For applications in this area the reasoned justification states that proposals will be considered in the context of the particular circumstances and planning history of the site.

The reasoned justification sets out that: *“The privately owned West Camp comprises a range of former RAF buildings...a large part of which falls within RAF Biggin Hill Conservation Area. Although not forming part of the operational Airport, the Council wishes to ensure a continuation of the long-term relationship between this area and the Airport. West Camp has airside access and is considered an appropriate destination for airport-related development proposals. The Council recognises however that a flexible approach, allowing some provision for non-airport-related uses, is likely to be required to achieve satisfactory comprehensive development in the Green Belt...and to secure the stewardship of buildings within the Conservation Area.”*

Strengths <ul style="list-style-type: none"> There is a clear delineation between terminal area and west camp in terms of policy approach 	Weaknesses <ul style="list-style-type: none"> At present there is a restrictive policy approach in West Camp which appears to be misaligned with the Locate partnership and landowners requirementsThe NPPF's heritage policies supersede much of the policy intent in the saved policy The current policy provides no clear direction on quantum or uses that would be acceptable in West Camp
Opportunities <ul style="list-style-type: none"> A more explicit policy supporting the redevelopment of West Camp would help to remove some of the planning risk that currently exists The policy calls for more integration with little detail on how to achieve this. The Local Plan could be used to bring all stakeholders together to devise the optimum solution to West Camp and the Terminal Area 	Threats <ul style="list-style-type: none"> The vacant buildings need urgent attention and a supportive policy framework. An overly restrictive approach misaligned with NPPF heritage policies could be found unsound at EIP and delay redevelopment/renewal efforts

BH6 East Camp (Area 3)

Infilling or redevelopment proposals on Area 3 will be restricted to airport and aviation-related uses and will only be considered appropriate where the proportion of developed to undeveloped land is such that the site retains its essentially open character.

The reasoned justification states that: *“only development limited to the replacement of existing substandard facilities, small-scale extensions and appropriate infilling will be considered appropriate...This location is not considered appropriate for non aviation-related development, but could be used for replacement or relocated flying club buildings, aircraft parking and maintenance, and similar aviation facilities.”*

Strengths <ul style="list-style-type: none"> Support for airport related development 	Weaknesses <ul style="list-style-type: none"> Policy restricted to only allow changes to 'substandard' buildings and small-scale extensions. This approach is not particularly ambitious and misaligned with Green Belt policy in the NPPF
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	which allows redevelopment of existing buildings
Opportunities <ul style="list-style-type: none"> Redevelopment could offer consolidation opportunities for improved layout/accessibility in East Camp 	Threats <ul style="list-style-type: none"> Proximity to shortlisted proposed World Heritage Site and SINC Least accessible area within the airport and environs Strong Green Belt features

2.5 Local Plan consultations and Locate partnership representations

To date there have been three formal consultations for the emerging Local Plan. An Issues Document was published in July 2011 followed by an Options and Preferred Strategy Document published for consultation during March and April 2013. The Options and Preferred Strategy Document made suggestions for how the borough's issues may be tackled through a broad approach to planning.

The 2013 document recognised that the SOLDC status offered potential for increased economic growth at the Airport and adjoining areas. The report acknowledged that a new policy approach was needed to support the status of the area and to take advantage of aviation-related commercial opportunities, including the provision of new business infrastructure and amenities.

The representations submitted by the Locate partnership in April 2013, in response to the emerging plan, were primarily concerned with the development of a positive planning policy framework which specifically identifies Biggin Hill as a SOLDC and fully supports development that achieves sustainable economic growth in line with the London Plan and national policy. The Locate partnership point out that the airport has grown to accommodate between 14%-16% of the London Business Aviation market and the challenge now was to remain commercially competitive and achieve continued growth in the face of growing capacity at competing airports.

The Airport's proposed strategy to achieve and maintain continued growth is to focus upon existing locations where development is currently permissible in accordance with planning law and policy. A key policy 'ask' of the representations was to review the approach to Green Belt boundaries at Biggin Hill to provide 'insets' that remove Green Belt from existing and future development areas. It is proposed that these areas are more clearly defined within policy to 'de-risk' current planning issues with the airport and to encourage inward investment and promote economic growth.

The Locate partnership's specific policy proposals can be summarised as follows:

- To identify the Terminal Area as a location where airport-related development will be permitted, including an inset in the Green Belt boundary which excludes this area from the designation;
- To remove the West Camp area from Green Belt designation and to allocate it as a site for employment. Local Plan policy should support proposals for economic development at West Camp. Where relevant this should include allowances for proposals such as the creation of a gateway site with road frontages and a business hub on site, as well as suitable opportunities for B1 development on the West Camp site. This should include the sensitive re-use of existing heritage buildings and the demolition of buildings where re-use is not feasible or for viability reasons. Support should also be afforded to the development of airport-related uses on airside parts of the site, including the development of new hangars;
- To promote positive planning policy for delivering development within the South Camp and industrial estates whilst protecting airside locations. Green Belt designations

should be amended for areas adjoining South Camp to extend the area to facilitate future development capacity once existing plots have been built out. Specifically this should exclude parcels of Green Belt via insets to attract inward investment as well as allowing the redevelopment and/or realignment of infrastructure to increase future development potential. The site should also be designated as a site for employment permitting B1, B2 and B8 uses in addition to airport related uses, with some allowances for non-B-class uses such as trade-counters. Where possible secure airside access should be provided from employment development on plots without airside frontage; and

- To amend boundaries of the Green Belt to exclude land at East Camp with allocations for airport-related development.

Meeting with Locate partnership's appointed consultants - Friday 22nd November 2013

A meeting was held with Locate partnership (represented by Biggin Hill Airport's Estates and Nathaniel Lichfield and Partners) to discuss in more detail a number of the issues discussed in the representations and to clarify a number of aspects of the documentation produced since 2012. The meeting helped to clarify the drivers behind the policy 'asks' within the Local Plan representations and was used to explore what approaches may be most effective in the future. The salient points from that meeting are recorded below:

- The London Plan policy support for the SOLDC is helpful but not specific enough. It was felt that the SOLDC designation could be implemented most meaningfully at the local level, discussions covered whether the LPA should provide a boundary for where the London Plan SOLDC policy actually applies. If it were to apply this to the entire airport and all airport associated environs (e.g. West Camp) closer linkages could be achieved through a more comprehensive approach to new development.
- The Locate partnership requested a clear prospectus capable of outlining accurate timescales for planning with a clear policy framework. Jet aviation were cited as an example of a business that wanted to expand but could not achieve the necessary permissions and so sold up and left the airport. The ambiguity of the existing policy framework (namely the Green Belt MDS, the Article 4 direction and sensitivity area protocol) was highlighted as the key impediments to future growth. It is felt that part of the problem is that the saved policies were now misaligned with updated regional and national policy.
- The MDS and Green Belt designations are viewed as ambiguous and in most cases applicants will be expected to demonstrate 'very special circumstances' for every application as the policy support in the MDS was not felt to be enough on its own to justify very special circumstances. Referral to the GLA is also an additional step in the process where Green Belt is concerned which causes further delays and potential risk for promoting development.
- Following a change in ownership to parts of the industrial area adjoining South Camp, the Locate partnership and NLP undertook to revise their concept plan and broad floorspace calculations to ensure future planning policy representations to the LPA reflect the current situation.
- Reconfiguration of the development areas is currently restrained due to the tight boundary of South Camp and other constraints in addition to Green Belt elsewhere. The Locate partnership require new infrastructure and enough space to ensure business continuity during redevelopment and realignment of hangars. It is felt there is not enough explicit policy support for such an approach at present.
- The changes requested for the MDS areas detailed in the concept plan are driven by the lack of need/demand in certain parts of the MDS and a desire to consolidate development and improve openness across the site as a whole.

Illustrative Concept Plan – proposed quantum and approach to growth (2013)

The Economic Value and Potential (EVP) report (June 2012) informed the Locate partnerships emerging concept plan and includes evidence to support their approach. The report includes a breakdown of current business types located within the airport and airport related environs:

Table 2.3 Location and Sector of Biggin Hill Businesses (Source: NLP / LoCATE)

Business Type	Airport Industrial Estate/ Concorde Business Centre	East Camp	South Camp	Terminal Area	West Camp	Total
Aviation (Direct and Related)	1	3	21	5	0	30
Aviation User/Location / Market	4	1	0	1	1	7
Non Aviation	18	0	4	1	2	25
Total	23	4	25	7	3	62

The above table was formulated using data from TCR, Yellow Pages data, the Airport's own business list, ONS, ABI, SIC codes and then validated via Google searches and interviews with business occupiers.

The Economic Growth Plan (January 2013) then used VOA data to estimate an unrestrained net additional floorspace capacity of approximately 90,100m² and net potential employment growth of 3,681 jobs. A table from the January 2013 report is included which disaggregates potential additional floorspace down by displaying an estimate of the amount of new build/conversion (m²) and demolition (m²) expected based on GIA space estimates for plots taken from the illustrative Concept Plan, with the assumption that some hangars in South Camp comprise a mix of office space (but no more than 15%).

Table 2.4 Theoretical Capacity-based estimate of Floorspace/Employment/Business Rate Uplift (Source: NLP)

	Floorspace (m ²)		Employment Growth Potential (Net)	Business Rate Uplift
	New Build / Conversion	Space Demolished		
Terminal Area	1,850		175	£29,000
West Camp	20,300	7,250	1,600	£209,800
South Camp	72,650	14,700	1,850	£1,665,150
East Camp	21,500	3,600	50	£209,800
Total	116,500	25,550	3,681	£2,113,900

These figures were then refined using the EVP report's net employment growth figure of 2,300 jobs up to 2031 (split proportionately between the four locations) and reflective of employment densities, types of space across the site (incorporating blended averages) and taking account of demolitions of some space on some of the sites that might be needed to release development.

Table 2.5 Estimate of Floorspace / Employment / Business Rate Uplift (Source: Locate partnership / NLP)

	Floorspace (m ²)	Employment Growth Potential (Net)	Business Rate Uplift	Business Rate Uplift retained by LBB/GLA
Terminal Area	1,850	176	£29,150	£14,600
West Camp	15,450	1,235	£159,600	£79,800
South Camp	31,400	795	£720,200	£360,100
East Camp	20,800	40	£201,550	£100,750
Total	69,475	2,272	£1,110,400	£555,200

For plan-making purposes it can be assumed that over the plan period the Locate partnership's concept plan seeks to accommodate in the region of 70,000 – 117,000m² of commercial floorspace on the airport (including west camp). This section makes no comment on the robustness of that figure; the possible quantum of development is used to assess the land that may be required to deliver that growth and identify the impact of constraints on achieving the growth ambitions of Locate partnership, in order to inform policy recommendations later in this report.

Local Plan Draft Policies and Designations (February 2014)

The most recent consultation entitled 'Local Plan Draft Policies and Designations' was published in February 2014. The report included a series of proposed draft policies for Biggin Hill, including support for the SOLDC, the intention to prepare a SOLDC masterplan and accompanying conservation area management plan for West Camp. In addition, separate policies were put forward for East Camp, West Camp (including the terminal area) and South Camp with a map showing an indicative SOLDC boundary and the current boundaries for the three areas (as defined in the UDP).

In contrast to the saved UDP policies (assessed in 2.4 above) the draft policies put forward for comment are less restrictive and promote the redevelopment of the Airport, with a more flexible approach proposed for West Camp and South Camp – 'with the provision of associated business infrastructure and amenities'.

The consultation document noted that the Airport operators and the Locate partnership have agreed to work with the Council to provide the documentation supporting their strategic proposals to allow the Council to fully appraise their plans and test validity of the underlying assumptions and that this will be factored in further policy development. The consultation report also acknowledged the work that had been undertaken for the purposes of this study stating that the justification for the removal/amendment of the Green Belt designations on the Airport was being looked at in relation to the potential for Airport growth.

Economic Growth Plan Update (2014)

Following the preliminary work, conducted between 2012 and 2013 and subsequent meetings with the Council for the purposes of the emerging Local Plan, the Airport operators and the Locate partnership (and their consultant) agreed to share more of their thinking, including the basis for its growth ambitions and the emerging spatial plan for growth. The updated report explores the validity of the original job growth estimates and provides an indicative phasing programme linked to an update of the illustrative Concept Plan (shown overleaf). This concept plan update builds in factors such as the change of ownership in the Airport Industrial Estate/Concorde Business Park and further changes made to reflect recent discussions with potential OEM and AOC occupiers e.g. building in more nuanced technical and commercial

considerations such as phasing assumptions linked to decanting and redevelopment of particular buildings.

The airport puts forward in the report the reasons why the original job growth estimates are still valid. The assumptions for the job growth estimate were based upon:

- Additional or expanded facilities that are developed (excluding any expansion in the course of a relocated facility or expansion of existing companies within their own existing buildings).
- Job densities for hangar-based operations based upon interviews with existing businesses, potential investors and using comparable data from OEM/MRO operations at other airports (illustrated as a total end growth figure for each phase).
- A phasing plan, demonstrating how accommodating new operators, decanting existing operations onto new sites, and redeveloping older accommodation could accommodate these levels of growth. Reflecting that demand will be exogenous 'airport-led', with early phases dominated by aviation operation businesses, and commercial B1 office space phased towards the end of the development period;
- An assessment of how many new operators could be attracted based upon the Airport's investment

All of these factors are of relevance to the future Local Plan. A new phasing plan sets out how the estimated growth at the airport would be developed out. The analysis highlighted an increased requirement for 'airside' land outside of the existing planning boundaries included in the UDP (particularly in proximity to East and South Camp). It also shows that more Green Belt land is required with different boundaries from those previously suggested by the Airport in 2013. The next section looks at the constraints present at the Airport in light of the land proposed for future development in the concept plan.

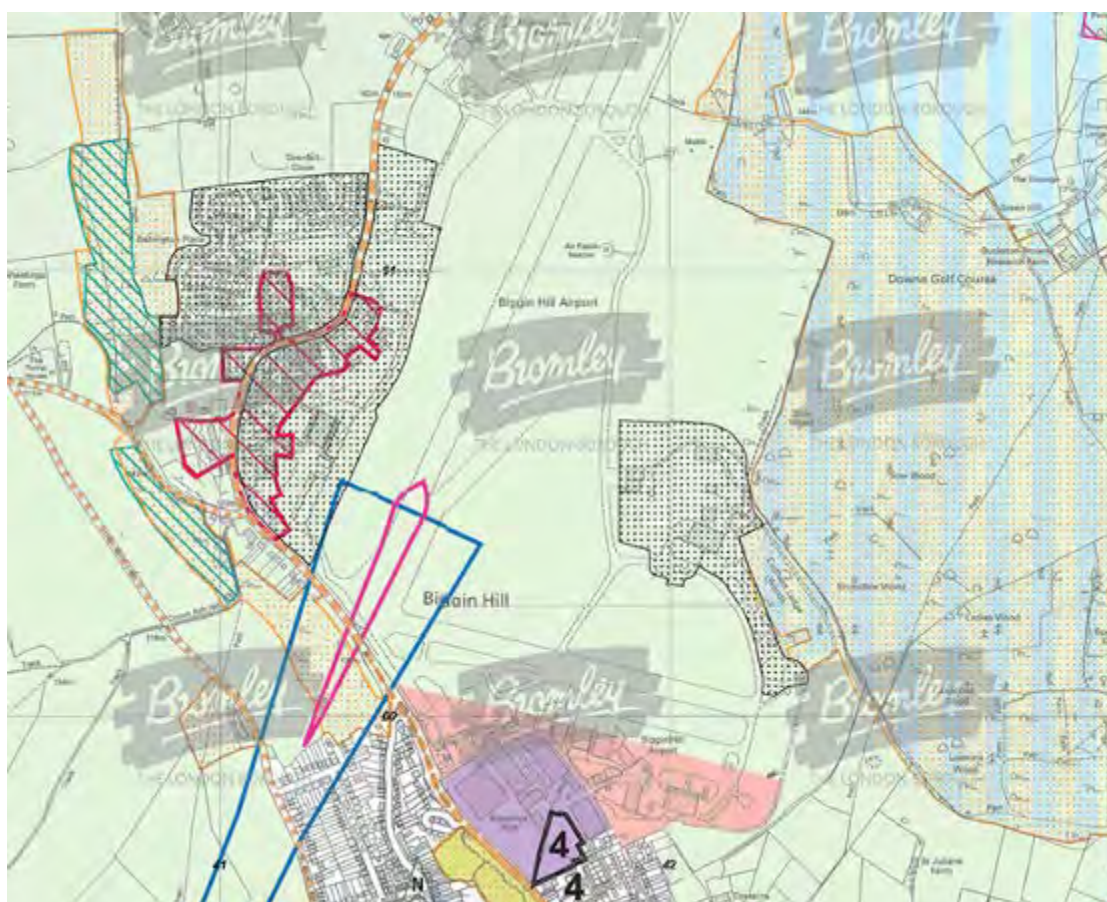
Figure 2.1 Illustrative Concept Plan from Economic Growth Plan 2014 (Source: NLP)



2.6 Site Constraints

The UDP Proposals Map provides a baseline of the key constraints under the current planning framework and highlight some areas where it may be more difficult to accommodate the Airport operators and Locate partnership's ambitions for the SOLDC in terms of floorspace (as highlighted above in 2.5). The site is almost entirely washed over by Green Belt (aside from two small parcels either side of the hangars in South Camp that fall within the current inset). There are heritage designations and SSSIs to the West, nature conservation and landscape designations to the East and North East and the safety zones to the South West and North. The concept plan builds in many of these constraints already (e.g. safety zones) as demonstrated by the concept plan's layout of proposed new development.

Figure 2.2 Biggin Hill - UDP Proposals Map



In addition to the operational, heritage and nature constraints there is an Article 4 direction (2001) in place (where the West Camp and Terminal area meet) and a quasi-Article 4 protocol (agreed between the Council and Biggin Hill Airport Ltd in 1996) that removes permitted development rights in particular locations.

Article 4 direction (2001)

The Council have powers under Article 4 of the 1995 Order to remove permitted development rights. In January 2001, the Secretary of State confirmed an Article 4 Direction relating to land in the Green Belt between the control tower and the adjacent Conservation Area of the former RAF quarters at Biggin Hill Airport. The Direction removes permitted development rights, thereby requiring planning permission to be sought for any subsequent proposals in this area. The Council will assess any proposals under permitted development on the need for an Environmental Impact Assessment and in light of the voluntary consultation agreement between Biggin Hill Airport Ltd (BHAL) and the Council. Development has subsequently taken

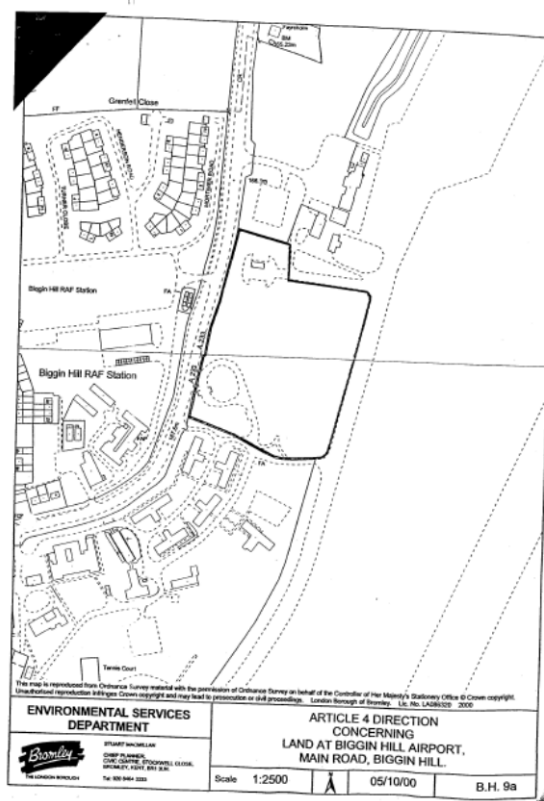
place since 2001, however, with the Article 4 still active any redevelopment in this area in the future would still require consultation with the Council.

A number of changes have occurred since 2001 when the Article 4 direction was first put in place. Before April 2010 the Secretary of State confirmed certain article 4 directions, it is now for the Council to confirm all article 4 directions (except those made by the Secretary of State) in the light of local consultation. While Article 4 directions are confirmed by LPAs, the Secretary of State must be notified, and has wide powers to modify or cancel most Article 4 directions at any point. Article 4 directions must be in compliance with NPPF paragraph 200⁴. In some circumstances a Council may be liable to pay compensation, if they:

- refuse planning permission for development which would have been permitted development if it were not for an Article 4 direction; or
- grant planning permission subject to more limiting conditions than the General Permitted Development Order [the 1995 Order] (GDPO) would normally allow, as a result of an article 4 direction being in place.

There is now a possibility that Councils with existing Article 4 directions or those seeking to push back against the GPDO via new Article 4 directions may trigger legal action. It may be beneficial to review the need for this Article 4 direction given the Airport's status as a SOLDC.

Figure 2.3 Extent of area covered by 2001 Article 4 Direction



Quasi-Article 4 “protocol” (1996)

In addition to the 2001 Article 4 direction there is a “voluntary Article 4 Direction” or “protocol” signed on 24th January 1996 which regulates the permitted development rights for “defined

⁴ 200. The use of Article 4 directions to remove national permitted development rights should be limited to situations where this is necessary to protect local amenity or the wellbeing of the area (this could include the use of Article 4 directions to require planning permission for the demolition of local facilities). Similarly, planning conditions should not be used to restrict national permitted development rights unless there is clear justification to do so.

A map was included under Appendix 2 in the 1996 protocol, showing airport sensitive locations indicated by stars. Sensitive locations covered by this protocol include a small element of South Camp, all of West Camp, the wooded SINC in East Camp and the terminal area. It is expected within the protocol that for the purposes of operating the test of sensitivity, "in considering the degree to which Biggin Hill airport has exhausted alternative locations, LB Bromley will have regard to issues of economic viability".

Figure 2.4 Airport sensitive locations



Overview permitted development rights and potential capacity

The 1996 protocol and 2001 Article 4 direction were put in place to prevent permitted development rights at particular locations at the Airport. This section reviews how much

potential development could be provided at the Airport today without the need for planning permission.

There are a range of exclusions which currently apply to permitted development rights in England such as with protected areas known as article 1(5) land, these include:

- Conservation areas;
- Areas of Outstanding Natural Beauty;
- National Parks;
- the Broads; and
- World Heritage Sites.

In a small number of cases it may be necessary to notify or obtain prior approval from the Council before carrying out permitted development. Permitted development rights do not override the requirement to comply with other permission, regulation or consent regimes. Therefore the potential for permitted development at West Camp is limited where land falls within the Conservation Area.

For prior approval applications the LPA will be expected to consult certain statutory consultees and immediate neighbours, and may require information to enable it to assess impacts and risks⁵. The LPA can approve or refuse the application but if it does neither within 56 days, the developer may proceed (though this period may be extended by agreement). A refusal can be appealed as though it were a refusal of planning permission.

In terms of transport and highways impacts, the council must form an opinion as to whether the development 'is likely to result in a material increase or a material change in the character of traffic in the vicinity of the site'. In the case of flooding, the issue is whether the site is in flood zone 2 or 3 or, if it is in an area within flood zone 1 that has critical drainage problems. In respect of contamination, the council must decide whether the site is contaminated land under Part 2 of the Environmental Protection Act 1990, and in doing so they must have regard to the Contaminated Land Statutory Guidance issued by DEFRA in April 2012 (and if they determine that the site will be contaminated land, they must refuse to give prior approval.)

The LPA may require the developer to submit such information regarding the impacts and risks referred to above as they may reasonably require in order to help officers to determine the application, which may include assessments of impacts or risks and statements setting out how impacts or risks are to be mitigated. However, there is no power for the LPA to request additional information outside this fairly narrow subject matter, even if there are objections from neighbouring owners or occupiers; a request for additional information cannot extend beyond material relating to transport and highways impacts, contamination risks and flooding risks.

When determining the application, the Council must take into account any representations made to them as a result of any consultation; they must have regard to the National Planning Policy Framework as if the application were a planning application and (in relation to the contamination risks on the site). Paragraphs 51 and 55 of are of particular relevance in this instance.

For changes of use any material external physical alterations will need to be the subject of a planning application given that the permitted development right only applies to the principle of use. In addition Building Regulations approval will be required in the usual way. If there is any doubt about whether the permitted development provisions apply to a particular building a developer can apply to the LPA for a Lawful Development Certificate.

⁵ <http://planningguidance.planningportal.gov.uk/blog/guidance/when-is-permission-required/what-are-permitted-development-rights/>

Emerging transport evidence (see Section 6) may help to highlight 'hot spots' for transport impacts. Whilst the principle of permitted development cannot be challenged there may be local circumstances (listed buildings, Scheduled Ancient Monuments, safety hazard areas, military explosive areas, flood areas, transport hot spots and contaminated land) that should be considered for some forms of prior approval applications.

Amendments to the Town and Country Planning (General Permitted Development) Order 1995 introduced in May 2013 included:

- Increases in size thresholds for changes between the B use classes e.g. increasing from 235m² to 500m² for change of use from offices and general industrial use to storage and distribution, and from general industrial and storage or distribution to offices.
- Premises that are offices, hotels and assembly or leisure use classes are able to change use permanently to a state-funded school (subject to prior approval covering highways and transport impacts and noise). A temporary permitted development right is introduced which allows a building in any use class to be used as a state-funded school for 1 academic year to help deliver new schools and allow for minor associated physical development.
- The requirement for prior approval of siting and appearance of fixed broadband infrastructure has been relaxed for 5 years to encourage operators to invest in this key provision in rural areas.
- Business owners will also be able to extend their properties for a 3-year period as part of new permitted development rights.

The amendments in May 2013 apply to the industrial and warehouse developments at Biggin Hill (those is B2/B8 use classes):

Permitted development exists until 30th May 2016, whereby the gross floor space of the original building could be exceeded by no more than—

- (i) 10% in respect of development on any article 1(5) land, 25% in respect of development on a site of special scientific interest and 50% in any other case; or
- (ii) 500 square metres in respect of development on any article 1(5) land or 1,000 square metres in any other case; whichever is the lesser;"

- The development shall be completed on or before 30th May 2016.
- The developer shall notify the local planning authority of the completion of the development as soon as reasonably practicable after completion.
- The notification shall be in writing and shall include— the name of the developer, the address or location of the development, a description of the development, including measurements and calculations relevant to the requirements, and the date of completion.

These time limited permitted development rights exclude:

- Listed buildings (as at West Camp) or Scheduled Monuments;
- Safety hazard areas (where notified to LPAs by the Health & Safety Executive – this may include elements of the runway);
- Military explosives areas (as licensed by the Secretary of State for Defence).

For B1 offices until 30th May 2016 (excluding buildings on a site of special scientific interest) extensions are permissible provided the gross floor space of the original building is not exceeded by more than 50%; or 100 square metres, whichever is the lesser.

It should be noted that some forms of larger development cannot be provided under permitted development and others may require an Environmental Impact Assessment (EIA) screening opinion, as per the EIA regulations.

The Town and Country Planning (General Permitted Development) Order 1995 as amended grants a general planning permission (usually referred to as 'permitted development rights') for various specified types of development. Although many permitted development rights at the Airport and surrounding areas concern development of a minor, non-contentious nature, there are some that could fall within the descriptions in Schedules 1 or 2 of the EIA regulations.

Schedule 1 development is excluded from being permitted development. Such development always requires the submission of a planning application and an Environmental Statement (and, where relevant, a subsequent application and revised Environmental Statement). Schedule 6 makes consequential amendments to the General Permitted Development Order 1995. Schedule 1 includes reference to manufacturing that includes chemical installations. Whilst it is unlikely most hangars at the Airport would not be captured by this clause it is worth noting should future occupiers fall within this definition:

The Town and Country Planning (Environmental Impact Assessment) Regulations 2011

SCHEDULE 1 Descriptions of development for the purposes of the definition of "Schedule 1 development"

6. Integrated chemical installations, that is to say, installations for the manufacture on an industrial scale of substances using chemical conversion processes, in which several units are juxtaposed and are functionally linked to one another and which are— 7(a) Construction of lines for long-distance railway traffic and of airports with a basic runway length of 2,100 metres or more.

Schedule 2 development does not constitute permitted development unless the local planning authority has adopted a screening opinion to the effect that EIA is not required. Where the authority's opinion is that EIA is required, permitted development rights are withdrawn and a planning application must be submitted and accompanied by an Environmental Statement. Schedule 2 includes forms of development that could be brought forward at the Airport and adjoining areas under permitted development (e.g. runway extensions, industrial units etc.):

SCHEDULE 2 Descriptions of development and applicable thresholds and criteria for the purposes of the definition of "Schedule 2 development"

Column 1 Description of development	Column 2 Applicable thresholds and criteria
10. Infrastructure projects	
(a) Industrial estate development projects;	The area of the development exceeds 0.5 hectare.
(b) Urban development projects, including the construction of shopping centres and car parks, sports stadiums, leisure centres and multiplex cinemas;	
(c) Construction of intermodal transshipment facilities and of intermodal terminals (unless included in Schedule 1);	
(e) Construction of airfields (unless included in Schedule 1);	(i) The development involves an extension to a runway; or

	(ii)the area of the works exceeds 1 hectare.	
13 Changes and extensions		
(a)Any change to or extension of development of a description listed in Schedule 1 (other than a change or extension falling within paragraph 21 of that Schedule) where that development is already authorised, executed or in the process of being executed.	Either— (i)The development as changed or extended may have significant adverse effects on the environment; or (ii) in relation to development of a description mentioned in a paragraph in Schedule 1 indicated below, the thresholds and criteria in column 2 of the paragraph of this table indicated below applied to the change or extension are met or exceeded.	
	Paragraph in Schedule 1 7(a)	Paragraph of this table 10(e) (in relation to airports)
(b)Any change to or extension of development of a description listed in paragraphs 1 to 12 of column 1 of this table, where that development is already authorised, executed or in the process of being executed.	Either— (i)The development as changed or extended may have significant adverse effects on the environment; or (ii) in relation to development of a description mentioned in column 1 of this table, the thresholds and criteria in the corresponding part of column 2 of this table applied to the change or extension are met or exceeded.	

Using the information outlined above a broad assessment can be made of the potential capacity for new development utilising permitted development rights at Biggin Hill. This will highlight the impact of existing constraints on-site and help to elucidate the amount of additional net floorspace that could be feasibly developed without the need for planning permission.

Appendix A sets out an analysis of existing use classes and our calculations for the amount of development possible under the GPDO (as amended) based on the existing floorspace figures for all buildings within the airport, West Camp and the industrial estates adjoining south camp. The exercise was high-level and so individual curtilages were not factored into the calculations nor were the detailed restrictions contained within Schedule 2 of the Town and Country Planning (General Permitted Development) Order (as amended). Listed buildings and buildings falling outside of the B use classes were excluded from the calculations. A summary of these detailed calculations and assumptions are set out below:

Permitted Development Assessment	
Existing floorspace (including industrial areas adjoining south camp)	79,603 m ²
Potential unrestrained gross floorspace using permitted development rights	94,456 m ²
Net increase in floorspace using permitted development	14,852 m ²
Net increase once land subject to 1996 protocol 'sensitivity areas' is factored in	4,563 m ²

Given that Locate partnership's concept plan is based upon approximately 91,700m² of new build/refurbished floorspace (excluding the industrial areas adjoining south camp), permitted development alone is not capable of delivering the growth envisaged. Further the 1996 protocol has the potential to act as a barrier to permitted development removing circa 10,000m² of potential new floorspace allowable under permitted development rights.

This is a purely theoretical exercise to assess how the latest permitted development rights could be utilised on existing buildings. Clearly the concept plan envisaged includes a great deal of redevelopment and decanting that would necessitate following a more traditional planning application route, however, this exercise highlights that the 'do nothing' approach would not be capable of bringing forward the changes envisaged under the SOLDC policy.

Biggin Hill Green Belt

In addition to the limited potential of permitted development and the existing environmental and heritage assets, Green Belt has been highlighted as the single biggest impediment to growth at the airport. The Locate partnership's representations referenced the ambiguity surrounding the saved policies and stated that this impedes growth. This assertion was supported by anecdotal evidence (as reported by Biggin Hill Airport Ltd) of businesses moving away from the area and failed or stalled planning applications over the past decade.

A high-level commentary of the Green Belt at Biggin Hill is provided in this section indicating the relative merits of the land when assessed against the five purposes of the Green Belt, as set out in the NPPF. The analysis is not rigorous, nor does it consider wider landscape considerations and therefore it cannot be considered a comprehensive Green Belt review. Instead it provides a broad overview on the function of the Green Belt at Biggin Hill incorporating an analysis of the sites characteristics, supplemented by a site visit.

Altering the extent of Green Belt boundaries (deletion, swaps, insets etc.) via the Local Plan would require formal consultation under Regulation 18 of The Town and Country Planning (Local Planning) (England) Regulations 2012. This would allow residents, adjoining boroughs/districts, statutory consultees and the GLA to make representations on this key issue. Recommendations are made to the Council in this section on the merits of revising the current approach in the UDP (MDS infill boundaries), in light of updated national and regional policy.

The Locate partnership's representations and evidence reports refer to the use of insets within the Green Belt to enable growth at Biggin Hill⁶. The fundamental aim of Green Belt policy in the NPPF is to prevent urban sprawl by keeping land permanently open; the essential characteristics of Green Belts are their openness and their permanence. In order to review the Green Belt at Biggin Hill a number of questions have been considered (adapted from the five purposes of Green Belt in the NPPF) and factored into a RAG summary table. In addition, a recent paper published by the Planning Advisory Service⁷ provides guidance to LPAs reviewing (or considering a review) of their Green Belt, this guidance has been reflected in this paper. The five purposes of Green Belt are as follows:

To check the unrestricted sprawl of large built-up areas

- Does the land act as an effective barrier against sprawl from large built-up areas locally?
- Does the land contribute to a wider strategic barrier against the sprawl of built-up areas in Bromley?

⁶ It has been clarified through meetings with the airport that this was not referring to insets as described in the old PPG2. In any case Green Belt Insets, Infill and Major Development Sites are no longer included in the NPPF. This further highlights that the saved policies must be comprehensively refreshed to conform to the NPPF.

⁷ Planning on the Doorstep: The Big Issues – Green Belt (PAS, April 2014)

The terminology of sprawl has its genesis in the 1930s, therefore would development at the airport over the plan period, which is planned positively through the local plan, well designed and subject to masterplanning be considered sprawl in any of the locations highlighted in the concept plan? Arguably only North of the existing terminal or elements of East Camp could be considered sensitive enough to assess for potential impacts of sprawl. Many of the areas within the concept plan are on existing built up areas and previously developed land.

To prevent neighbouring towns from merging

- Does the land provide a gap or space between existing settlements?
- Is there evidence of ribbon development?
- What is the visual perception of the gap between settlements?
- Would a reduction in the gap compromise the separation of settlements and openness?

The PAS guidance suggests a 'scale rule' approach should be avoided - *"the identity of a settlement is not really determined just by the distance to another settlement; the character of the place and of the land in between must be taken into account. Landscape character assessment is a useful analytical tool for use in undertaking this type of assessment."* In the context of Biggin Hill the settlements in closest proximity are New Addington (a District Centre within Croydon) to the West, Leaves Green Village to the North, Downe a village to the North East and Keston further North. The relationship between West Camp/RAF Biggin Hill CA/Terminal Area and the Biggin Hill Local Centre to the south is of relevance. For example, could they be considered contiguous in terms of character? If so, it may lend weight to the argument that Green Belt should be released in South and West Camp. Whereas there are gaps between Leaves Green village and the Terminal area which would benefit from a more detailed assessment.

To assist in safeguarding the countryside from encroachment

- What countryside / rural characteristics exist within the parcel including agricultural or forestry land uses and how is this recognised in established national and local landscape designations?
- Has there already been any significant encroachment by built development or other urbanising elements?

The PAS notes advises that *"the most useful approach is to look at the difference between urban fringe – land under the influence of the urban area - and open countryside, and to favour the latter in determining which land to try and keep open, taking into account the types of edges and boundaries that can be achieved."*

To preserve the setting and special character of historic towns/features

- What settlements or places with historic features exist within the parcel?
- What is the relationship and connection (in the form of character, views and visual perception) between the parcel and historic feature?
- Does the parcel provide an open setting or a buffer against encroachment by development around settlements or places with historic features?

The airport itself is a heritage asset, as is the adjoining West Camp/RAF Biggin Hill CA. New development proposed within the concept plan appears to be sympathetic to these assets. This purpose doesn't generally apply to many settlements in practice. The PAS paper notes that *"In most towns there already are more recent development between the historic core and*

the countryside between the edge of the town". Airside development, in general, is not considered to be harmful in this respect.

To assist in urban regeneration, by encouraging the recycling of derelict and other urban land.

- Is the land brownfield land?

All Green Belt does to the same extent encourage recycling of land and hence the value of various land parcels is unlikely to be distinguished by the application of this purpose. Almost all parts of the concept plan involved redevelopment of brownfield land or development of hard standing. However, there appear to be elements within East Camp that would result in the loss of trees and greenfield land.

The basic questions listed above were considered by the project team to test whether or not the parcels of land at Biggin Hill meet the five purposes of Green Belt. Below is a summary table displaying RAG status for each development area based on how well it performs against the five purposes. Green colouring is absent from the table as none of the parcels of land were adjudged to completely fulfil the five purposes, as per the NPPF definition; amber represents a partial meeting of the purpose and red denotes that the land does not fulfil any aspect of the purpose.

Table 2.5 Biggin Hill high-level Green Belt assessment

	To check the unrestricted sprawl of large built up areas	To prevent neighbouring towns from merging	To assist in safeguarding the countryside from encroachment	To preserve the setting and special character of historic towns/features	To assist in urban regeneration, by encouraging the recycling of derelict and other urban land.
Terminal Area	Assessed in isolation only portions of this land prevents sprawl	Assessed in isolation only parts of this land restrict merging	Assessed in isolation only portions of this land do not safeguard the countryside	Assessed in isolation this land does not preserve the setting of historic towns	Assessed in isolation this land does not assist in urban regeneration
West Camp	Assessed in isolation only portions of this land prevents sprawl	Assessed in isolation only parts of this land restrict merging	Assessed in isolation this land does not safeguard the countryside	Assessed in isolation this land only partially preserves the setting of historic towns	Assessed in isolation this land does not assist in urban regeneration
Green Belt adjoining South Camp	Assessed in isolation only portions of this land prevents sprawl	Assessed in isolation only parts of this land restrict merging	Assessed in isolation this land does not preserve the setting of historic towns	Assessed in isolation this land does not preserve the setting of historic towns	Assessed in isolation this land does not assist in urban regeneration
East Camp	Assessed in isolation only portions of this land prevents sprawl	Assessed in isolation only parts of this land restrict merging	Assessed in isolation only portions of this land do not safeguard the countryside	Assessed in isolation this land only partially preserves the setting of historic towns	Assessed in isolation this land does not assist in urban regeneration

The desk based analysis suggests that the land at East Camp performs most strongly against the five purposes. The site visit confirmed that this area was more sensitive to change than the other development areas of the airport given its detached and open nature. New net development in this area would be challenging without harming the general openness of the land within the airport and beyond. The land at West Camp, the Terminal Area and South Camp performed less well against the five purposes of Green Belt due to a combination of factors e.g. historic ribbon development, Green Belt land encircled on numerous sides giving a greater sense of enclosure and the presence of previously developed land.

The PAS guidance highlights a number of instances where land could be adjudged to make a limited contribution to the overall Green Belt:

- it would effectively be 'infill', with the land partially enclosed by development
- the development would be well contained by the landscape e.g. with rising land
- there would be little harm to the qualities that contributed to the distinct identity of separate settlements in reality
- a strong boundary could be created with a clear distinction between 'town' and 'country'.

A formal review should use such criteria in addition to the questions posed at the beginning of this section in order to identify the most appropriate land to be used for development, through the local plan.

Figure 2.6 View of East Camp taken from South Camp



Figure 2.7 View of gap between East Camp and South Camp



To supplement the high-level review of the Green Belt at Biggin Hill, precedents elsewhere have been reviewed for their applicability to Biggin Hill. On the whole the examples cited in the Locate partnership's representations were for much larger airports which benefited from explicit policy support for expansion at the national level.

Newcastle

In the Newcastle upon Tyne UDP (adopted 1998) the main part of the airport site was removed from the Green Belt and allocated for Airport related development. Within the Joint Newcastle and Gateshead Joint Local Plan (submission draft) under Policy CS1- Spatial Strategy for Sustainable Growth it is proposed that revisions to the boundary of the Green Belt to allocate land for new development are made. Under policy KEA1 'Newcastle International Airport' land to the south of the airport will be allocated primarily for employment uses (B1, B2, B8).

Justification:

- There is a shortage of land which can be developed for housing- this is both in terms of the five-year housing supply of housing land and of the land available for housing over the whole plan period;
- There is a shortage of land for employment to ensure sufficient space of the right type is provided in the right location to allow for growth. ELR's have identified a locational need for a greenfield employment site next to the airport;

Bournemouth

Policy BA3 of the Christchurch and East Dorset Joint Core Strategy- Consolidated Version for Council (2013) - proposes the removal of the operational airport from the Green Belt in order to facilitate the growth of airport facilities which can be achieved within environmental limits.

NPPF states GB boundaries should only be altered on exceptional circumstances.

Justification:

- National policy support in the Air Transport White Paper (2003) for the growth of Bournemouth airport;
- Evidence as part of the preparation of the South West RSS supported local Green Belt boundary changes at the airport to accommodate growth;
- Significant benefits arising from increased airport development and operations and its growth within the South West region:
 - Operational airport and business park are identified as of strategic significance- the Dorset LEP identifies Bournemouth Airport as a global hub for trade and international business; and
- Removal of land within existing operational airport boundary will provide flexibility for improvement in airport operational facilities- in accordance with adopted Airport Master Plan (2007).
- A zoning approach has been suggested which places further restriction on the type of development permitted- this is to avoid any adverse impact on the openness of the Green Belt and to retain a buffer between the airport and the Moors River SSSI.

Manchester

Manchester LA managed to release 50ha of land from Green Belt allocation in 2012 as part of the Manchester Airport Enterprise Zone. This was justified under Policy MA1 as the area was needed for airport development. The inspectors report agreed that the need for the Airport to expand in order to meet the updated national forecasts and fulfil its potential as an economic driver in the region provides the exceptional circumstances for an alteration to Green Belt boundaries. This release of land was not made in consideration of the NPPF, but instead referenced the draft NPPF.

Justification:

- Future of Air Transport White Paper 2003 forecast growth at Manchester Airport to grow to 50 million passengers by 2030. This figure was revised to 45 million in the UK Air Passenger Demand and CO2 Forecasts 2009. Further revised in 2011 to 35 million passengers per annum by 2030 and 55 million passengers per annum by 2040 in the UK Aviation Forecast. The White Paper supports the importance of air travel to national and regional economic prosperity and acknowledges that not providing additional capacity will significantly damage the economy and national prosperity.
- The Airport, within the City Region, is a key economic driver, adding value to the attraction of the City Region for indigenous businesses and inward investment. Businesses have cited the Airport as being important in terms of access to markets, customers and clients, and inward investors attracted by the range of direct flights to key European and global cities. Airport also plays an important role in attracting inbound tourism to the region.
- Manchester Airport- the Need for Land (2010) and the Manchester Airport Master Plan to 2030 (2007) outline the need for development.
- The Airport is a unique use and expansion cannot be located elsewhere;

- A number of identified uses require direct runway access and cannot be located elsewhere;
- Whilst ancillary uses (e.g. hotels, offices, car parking) could be located outside of the Green Belt, these are uses which are specifically related to the Airport;
- The results of an updated Green Belt assessment suggest that the existing built up area around the terminals should be removed from Green Belt as it doesn't serve a Green Belt Function. The proposed operational area extensions should be removed because they either did not serve a Green Belt function or there were exceptional circumstances justifying an amendment to the boundary.

Bristol

The North Somerset Replacement Local Plan (2007) established an inset in the Green Belt around the northern part of the Airport to allow for development to come forward within the Local Plan period.

Justification:

- Bristol International Airport is the largest civil airport serving the South West- playing an important role in driving economic prosperity and growth within the region.
- Growth of the airport is supported within the White Paper: The Future of Air Transport (December 2003) to support the development of the Airport up to a capacity for a throughput of 10-12 million passengers per year by 2030.
- The more recent adopted North Somerset Core Strategy (2012) states that further Green Belt amendments would be premature in advance of exceptional circumstances being demonstrated through evidence regarding future expansion and its land use implications. Further amendments to the Green Belt at Bristol Airport will only be considered once long-term development needs have been identified and exceptional circumstances demonstrated.

The high-level review of the Green Belt highlights that there is some justification for a formal review for the purposes of aviation-related commercial development at Biggin Hill within the Local Plan plan period. We recommend that a targeted review should be conducted to identify areas of the airport that do not fulfil the five purposes of Green Belt, which the Council could then in turn put forward options for the deletion of some Green Belt at the airport in a future Local Plan consultation.

The application of revised MDS infill boundaries for areas washed over⁸ by Green Belt would not be suitable. The current MDS approach is misaligned with the NPPF. However, the new Local Plan could still provide a policy stating what development would be permissible for any remaining land washed over by the Green Belt.

The creation of new insets⁹ and/or an extension to Biggin Hill town's inset would require the deletion of Green Belt; as noted previously a more detailed Green Belt review would be required in order to assess the role of the Green Belt at Biggin Hill more fully. Clearly there are elements of the Green Belt at Biggin Hill that do not satisfy the purposes of Green Belt. The high-level review has highlighted a number of areas where alterations and/or deletions could

⁸ A 'washed over' settlement is one where the built up area is included within the Green Belt. The NPPF (paragraph 86) requires that this should be used primarily because the open character of the settlement is an important characteristic and requires protection. A 'washed over' settlement may include an infill boundary within which 'limited' infill development may be acceptable.

⁹ An 'inset' settlement is one where the Green Belt boundary is drawn around the settlement so that the built up area is not included in the Green Belt. Larger settlements with a denser built form are usually 'inset'.

be tested in greater detail, but this would only be justified if exceptional circumstances can be demonstrated.

The Locate partnership's representations propound a number of locations that should be removed from the Green Belt in order to provide sufficient certainty for the concept plan to be delivered and for the growth potential of the airport to be realised. The concept plan includes some areas where development may be on existing brownfield land or in locations where it is arguable that land designated as Green Belt does not satisfy the purposes set out in the NPPF. In these instances it would be appropriate for a future Green Belt review to assess and identify the exact extent of new boundaries. Local Plans must contribute to the achievement of sustainable development and their development should consider the environmental implications of reasonable alternatives. Green Belt is not an environmental designation and it can sometimes be the most sustainable location for development. The PAS guidance states that *"the only relevant statement in national policy on the relationship between sustainable development and Green Belts is, 'when drawing up or reviewing Green Belt boundaries, local planning authorities should take account of the need to promote sustainable development'"* (NPPF para. 84). Therefore an assessment needs to take account of sustainability issues and an assessment against Green Belt purposes so that a comprehensive assessment can take place and not be reviewed in isolation. Plans should be positively prepared and identify the most sustainable locations for development unless outweighed by effect on the overall integrity of the Green Belt. A targeted review would be appropriate in these circumstances owing to the fact that the concept plan is built upon an aviation focussed economic growth strategy.

Our analysis of the Green Belt has shown that the eastern portion of Green Belt adjoining south camp could be suitable for future deletion from the Green Belt; it is enclosed on three sides by existing development and has many characteristics in common with the urban fringe. This portion of land does not meet the purposes of the Green Belt under the NPPF definitions and its enclosed nature provides little in the way of openness. There is merit in exploring the potential for Green Belt deletions at South Camp, West Camp and a large portion of the Terminal area given that these areas are already built up established areas. East Camp and north of the Terminal area could be more complicated given that some portions of this land are preventing sprawl and encroachment into the countryside. Figure 2.7 below identifies those areas of Green Belt that could be considered for deletion at Biggin Hill and those which are more sensitive based on our initial high level assessment.

2.7 Other planning mechanisms to support growth beyond the Local Plan

As well Green Belt deletions and a more positive policy approach in the Local Plan, the LPA could explore the potential of other planning mechanisms that could be worked up in parallel with a revised Local Plan and in partnership (with the Locate partnership, GLA and other stakeholders) to help de-risk the site and make it a more appealing prospect for investors or existing businesses that may be considering expansion or relocation within the airport.

Masterplans

Masterplans offer a non-statutory route for providing planning certainty and can be worked up alongside the Local Plan as a means of demonstrating deliverability of new/replacement commercial floorspace (and other uses) at Biggin Hill over the plan period. In neighbouring Croydon, town centre masterplans were produced in parallel for a number of difficult town centre sites within the Opportunity Area and this work then fed into a joint Croydon/GLA/TfL Opportunity Area Planning Framework (OAPF). The masterplan process helped to build consensus and de-risk the key town centre sites, reducing the amount of time required on the planning applications at the development management stage and provided certainty over the supply of deliverable/developable¹⁰ sites at the Local Plan Examination in Public. The masterplans provided certainty to the market, were used to lever in additional funding (e.g. LEP Growing Places Fund) and served as an effective vehicle to bring forward development via collaboration between the landowners, developers, public bodies and infrastructure

¹⁰ Footnotes 11 and 12 of paragraph 47 of the NPPF

providers. Each masterplan brief was written in partnership by boards constituting the stakeholders listed above. Jointly commissioning the design team (planners, landscape architects, transport planners, urban designers etc.) allowed the boards to progress each key site in partnership and eventually led to the adoption of interim planning guidance/Supplementary Planning Documents that provided greater details to emerging Local Plan and OAPF policy. Biggin Hill's status as a SOLDC offers significant opportunities for collaborative masterplanning based on the emerging concept plan ideas.

Area-wide local planning permission

Permitted development rights are set nationally, and apply across the whole of England.

However there are other locally focused tools which can be used by a local planning authority to grant planning permission for development in their geographic area. These tools are:

1. Local Development Orders; and
2. Neighbourhood Development Orders.

Paragraph 199 of the NPPF states: *Local planning authorities should consider using Local Development Orders to relax planning controls for particular areas or categories of development, where the impacts would be acceptable, and in particular where this would promote economic, social or environmental gains for the area, such as boosting enterprise.*

Local Development Orders are made by local planning authorities and give a grant of planning permission to specific types of development within a defined area. They streamline the planning process by removing the need for developers to make a planning application to a local planning authority. They create certainty and save time and money for those involved in the planning process.

Local Development Orders are very flexible tools, and it may be appropriate for them to be either permanent or time-limited, depending on their aim and local circumstances. For example, Local Development Orders in fast-developing areas may be time-limited so that they can be easily revised and updated in the future, while Local Development Orders which extend permitted development rights in established areas may be permanent.

Local Development Orders do not remove or supersede any local authority planning permission (or permission granted on appeal) or permitted development rights which are already in place. Equally, they do not prevent a planning application being submitted to a local planning authority for development which is not specified in the Order. Local Development Orders only grant planning permission, and do not remove the need to comply with other relevant legislation and regulations, such as the EIA regulations described.

The Growth and Infrastructure Act 2013 simplified the Local Development Order process by removing the requirement for the local planning authority to submit the order to the Secretary of State before adoption for consideration of whether to intervene. This was replaced by a requirement to notify the Secretary of State as soon as practicable after adoption. The Act also removed the requirement for Local Development Orders to be reported on as part of Authorities' Monitoring Reports.

A local planning authority can revoke a Local Development Order at any time. If a local planning authority wishes to modify a Local Development Order, re-consultation may be required. The Secretary of State can also require the revision of a Local Development Order by the local planning authority at any point before or after its adoption.

A local planning authority is able to impose planning conditions on a Local Development Order in much the same way as the Secretary of State can impose conditions on permitted development rights in the GDPO. Some of the conditions imposed in a Local Development Order may be similar to conditions that may be imposed on a normal grant of planning permission. However, a LPA should try to avoid imposing excessive numbers of conditions on Local Development Orders otherwise there may not be much point in simplifying planning for that particular area.

Section 106 planning obligations cannot be required under a Local Development Order; however, this does not prevent section 106 agreements being offered by a developer. For example, if a condition attached to a Local Development Order requires mitigation of an impact from development then a section 106 agreement could be used to secure this. Development carried out under a local development order may be liable to pay a Community Infrastructure Levy charge where one applies.

There are still strict limits as to what LDOs can cover but they may be worth considering for Biggin Hill as another possible policy lever to help provide certainty and encourage future investment.

The Council may also wish to consider the more radical step of encouraging a business led Neighbourhood Plan and/or Neighbourhood Development Order produced by the Locate partnership and other business stakeholders, once the Local Plan's strategic policies are in place. The main advantage for the LPA would be that the NDO would be voted on at referendum and could potentially be produced and 'made' in a shorter timeframe than the Local Plan. It would only be able to pass a referendum if it were acceptable to voters. In addition, where an NDP or NDO are in place, a 'meaningful proportion' of CIL monies can be passed to an established group where a plan is made/adopted. This could help to keep infrastructure funding generated at the Airport within the SOLDC in order to reinvest in infrastructure for the SOLDC.

Paragraph 201 and 202 of the NPPF state:

201. Communities can use Neighbourhood Development Orders...to grant planning permission. Where such an order is in place, no further planning permission is required for development which falls within its scope.

202. Neighbourhood Development Orders...require the support of the local community through a referendum. Therefore, local planning authorities should take a proactive and positive approach to proposals, working collaboratively with community organisations to resolve any issues before draft orders are submitted for examination. Policies in this Framework that relate to decision-taking should be read as applying to the consideration of proposed Neighbourhood Development Orders, wherever this is appropriate given the context and relevant legislation.

A Neighbourhood Development Order can be used in designated neighbourhood areas to grant planning permission for development specified in an Order. They allow communities the opportunity to bring forward the type of development they wish to see in their neighbourhood areas.

Neighbourhood Development Orders are not limited as to the size of land they can cover. However, they can only apply to land which falls within the specific designated neighbourhood area to which the community proposing the Order is the qualifying body.

Neighbourhood Development Orders can grant either unconditional or conditional planning permission for development.

Development carried out under a Neighbourhood Development Order may be liable to pay a Community Infrastructure Levy charge where one applies.

A local planning authority can modify a Neighbourhood Development Order to correct errors so long as the qualifying body that initiated the Order agrees with the changes, and is still authorised to act as the qualifying body. The procedures for modifying are orders set out in the Neighbourhood Planning (General) Regulations 2012.

The Secretary of State has the power to revoke any Neighbourhood Development Order which is made. A local planning authority, with the permission from the Secretary of State, may also revoke a Neighbourhood Development Order. If a local planning authority wishes to revoke an Order, it is important that they first engage with the neighbourhood planning body so that the

reason for the revocation can be understood and considered by the community that supported the Order.

The Neighbourhood Planning (General) Regulations 2012 amended the Environmental Impact Assessment Regulations so that they apply to Neighbourhood Development Orders. These modifications are set out in a new regulation 29A. An Order, which grants planning permission, may not be made by a local planning authority in respect of Schedule 1 development. An order proposal for development that would fall within Schedule 2 may be made provided the correct Environmental Impact Assessment procedures are followed, the basic conditions and other legal requirements are met and the order proposal achieves a majority at a referendum.

For Schedule 2 development, a screening opinion or screening direction must be adopted to determine whether the development is Environmental Impact Assessment development. If screening identifies likely significant environmental effects, then Environmental Impact Assessment is required. In this situation when a qualifying body submits an order proposal to the local planning authority it should be accompanied by an environmental statement. The environmental statement will be one of the documents sent to the Independent Examiner.

Schedule 3 of the Neighbourhood Planning (General) Regulations 2012 prescribes a basic condition that must be met where the development described in an order proposal is Environmental Impact Assessment development. A referendum may not be held on the making of a Neighbourhood Development Order unless the local planning authority is satisfied that, having taken the environmental information into consideration, this basic condition has been met.

2.8 Summary

- We agree with Locate partnership's assertion that the existing approach to Green Belt and MDS is misaligned with the NPPF and it remains challenging to demonstrate very special circumstances for potential investors/developers/occupiers.
- The review of the national, regional and local policy has highlighted a number of deficiencies in the saved UDP policies. The Local Plan presents opportunities to revise these policies and implement a more positive policy stance in line with the SOLDC designation and NPPF.
- Permitted development rights alone will not be able to accommodate the proposals from the Locate partnership in the emerging concept plan and would not be commensurate with the SOLDC designation, especially while the 2001 Article 4 Direction and 1996 protocol remain in place. They are 'out of step' with the 2011 London Plan and 2012 NPPF and should either be deleted or replaced via the Local Plan process through an updated policy.
- The SOLDC designation and Town Centres Supplementary Planning Guidance provide great latitude for the LPA to adopt a more positive approach towards development at Biggin Hill moving forward and indicates a number of factors that should be considered for a future DPD or masterplan.
- The LPA should consider the following approaches to enable redevelopment and growth:
 - designate a SOLDC boundary around the airport and airport related environs to be included on the Proposals Map;
 - Stipulate an allowable quantum of development for replacement and/or new commercial development in the SOLDC area to demonstrate a positive approach to growth that would not disturb the openness of any remaining Green Belt so as to conform to the sustainable patterns of development policies in the NPPF and London Plan. This would be possible following a more detailed masterplanning exercise.
 - tailor area-specific policies for each area at the airport, including urban design schematic diagrams, to provide an indication of acceptable uses, indication of preferred development form/layouts and preferred locations for infrastructure (e.g. specify policy to support redevelopment and reconfiguration of South Camp and adjoining industrial areas);
 - undertake a detailed infrastructure assessment planning feeding into infrastructure delivery plan schedule and possible future CIL 123 list.
- There is evidence that the parts of the Green Belt may be suitable for deletion/alteration. However, this would require a targeted Green Belt study to justify such an approach. A targeted analysis of the airports Green Belt will be required prior to consulting on proposed Green Belt deletions via a Regulation 18 consultation report..
- For areas where deletion of the Green Belt may not be justified, new policy should be in line with NPPF development management policy for Green Belts, therefore the replacement policy for such areas should seek to promote redevelopment and growth wherever possible by:
 - the extension or alteration of a building provided that it does not result in disproportionate additions over and above the size of the original building;

- the replacement of a building, provided the new building is in the same use and not materially larger than the one it replaces;
 - limited infilling or the partial or complete redevelopment of previously developed sites (brownfield land) which would not have a greater impact on the openness of the Green Belt (and 5 purposes of Green Belt)
 - local transport infrastructure which can demonstrate a requirement for a Green Belt location
 - the re-use of buildings provided that the buildings are of permanent and substantial construction
- The above stipulations are drawn from the NPPF itself, therefore there is scope for Bromley officers to further refine the local deployment of these broad approaches in the context of land that remains within the Green Belt e.g. by drafting policies with positive support for development with accompanying diagrams/maps (including identification on the Proposals Map).
- Alternative planning mechanisms should be investigated further to weigh the pros and cons of their deployment and interaction with the emerging Local Plan e.g. joint Bromley/GLA/TfL/landowner/airport/occupier masterplan, the use of LDOs or business-led neighbourhood planning.

	Summary of Recommendations
SOLDC designation	<ul style="list-style-type: none"> Designate a Biggin Hill SOLDC boundary on the emerging Local Plan key diagram and update the Proposals Map. Cancel 1996 protocol (quasi-Article 4 Direction). <p>Justification: Such an approach will help to support the London Plan SOLDC designation and remove unnecessary ambiguity for applicants where the protocol is engaged.</p>
Terminal Area	<ul style="list-style-type: none"> Investigate justification of Green Belt deletion and include an area-specific policy steer in the Local Plan. Cancel 2001 Article 4 Direction. <p>Justification: The analysis of permitted development rights potential (Annex I) shows that an unrestrained approach to permitted development (i.e. cancelling the 1996 protocol and 2001 Article 4 Direction) wouldn't be enough on its own to enable the growth envisaged by the Locate partnership or the aspirations contained in the London Plan and Town Centres SPD. The area between the Terminal Area and Leaves Green should be looked at in more detail. The NPPF allows scope for intensification and redevelopment within the Terminal Area through the infill policy wording which suggests that "partial or complete redevelopment of previously developed sites (brownfield land) which would not have a greater impact on the openness of the Green Belt" may be permitted. However, this would not be capable of delivering the concept plan.</p>
West Camp	<ul style="list-style-type: none"> Investigate the potential for deletion of Green Belt in this location. Develop area-specific policy steer reflecting more detailed heritage evidence. Subject to appropriate design and mitigation of impacts support airport related uses on airside parts of West Camp and adopt a more flexible position for other parts of West Camp allowing related training, heritage and hotel uses. Subject to mitigation of negative impacts support the quantum of development envisaged at West Camp within report Figures 4.1 and 5.9. <p>Justification: Due to the numerous heritage assets in West Camp it will be important to provide guidance in the Local Plan to help guide future management plans and masterplan.</p> <p>The high-level Green Belt analysis shows that West Camp appears to be an appropriate area of Biggin Hill to intensify and develop subject to heritage considerations.</p>
South Camp	<ul style="list-style-type: none"> Investigate the potential for deletion of Green Belt in this location. Subject to landscape assessment findings and a decision to delete the area of Green Belt broadly envisaged in this report, safeguard airside locations for airport/aviation-related development. For non-airside parts of South Camp, adopt a flexible approach that allows for non-airport/business related uses, such as general manufacturing operations (B2), light industry (B1c) and associated small scale distribution uses (B8). Subject to landscape assessment findings and a decision to delete the area of Green Belt broadly envisaged in this report and a more detailed masterplanning exercise, support the quantum of development envisaged at South Camp within the Economic Growth Plan Update of June 2014, <p>Justification: The high-level green belt analysis shows that South Camp</p>

	appears to be the most appropriate area at Biggin Hill to intensify and develop
East Camp	<ul style="list-style-type: none"> Investigate the potential for deletion of Green Belt in this location. Consider area-based Local Plan policy for redevelopment of East Camp <p>Justification: East Camp was shown to be a highly sensitive area e.g. SINC, characteristics of openness. However, it is possible that maintaining or 'safeguarding' the Green Belt in this location will not disturb the Airport's ambition to concentrate flying school premises in this locale. The NPPF allows scope for intensification and redevelopment within a consolidated east camp through the infill policy wording which suggests that "partial or complete redevelopment of previously developed sites (brownfield land) which would not have a greater impact on the openness of the Green Belt" may be permitted.</p>
Other planning mechanisms	<ul style="list-style-type: none"> Form a masterplan board/working group (in partnership with all relevant stakeholders e.g. Locate, TfL, GLA etc) to commission a detailed (joint) masterplan brief for the SOLDC area including adjoining industrial areas and West Camp. <p>Justification: A masterplan offers a useful non-statutory policy tool that can help to de-risk the site and provide investors and applicants with certainty, whereas now the policy framework is misaligned with the NPPF and includes much ambiguity e.g. 1996 protocol and 2001 Article 4 direction.</p>

Further recommendations on the he types of uses that are recommended within each camp are presented in sections 4 (property market review) and 7 (conclusions and recommendations).

Figure 2.7 – Potential changes to the Green Belt boundary



Source – NLP

Figure 2.7 above identifies the consultants view on the areas of Green Belt that could be considered for deletion at Biggin Hill and those which are more sensitive locations based on an initial high-level desk based assessment. This plan makes use of Figure 5.3 of the Economic Growth Plan Update of June 2014. The areas hatched in blue are sections of Green Belt within the proposed SOLDC designation that it is agreed could be explored for deletion whereas those hatched in yellow appear to be fulfilling some purposes of Green Belt and

require more detailed assessment. As stated in the report this is primarily due to the risk of sprawl to the north of the terminal area which may impinge on the gap between the airport and Leaves Green. East Camp potentially presents greater difficulties given the risk of sprawl and also encroachment into countryside and impacts on heritage assets, the SINC and openness.

As the reports states the Council need to prepare a more detailed site and landscape assessment in order to take forward Green Belt deletions for the Local Plan. Such a study should also assess the merits of safeguarding some Green Belt for after the plan period if the airport still requires land in the long term.

The review should investigate the capacity and constraints encompassing a targeted assessment of the Biggin Hill SOLDC, as a specialised employment area serving the aviation industry. As such it wouldn't be appropriate to look at Green Belt areas outside of Biggin Hill SOLDC. The Framework makes clear that, once established, Green Belt boundaries should only be altered in exceptional circumstances, through the preparation or review of the Local Plan. The SOLDC designation and economic needs/demand provide those exceptional circumstances.

This further work should review the constraints of landscape and Green Belt on capacity at the Airport and assess where growth may be able to be accommodated, in much greater detail than the high-level assessment contained in this report. Such a study should incorporate:

- An assessment of individual sites and including their constraints and opportunities, their capacity for development, given their location, and adjoining sites, landscape and biodiversity and heritage;
- Recommendations for the boundaries of the Green Belt at Biggin Hill SOLDC, so they are defensible and fixed for the plan period (2015 – 2030) and beyond; and
- Recommend a strategy to meet the objectively assessed need for employment space at the SOLDC.

3 ECONOMIC APPRAISAL

3.1 Introduction and approach

The following section provides a headline appraisal of the economic aspects of the proposals for Biggin Hill including a review of the existing baseline economic data and forecast impacts resulting from the development proposals. The purpose here is to provide a view on the realism of the proposals and impact figures.

It should be noted that the work on the economic impacts and property strategy to support the development was mainly produced between June 2012 and January 2013. Those reports therefore reflect market conditions and data available at those points in time. Economic and financial conditions have changed since and as such this will have some influence on the relevance of the reports at the current time. Following discussions with NLP and the client group further evidence and information was provided by NLP in April 2014 and later in June 2014 to augment and expand on the economic growth case made within the original reporting¹¹.

The following documents were originally provided by the client for review:

- London Biggin Hill Airport Ltd, The Economic Value and Potential of LoCATE@Biggin Hill, discussion draft, June 2012, Nathaniel Lichfield and Partners (NLP);
- Planning and Development Prospectus, A submission to LB Bromley, June 2012, Draft for discussion, Nathaniel Lichfield and Partners;
- Locate@Biggin Hill, Economic Growth Plan, NLP, January 2013;
- Property Development Strategy, Jones Lang LaSalle, June 2012.

In addition we have also considered a range of other research and information including:

- Stimulating the economy study, LB Bromley, GL Hearn, January 2013.
- 2012 Retail, Office, Industry and Leisure Study, DTZ
- Employment Forecasts for South London Response to the Examination in Public, Final report, June 2010, Oxford Economics.

The geographic scope of the proposals and this appraisal relate to the Biggin Hill development proposals as outlined in the Economic Growth plan. The development proposals are for up to 69,500¹² square metres of additional employment floorspace. These proposals are projected to have the following impacts:

- Up to 2,300 additional jobs by 2031¹³
- Business rate revenue uplift of £1.1million at 2031. 50% of which would be retained by the LB Bromley/GLA.
- £10.6M total business rates in total at 2031 (£5.28 retained by LBB/GLA) within the Biggin Hill Airport site.
- Wider economic benefits – Annual business turnover of £468m and Gross value added of £230million

¹¹ Economic Growth Plan Update, Biggin Hill Airport Ltd, Working Draft for Discussion, April 2014.

¹² Locate@Biggin Hill, Economic Growth Plan, Executive summary, Nathaniel Lichfield and Partners, January 2013.

¹³ Locate@Biggin Hill, Economic Growth Plan, Executive summary, Nathaniel Lichfield and Partners, January 2013.

3.2 Analysis

The section takes a view on the validity of the calculations and assumptions used and the overall realism of the data, impacts and argument presented in relation to:

- Employment
- Gross Value added (GVA)
- Business rates
- Wider economic impacts
- Overall demand and strategy

3.2.1 *Employment*

Current

The information provided identifies that the Airport is currently home to 60 businesses¹⁴ and 980 jobs¹⁵ of which 75% is accounted for by airport related businesses. Businesses at Biggin Hill generate turnover of £225m and £69m Gross Value added per year. This represents a GVA per employee figure of £70.4k.

The basis for calculating these figures is reasonable although the limited extent of the original business survey responses and the small sample could have a significant skewing effect on the results. This is partly offset by the use of the Trends Business Research data on business performance, although this too has some estimated figures within it.

The Jones Lang LaSalle paper on property identifies 30 different companies employing 1000¹⁶ this is at odds with the figures provided in the Nathaniel Lichfield work outlined above. For consistency purposes the work should be revisited and amendments made to ensure consistency with the wider economic and planning reports.

A further survey of businesses on the airport was carried out in June 2014. The survey was undertaken with 18 businesses located on the airport that currently employ 560 people. The updated survey based on NLP's Economic Growth Plan report from June 2014 identifies an expectation of additional employment of 300 jobs from existing firms over the next five years.

Future

The original survey evidence identifies future growth potential over a five year period of 41% in that time. This is based on responses from less than 20 of the businesses located at or close to Biggin Hill. As such the results should be treated with caution as this does not represent a statistically significant sample based on the overall number of businesses located at Biggin Hill. Results from further survey work carried out in June 2014 with 18 businesses located at the airport estimate that current employment in these firms was 560. Employment in these firms was expected to increase to 851 job (52% increase) in the next five years based on survey interviews.

Comparing the expected employment growth figures from the two surveys (41% and 52%) for existing businesses from the survey data to a range of historic and future employment projections shows the initial five year estimate to be high (see Table 3.1) given wider annual growth rates...

¹⁴ Planning and Development Prospectus, A submission to LB Bromley, June 2012, Draft for discussion, Nathaniel Lichfield and Partners;

¹⁵ Locate@Biggin Hill, Economic Growth Plan, Nathaniel Lichfield and Partners, January 2013;

¹⁶ Property Development Strategy, Introduction p.9, The property case for Biggin Hill, Jones Lang LaSalle, June 2012.

Since the original review further information on the airport's argument for growth has been put forward. This is centred on the airport playing three roles which make it unique amongst airports and as a growth location. The specific roles are as a location for business aviation aircraft owners to be based at, business aviation users to fly in and out of and for business aircraft manufacturers to base their service centres at Biggin Hill.

A series of employment growth examples are presented for a range of other airport locations, original equipment manufacturers and aircraft operating companies to demonstrate demand. The information suggests growth at "comparable locations" of between 4.4% and 17.7%.

A further aspect of the argument is also the increasingly constrained capacity at other airports serving London and the south east which will create additional demand at Biggin Hill in the future.

The predicted growth of 930 additional jobs (approximately 400 from existing businesses) by 2017 and 2300 additional jobs by 2031 would mean doubling the number of jobs at Biggin Hill within the next 3 years – this would appear ambitious given current economic conditions, recent employment data which shows a stable level of employment in relevant aviation employment¹⁷ over the 2009-2012 period and a range of future projections. The most recent survey data shows predicted employment growth of 34% or 189 jobs over the next three years from existing businesses.

Accounting for better growth prospects within specific sectors that could be targeted by the Biggin Hill development the employment growth target ambitious target. Much of the growth within the Bromley economy has been in business services, whilst the strategy identifies this as a potential target sector with the provision of office space, Biggin Hill is not historically associated with these uses. Further analysis within the work by GL Hearn also identifies that the business park market is already well catered for.

Table 3.1 Comparison of projected employment growth for Biggin Hill with historic and projected future employment change

Source / date of publication	Employment growth projection/ historic trend	Period over which figure applies	Area over which figure applies	Annual growth rate equivalent
Oxford Economics 2010 ¹⁸	8% (historic trend)	1998-2008 (10 years)	South London	0.8%
NLP business survey (2012)	41%	2012-2017 (5 years)	Biggin Hill	8.2%
Experian (November 2012) ¹⁹	28%	2011-2031 (20 years)	LB Bromley	1.4%
GLA 2013 ²⁰	8%	2011-2031 (20 years)	LB Bromley	0.4%
Oxford Economics 2010 ²¹	14%	2008-2031 (23 years)	South London	0.6%

¹⁷ Business Register and Employment Survey data for relevant aviation SIC codes

¹⁸ Employment Forecasts for South London Response to the Examination in Public, Final report, June 2010, Oxford Economics.

¹⁹ Stimulating the economy study, London Borough of Bromley, GL Hearn, January 2013.

²⁰ 2013 Borough employment projections, GLA, May 2013

As noted previously further discussion and evidence has been provided since the previous draft of this report²². This work provides additional evidence to add further weight to the argument which supports the 2300 job creation target.

3.2.2 **Gross Value Added**

Calculations of current gross value added generated by existing businesses appear reasonable as is the approach to estimating information gaps in the GVA data. The projection of future GVA impact is based on the employment projection figures and as such are at the upper end of the scale based on a review of the evidence.

3.2.3 **Business rates**

The approach to calculating the business rate uplift appears reasonable as are the rateable values and employment densities used (notwithstanding the caveats identified within the report). The key driver of the potential future business rate uplift is the level of additional employment predicted, subsequent need for new space and related increase in rateable value from that space. The evidence to date suggests that the predicted employment figures and uplift in business rates are at the upper end of estimates.

Table 3.2: Floorspace per job / rateable values used within economic impact analysis

	Floorspace per job (m2)	Rateable values (£m2)
B1	12.5	50
B2	37	55
Hangars	440	35

Inevitably it is difficult to predict future growth and demand patterns but to achieve the ambitions set out within the NLP document will involve a significant change from past and recent economic trends.

In a wider context and allied with the uncertainties around demand for the development proposals, the evidence suggests that over recent history that LB Bromley's business rate revenues have fallen by 3% in real terms over the period from 1999-2010²³ equating to a fall of £2.2 million. The report also notes that

"...outer London local authorities (e.g. Bromley, Bexley and Harrow) primarily function as residential locations for commuters and are unlikely to be able to increase their business rates by as much central local authorities. However, these locations will still face an incentive to encourage and permit the development that can occur, which would increase their tax bases."

3.2.4 **Wider economic impacts**

Current spending and supply chain effects from existing businesses and employees (multiplier) are suggested at £15million for the Bromley economy, a further £11.6m into the rest of London and £35.5m into the wider South East²⁴. The impacts here are based on the analysis of the business survey results. As with the employment and GVA impacts there is the potential for the small sample and assumptions made in the calculations to skew the results here. Further work to survey all businesses could help improve the accuracy of the data.

²¹ Employment Forecasts for South London Response to the Examination in Public, Final report, June 2010, Oxford Economics.

²² Economic Growth Plan update, Nathaniel Lichfield April 2014

²³ Capital gains: What does the Local Government Resource Review mean for London? Kieran Larkin & Zach Wilcox, October 2011

²⁴ Locate@Biggin Hill, Economic Growth Plan p.3, Nathaniel Lichfield and Partners, January 2013.

The overall approach to assessing the wider supplier and income effects is sound and the reported impacts from future development are likely to be at the upper end of estimates.

3.2.5 ***Further evidence of demand and economic strategy***

The strategy for development is focused on “inside out” approach that “mines” the demand and links from existing firms located at the airport and attracts other aviation related firms. The strategy is therefore focused on existing activities which primarily relate to business aviation. Given this focus it is critical that there is evidence of historic growth from existing businesses as well as a sound case for future growth in order that the development strategy has credibility.

A range of information is presented on the business aviation sub-sector which demonstrates the potential for growth and the plans and development of competitor and comparator airports. This provides positive evidence but will require a significant improvement in the operation and promotion of Biggin Hill as a location for investment and business growth.

The evidence presented on the potential growth of the aviation sector consists of a range of documents including London Biggin Hill Airport’s response to the Airport’s Commission on Aviation and Connectivity²⁵

This document provides an overview of the recent trends in Business Aviation movements in London and the south east and annual growth rates. The data shows a significant fall over the 2007-2009 period reflecting the impact of the recession at this time. Over the period 2010 - 2012 there has been a small amount of growth, averaging about 1.5% per year. Based on the data provided in Appendix 1 of this document, in 2011 Biggin Hill had the third highest number of business aviation movements per day of all UK airports behind London/Luton and Farnborough.

Most recently the Airports Commission report also provides a positive recommendation which provides support for growth and development at smaller airports such as Biggin Hill with the recommendation that:

“Government policy should promote the benefits of smaller airports in the London and South East system for accommodating business and general aviation.”²⁶ and

“Furthermore, while the opening hours and other conditions of use of these airports are often matters that should properly be dealt with between the airport and its local authority, the local authorities should support the development of smaller local airports and, alongside consideration of their environmental impacts, also give due consideration to the positive benefits they can bring to the local and regional economy.”

The Jones Lang LaSalle report suggests that there is not a strong case for clustering and Biggin Hill would not be able to compete with alternative locations in looking to establish an aviation cluster²⁷. A similar view is apparent in the work by GL Hearn which notes the competitive market place in which Biggin Hill operates. The analysis of potential end uses for the masterplan notes the following key points²⁸:

- Office markets are focused on established locations elsewhere in Bromley and Croydon where there is only limited development occurring and a high proportion of vacancy.

²⁵ Response to the Airports Commission’s Discussion Paper No.2 – Aviation and Connectivity, 19th April 2013.

²⁶ Airports Commission, Interim Report, December 2013

²⁷ Property Development Strategy, The property case for Biggin Hill p.24, Jones Land LaSalle, June 2012

²⁸ Property Development Strategy, The property case for Biggin Hill p.43, Jones Land LaSalle, June 2012

- Biggin Hill is not an established office location and demand is “extremely limited”. The analysis notes that demand for any office space at Biggin Hill will be driven by aviation related demand particularly from existing users.
- Industrial estates close to the airport have seen slow take up rates (and recent visual review of these suggests a high degree of vacancy) The JLL analysis also identifies the lack of quality in the existing industrial stock which could also act as a constraint on new development
- South East London including Bromley does not generate large volumes of industrial property take up. Existing demand at Biggin Hill is very patchy and other locations have better take up, primarily due to better accessibility.
- There is a lack of single large sites for employment use within the M25 and the West Camp could be developed to help fill this gap if a clear planning prospectus for the site is established.
- There has been some interest from mid-range hotel operators and anecdotal evidence of demand from the existing business base for additional retail uses.

Other work commissioned by the council shows that there is limited demand²⁹:

“the current occupancy of employment land at this location (Biggin Hill) highlights limited demand from general office or industrial occupiers at this location.”; and

“we do not consider that there is the evident market demand within the M25 SE quadrant to support a further business park scheme based on the information currently available”

Further evidence of demand and views from current and future occupiers is provided in a range of documents.

There is also evidence from a business previously located at the airport (JET aviation) which alludes to the difficulties the company had in increasing the physical size of their operation which affected the viability of the business. At the same time the e-mail, written in November 2013, also cites the “...declining overall business aviation traffic in Europe” which has put further pressure on the business. The result here was that the company have discontinued their operations at Biggin Hill and sold the existing concern.

There is evidence presented within the submissions from Biggin Hill airport to the Airports Commission which shows some growth in business aviation movements in London and the South east between 2010-2012. The key question is whether this trend will continue and what ability Biggin Hill has to capture any growth. Building on this further evidence has been presented by NLP to support its argument principally on the basis that other competing airports are becoming increasingly constrained in capacity terms. This does offer future growth potential for Biggin Hill.

Additional evidence submitted is correspondence from 2011 from another existing occupier, Formula One Management who express their view that the existing planning policy and operating basis of the airport does not sufficiently allow the airport and surrounding area to realise the economic growth potential.

3.3 Summary

Overall the economic growth plan and supporting documents present an ambitious strategy for the development of Biggin Hill. Whilst the potential for growth is acknowledged, the suggested

²⁹ Stimulating the economy study, London Borough of Bromley, GL Hearn, January 2013

targets will be challenging. The methods used to calculate impacts are reasonable, with the analysis presenting a positive view of future growth potential.

The strategy is very much based on generating additional demand from existing occupiers, looking at the opportunities to attract occupiers supply chain and customer bases alongside business in the wider aviation sector. The question to answer here is what evidence of increasing demand/expansion from existing businesses and their supply chain and customer base is there? A reasonable argument for growth potential is presented using a range of information from previous studies on the business aviation sector, discussion with manufacturers and aircraft operating companies in the business aviation sector and an argument that constrained capacity in competing locations will drive demand at the airport.

The review of the business aviation sector suggests potential growth for the future but the market is highly competitive and capturing the opportunities will require a step change in the way that Biggin Hill does business and presents itself to the market. There is also some conflicting evidence provided which suggests that business aviation traffic in Europe is declining, a position which could adversely affect the airport's wider vision for growth.

The evidence suggests a challenging environment in which to achieve economic growth at Biggin Hill. Having said this, Biggin Hill has a supportive policy designation from the London Plan as a SOLDC and the outcomes of the Davies Commission also provide support for the growth of smaller airports.

In order to achieve the ambitions set out there will need to be a transformational change in the area. This would require major pump priming by the public sector to improve and address infrastructure constraints and the development of a positive planning and wider policy framework that supports these ambitions. This emphasises the role of the public sector, its statutory planning powers and related resources in helping to de-risk and provide the certainty and confidence for the private sector to invest.

4 PROPERTY MARKET REVIEW

4.1 Existing Research

GVA Grimley report

GVA Grimley prepared an Economic Development and Employment Land Study for LB Bromley in January 2010. The report included comment on how Biggin Hill could be incorporated as an opportunity for business growth within the borough, although it is by no means the primary focus of the report.

It was suggested that Biggin Hill could complement Bromley as an out-of-town location for businesses to locate, particularly for hi-tech manufacturing. It also touches on the balance between a burgeoning business community and the political and local community resistance / scepticism of large scale growth, as well as the lack of connectivity particularly with rail links.

The report also promotes an Innovation Centre. However, there is little supporting evidence of its need, nor an explanation of why such a centre would not be better located in one of the traditional office locations within the borough.

Overall, the report provides a summary of the airport's objectives and ambitions, but does not attempt to critique the plans to any degree.

DTZ report

Subsequent work by DTZ (LB Bromley Retail, Office, Industry & Leisure Study 2012) identified the following market issues in relation to business space:

Offices

The office stock in Bromley is focused on Bromley town centre given its accessibility by public transport and quality of environment and supporting amenities. Most office supply is located along the High Street along with office cores adjacent to Bromley South station in Elmfield Road and around Bromley North Station opposite the Civic Centre. Bromley is a historically important centre but it suffers from challenges in delivering new office development. This reflects the underlying state of the market and is a common theme amongst other outer London centres

While there are a few modern office developments focussed around Bromley, the majority of its office stock can be regarded as secondary, and is leased to smaller local occupiers. There is a marked deficit in Quality Grade-A space. In recent years, landlords have made efforts to undertake office refurbishments in order to prevent reputable tenants from relocating to better quality units elsewhere in alternative outer London regions.

Local agents have estimated that the vacancy rates in Bromley are currently around 15 - 20%

Whilst Bromley enjoys a strategic location within South London and therefore has the potential to attract further major employers with substantial back-office functions, the secondary nature of the majority of office accommodation in Bromley has limited levels of demand and take-up in recent years. Current B1 Office employment stock will need to adapt to the modern needs of business occupiers. The current lack of Grade A stock is a disincentive to investment and employment growth in Bromley, since it decreases the Borough's ability to attract occupiers who have a requirement for such facilities in the surrounding area. Office space in Orpington has proved difficult to market with very local demand and the peripheral location of the train station.

Industrial

Industrial land in LB Bromley is in short supply, and the market is leaking demand to Croydon and areas of Lower Sydenham/Lewisham.

With the exception of the Crayfield Industrial estate in Orpington, there has been an absence of new-build industrial units on the market in Bromley.

At present levels of available B2/B8 space around Bromley centre are very low, however agents felt that this could potentially present a future opportunity.

Typical rents are c£7.00 psf for good quality space, which compares with Croydon (£8.00 psf) and Dartford (£8.70 – £9.00 psf).

DTZ's report findings indicate that the overall level of employment land is broadly in balance with demand. As such, the key to planning employment land provision to 2031 is restricting the release of existing office sites and non-office sites that have the potential to be converted to office uses. Therefore, the report recommended strongly protecting against loss to other uses existing employment land and premises in Bromley that meet the following criteria:

- Existing employment sites or premises that are within town centres. A detailed assessment of the capacity and delivery strategy for office accommodation around Bromley South should be undertaken as this area represents the greatest opportunity to accommodate additional future development.
- Existing employment sites or premises that are suitable existing office locations outside town centres to provide both capacity for growth and choice for the market. Land at Biggin Hill and in the Cray Valley could be examples.

Jones Lang LaSalle Report

Jones Lang LaSalle prepared a report in 2012 titled "Property Development Strategy – The Property Case for Biggin Hill" on behalf of the Locate at Biggin Hill partnership. The report is specifically focussed on the potential of the immediate Biggin Hill area with the objective to identify the intensification of uses and development, as well as delivering an argument for investment at the airport by the private and public sector.

Their summary of the airport, its users and rational notion of the 'inside out' approach is informative and logical. It outlines that a new approach to 'place creation' needs to be adopted, although at the same time driven by airport related users and manufacturers. We would agree that this approach has logic, notwithstanding our comments on the relative lack of hard evidence of demand to back this up.

It does not tackle West Camp with any specific recommendations and does put a lot of emphasis on serviced offices, leisure and conference facilities without backing this up with how the demand will be generated, or how the existing space could be viably adapted. In terms of other uses it promotes such uses as data centres, which are highly unlikely to locate adjacent to an airport due to the risk of a plane crash.

It does make the point that given that a market needs to be created, generating demand is the key to success. Whilst the general analysis of the various uses is well argued, it is largely hypothetical as it is not substantiated with significant hard evidence on current or recent historic demand.

The main shortcoming of the report is that it does not outline a strategy, methodology or likelihood of increased demand, and more specifically how that demand will be created. As such, it is challenging to identify and justify any tangible growth potential and timing with a significant degree of accuracy.

4.2 Defining the Local Property Market

Biggin Hill is at the centre of a cluster of businesses which primarily serve the airport's operations, though some are non airport-related; many of the occupiers on the adjacent industrial estate for instance serve the local community (joinery and glass businesses, for example).

If there was not an airport at this location, it is unlikely that there would be any business community of any scale, save for what one would normally expect on a local industrial estate. Reasons for this are set out below.

The Biggin Hill area does not benefit from a compelling case for inward investment due to the relatively poor road and rail communications when compared to the neighbouring centres of Bromley and Croydon and the broader South East quadrant of the M25.

The road network serving the airport is poor, with drive times of 10-15 minutes to Bromley, Croydon or the M25. Furthermore, the connectivity to the rail network is meagre with the nearest tram connection being at New Addington, with Knockholt, Hayes and Orpington being the nearest railway connections.

The clearest and most compelling case for investment into Biggin Hill is the attraction of the airport itself. The airport is important as it is used exclusively by business traffic, the consequence of which is that it drives traffic from the larger passenger airports around London. It also provides its customers the benefits of flying closer to Central London than some of its competitor airports such as Luton and Farnborough.

What some of the operators on the airport have also realised is that customers may not want to connect on from Biggin Hill, with some customers preferring to fly in, enabling their clients or suppliers to come to the airport to meet. The airport now boasts state of the art conferencing and meeting facilities to cater for this trend, with Rizonjet leading the way.

Looking ahead, the demand profile for airport-related activity appears to be positive, albeit speed of delivery is a significant issue for both the airport and the operators. The ambiguity framing planning policy is a complexity and risk for inward investors. Examples include the fact that the airport is impeded by the green belt designation for large parts of the peripheral land. In addition, West Camp is situated within a conservation area, which contains numerous old accommodation and mess halls which are listed.

At the same time the airport has recently been designated at a SOLDC, which indicates that planning policy allows, and activity encourages, inward investment into a vibrant and successfully run airport. The difficulties of these constraints will be dealt with in more detail elsewhere within this report, but the consequences for the market and from a marketing perspective are a concern.

The following sections cover an assessment of the masterplan in more detail. In brief, the masterplan attempts to incorporate the modernisation of West Camp to become a vibrant leisure and office campus, although the constraints make this particularly difficult to accomplish. The expansion of South Camp appears on the face of it to be more aligned to the demand profile for future activity that will be driven by airport-related activity, in that it provides for increased hangar accommodation, which the majority of the expansion will need over the short and medium term.

Where the masterplan takes a more long term view is in the warehouse accommodation which is not airside. It is not surprising that the industrial estate does not teem with airport and aircraft suppliers, as the level of activity is significantly influenced by the size of the airport itself in terms of the number of flights. As the airport only accounts for circa 28,000 aircraft movements a year, it has not reached a point of critical mass that suppliers need a dedicated distribution or maintenance unit adjacent to the airport.

This is in part due to the connectivity issues, as a supplier based at Biggin Hill would struggle to supply any other airports from this based due to the length of time to reach a motorway, in which case it will unlikely ever be considered at a regional hub for distribution parts and services.

We envisage it taking some time to upscale to the point that there will be significant demand for non-airside accommodation, although there is a precedent in Formula One locating at the airport.

What is important is that a unified planning policy needs to be presented to operators considering investment at this location, if further examples of Jet aviation leaving the airport are to be avoided.

Updates to the Economic Growth Plan (EGP) produced by NLP for Locate at Biggin Hill were produced in April and June 2014.

Whilst the updates provide relatively little hard evidence on demand from a property market perspective, they do provide a more logical strategy that supplements the JLL research to assist in generating future demand. For example, the updates are clearer regarding drivers of demand based on the airport having three, mutually reinforcing roles as a Gateway to London (driving business aviation demand), a home base for aircraft owners and an MRO (maintenance, repair and overhaul) service centre.

The forward strategy set out in the updates sees the above three roles generating demand for service facilities, third party aviation-related engineering, manufacturing and technical companies and supporting facilities including hotel, conference, event and training facilities.

Additional consideration has also been given to a phasing plan that reflects the commercial rationale that demand will be “airport-led” with early phases being predominantly aviation operation businesses and commercial B1 office space phased towards the end of the proposed 20 year development period split into three phases of 5-7 years each.

In greater detail, the delivery and phasing rationale is based on:

- Five aircraft Original Equipment Manufacturers (OEMs) moving to Biggin Hill over 15-20 years
- Two expanded Aircraft Operating Companies (AOCs)/Fixed Base Operators (FBOs) and four new AOCs attracted to the airport over 15-20 years
- 5 new hangars for aircraft parking. Survey information provided in the June 2014 EGP Update report showed that local existing businesses have a space requirement for three additional hangars each of over 3,700 sq m over the next three years.
- A small heritage facility
- 16 individual plots for manufacturing businesses associated with suppliers to aviation businesses offering 17,500 sq m of light industrial space
- 13,700 sq m of new build and converted accommodation for office use (though alternatives may be possible) on West Camp to be built out from year 6 onwards and principally in the final phase, given that demand for commercial space at West Camp is expected to follow the momentum generated by successful take-up of air-side space on other parts of the airport.
- Replacement space for existing operators

Total development quanta set out in the June 2014 EGP Update comprise a total of 48,198 sq m of new build floorspace and 43,534 sq m of refurbished/relocated floorspace split between:

- 17,166 sq m of new build floorspace and 9,894 sq m of redeveloped/relocated floorspace in Phase 1, mainly new airside development for OEM and AOC occupiers at South Camp

- 14,750 sq m of new build floorspace and 15,279 sq m of redeveloped/relocated floorspace in Phase 2, bringing in more development at East Camp and initial works at West Camp
- 16,462 sq m of new build floorspace and 18,361 sq m of redeveloped/relocated floorspace in Phase 3, focused on West Camp in terms of land-side airport user businesses and including new office HQ buildings

Whilst this strategy has commercial logic in terms of the building blocks required for development and broad phasing, we consider that there are the following risks to delivery that are set out in further detail in the remainder of this section. These comprise:

- The ability of the airport to attract the OEM, AOC and FBO investment against its competitor locations. This is key since we concur that the main driver of demand for business space in the area is airport activity. Evidence is set out in the June 2014 EGP Update report that – assuming like is being compared with like – shows part of Biggin Hill's competitive advantage could lie in its ground rents. Ground rents are quoted in the report as ranging from £1.80-£2.80 psf at Biggin Hill compared for £15.00 at Luton Airport. Growth from existing occupiers is evidenced in the June 2014 EGP Update report that shows that 94% of existing businesses at Biggin Hill who responded to a survey planned expanding their current floorspace.
- The likely requirement for public sector funding to underpin a heritage facility
- The potential scale of office accommodation proposed at West Camp, given that this is likely to be the most challenging type of accommodation to develop given our analysis below.

4.3 Local Office Market

Biggin Hill has no discernible office market. The offices that are in existence at Biggin Hill are largely ancillary to the airport's operation, or connected to the manufacturing and suppliers adjacent to it. Formula One does have its HQ office function at the airport, but the primary driver to locate here was the proximity of the airstrip.

Attempting to attract businesses to Biggin Hill who are not connected to the airport will be challenging. The main reason being that the site is difficult to access and does not have the supporting infrastructure of neighbouring locations, particularly Bromley and Croydon town centres.

In Croydon alone there is currently 1.6m sq ft of available office space, which is a void rate of 21.5%, way above the Greater London average for major centres of 13.5%. Much of this space is refurbished 1960s and 1970s stock, but there have been recent modern refurbishments which has raised the quality on offer, and even a 100,000 sq ft new speculative development, the first built speculatively for 20 years. Prime rents are £22 per sq ft.

The position in Bromley is not as stark, but availability is still relatively high following disappointing take-up over the past five years during the downturn.

Notwithstanding this point, as there is no office space at the airport to offer to rent or to buy, occupiers would need to undertake significant investment in which to develop a new facility, and for an occupier to consider such a location, it would need to be attractive in terms of infrastructure, amenities and/or labour force.

We have already covered the poor connectivity in terms of local transport, coupled with the lack of local amenities and questionable useful local labour force (as referenced in the Jones Lang LaSalle report for the Locate partnership), attracting significant inward investment that will require office space will be highly challenging.

Given the above factors, we do not believe that major growth in office space at Biggin Hill in the future is likely to be deliverable. Smaller scale office provision, however, may be achievable. We understand that the airport has recently included some office accommodation

within the new airport hangar. This should be encouraged as we would not rule out demand for flexible office space at the airport from time to time, and arguably if this turns into serviced office space, then there may be demand for this on a small scale.

Speaking with local agents there is unlikely to be significant demand from corporate seeking a South East headquarters, but at the other end of the spectrum, there may be a reasonable level of demand for flexible office accommodation. A local example is of the Addlington Business Centre, which is managed by Bizspace. The facility is predominantly utilised by industrial occupiers (42 units), but does have eight office business units to rent.

These are all fully let on 12 months licences at a rental of £15 psf including utilities. The companies who have been attracted to New Addlington are a mixture of local businesses as well as companies coming into the area, who have contracts in the area.

Speaking with Maxwell Brown, who are the agents marketing Maybrook House in Caterham, they report that the market is beginning to improve after many years of being relatively stagnant. Maybrook House is 1970s office block, where void periods are often 12-18 months. The current demand is from occupiers seeking 1,500 – 2,000 sq ft suites. Rental levels are currently around £15 per sq ft, exclusive of rates and other occupational costs.

What should be a target in the medium term is to attract businesses which are connected to or who may benefit from the airport. It is difficult to formulate a marketing strategy for this, other than to continue to attract airport related businesses, which would need ancillary office accommodation.

Much has been made of West Camp as a location for office space in the medium to long term. There are however significant impediments to this strategy. West Camp is almost exclusively owned by Pentbridge Properties, which is connected to Formula One, and who operates from two airside hangars. The remainder of the space is in the aforementioned old accommodation blocks and mess halls, many of which are listed.

It is extremely likely that the redevelopment or refurbishment of these blocks will be economically unviable. This is due to the high costs to bring them up to an inhabitable condition, coupled with the likelihood that they would not provide modern accommodation.

There have been discussions in regards to a heritage centre, and subject to funding this venture should be pursued, as utilisation as offices is unlikely to be viable.

Further commentary on proposals for West Camp is set out below.

4.4 Local Industrial Market

There is an industrial estate adjacent to the airport, made up of a combination of airport and local occupiers. As has been explained previously the airport is currently of a scale which does not encourage suppliers to locate adjacent due to the economies of scale, in which case there is not yet the case to expect much expansion of the adjacent industrial estate serving the airport itself.

Larger airports may well attract such ancillary businesses as catering, freight forwarding, parts distribution, aircraft manufacturers servicing and training centres, aircraft part suppliers etc, but the larger scale permits this.

Due to the suburban / rural nature of this area, there are few industrial estates within a five mile radius to accommodate many local businesses to serve the local community. As such it is not surprising that there is a limited take-up of businesses located at Biggin Hill in which to serve the local community.

Demand for industrial / warehousing space is often led by a need to be at a particular location, followed by such things as cost, specification and available workforce. The demand profile for

Greater London is dominated by the service sector be that retailers, distributors or suppliers to which connectivity is key. In the South East London segment this is no different, which is why such location as Croydon, Dartford, Greenwich and Erith benefit from large industrial areas. These areas benefit from either swift access to Central London, access to markets (populated boroughs close to London), or access to the M25.

Biggin Hill does not benefit from such advantages, and this means that significant growth in non airport-related industrial space in the future is unlikely.

4.5 Aviation sector and businesses

Biggin Hill airport supports a vibrant business community who cater for the business traveller and its essential infrastructure, primarily at South Camp. A number of the businesses maintain aircraft and cater for the business traveller, including Avalon Aero, PremiAir, Jet, and Rizonjet, the latter of which also provide conferencing and meeting facilities.

Pentbridge Properties own two hangars at West Camp, which is used is the storage of goods associated with the Formula One operation at the airport. The warehouses and stores behind these hangars are also used for storage of Bernie Ecclestone's private property.

Other sectors on the airport include the flight schools and hangar space for light short range aircraft.

The airport appears to be close to capacity, particularly with the hangar space at South Camp. We understand that demand has not been in short supply in recent years, particularly for airside hangar space, but it is the supply and more important the deliverability of hangar space which is a real issue with the marketability of the site to new and existing operators.

The site does have an existing consent for a 76 bedroom hotel. The interest received to date has apparently been from Hilton and Ramada Hotels, although both have expressed that they would only be interested in a site which had consent for 100+ beds within this area.

4.6 Summary

We understand that the airport, in association with NLP, have projected that the current number of jobs (circa 1,000), could increase to 2,300 by 2031. These employment projections have been compiled based on speaking to occupiers at Biggin Hill who have provided their own growth forecasts, as well as benchmarking against other airports, particularly Paris Le Bourget Airport.

It is difficult to verify the demand for property due to the fact that we consider demand for this location being derived almost exclusively as a result of the airport itself. We have spoken with the airport operator and it is clear at this stage that the vast majority of the demand that they witness is for airside hangar space in which to use for the storage and maintenance of commercial aircraft.

Addressing the illustrative concept plan within the NLP Economic Growth Plans, they have attempted to demonstrate how the airport could expand to accommodate the projected growth of demand.

We summarise our thoughts below on the various camps at the airport:

West Camp

The areas to the north of West Camp include the terminal building, as well as current and future development potential of the essentials services provided by the airport operators. We have no reason to believe that the growth of this area of the site will not grow in line with the growth of flights into the future. This is an area with scope for expansion and/or redevelopment for this purpose.

The southern section of West Camp is the most constrained part of the site as it is within a conservation area, and many of the buildings are listed. We are more circumspect in regards to the redevelopment potential of this area, both in terms of practical and financial viability. We have discussed the historic lack of demand for B1 office accommodation in this area however we understand there may be some market demand (concerning the area Marked in Figure 4.1 below) for bringing forward a mixed use scheme comprising workspace, education uses/training facility, a heritage centre and potential hotel linked to the airport and training facility and to help deliver the scheme there may be grant funding availability.

Figure 4.1 below identifies the area of West Camp for which we understand there may be some market demand for mixed use development proposals. The consultants undertook an initial and high level development capacity assessment of this site taking account of the above uses the Council wishes to accommodate, listed buildings and those with most architectural merit, poorer quality building stock which could be considered for demolition, the potential for infilling and the requirement to retain an ongoing overall sense of openness. This has enabled us to produce a basic site layout plan with an initial view on how buildings can be sited. It involves conversion of the heritage buildings to be retained and the addition of a modest amount of new build workspace.

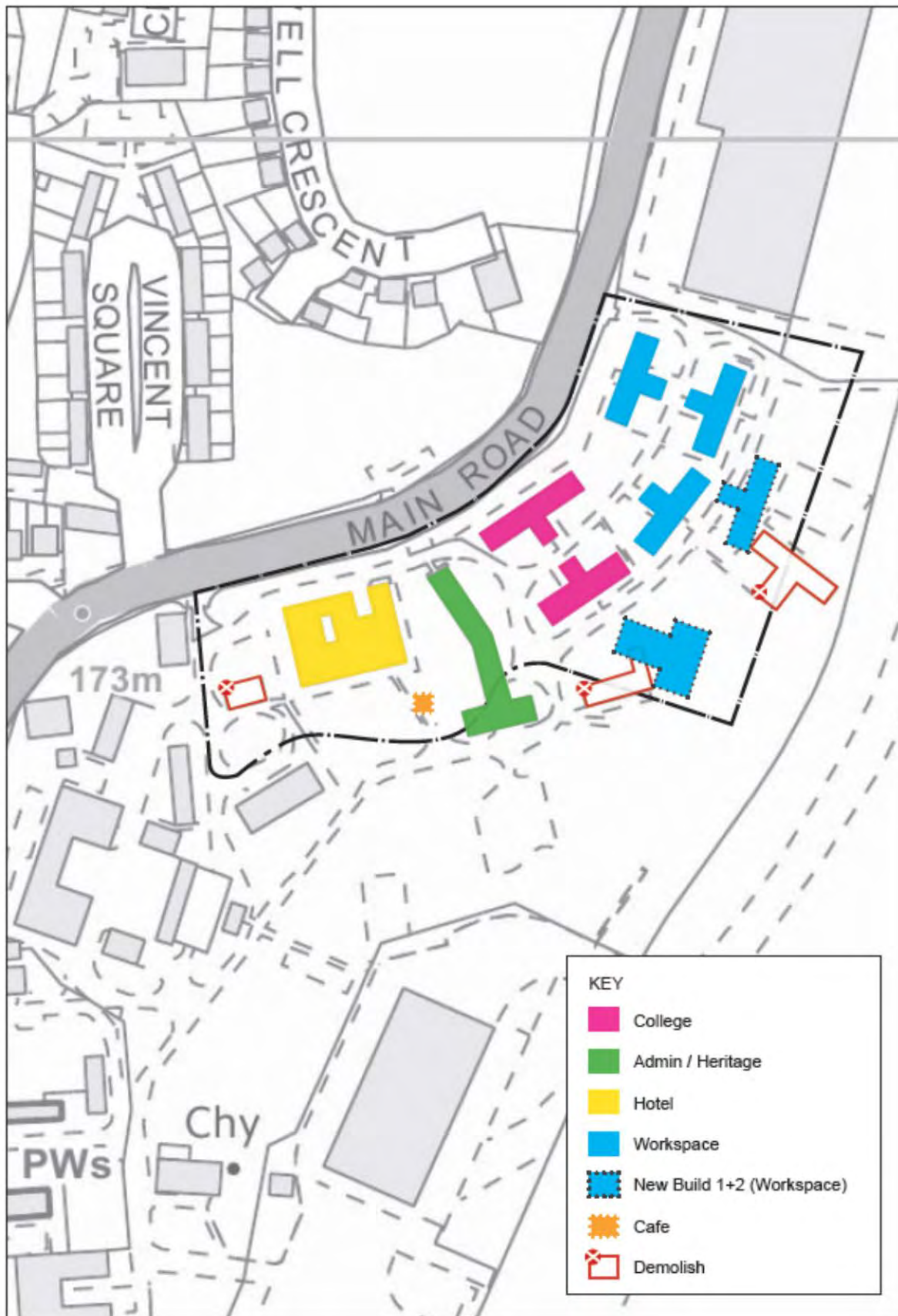
The June 2014 Economic Growth Plan Update sets out the following development quanta for West Camp:

- Hangarage: 5,681 sq m GEA (of which 3,198 sq m will be new build)
- Office (B1): 14,675 sq m (14,111 sq m redevelopment, 564 sq m new build)
- Light industrial (B2): 2,600 sq m (all new build)

Our analysis focuses on the section of West Camp identified in the below plan (referred by the Council as Area 4). It sets out the a total potential development of 8,812 sq m GIA comprising the reuse of existing buildings and limited new build, split into the following potential development mix:

- Engineering College / Training Centre: Circa 1,312 sq m GIA
- Heritage Centre: Circa 309 sq m GIA
- Workspace: Circa 3,985 sq m GIA (this would include is the 1,108 sq m GIA new build element of the proposals)
- Hotel: 3,168 sq m GIA
- Cafe/amenity: 38 sq m GIA

Figure 4.1 – Indicative concept for reuse of part of West Camp (Area 4)



Source -URS

Key to deliverability will be securing the College's requirement on site. We comment below on what the Council should address with the College in order to secure this. We also comment on the likely need for public sector funding to support the heritage centre and the workspace scheme, given the need for demand to be encouraged and the risks of delivering office space in the area. This will be particularly important if the Council wishes to move this site forward more quickly than proposed in the June 2014 EGP Update whereby this area would be able to benefit from the earlier momentum gained from the growth of the airport and development at South Camp in earlier phases.

In terms of delivery, the Council could potentially assist in taking forward development at Area 4 of West Camp through a number of means. Should the Council wish to take more proactive steps to exercise more control over the future use of the site and its maintenance as an employment location, the following options could be considered:

- Acquiring the site and gaining control of its future development potential.
- Working with Bromley College, who have expressed an interest in taking accommodation on the site for their engineering facility in the future. The Council should work with the College to confirm:
 - The proposed uses that the College wishes to accommodate on-site (for example are they purely proposing teaching facilities, and will the engineering activities impact on the type of accommodation required?)
 - The future floorspace requirements of the College on the site
 - The proposed timing of any move to the site by the College
 - The cost of any works required to bring the accommodation up to the standard required by the College
 - The lease terms and associated rental levels (or consideration for a freehold interest) that the College would be able to pay
 - The development potential and any financial contribution of space on the College's existing site that could be freed up for development following a move of the College engineering facility to Biggin Hill.
- Developing a business plan and securing public sector funding for the proposed heritage centre, since heritage centre schemes often require public sector funding to be economically sustainable. Sources could include:
 - Council capital or revenue funding
 - GLA (given their interest in the area as a growth location)
 - English Heritage
 - Heritage Lottery Fund
 - Arts Council (funding is available for museum facilities)
- Market testing to identify any commercial interest in operating the cafe
- Identification of car parking requirements and how they would be capable of being accommodated
- Public sector support for the improvement of the quality of the environment and supporting infrastructure in the area in order to improve its attractiveness to businesses as a location. This could include transport infrastructure, signage, security, environmental improvements.
- Engage with the Locate Partnership and other local employers to develop a management structure to promote the area (BID-type structures have been used in employment locations elsewhere, for example)

- Identification of an appropriate delivery mechanism through which to develop and implement a preferred scheme. The delivery mechanism could take the form of two options, namely:
 - The Council develops an overall masterplan for the site to reduce planning risk, funds necessary infrastructure to improve the opportunities for viable development and disposes of plots (freehold or long leasehold) on a site by site basis. This route potentially presents less risk for the Council but provides less control, which may mean that the potential regeneration benefits of future development are not fully realised.
 - Exertion of more direct control by working with a developer partner to acquire and develop the preferred scheme on the site on behalf of the Council and the College. This is a higher risk option for the Council given our views of the challenges of delivering development on the site, and would require a detailed assessment to inform the way forward, including:
 - Site due diligence
 - Detailed financial appraisal to demonstrate viability
 - Site valuation
 - Site assembly strategy
 - Market testing
 - Identification of an appropriate procurement process
 - Comprehensive risk assessment
- Direct Council involvement in the workspace element of the scheme, both to assist in achieving financial viability but also in terms of helping to ensure economic development objectives are met. A detailed assessment of the costs of converting listed barrack blocks to workspace use will be required. Case studies of how the Council could become involved are set out below.

THE HUB, WESTMINSTER

NEW ZEALAND HOUSE, SW1

Westminster City Council is supporting the development of new business hubs for start-ups and micro businesses, exemplified by Hub Westminster which is a 12,000 sq ft incubation lab for start-up companies.

Unlike traditional start-up space, the hub provides different levels of time-based monthly membership (based on the number of hours you use in its 160 workspaces), rather than companies leasing specific floorspace.

The focus is therefore on 'touch-down' space, resulting in higher utilisation for the hub and lower costs for start-ups who are able to be flexible. Additional facilities include registered address and mailboxes, dedicated storage, cafe, event space, meeting rooms, collaboration booths, wi-fi and workshop space. This mix of facilities and support services aims to foster and encourage business growth, increasing the business survival rate and removing the property barriers to growth in one of the world's most expensive commercial property markets.

The concept was co-founded as a Community Interest Company by Westminster City Council and a private investor. Opened in 2011, the scheme has 300 entrepreneurs working from the space. The Council used its Civic Enterprise Fund to put seed equity finance into the venture and is a 40% shareholder. The Hub is on course to make a profit without ongoing reliance on public funding.

BARKING AND DAGENHAM ENTERPRISE CENTRES

The Barking and Dagenham Enterprise Centres opened in 2011, offering managed office space and workshop space respectively, targeted at start-ups and expanding small businesses. Funding from the European Regional Development Fund paid £200,000 towards the environmental aspects of the schemes (which has achieved BREEAM Excellent standard), and Local Enterprise Growth Initiative (LEGI) funding also contributed.

The Barking Enterprise Centre was developed on a Council-owned site in Barking town centre. LEGI grant paid for the £3.5m construction cost, and an operator for the centre was selected by the Council through OJEU. The 3,000 sq m, 2-storey scheme is office-space focused (typical unit size is for 2-5 people), with common facilities including a kitchen. A conference room with capacity for 60 people is also included. The Council has provided ongoing revenue support to the centre manager, with rentals being slightly below the prevailing market norm. The centre has been 100% occupied with a waiting list since it was opened. The success of the scheme is attributed to the good quality of space provided, its accessible town centre location and the LEGI grant funding that paid for construction, making the scheme viable.

The Dagenham Business Centre was developed by the Council in partnership with GLE Property Developments Limited. The scheme comprises 21 light industrial/office units providing 34,085 sq ft of accommodation. The units can be flexibly configured and offer easy in/easy out terms. Again, LEGI funding assisted with the construction costs of the facility.

UGLI CAMPUS

WOOD LANE, W12

With a focus on the creative industries, the Ugli Campus offers flexible tenancy agreements of one year, WiFi, a cafe and meeting areas/rooms. The scheme is based in converted space inside a former 1960s office block, close to the BBC Television Centre. Rentals start from £10 psf and space from 130-10,000 sq ft is available. The initiative is supported by the BBC, to provide low cost environments to enable businesses to collaborate and grow.

Care will need to be taken regarding the hotel element of the scheme. Whilst we consider that a hotel would form a good part of the overall development mix on the site in the future, there is already a hotel proposed on South Camp and there is unlikely to be demand for two hotels in the area.

The above assessment demonstrates that there are several ways that the Council could become involved in assisting the delivery of a scheme that meets economic development objectives. However, our market assessment of the area suggests that this carries risk for the Council. As such, before committing to acquire the site, we recommend that the Council carries out more detailed work into the demand for space, development costs and returns and the level of financial commitment it may need to make to the scheme together with a full risk assessment, particularly as we understand that the Council would wish to achieve an income from the site in the future.

South Camp

South Camp comprises the majority of the commercial buildings and hangar space. From the discussions that we have had with the occupiers within this area there is evidence to support the case for medium to long term growth of these occupiers. There is also adequate supply of land towards the eastern section of South Camp to accommodate this growth as well as incorporating demand from companies looking to locate at the airport.

The case for demand for non-air-side commercial buildings off airport is not so convincing. Clearly with Formula One racing there is a palpable precedent to support the case of an organising wanting access to an airstrip, but we see limited evidence to support the case for anything other than slow take-up of accommodation at this location.

Furthermore, general industrial demand appears to be saturated at present, until the airport reaches a critical mass.

East Camp

Due to the significant number of flight schools and light aviation businesses there is logic to reserve East Camp for these businesses, although it is likely that the accommodation will develop further in the medium term to provide better space in which to store and operate the aircraft.

This location is certainly not considered appropriate for non-aviation related development, but could be used for replacement or relocated flying club buildings, smaller scale aircraft maintenance or parking.

4.7 Business rates impact

Introduction

This section estimates the additional business rate revenue per annum which would be payable to the London Borough of Bromley from the development of Biggin Hill. Two scenarios have been assessed; one considering the proposed growth in floorspace in line with the Locate Partnership's EGP Update (June 2014) (excluding hangar space due to lack of comparable rateable value evidence) and one focusing on the development potential for Area 4 of West Camp as set out earlier in this report. The floorspace assumptions for each are set out below.

Table 4.1 - EGP Update (June 2014) - Floorspace

Use	Floorspace (GEA)
Business Park Offices (B1)	23,300 sq m
Light Industrial (B2)	17,464 sq m
Hotel	150 room budget hotel

Table 4.2 - Potential Development of Area 4 of West Camp - Floorspace

Use	Floorspace (GEA)
Light Industrial (B2)	3,985 sq m
Hotel	100 room budget hotel
College	Bromley College campus relocation
Cafe	38 sq m

Source - DTZ

Approach

Offices, Light Industrial and Cafe Uses

The additional business rate revenue has been estimated using the new development floorspace for these uses. A gross to net adjustment of 95% has been assumed to convert light industrial gross floorspace to net figures and 85% for business park offices. These are generic assumptions to acknowledge the fact that there will likely be a range of uses within these categories on site.

To calculate the business rates payable, the net development floorspace figures are multiplied by an estimated rateable value per sq m. Due to the high level nature of the calculations, a single assumption on rateable value per sq m has been used for both these development types. This figure is based on the unadjusted unit rate from comparables of business park and light industrial developments in the local area, amended to reflect the fact that the units will be new and of high quality.

It should be remembered that rating values very much depend on the exact nature of the proposed development and its context i.e. scale and type of development, and we have only been able to make generic assumptions here based on local comparables. The anticipated business rates may well differ significantly as the schemes for each location become known in more detail.

Local comparables represent a mix of recent B1-8 developments (but excluding specific high quality offices) and indicate an anticipated average unit rate of c. £120 per sq m. This is an uplift on surrounding quality older stock, which currently has average unit rates of c.£85 per sq m (typically 1990s units). Due to the very small floorspace of proposed cafe uses, the same unit rate has been applied as for other uses.

The average unit rate of £120 per sq m has then been multiplied by the anticipated net development floorspace. This results in an expected total rateable value for each of the new development sites. A government non-domestic rating multiplier (at 47.1p in each £1 of rateable value) is then applied to calculate the business rates due per annum. It is assumed here that the occupiers would be general businesses, rather than small or medium enterprises (as these attract a slightly lower rating multiplier). An assumption has been made that 30% of future business rate revenues will be retained by the London Borough of Bromley (based on information from the Council) as part of HM Government's Business Rate Retention Scheme, though this may change depending on the difference between expected returns from business rates and past government grant levels.

Hotel and College Uses

The additional business rate revenue for hotel and college uses has been estimated using comparable developments, as rateable values for these uses are not calculated on floorspace. For hotel uses, a budget style hotel has been assumed with the number of rooms as set out in the tables above. Recent development comparables have then been sought within the local area and these values have been adopted. For the college use, the average rateable value for Bromley College's two existing campuses has been used – in the absence of further detail. The government non-domestic rating multiplier (at 47.1p in each £1 of rateable value) has then applied, as with other uses, and an assumption made that the Council retains 30% of revenues.

Business Rate Impact

Using the above method, the total business rate increase for LBB from the anticipated floorspace are around £677,000 per annum under the Locate Masterplan and £172,000 per annum under the Council's Proposals for Area 4 of West Camp - as set out in the tables below. It should be noted that these figures are an estimates based on the series of assumptions above. The actual rates retained may be higher or lower than this due to a number of factors – most obviously the rateable values of the resulting new developments, the total floorspace developed and any changes in the proportion of rates retained by LBB.

Table 4.3 - EGP Update (June 2014) - Business Rate Revenues

	Total Estimated Business Rates per annum	LBB Business Rate uplift (at 30% retention)
Business Park Offices (B1)	£ 1,119,000	£ 336,000
Light Industrial (B2)	£ 938,000	£ 281,000
Hotel (150 room)	£ 199,000	£ 60,000
TOTAL	£ 2,256,000	£ 677,000

Table 4.4 - Council Proposals for Area 4 of West Camp - Business Rate Revenues

	Total Estimated Business Rates per annum	LBB Business Rate uplift (at 30% retention)
Light Industrial (B2)	£ 214,000	£ 64,000
Hotel (100 room)	£ 132,000	£ 40,000
College	£ 223,000	£ 67,000
Cafe	£ 2,000	£ 600
TOTAL	£ 571,000	£ 172,000

Source - DTZ

5 STRATEGIC HERITAGE IMPACT ASSESSMENT OF WEST CAMP – OPPORTUNITIES AND CONSTRAINTS

5.1 Introduction

URS were instructed to provide a strategic heritage impact assessment in respect of the wider proposals prepared by Biggin Hill Airport Limited (BHAL) as per the Economic Growth Plan of June 2014, the Pentbridge Properties most current proposals (as set out in Figure 5.9) for part of West Camp, and the initial concept for the potential area of sale within West Camp (Figure 4.1).

5.2 West Camp focus

This section specifically considers West Camp and the surrounding area and is provided to assist in the decision-making process in relation to proposals for redevelopment of the Biggin Hill Conservation Area, entailing a mixture of demolition, refurbishment and construction of new buildings. The strategic heritage impact assessment provides an evidence base allowing informed decisions to be made and provides reasoned advice concerning the development of West Camp from the perspective of the historic environment.

The section provides an overview of the conservation area and the buildings within it, and also considers the designated and non-designated assets within a wider study area that may be impacted by development suggested by the development proposals. The heritage significance and values of the assets are briefly considered. Statements and justifications for works are made with reference to planning policy specifically those contained within the National Planning Policy Framework (NPPF) and associated guidance documents.

5.3 Basis of the investigation

BHAL have commissioned a masterplanning strategy for Biggin Hill Airport, *Economic Growth Plan Update* (2014), which suggests an outline masterplan for the airport and surrounding areas known as West Camp, South Camp and East Camp. This masterplan envisages development within and adjacent to West Camp consisting of new aircraft hangars, terminal buildings, a conference centre, training facilities and office space. BHAL do not own all of the land on which proposed development is located within the Economic Growth Plan Update and we are aware of alternative proposals the site owner Pentbridge Properties are beginning to bring forward at West Camp in discussion with the Council – these are set out in Figure 5.9. Pentbridge Properties proposals envisage development of new hangars and purpose-built office space alongside the Biggin Hill Conservation Area as well as redevelopment within the conservation area including demolition of buildings, new construction and landscaping works.

It is proposed that as part of the planning process the Greater London Authority or LBB will purchase approximately 40% of West Camp, in the north of the conservation area, and redevelop this area to accommodate Bromley engineering college, commercial workspace, a small hotel and a heritage centre (our initial concept for this is presented in Figure 4.1).

The Pentbridge Properties proposal (Figure 5.9) is considered to be a deliverable scheme by the consultants and the Council has asked that the heritage implications of this are considered and this forms the focus of this section. This section will consider:

- impacts of the proposed redevelopment on built heritage within and immediately surrounding the Biggin Hill Conservation Area;
- impacts of the proposed redevelopment on built heritage within the area of land that the GLA/LBB might purchase;

- capacity of the GLA/LBB proposed sale area to accommodate new and increased density of development.

5.4 Understanding of the site

The proposed redevelopment areas at West Camp includes land to the east of Biggin Hill Conservation Area, designated by London Borough of Bromley in 1993. The conservation area has as its focus the area of barracks, technical and command buildings that made up “West Camp”, one of three camps that comprised Biggin Hill airfield prior to, during and after World War II. Outside of West Camp but within the conservation area is the Officers Mess and Vincent Square (married quarters). The conservation area includes 14 designated Grade II listed assets.

Some of these assets consist of multiple buildings - there are 33 individual designated buildings represented within the 14 designation records. There are three locally listed buildings identified by the London Borough of Bromley within the study area as well as a number of non-designated buildings of heritage value within the conservation area which contribute positively to its character, appearance and special interest.

The proposed redevelopment envisages development throughout, and to the east of, West Camp.

In general, the proposed redevelopment covers an area of high heritage sensitivity, and development in this area may impact buildings and landscape of the high significance.

The conservation area boundary and locations of designated and locally listed buildings are illustrated on in Appendix E.

5.5 Methodology

Aims and objectives

The aim of this heritage impact assessment is to establish possible impacts of the NLP Masterplan options on built heritage assets within the proposed development site at West Camp (herein the “Site”) and its adjacent study area.

The objectives of the study are:

- to identify, by reference to and collation of data held by English Heritage, the Greater London Historic Environment Record (GLHER) and other resources, known built heritage assets within the Site and its surrounding study area;
- to establish by reference to planning policy and English Heritage guidance the significance and setting of built heritage assets identified within the study area;
- to identify direct and indirect impacts of the proposals on the built heritage assets within the study area;
- to propose opportunities to create beneficial impacts with regards to built heritage assets; and
- to recommend ways to mitigate potential negative impacts.

Study area

The study area for the collation of information in relation to heritage assets was defined as 300m from the boundary of proposed redevelopment area. The extent of the study area was determined following an initial appraisal of the topography and historic landscape of the area

surrounding Site and is considered sufficient to allow an overview of the historic development of the Site.

Due to the positioning of Biggin Hill airfield on flat open land, impacts of the proposed redevelopment on land on the eastern side of the airport have also been considered.

Within the study area, information has been collated in relation to all designated built assets and in relation to non-designated built assets of heritage interest.

Data Sources

Information in respect of designated heritage assets has been obtained principally by reference to the National Heritage List maintained by English Heritage. This information has been supplemented by reference and collation of data held by the Greater London Historic Environment Record (GLHER) which also provides information in respect of non-designated assets.

The historical overview of settlement history within the study area and map regression has been informed by a review and examination of available documentary and historic map sources held by the London Borough of Bromley Local Studies Centre. Other sources of information include The National Archive at Kew, the RAF Museum and published research.

Strategic heritage impact assessment methodology

A thorough site walkover was undertaken. The site walkover confirmed which buildings within the 300m zone would be impacted by proposals, as well as enabling brief inspection of the buildings, their general condition and their settings within closer proximity to the site.

A baseline was prepared, describing briefly the history of the site and its surroundings, supported by an historic map regression exercise. The baseline highlighted particular sensitivities. Early consultation was undertaken with London Borough of Bromley, to gauge particular areas of concern relating to built heritage.

Using design information and the results of baseline preparation, and bearing in mind responses to consultation, the impacts of the proposals was assessed. Where there are particular concerns for the fabric or setting of heritage assets, recommendations for mitigation were prepared.

As a result of the baseline and assessment process, URS was able to make a series of recommendations to ensure heritage concerns were recognised early in the process, and continued consultation with London Borough of Bromley contributed to the clarity of the assessment.

An assessment of the setting of built assets and contribution to significance arising from their setting was determined with reference to English Heritage guidance on setting (2012). Statements in relation to the heritage significance of assets are made with reference to English Heritage guidance principally 'Conservation Principles' (2008).

Heritage Significance

The significance (heritage value) of an asset is derived from its heritage interest which may be archaeological, architectural, artistic or historic (NPPF Annex 2, Glossary; Ref. 13-1). The significance of a place is defined by the sum of its heritage values. English Heritage identify these as being evidential, historical, aesthetic and communal (Conservation Principles, Ref. 13-13). The setting of an asset can also contribute to significance.

Having understood the significance (heritage value) of the heritage asset, using professional judgement the assessment identified direct and indirect impacts arising from the masterplan options.

In respect of built heritage, the assessment enabled the development of strategic recommendations that will contribute to the mitigation of direct and indirect impacts through architectural, landscape and urban design principals.

Within the NPPF, impacts affecting the significance (heritage value) of heritage assets are considered in terms of level of harm and there is a requirement to determine whether the level of harm amounts to 'substantial harm' or 'less than substantial harm'. Guidance suggests that substantial harm equates to serious harm or loss of significance of the asset, the emerging on-line National Planning Guidance states that for harm to be substantial there needs to be consideration of impact needs 'whether the adverse impact seriously affects a key element of its special architectural or historic interest go 'to the heart of why the place is worthy of designation'.

In all cases determining the level of harm to the significance of the asset arising from development impact is a matter of professional judgement.

Limitations

- The agreed methodology does not allow for the collection or analysis of archaeological data to identify archaeological assets or archaeological potential. The assessment of impact of the proposed redevelopment on archaeological assets is therefore excluded from this study.
- URS has not been able to participate in any public consultation exercise which would help to identify intangible / cultural heritage values that may be impacted by the proposed redevelopment.
- URS was not empowered to collaborate with, or develop a working relationship with, the Pentbridge Properties design team.
- No invasive survey has been undertaken to reveal historic finishes or fixtures that may contribute to an understanding of the significance of built heritage assets.
- No detailed condition survey of individual built heritage assets has been undertaken.
- Not all built heritage assets within the study area have been accessible.

Consultation

Initial consultation regarding built heritage assets and the methodology of this heritage impact assessment has been undertaken with London Borough of Bromley and English Heritage.

A meeting with English Heritage as hosted by London Borough of Bromley in order to discuss the proposals and URS's consultation work. All parties acknowledged that Biggin Hill Conservation Area had been at risk for several years and agreed in general that the emergence of proposals for development was to be welcomed.

5.6 Legislation and planning policy

The Planning (Listed Buildings and Conservation Areas) Act 1990

Section 7 of the Act requires applicants to obtain consent for the demolition of a listed building or for works of alteration or extension, which would affect its character as a listed building.

Section 66 of the Act establishes a general duty when considering whether to grant planning permission for a development which affects a listed building, to have special regard to the desirability of preserving a listed building or its setting or any features of special architectural or historical interest which it possesses.

Section 72 of the Act establishes a general duty when considering whether to grant planning permission for a development that affects any building or land within a conservation area, to have special regard to the desirability of preserving or enhancing the character or appearance of that area.

Section 74 of the Act establishes control of demolition of buildings within conservation areas, that any such demolition will not be undertaken without the first granting of Conservation Area Consent by the Local Authority.

Enterprise and Regulatory Reform Bill 2013

The Enterprise and Regulatory Reform Bill was passed in 2013. The bill brings in a number of legal reforms in relation to the historic environment, particularly listed buildings and conservation areas. The aim is to make heritage protection more efficient and effective through removing legislative burdens. The main tenets of the bill include the simplification of conservation area consent by removing the requirement for separate applications. It also addresses listed buildings through the improvement of descriptions to identify which elements are significant, allowing other elements to be specifically excluded. Further reform will see the establishment of Listed Building Orders which will enable the authorisation of particular schemes of work without a requirement for Listed Building Consent.

The reforms have been implemented in a staged process. On 25th June and 1st October 2013 provisions relating to conservation areas and conservation area consent came into effect; on 6th April 2014 provisions relating to heritage planning regulation (listed building consent, locally listed buildings and certificates of lawfulness) came into effect.

National Planning Policy Framework

Section 12 of the National Planning Policy Framework (NPPF) deals with the consideration of cultural heritage assets and sets out the importance of being able to assess the impact of a development on the significance of heritage assets. Significance is defined in Annex 2 as the value of an asset because of its heritage interest. This interest may be archaeological, architectural, artistic or historic and can extend to its setting. Listed buildings are identified as being designated assets. The requirement for applicants to describe the significance of assets likely to be affected by a proposed development is set out in paragraph 128. The NPPF states that the level of detail submitted should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance.

The NPPF recognises that a balance needs to be struck between preservation of the significance of a heritage asset and delivering public benefit. With regard to designated assets, paragraph 132 states that the more important the asset, the greater the weight should be on its conservation. Amongst other assets the NPPF identifies grade I and grade II* listed buildings as having significance greater than grade II listed buildings. The NPPF identifies harm as being either substantial or less than substantial. Where the proposal would lead to substantial harm to the significance of a designated asset, consent should be refused unless the harm or loss is necessary to achieve substantial public benefit that outweigh that harm

(paragraph 133). In cases where less than substantial harm to the significance of a designated asset is anticipated this harm should be weighed against the public benefits of the proposal (paragraph 134).

Guidance on the application of heritage policy within the NPPF is provided within the English Heritage PPS 5 Planning Practice Guide (EHPPG, 2010) and the complimentary on-line National Planning Policy Guidance (NPPG, 2014).

Regional Policy

The London Plan

The London Plan (2011) is the primary strategic legislation affecting Greater London, and contains a number of policies relating to the historic environment.

Policy 7.4.A makes the general statement that “a Development should have regard to the form, function, and structure of an area, place or street and the scale, mass and orientation of surrounding buildings. It should improve an area’s visual or physical connection with natural features. In areas of poor or ill-defined character, development should build on the positive elements that can contribute to establishing an enhanced character for the future function of the area”. Further instructions to the boroughs are given in Policy 7.4.B, where they are to ensure that “buildings, streets and open spaces should provide a high quality design response that:

- has regard to the pattern and grain of the existing spaces and streets in orientation, scale, proportion and mass;
- contributes to a positive relationship between the urban structure and natural landscape features, including the underlying landform and topography of an area;
- is human in scale, ensuring buildings create a positive relationship with street level activity and people feel comfortable with their surroundings
- allows existing buildings and structures that make a positive contribution to the character of a place to influence the future character of the area
- is informed by the surrounding historic environment.”

Policy 7.5.A makes the general statement that “London’s public spaces should [...] relate to local context, and incorporate the highest quality design, landscaping, planting, street furniture and surfaces.”

In Policy 7.5.B, boroughs are to ensure that:

- “development should make the public realm comprehensible at a human scale, using gateways, focal points and landmarks as appropriate to help people find their way. Landscape treatment, street furniture and infrastructure should be of the highest quality, have a clear purpose, maintain uncluttered spaces and should contribute to the easy movement of people through the space. Opportunities for the integration of high quality public art should be considered, and opportunities for greening (such as through planting of trees and other soft landscaping wherever possible) should be maximised.
- Treatment of the public realm should be informed by the heritage values of the place, where appropriate”.

And Policy 7.5.C states that when considering policies for LDFs, “Development should incorporate local social infrastructure such as public toilets, drinking water fountains and seating, where appropriate. Development should also reinforce the connection between public

spaces and existing local features such as the Blue Ribbon Network and parks and others that may be of heritage significance.”

Policy 7.8.A, Heritage Assets and Archaeology, the London Plan states that “London’s heritage assets and historic environment, including listed buildings, registered historic parks and gardens and other natural and historic landscapes, conservation areas, World Heritage Sites, registered battlefields, scheduled monuments, archaeological remains and memorials should be identified, so that the desirability of sustaining and enhancing their significance and of utilizing their positive role in place shaping can be taken into account.” Policy 7.8.B states that “development should incorporate measures that identify, record, interpret, protect and, where appropriate, present the site’s archaeology.” Policy 7.8 gives further instructions to boroughs to ensure:

- “Development should identify, value, conserve, restore, re-use and incorporate heritage assets, where appropriate.
- Development affecting heritage assets and their settings should conserve their significance, by being sympathetic to their form, scale, materials and architectural detail.
- New development should make provision for the protection of archaeological resources, landscapes and significant memorials. The physical assets should, where possible, be made available to the public on-site. Where the archaeological asset or memorial cannot be preserved or managed on-site, provision must be made for the investigation, understanding, recording, dissemination and archiving of that asset.”

Local Policy

Local policies relevant to the potential development of historic assets at West Camp are contained within the saved policies of the Interactive Unitary Development Plan (2006), The Biggin Hill RAF Conservation Area Supplementary Planning Guidance, and the West Camp, Biggin Hill, Planning Framework (2007).

Unitary Development Plan

Policy BE1 (design of new development) states that all development proposals, including extensions to existing buildings, will be expected to be of a high standard of design and layout. Of particular importance is the need for complimentary scale, form, layout and materials of new buildings in relation to existing adjacent buildings and areas. New development should safeguard public amenity and encourage local distinctiveness and “sense of place” by using vernacular materials.

Policy BE8 (historic buildings) states that “applications for development involving a listed building or its setting, or for a change of use of a listed building, will be permitted provided that the character, appearance and special interest of the listed building are preserved and there is no harm to its setting.”

Policy BE11 (conservation areas) states that proposals for new development, engineering works, alteration or extension to buildings within conservation areas should “respect and incorporate in the design existing landscape or other features that contribute to the character, appearance or historic value of the area.”

Policy BE12 (demolition in conservation areas) states that demolition of unlisted (non-designated) buildings within a conservation area will not be allowed unless “there is clear and convincing evidence that reasonable efforts have been made to ... find a viable use for the building and these efforts have failed and it is demonstrated that preservation of the building as part of the scheme or in some form of charitable or community ownership is not possible or suitable.” Furthermore the policy adds that permission to demolish unlisted buildings within conservation area may be granted if it is demonstrated that “there will be substantial planning

benefits for the community from redevelopment which would decisively outweigh loss from the resulting demolition.”

Policy BE13 (development adjacent to a conservation area) states that “a development proposal adjacent to a conservation area will be expected to preserve or enhance its setting and not detract from view into or out of the area.”

Policy BE14 (trees in conservation areas) states that with conservation areas development will not be permitted if it will damage or lead to the loss of one or more trees within that conservation area unless “the reason for the development outweighs the amenity value of the tree/s.”

Section 12 of the Written Statement (Biggin Hill Airport and Environs) includes the following relevant paragraphs:

Paragraph 12.6 states that economic benefits relating to the development of direct and indirect generators of employment must be balanced against environmental consequences of airport operations.

Paragraph 12.7 states that in January 2001 an Article 4 Direction was confirmed by the Secretary of State to remove permitted development rights in relation to proposals relating to the Biggin Hill Conservation Area.

Paragraph 12.8 (vi, vii and viii) states that detailed land use policies for the airport must take into account the future of the former RAF West Camp and Married Quarters; the preservation or enhancement of the character and appearance of the Conservation Area; and the enablement of a Heritage Centre.

Policy BH4 (iv) states that development within West Camp will be required to preserve or enhance the character and appearance of the RAF Biggin Hill Conservation Area.

Biggin Hill RAF Conservation Area Supplementary Planning Guidance

Paragraph 3.11 (new development) states that “all proposals for new development [is expected] to conform to the particular character of the development site and with the general character of the conservation area, especially in regard to scale and height of construction, design and materials used. New development should normally respect the open plan campus atmosphere of much of the site and the military aspect of the existing buildings.”

Paragraph 3.12 (alterations to buildings in the conservation area) states that “it is hoped that all improvement works to buildings constructed prior to 1946 will take account of their character and [with a view to retention rather than replacement].”

Paragraph 4.19 (extension of buildings within the conservation area) states that “new extensions should normally match the materials and finish of the host building. Many of the buildings with a command, residential, or social function are built according to a strictly applied and simple symmetry. Great care will be required when extending such buildings to ensure that this symmetry is not damaged or lost.”

Paragraph 4.21 (layout and new development) states that “buildings were laid out in an open plan manner ... new development should be undertaken within this existing framework and should not result in the loss of the landscape dominated campus atmosphere of the area.”

Paragraph 4.28 identifies the lack of boundaries and internal fences within West Camp as a particular feature of the open plan landscape. It is stated that the “Council wish to retain the characteristic open plan landscape within the perimeter fence and will resist the erection of boundaries that have the effect of subdividing it into subsidiary visual curtilages.”

Paragraph 4.30 (access, internal distribution, parking and hardstanding) states that “roadways and parking provision ... are likely to need comprehensive re-consideration [and] any application should demonstrate how these issues are to be addressed.”

West Camp Planning Framework

The West Camp Planning Framework was adopted for development control purposes on 8th October 2007. The document aims to enable West Camp to be planned as a whole and to facilitate appropriate development that will encourage and enable economic use of the listed buildings and other buildings of historic interest within West Camp.

Additional stated aims of the planning framework include the provision of a heritage centre with links to St. George’s Chapel; the development of a heritage trail with interpretation of built and landscape features; and the preservation and enhancement of the airfield campus character of the conservation area.

Selective demolition and high quality new development that enhances the conservation area is specifically allowed within the planning framework.

English Heritage guidance

Conservation Principles (2008)

The document sets out 6 guiding principles governing the approach to decision making. *Principles 1 and 2* relate to how the public values and participates in the historic environment. Principle 3 *Understanding the significance of places is vital* and Principle 4 *Significant places should be managed to sustain their values* are principles that relate to the development process and assessment of harm. Principle 5 relates to decisions being guided by public policy and the balance to be struck between heritage significance and the impact of change on that significance. These principles are intended to be used as a tool to aid analysis rather than be taken as policy.

Paragraphs 30-60 define heritage significance of an asset as the sum of its heritage values comprising:

- Evidential value – these relate to the physical properties of a place;
- Historical value – these are associative or illustrative and connect a place to past people or events;
- Aesthetic value – these relate to design, craftsmanship and artistic aspects of the place; and,
- Communal value – the meaning of a place to people who relate to it.

Principle 3 is inherently linked to the NPPF, and articulates this approach to assessing significance of heritage assets based on their evidential, historical, aesthetic and communal values, and balancing these with the contribution made by setting and a wider cultural context. Having first understood and addressed the values that make up the significance of a place, the document sets out how then to manage impacts on significance.

The Setting of Heritage Assets (2012)

The document defines setting as ‘the surroundings in which a heritage asset is experienced.’ Setting in this definition does not have a fixed extent and can change as the asset and its surroundings evolve. Elements of a setting can make positive or negative contributions to the significance of an asset and affect the ways in which it is experienced. The guidance is clear that setting is more extensive than the curtilage of a building and is contributed to by factors other than the visual including noise, dust and vibration.

The Guidance recommends a five step approach to the assessment of the effect of development on the setting of heritage assets as follows:

- Step 1: identify which heritage assets and their settings are affected;
- Step 2: assess whether, how and to what degree these settings make a contribution to the significance of the heritage asset(s);
- Step 3: assess the effects of the proposed development whether beneficial or harmful, on that significance;
- Step 4: explore the way maximising enhancement and avoiding or minimising harm; and
- Step 5: make and document the decision and monitor outcomes.

Seeing the History in the View (2012)

This document presents a method for understanding and assessing heritage significance within views. This is a two part process, the first part involving establishing the baseline significance of heritage in views and the second part involving assessment of the potential impact of a development proposal on the heritage significance of the views analysed.

The Guidance uses values for the importance of heritage assets identified within the view, for the view as a whole and criteria for determining the magnitude of impact of the proposed development on the heritage significance within the view. The overall effect is expressed in a range from Negligible to Major.

At Risk Conservation Areas

Conservation Areas are designated by local authorities and are areas of special architectural or historic interest the character or appearance of which it is desirable to preserve or enhance. There are currently more than 9,800 conservation areas in England. They are considered a crucial component of local identity and community cohesion.

The Biggin Hill Conservation Area has been identified by London Borough of Bromley and English Heritage as being at risk and subsequently is included on the current English Heritage survey of Heritage at Risk. Conservation areas are included on the “at risk” register if the condition of the area is considered to be deteriorating or are in a very bad or poor condition and are not expected to change significantly in the next three years.

Conservation areas are removed from the register once plans have been put in place to address the issues. The proposals being assessed in this report have the potential to positively contribute to the conservation of the Biggin Hill Conservation Area and may eventually lead to the removal of the Biggin Hill Conservation Area from the “at risk” register.

Factors that have contributed to the inclusion of Biggin Hill Conservation Area primarily relate to no sustainable use being identified for many of the buildings within West Camp. Although the condition of many listed buildings in West Camp is adequate their vacancy and lack of an identified sustainable use for them is reflected in their “at risk” status.

During the 1990s a number of applications to demolish buildings within the conservation area were granted and whilst these may not have greatly affected the significance of the conservation area as a whole the cumulative impacts of successive demolitions may have an adverse impact on the area over time. It appears that a number of structures of historic interest were demolished including defensive structures and operational buildings.

Furthermore Biggin Hill Control Tower, dating from the Cold War and located to the north of the Biggin Hill Conservation Area, was delisted on 29th October 2012 due to its unsympathetic alteration which has negated its special architectural interest.

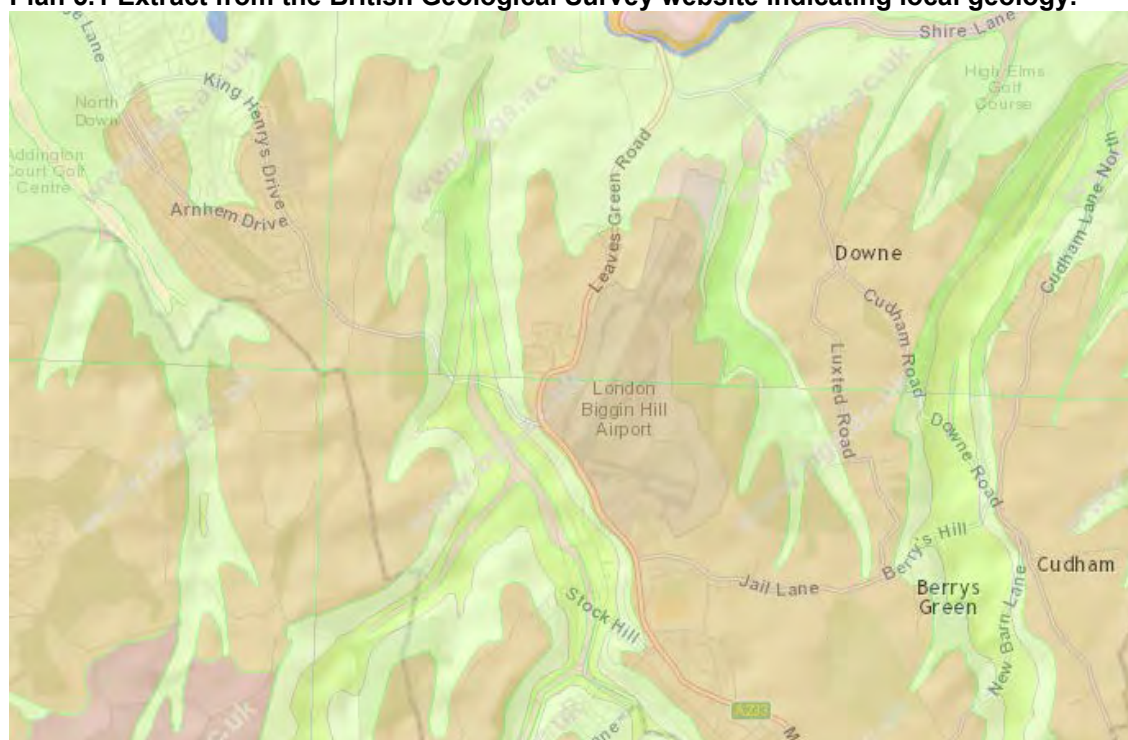
5.7 Site description

Location

Biggin Hill airport is located southeast of central London, approximately 7 miles south of Bromley town centre and accessed from the A233 Westerham Road.

Topography and geology

Plan 5.1 Extract from the British Geological Survey website indicating local geology.



Biggin Hill Conservation Area is located in a landscape area characterised as the Upper North Downs. Largely chalkland, it includes extensive parts of the boroughs of Bromley and Croydon. The whole of this area is underlain by the resistant chalk bedrock of the North Downs and the distinctive topography reflects the geological history of this part of south east England (plan 5.1).

The geology was formed 20 million years ago when tectonic shifts pushed the existing layers of chalk, clay, silt and sand upwards to form a dome centred on the area now known as the Weald. The corresponding trough forms the London Basin. Gradual erosion of softer rocks at the centre of this dome has left the North and South Downs as an exposed rim of chalk. The topography reflects the distinctive, rolling upland relief typical of chalk downland landscapes.

These upper chalk slopes have superficial deposits of clay-with -flints, which produce soils deep enough to support extensive woodlands. As a result, this part of the North Downs has a relatively wooded character, with remnant fragments of extensive ancient woodlands.

Patterns of settlement reflect lines of communication along the valleys and sheltered valley side slopes. There are older settlements with medieval churches near to Biggin Hill at Old Coulsdon, Downe and Cudham. Elevated land with a relatively even slope has been developed as an airfield at Biggin Hill.

The ground at Biggin Hill slopes gently downwards to the north with the north down ridge of chalk rising to the south on which Biggin Hill town is positioned. The airfield itself is deliberately positioned on an area of flattish ground, exploiting the topography to enable the construction of the runway in a north-south orientation. The land slopes downward immediately west of the airfield ensuring that West Camp is on lower ground than the airfield runways. West of Main Road the gradient of the slope increases greatly.

Site conditions

The ridge on which Biggin Hill Airport is located is wooded with many substantial mature trees lining Main Road as well as copses of trees forming dense areas of woodland within valleys and small areas of unproductive land.

As its use necessitates, Biggin Hill airfield is an area of flat open land resulting in the ability to see clearly from one side of the airfield to the other. West Camp, on the south-western edge of the airfield, has many mature trees growing within it, some of these having been planted deliberately in order to provide camouflage for airfield infrastructure.

The ground within West Camp is generally flat or sloping gently up towards the airfield. Buildings within West Camp are constructed of brick with slate roofs and are in adequate condition. However the majority of the buildings are vacant and are not well ventilated. West Camp is currently used by the Metropolitan Police to train police dog units and some buildings are used for storage or offices. The site in general is clean and well maintained by Pentbridge Properties.

Within the proposed development site but adjacent to West Camp, airside hangars and offices have been developed for the use by private aircraft.

5.8 Cultural heritage baseline

The fascinating story of the development of Biggin Hill has been well documented in many publications and needs no further detailed commentary in this report. However, as the principal subject of inquiry for this study surrounds West Camp, its own history is briefly described below. It helps to underpin the reasons for designating West Camp as a conservation area. It also illustrates that change and evolution have been part and parcel of the area ever since its establishment immediately prior to WWI.

Heritage overview

Biggin Hill opened as a military landing ground in 1914. From 1917 it functioned as a Radio Signals Unit and from February 1918 as a 'Home Defence Aerodrome' as part of London's air defence system. In the inter-war years, Biggin Hill was the site of pioneering air-to-air and ground-to-air experiments in radio communications and, crucially, how radar was to be integrated into an operationally successful fighter defence system.

The airfield was expanded during the 1930s on land purchased in 1927. This included the purchase and demolition of Cudham Lodge which occupied an area to the east of the original airfield.

During the critical Biggin Hill Experiment of 1938 the station was used as a laboratory for creating the Fighter Direction organisation, linking radar to defending aircraft which was to prove decisive during the Battle of Britain in 1940.

Biggin Hill's location south of London guaranteed its front-line involvement in fighter operations throughout World War II, from the Battle of France to the support of daylight raids by Bomber Command. It was regarded as Britain's principle fighter station and was heavily bombed during the war. 1,400 axis aircraft were destroyed by fighters stationed at Biggin Hill.

A great number of RAF squadrons were stationed at Biggin Hill during the war as well as many foreign units on a temporary basis, including those from the USA, Canada and Poland.

After World War II Biggin Hill was briefly used by the RAF's Transport Command, and then became a base for both regular and reserve fighter squadrons. Following intensification of the Cold War after the outbreak of the Korean War in 1950, with the resultant fear of a possible Soviet nuclear attack, a large scale rearmament programme was undertaken. This included the modernisation of several World War II airfields to enable the service of Meteor fighters. The main runway was extended in 1957 but in 1958 Biggin Hill ceased to be an operational RAF station, becoming the Officer and Aircrew Selection centre for the RAF. In 1974 the majority of the site was purchased by the London Borough of Bromley and in 1992 the RAF finally withdrew from the site.

Development of the historic Landscape

Historic mapping indicates that the land surrounding Biggin Hill Airfield remained agricultural in character until the 1930s phase of expansion prior to the outbreak of WWII. Appendix F illustrates the development of the landscape from the late 19th century until the outbreak of WWII.

Prior to 1896 the airfield area is shown on OS mapping as an area characterised by large open fields with few subdivisions. A group of three buildings, two co-joined and one detached, are located west of Main Road (here marked as Westerham Road) at the point where later Vincent Square was established. South-east of the study area is a wooded copse and other bands of trees line the western verge of Main Road. Saltbox, a hamlet at the southern end of the land on which the airfield was later to be established, consists only of a farmyard and cottage straddling a crossroads. There is also an "old quarry" recorded here, most likely exploiting the topography which exposes readily available chalk at the top of the ridge at this location. A track runs north-west from Saltbox to the moated Cudham Lodge which consists of a manor house surrounded by out-buildings and belts of trees.

Cudham Lodge was established in post medieval era by the Whyffyn family. Records indicate that the family owned a series of estates and lands surrounding Cudham. The Greater London Historic Environment Record indicates that the property indicated on the 19th century maps was an 18th century replacement of the Tudor manor house, built by the Christy family and also known as Apperfield Manor. Although there are no known images of the 19th century house, the 1996 and 1909 maps indicates that it retained its moat and other landscape features. Cudham Lodge itself was demolished in 1895 and the site later levelled when the airfield expanded in the 1930s.

The 1909 edition of Ordinance Survey records no significant changes or developments during the first decade of the 20th century.

By 1932 RAF Biggin Hill is broadly located on the map although no individual buildings or landscape features are included. The track way previously linking Cudham Lodge to Saltbox is truncated south-west of the manor house indicating the pre-expansion extent of the airfield. The hamlet of Saltbox has developed into a linear settlement along Main Road consisting of 15 additional plots of land west of the road, the majority of which have buildings shown within them. These buildings appear to be residential with their names referencing both their location on the hilltop with fine views (eg Valley View) to the west and the adjacent airfield (eg Wild Air). The growing influence of the airfield on the local economy is indicated by the change of use of one previously residential building at the Saltbox crossroads into the Saltbox Tea Rooms.

Despite the date of the 1932 map being after the construction of Vincent Square this area is not detailed on the map, possibly due to the relevant data collection having taken place prior to the construction of Vincent Square.

The later 1939 map does illustrate Vincent Square and other residential development west of Main Road and north of Saltbox. This also shows the Officers' Mess and motor transport garage area just north of Saltbox. At this point there is also an unidentified rectangular building linked to Main Road which may be an operations room or shelter of some kind. North of the Officers' Mess is an area of open land, referred to as the "Village Green", which has a tennis court on it. Here also Main Road is lined with mature evenly spaced trees which are now specifically protected. North of this area are three residential properties, now locally listed that provided additional Officer quarters. North of this is Vincent Square (married quarters), a horseshoe shaped Cul de Sac with short terraces of inter-war housing. On this map all notation relating to Cudham Lodge and field markings to the east have been removed indicating that the airfield has been expanded to the north and east.

The development of the buildings and roads within West Camp

Examination of the incremental development of the building and road layout of West Camp during the 20th century provides evidence of the individual elements of the site, how the site was structured and how this has changed over time. These developments are illustrated in Appendix G.

In 1930, immediately prior to the expansion of Biggin Hill airfield, West Camp had a linear plan that closely follows Main Road. At the north of the site are residential and recreational areas, the middle of the site contains workshops and storage areas and to the south are the operational buildings and aircraft hangars. The current location of St. George's Memorial Chapel is occupied by a large aircraft hangar. The roads within West Camp at this time are of a minor nature reflecting the use of vehicles at the time and display a concise structure to the camp. The location of the actual airfield is clearly discernable and is close to the Main Road.

By 1954 site plans indicate that post WWII developments have led to a significant expansion of West Camp's building stock. The large hangars have moved to the east, indicating the new alignment of the taxiways and runways and moving this area of activity away from Main Road. The original building stock has been expanded with the addition of many smaller individual structures including many that currently remain. The increase in the number of serving military staff is indicated by the increase in barrack buildings in the north and the development of a large parade ground adjacent to St. George's Memorial Chapel as well as tennis courts for recreation. Despite the increasing density of structures the camp retains a high degree of permeability reflected in its road layout. The original camp structure and road layout is still clearly discernable.

West Camp's development as a training and selection centre was consolidated by the construction of the Officer and Aircrew Selection Centre, which is recorded on the 1963 site plan. Elsewhere there are few changes to the layout and density of buildings within the camp. Likewise there are few alterations to the road layout with the original layout of the early airfield is clearly discernable.

Considered together the development of building layout at West Camp reinforces the understanding that whilst the structure of the camp was planned with identifiable areas within the camp satisfying differing functions the incremental changes and additions to the building inventory has encouraged a dispersed layout of the buildings.

Designated Assets

There are 14 designated Grade II heritage assets within the study area consisting of 33 separate buildings. These buildings are illustrated in Appendix E and their significance and setting are described in the illustrated gazetteer (Appendix J).

Listed Buildings

- The Officers Mess

- Station Headquarters
- St. George's Memorial Chapel
- Airmen barracks 1 – 5
- Hawkinge block
- The Candidates' Club and former Sergeants Mess
- Junior Mess and former Airmen Institute
- Married Quarters at Vincent Square

Conservation Area

West Camp forms the core of the Biggin Hill Conservation Area which is illustrated in Appendix E.

Summary of the Biggin Hill Conservation Area

The designation of West Camp as a conservation area is recognition of its special architectural and historical interest. It was designated in 1993 with the strong support of English Heritage and a number of veteran associations. It incorporates the best remaining examples of airfield architecture associated with the RAF presence at Biggin Hill.

The area was developed rapidly from the early 20th century in response to military need and the growing importance of aviation and aviation related technology in warfare. The location of Biggin Hill airfield was selected due to the area's topography and elevated position south of London which rendered it fit for purpose.

The conservation area is broadly linear in form, following the line of the Main Road, a busy thoroughfare connecting Bromley in the north with Westerham in the south. To the west of Main Road the conservation area includes residential buildings for Officers and married staff whilst West Camp itself to the east of Main Road contains the technical, operational and barrack buildings that formed the nucleus of the WWI and WWII airfield.

All of the extant buildings within West Camp are included within the conservation area with the exception of two later residential buildings adjacent to the airmen's barracks. Between these two buildings is an area of now open land which is included, primarily because during the WWII this is considered to be the location of a bomb shelter destroyed during raids in late 1940 resulting in significant loss of life.

The conservation area is, in part, characterised by the significant number of mature trees within West Camp and along Main Road. Many of these were planted during the 1930s as camouflage for the airfield buildings. All of the trees within the conservation area are assumed to be protected by Tree Preservation Orders, as are a belt of trees lining Main Road north of the Officers Mess.

Non-designated Assets

There are three locally listed buildings within the study area, located on the western side of Main Road close to the entrance to Vincent Square. These are known as 1 and 3 Hanbury Drive and 16 Main Road.

A number of buildings within West Camp are non-designated but are of historic interest and contribute to the character and appearance of the conservation area. In particular these add to the integrity, or 'completeness', of the military landscape and its authenticity as an historical resource.

Streetscape and views

Biggin Hill airfield was planned by the RAF to function as efficiently as possible with discernable zones for non-married and married residential quarters, pastoral care, technical and operational areas. Within these areas, the RAF drew from a pattern book of standard building designs that reflect military and town planning ideologies of the time.

The townscape qualities of West Camp are embodied in the consistent use of red brick with restrained architectural details combined with areas of hard and soft landscaping, the campus style layout of the camp which enabled many routes to transverse the camp whilst creating distant views of buildings from various vantage points, and the dispersed layout of the buildings that result in a permeable character despite the needs for security. As is typical of military sites the area is private with definite boundaries whilst also being well integrated into its surroundings.

West Camp and its individual buildings enhances to a significant degree the Main Road streetscape.

Important vistas of West Camp occur as you approach from either the north (figure 5.1) or south and progress along Main Road (figures 5.2, 5.3, 5.4). These views are important to both pedestrians and motorists. The location of mature trees along Main Road is not consistent along the entire length of West Camp. In the north, gaps provide the viewer with more visibility of the barrack buildings from the road (figure 5.4) whilst in the south trees are more closely grouped which have more effectively screened the MT workshop buildings and operational areas from the road (figure 5.5). An exception to this is the area around St. George's Memorial Chapel which is the only publicly accessible area of West Camp and is a very important focus of communal memory for service personnel, their families and the public more generally. Here the RAF has positioned two replica fighter planes and it acts as a landmark announcing the visitors' arrival at Biggin Hill (figure 5.3).

There are also important views from within West Camp which contribute to the character of the conservation area, displaying aspects of the planning of the fighter station. A sense of permeability results from the building positions which provide views through the camp. The survival of largely grassed areas between the buildings, including the lack of hard building aprons, unifies the site and contributes to the area's integrity. Views along straight roads within the camp which form part of the surviving rectilinear network afford distant views along avenues of trees and buildings at the view terminations (figure 5.7).

The "campus" character of West Camp is, in part, created by the areas of mown lawn interspersed by mature trees that surround most buildings. Recessed concrete paths connect many buildings but these have little impact on the landscape. That the predominately green landscaping extends throughout the camp and right up to the extant taxiway further reinforces a sense of unity that relates the camp to the airfield beyond (figure 5.8).

Figure 5.1: Arriving from the north.



Figure 5.2: Looking south along the fence line and Main Road illustrating the set-back building positions.



Figure 5.3: View of St. George's Memorial Chapel and replica fighters.



Figure 5.4: View towards the Airmen's barracks from Main Road.



Figure 5.5: View from the entrance of Vincent Square towards the MT workshops.



Figure 5.6: View through the Airmens' barrack blocks towards Main Road.



Figure 5.7: Typical view along internal road network



Figure 5.8: Mature trees and predominately green landscaping unify the site.



Assessment of Special Interest

The area now occupied by the Biggin Hill Conservation Area developed rapidly from the 20th century onwards. This development was associated with the growing importance of military aviation and the Royal Air Force, aviation related technology and ground based aviation defences.

Prior to this development the area was characterised by open farmland interspersed with densely wooded areas. Cudham Lodge, located at the centre of the current airfield, consisted of the remains of a Tudor manor incorporated into a 19th century farm. Saltbox was a hamlet of three buildings at a crossroads at the southern limit of the current conservation area. Following the development during the 20th century, area gained a sub-urban character with the erection of buildings with a restrained architectural style.

The distinctive character and appearance of the area which contribute to its heritage value is derived from a number of factors.

The location and positioning of West Camp adjacent to, but set-back from, Main Road ensures that one experiences a sense of discovery when travelling through the area, with glimpses of the individual buildings and airfield beyond the fence-line and through the mature trees. This experiential impact contributes to the communal and historic value of Biggin Hill and is enhanced by the landmark quality of St. George's Chapel and flanking replica WWII fighter aircraft.

The individual buildings within the conservation area are designed in a manner that conveys information about the status of those that used them, about individual buildings' specific function and about military planning and technology in the first half of the 20th century. Whilst many of the buildings do not individually have great architectural merit they are designed in a consistent manner and utilise similar materials that enhance the aesthetic and group value of the conservation area. Many of the buildings physically relate towards the centre of West Camp and towards the airfield itself however buildings adjacent to Main Road, specifically the Station Headquarters and Airmens' barracks have facades that also relate to the public space of Main Road.

Comparative analysis illustrates how individual buildings within the conservation area embody physical properties such as construction materials and differing degrees of architectural complexity that display evidence of the relationship between different subset of the military community, for example between commissioned and non-commissioned ranks.

Considered as a whole the Biggin Hill Conservation Area, despite the loss and alteration of several built features in the last 20 years, retains many special features of the historic airfield and these contribute substantially to the integrity and completeness of the conservation area as an heritage asset of special interest. Many of these features, such as the sick bay and decontamination unit, are non-designated but of historic interest in their own right.

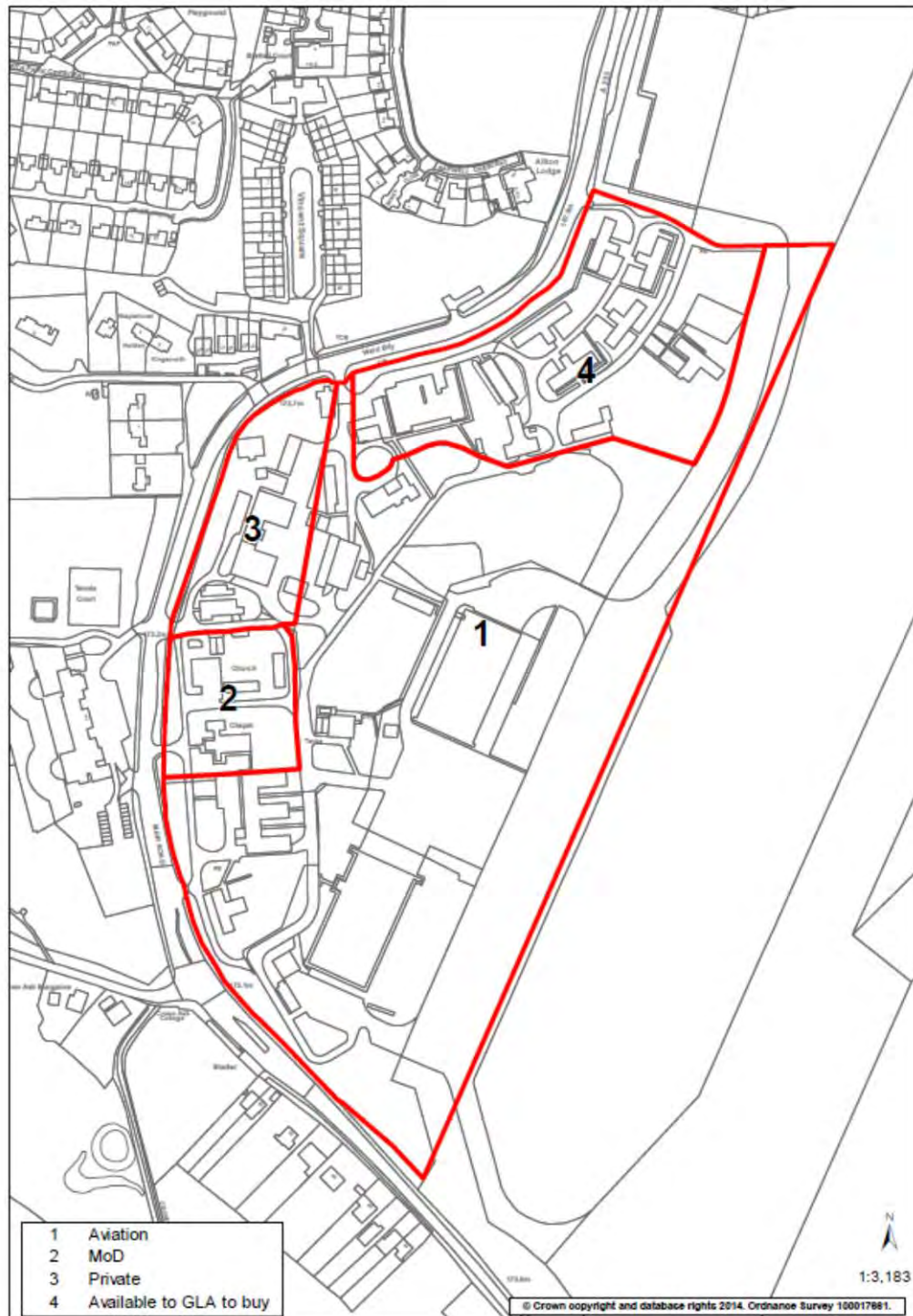
Recommendations for further study or investigation

It has not been possible to access some key buildings within West Camp. In other instances it has not been possible to undertake any research concerning the significance of particular buildings. The following structures should be investigated before any decision about their future is made:

- Building 7: sick-bay and decontamination unit;
- Buildings 30: boiler house;
- Previously inaccessible buildings within the MOD controlled area.

5.9 The proposed development

Figure 5.9: Proposal map supplied by London Borough of Bromley



Appendix H illustrates the building and road layout in West Camp currently alongside layout of the proposed changes. This report will consider in summary the potential impacts of proposed development for all development within West Camp.

Concerning the land that may be purchased by the GLA/LBB (Area marked 4 above and as identified in Figure 4.1), it is proposed that this might be redeveloped to accommodate

Bromley Engineering College, a hotel, a heritage centre and privately let office / workspace. It is proposed that approximately 50% of the available floorspace in this area should be allocated to office / workspace. Our initial assessment under Section 4.6 demonstrates that this proportion may be slightly less.

Description of options

Developments illustrated within the proposal map include:

- Demolition of 2 barrack blocks outside of the conservation area in the north-east corner of the study area.
- Demolition of non-designated buildings within the conservation area to enable an increase in total floorspace – specifically the proposed demolition of the Sick Bay, associated Ambulance Garage and Decontamination Centre; Meat Store; 2 MT garages; Reservoir and associated Pump House; Civilian Labourers Rest Hut; OASC building.
- Demolition of surviving fragments of the Belfast hangar and annex buildings located at the southern end of the conservation area.
- Construction of new buildings within the conservation area: a building on land currently occupied by the Sick Bay and Decontamination Unit; a new building adjacent to the Guardhouse.
- Construction of new buildings adjacent to the conservation area – specifically two buildings to replace the barrack blocks in the north-east corner of the study area; a series of new hangars and offices to be constructed on open land.
- Creation of a spine road extending from the current Guardhouse to a new junction south of the Station Headquarters.
- An increase in the provision of car parking within the conservation area and other alterations to the landscape including the re-routing of secondary roads within the conservation area which implies the removal of several trees.

Assessment of key impacts on heritage assets

The non-designated barracks blocks located outside the conservation area boundary in the north-east corner of West Camp are of no particular architectural merit and do not enhance the setting of the conservation area. The proposed demolition of these buildings will have a positive impact on the setting of the designated Airmens' Barracks, these being closely related to the other 1930s buildings within the conservation area. As the blocks are not of a consistent design or detailing when compared to the Airmens' Barracks within the conservation area, their demolition will also not lessen the character or appearance of the conservation area as a whole. It is assessed that the demolition of these two barrack blocks will result in a positive impact on the adjacent listed buildings and conservation area as a whole. Furthermore the removal of the blocks will present an opportunity for replacement with new buildings which will contribute to the range of building type and uses within West Camp and therefore the area's viability.

The proposed demolition of buildings of the sick bay, decontamination unit and ambulance garage will remove three buildings of singular use from the conservation area. The Sick Bay and Ambulance Garage date from Biggin Hill's pre-expansion period whilst the Decontamination Centre was constructed subsequently to meet military requirements. Because of these reasons, and despite these buildings being non-designated, it is assessed that their loss would adversely affect the integrity of the conservation area as well as the setting of several adjacent designated buildings. It may be difficult to argue that this loss does not constitute substantial harm to the conservation area. At the time of writing it has also not

been possible to examine the interior of the buildings to determine the degree of surviving material and until the full significance of these buildings is assessed a decision on their future cannot be made. These buildings may be capable of re-use and this should be considered before demolition.

The proposed demolition of the Reservoir and Pump House will remove two buildings of a singular use and important function from the conservation area. The Reservoir and Pump House date from before the 1930s expansion period, predating other early buildings such as the Sick Bay. They are constructed of different materials to the later buildings and due to their unique functional role within the camp add character to the conservation area. Because of this, and despite these buildings being non-designated, it is assessed that their loss would adversely affect the integrity and character of the conservation area. Weighed against this one should consider that the buildings do not contribute to the significance or setting of any nearby designated assets and the Reservoir is not a structure that readily lends itself to reuse. The Pump House is a characterful building that would appear to lend itself to re-use or adaptation, possibly including the incorporation of the historic structure in an enlarged structure that complements the nearby garage block. Considered in balance, whilst it may be difficult to argue that the loss of the two buildings does not constitute harm to the conservation area, the resulting benefits of retaining and enlarging the Pump House should outweigh any perceived adverse impacts, rendering these impacts less than substantial.

The proposed demolition of the non-designated Meat Store will remove a building of ancillary historic function with no current use and of no particular architectural merit within the conservation area. As the adjacent mess buildings which the Meat Store served primarily face towards the historic airfield its loss will have a negligible impact on the setting of these designated assets. The Meat Store also makes little contribution to our understanding of how West Camp functioned or the character and appearance of the conservation area, especially considering that it no longer retains its brick exterior. Furthermore the demolition of the Meat Store would open up the area of land immediately surrounding the Guardhouse and between the three designated buildings which may enhance their settings and enable their inter-relationship to be more fully appreciated. Considering these factors the removal of the Meat Store should not constitute substantial harm to the conservation area.

The ensemble of MT buildings contributes to our understanding of how the camp as a whole was designed and functioned. In general, the MT workshops are of lesser architectural merit but equal historic value to the higher status buildings within the camp since they accommodated key functions within the airfield. The proposed demolition of one non-designated MT garage at the centre of West Camp will adversely impact the historic footprint of the camp and will, in part, adversely impact the setting of the larger MT workshops opposite which the building relates too. A second MT workshop, adjacent to the Guardhouse, is also proposed for demolition. Its loss will adversely affect the dispersed character of West Camp. Furthermore this building has been previously adapted for use as a storage facility but would be capable of further development that retains the building envelope and original metal framed windows facing toward Main Road.

The proposed demolition of the non-designated Civilian Labourers Rest Hut will remove a building of ancillary historic function of no particular architectural merit from within the conservation area. The labourers rest hut is of interest due to it displaying the separation of military and non-military personnel and as such has social significance but its loss would not constitute substantial harm to the conservation area as a whole. Its limited significance can be adequately preserved via a recording and documentary research. Furthermore, as it is positioned close to the designated Candidates Club, but does not relate to this building. It makes no contribution to the historic setting and significance of the Candidates Club and its removal may better reveal the significance of the designated building.

Being designed in a modern style distinct from the other buildings within the conservation area, the proposed demolition of the OASC building will have no adverse impact on the character and appearance of the conservation area. Although its loss will remove the most tangible record of candidate selection which formed an important part of Biggin Hill's role in

the 1960 to 1980 period, the Candidates Club and Hawking Block remain which accommodated candidates during an earlier period, which is of greatest historical significance. In addition the OASC makes no contribution to the heritage setting of the designated St George's Chapel or the Station Headquarters which are adjacent to the selection centre. It is understood that the OASC is structurally unsound and requires substantial repair which renders it unviable. Its demolition will result in potential heritage benefits, opening up the site to future development that will enhance the setting of the nearby designated assets, provide enhance permeability to the site and improve the viability of the conservation area as a whole.

The proposed demolition of the non-designated remains of the Belfast hangar and annex will remove a building from the early phase of the Biggin Hill's development and will adversely affect the integrity of the conservation area and denigrate its character and appearance. The hangar remains contribute positively to the significance of the designated Station Headquarters and it may be difficult to argue that its loss does not constitute substantial harm given the central role that these hangars played in the functioning of an operational fighter station.

Setting aside the strategic assessment of impacts of demolition that have been discussed in the preceding paragraphs the impacts of new construction on the built heritage within the study area are now considered from a neutral perspective.

The construction of two new buildings in the north-east corner of West Camp, adjacent to the designated Airmen's Barracks, provides an opportunity to increase the diversity of building types within West Camp and the capacity of the camp for new economic activity. The indicative proposal assessed here suggests that these blocks would broadly follow the form of the existing barrack buildings but be more substantial in plan. The new buildings will be positioned on elevated ground and have the potential to adversely impact the setting of the three adjacent designated Airmen's Barracks which face towards the airfield. The new buildings have been illustrated as being positioned so that viewing corridors remain between Main Road and the airfield and from the centre of West Camp to Biggin Hill Airport the north. Also, the areas of open ground between the buildings appears proportionate to the space between adjacent buildings. Assuming that the height of the new buildings is limited so that they do not dominate the designated Airmen's Barracks or the northern end of the conservation area more generally, then their impact on the setting and significance is predicted to be neutral.

The construction of a new building located between the designated Junior Ranks Mess and Airmen's Barracks provides an opportunity to increase the diversity of building types within West Camp and the capacity of the camp for new economic activity. The indicative proposal assessed here suggests that this block would broadly follow the form of the existing barrack buildings but be more substantial in plan. Its size and position would result in a reduction of open ground between buildings in this area which would erode the dispersed character of the conservation area. It is also noticeable that the Airmen's Barrack blocks facing onto main Road and the nearby Junior Ranks Mess building are similarly set-back from Main Road and by not adhering to this convention the new construction does not appear to respond to the existing layout as sympathetically as it might.

The construction of a new building adjacent to the Guardhouse increases the floor area of usable space in the central part of the conservation area. The indicative proposal assessed here suggests that this block would broadly follow a rectangular form of the adjacent Hawking Block but be more substantial in plan. Its size and position would result in a reduction of open ground between it and the boundary fence and this would have an impact on the experience of driving along Main Road by making this building highly prominent. In this way, it would erode the character of the conservation area. By not responding to the set-back convention in evidence elsewhere, the new construction does not appear to be sympathetic to the existing layout and character of the conservation area. Despite this, the construction is positioned so that it would be unlikely to adversely impact the significance or setting of any designated or non-designated assets within the conservation area.

The construction of new offices and hangars adjacent to the conservation area has the potential to substantially harm the character and appearance of the conservation area, as well as the setting of individual designated and non-designated heritage assets. This primarily relates to the topography of the site and proximity of new hangars to the Candidates Club, Junior Ranks Mess and Airmens' Barracks in the northern half of the conservation area. The modern hangars already existing on the boundary of the conservation area give an indication of the form of development inherent in this proposal. The hangars are large sheds constructed with metal sheet walls and flat roofs. Positioned, as they will be, on land at greater height to that on which the rest of the conservation area is means that the height differential between the new hangars and 1930s buildings will be exaggerated. It may be difficult to argue that this does not constitute a significant adverse impact on the setting of the conservation area.

A subsequent impact of the hangar construction will be to necessitate the rearrangement of the historic road network, within which it is possible to identify the earliest form of the airfield layout. Whilst the historic roads are generally rectilinear, the proposed network is characterised by a curvilinear layout. A new access road will be established between the Candidates Club and the Junior Ranks Mess and a more substantial and realigned "spine road" will connect the Guardhouse to a new entrance gateway immediately south of the conservation area. These developments also have the potential to substantially harm the character and appearance of the conservation area. Of most concern is their ability to subdivide what is currently a coherent area. The potential benefits of realigning the roads such as the creation of an area of open ground in front of the designated Candidates Club are negated by the close positioning of new offices and hangars that will block views to the airfield.

The proposals suggest that development of new uses for the buildings at West Camp will be supported by an increase in car parking provision and the possible removal of mature trees within the conservation area that are automatically protected by tree preservation orders. As noted elsewhere, trees within the camp have a heritage value as they were planted in order to provide camouflage for the camp buildings. The reduction in tree cover, increase in roads and other hard landscaping and provision of significant number of car parking places has the potential to substantially harm the character and appearance of the conservation area, as well as the setting of individual designated and non-designated heritage assets. An example of this is the construction of a new access point and roundabout at the southern end of the conservation area. This, combined with the construction of car-parking north of this point, has the potential to dislocate the station headquarters from other areas of West Camp.

5.10 Recommendations

These recommendations take into consideration national, regional and local policy detailed in section 5.6. Further assessment of buildings not previously accessed is advised.

The proposals assessed as part of this study give rise to some concern that it may not be possible to argue that substantial harm to heritage assets will not result in some cases. These potential impacts can be mitigated by a number of actions:

The proposals should preserve as fully as possible the key relationships between West Camp and its surroundings. This includes views of the camp from Main Road and the visual permeability of the camp affording views through and along the area. The residential, mess and operational buildings have easily determined principal elevations which should be taken into consideration when planning development.

Demolition of buildings within the conservation area should be avoided where they contribute to our understanding of the conservation area as a whole, or where new desired uses can be accommodated within existing buildings. For example rather than demolish the Sick Bay and Decontamination Unit it might be converted for use as an administration building. Likewise the adjacent Ambulance Garage might also be retained and converted for use as a café or other amenity.

Other buildings may not be affected directly by demolition but all will be convertible to a new uses. The Junior Ranks Mess may be suitable for conversion into a small hotel; in doing so, it would be possible to restore its principal elevation which faces the airfield whilst sensitively redesigning the rear of the building to provide additional accommodation and an attractive façade onto Main Road. Likewise the Airmen's Barracks blocks and other buildings should easily be converted to use as classrooms, lecture halls, individual workspaces.

As has been recommended in the London Borough of Bromley Planning Framework, the boiler house may present specific opportunities to be converted into a small heritage / visitors centre with the potential to develop an elevated viewing platform from which to appreciate and interpret West Camp.

In all cases, the buildings will need upgrading in terms of environmental performance and services but done from the inside out this is unlikely to affect the significance of designated buildings or the character of the conservation area. Where external historic features are visible such as electrical substations and mechanical services then every consideration should be given to retain these as they contribute to the character of the area and, very probably, its marketability.

Where buildings of little architectural merit do not make a contribution to the conservation area then their demolition may be justified on the basis that it will enhance the viability of the area as a whole – the benefit of demolition exceeding the 'cost' of losing the building. In such cases the buildings should be recorded to a minimum of English Heritage level II.

The proposals call for the demolition of the Pump House and adjacent MT garage. Instead it would be possible to adapt these building for new uses, or to extend them sympathetically to increase the useable floorspace. If this is not possible then a sympathetically designed new building of one tall storey in this location should be adequately screened from the rest of the area to render its impact insignificant.

Special consideration should be given to the repair and restoration of architectural details. As a general rule metal framed windows will be more in keeping with the buildings of a technical area and timber in the domestic or residential areas. External works should seek to preserve the character of the area whilst unifying the camp, such as not rendering buildings or painting external brickwork. The camp boundary onto Main Road should be restored and where internal subdivision is unavoidable the fences should be as unobtrusive as possible.

As indicated above, detailed consideration should be given to the height, mass and positioning of new buildings within the existing conservation area landscape and adjacent to the conservation area. Of particular concern is the proposed proximity of new hangars which will extend into the conservation area close to important designated assets.

Another area of concern is the implications of the proposed spine road and associated car parking and their ability to subdivide the conservation area to a greater degree or to isolate currently integrated structures such as the Station Headquarters. As much weight as possible should be given to integrating West Camp into the existing public transport network to limit the need or desirability for people to travel to the area by car.

5.11 Summary

The proposed redevelopment area includes land to the east of Biggin Hill Conservation Area, designated by London Borough of Bromley in 1993. The conservation area has as its focus the area of barracks, technical and command buildings that made up West Camp, one of three camps that comprised Biggin Hill airfield prior to, during and after World War II. Outside of West Camp but within the conservation area is the Officers Mess and Vincent Square (married quarters).

The conservation area includes 14 designated Grade II listed assets, 3 locally listed buildings and many other non-designated buildings of historic interest and which contribute to the

historic setting of designated buildings and character and appearance of the area more generally.

Biggin Hill Conservation Area is located in a landscape area characterised as the Upper North Downs. Largely chalkland, it includes extensive parts of the boroughs of Bromley and Croydon. The areas location south of central London and distinctive topography and geology has led to its selection for use as an airfield to satisfy operational and strategic functionality. As such it is part of a wider historic and military landscape.

Biggin Hill airfield was established in 1914 but the main period of significance clearly identifiable in the extant fabric can be traced back to the early 1930s expansion of the airfield. At this time additional barracks and other facilities were added in the lead up to WWII. During WWII the Biggin Hill fighter station was home to many squadrons of RAF airmen. After famously fulfilling a defensive role during the Battle of Britain, with West Camp being almost destroyed by enemy bombing in 1940, Biggin Hill played an important role in later offensive operations. After WWII, Biggin Hill played an important role in the selection of RAF personnel. Over the years a chapel was established which remains the focus of remembrance activity for the RAF.

Many of the buildings in West Camp are owned by Pentbridge Properties Ltd but vacant due to no appropriate use being identified. The vacant buildings have been mothballed and are maintained as and when deemed necessary – as a result they are likely to deteriorate steadily until a sustainable use can be identified. For this reason, the Biggin Hill Conservation Area has been placed on the English Heritage register of ‘at risk’ conservation areas.

Proposals for the development and reuse of the conservation area have been submitted to London Borough of Bromley and these formed the basis of this strategic assessment. The proposals include demolition of historic buildings, construction of new buildings to increase the useable floorspace within West Camp, construction of new hangars to increase the capacity of airside business, realignment and widening of the roads within the conservation area, a significant increase in car parking provision and removal of mature trees.

These proposals have the potential to cause substantial harm to the conservation area and recommendations have been made to mitigate the potential impacts. At most risk of not complying with adopted national, regional and local policy are the:

- demolition of the sick bay and decontamination unit;
- demolition of the surviving fragments of Belfast hangar and annex;
- creation of a curvilinear spine road;
- increase in car parking and other changes to the landscape including the removal of protected trees of heritage value;
- construction of new hangars that are located close to designated buildings;

It may be possible to mitigate the negative impacts of these proposals by sympathetic urban and building design. High standards of design will positively enhance the appearance and special interest of the area when new development takes place. It is suggested that every new building is designed as part of a larger whole, rather than as a separate entity. The conservation area has a character of its own which new buildings should respect and enhance.

A further detailed assessment of the Biggin Hill Conservation Area that might follow this strategic overview may help to set out specific parameters for regeneration that do justice to the historic buildings as well as the areas economic potential.

Conservation is a positive process in planning for the future of Biggin Hill Conservation Area even in its volatile environmental circumstances. An agreed framework for development should exist between all parties searching for a place in this very special and attractive location.

When considering the impacts of the proposed developments at West Camp as a whole it is also worth noting the changes to the area since its designation in 1993. Although specific details of applications are not available to view on the London Borough of Bromley planning portal, in the late 1990s a number of planning applications for the demolition of buildings within West Camp were approved. Some of the photographs used within the Biggin Hill Conservation Area SPG feature buildings that are no longer extant within the conservation area. This indicates that a number of potentially significant buildings that contributed to the integrity of the conservation area have since been lost including a defensive pillbox adjacent to the Meat Store and the operations building located in front of the Station Headquarters. These changes have already had the effect of lessening the comparative value of West Camp as an historic resource and suggest that further losses should be limited wherever possible.

6 TRANSPORT IMPACTS OF MASTERPLAN

6.1 Introduction

This chapter considers the highway impacts arising from the growth proposals put forward by Biggin Hill Airport Ltd and the Locate partnership for the Strategic Outer London Development Centre (SOLDC) within the Biggin Hill corridor. These proposals centre on Biggin Hill Airport and the surrounding area to the south and east. The work includes a strategic masterplan, which has been developed for the SOLDC by Nathaniel Lichfield & Partners as set out in the Economic Growth Plan Update of June 2014.

The study includes a review of the traffic impacts predicted to arise from the proposed development, considering the existing transport environment in Bromley and how this is expected to change in future years. Against this backdrop, the requirement and timing of transport planning measures and infrastructure schemes have been considered, including the opportunities to reduce car trips through improvements to the sustainable transport network. For the purposes of modelling it has been necessary to assume the years associated with phasing periods set out in the Economic Growth Plan Update of June 2014, however these phases are understood to be illustrative and of greater importance are the trigger points at which infrastructure is required to service quantities of completed development floor space. With this in mind Tables 6.18 and 6.19 have identified these trigger points.

6.2 Methodology

Liaison with LBB identified that a spreadsheet model should be developed to inform the assessment of growth scenarios. The assessment has been prepared in accordance with the Highways Agency guidance 'Local Development Frameworks – Evaluating Transport Impacts', which utilises a first principles method and allows different options to be tested and particular sites / schemes to be turned 'on' or 'off' within the model. The remainder of this section sets out the study area used and modelling scenarios developed for the Biggin Hill corridor.

Study Area

The A233, which forms the spine road of the Biggin Hill corridor, links Bromley to the north with Biggin Hill and beyond to the south. To the north, the A233 connects with the A232, which runs east to west, providing good linkages towards Croydon (west) and the M25 Junction 4 (east). To the south of Biggin Hill, the A23 connects with the A25, close to Westerham. The area therefore affords good access to the wider strategic highway network.

Liaison with LBB identified six junctions which would be considered as part of the study, and which would be included in the spreadsheet model. These are shown in **Figure 6.1** below, with a brief description of each provided.

Junction 1.1 - A233 Westerham Road / A232 Croydon Road Junction

This junction sits at the northern extent of the Biggin Hill corridor, and comprises a four arm signalised crossroads, with pedestrian facilities provided on each arm. To the north, the A233 continues and connects with Bromley; to the west, the A232 passes through Croydon, Sutton and Ashted; whilst to the east the A232 offers connections with Orpington and Junction 4 of the M25.

Junction 1.2 – A233 Westerham Road / B265 Heathfield Road

This junction comprises a three arm priority arrangement, with Westerham Road having priority, meaning that traffic on Heathfield Road has to stop to give way. The junction has a segregated left turn slip lane to Heathfield Road for traffic travelling northbound on the A233 Westerham Road, with all movements possible at the junction approximately 20m north of this slip. Heathfield Road is a B classified road (B265) and runs from the A232 to the north east, through Keston Village, to the junction with Westerham Road.

Junction 1.3 – A233 Westerham Road / Downe Road

This junction between the A233 Westerham / Downe Road comprises a three arm mini roundabout, with a painted central island. Two lanes are provided on the A233 Leaves Green Road approach from the south, with one lane available on the A233 Westerham Road approach from the north. Downe Road also has one lane at the give-way line, and affords access towards Downe to the southeast and the A21 Farnborough Way, via Shire Lane, to the north east.

Liasion with LBB has confirmed a planned improvement at the junction, in order to address safety concerns. With the improvement, it is intended that the northbound approach is reduced to one lane only, with hatching used to remove the offside lane. Furthermore, a physical central island, 6m in diameter will be delivered with a 2m overrun surrounding the island. The radius on the southbound approach will also be tightened.

Junction 1.4 - A233 Main Road / Airport Access Road

Access to Biggin Hill airport is provided towards the north of the SOLDC area from the A233 Main Road. A formal priority junction is provided at this location, with all movements possible. The access to the site is gated, and is therefore closed out of hours.

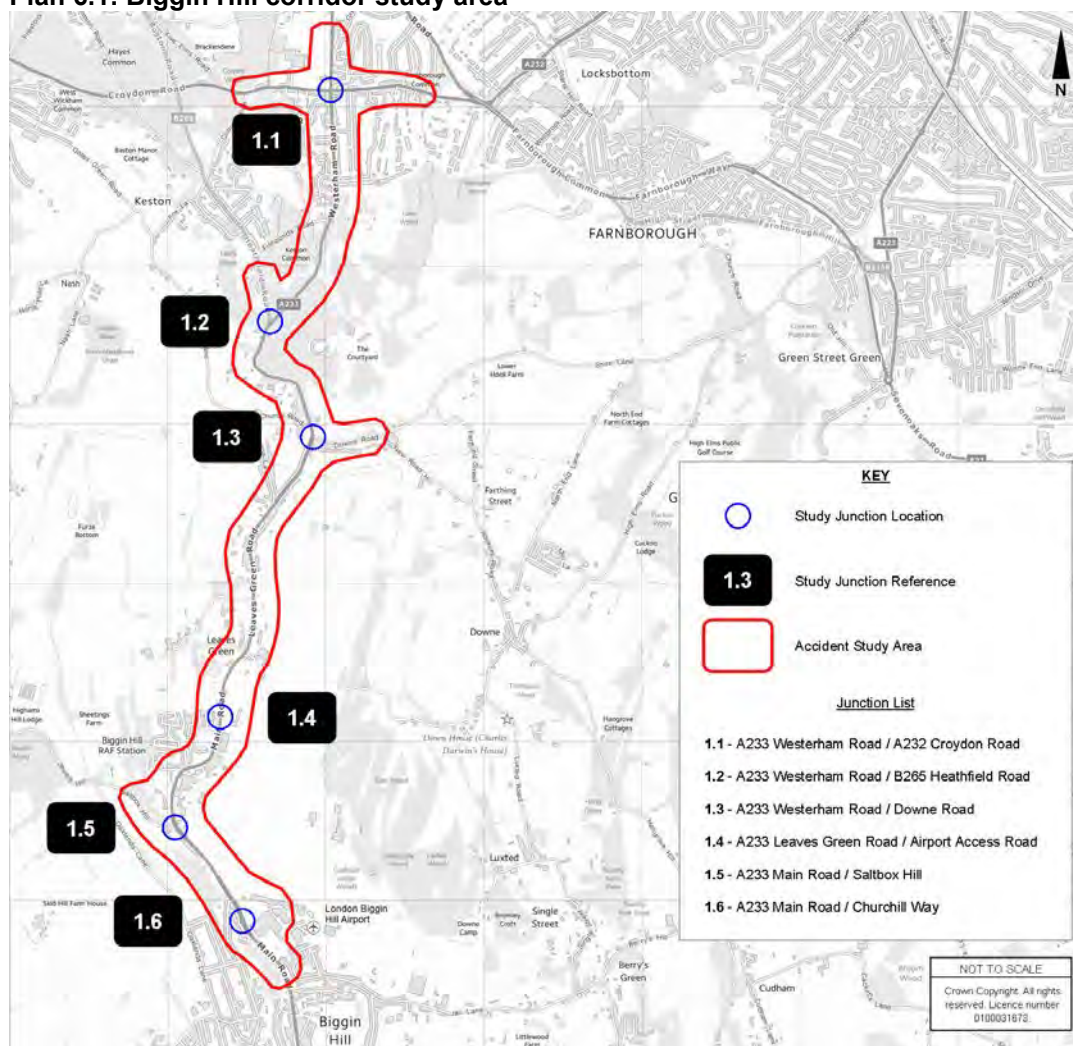
Junction 1.5 – A233 Main Road / Saltbox Hill

The A233 Main Road / Saltbox Hill junction comprises a three arm priority, with all movements afforded at this location. A dedicated right turn is provided from the A233 Main Road to Saltbox Hill. Two lanes are provided at the give-way line on the Saltbox Hill arm, with this road affording access towards New Addington.

Junction 1.6 – A233 Main Road / Churchill Way

The A233 Main Road / Churchill Way junction forms a three arm roundabout. Access to the southern and western camps at Biggin Hill airport is available from Churchill Way, alongside the Biggin Hill Industrial Estate. Two lanes are provided at the give-way line on the A233 Main Road north and Churchill Way arms, with one lane provided at the A233 Main Road southern arm.

Plan 6.1: Biggin Hill corridor study area



Methodology

Initially three scenarios were identified for inclusion within the model, and agreed with LBB. These comprise the 2014 Baseline situation, which represents the existing case, and two future year scenarios. The first was taken at 2030, as agreed with LBB, and represents the future year do minimum situation, which includes background traffic growth and committed development. The final scenario comprises the 2030 Do Something case, which introduces traffic associated with the total growth option for the Biggin Hill corridor.

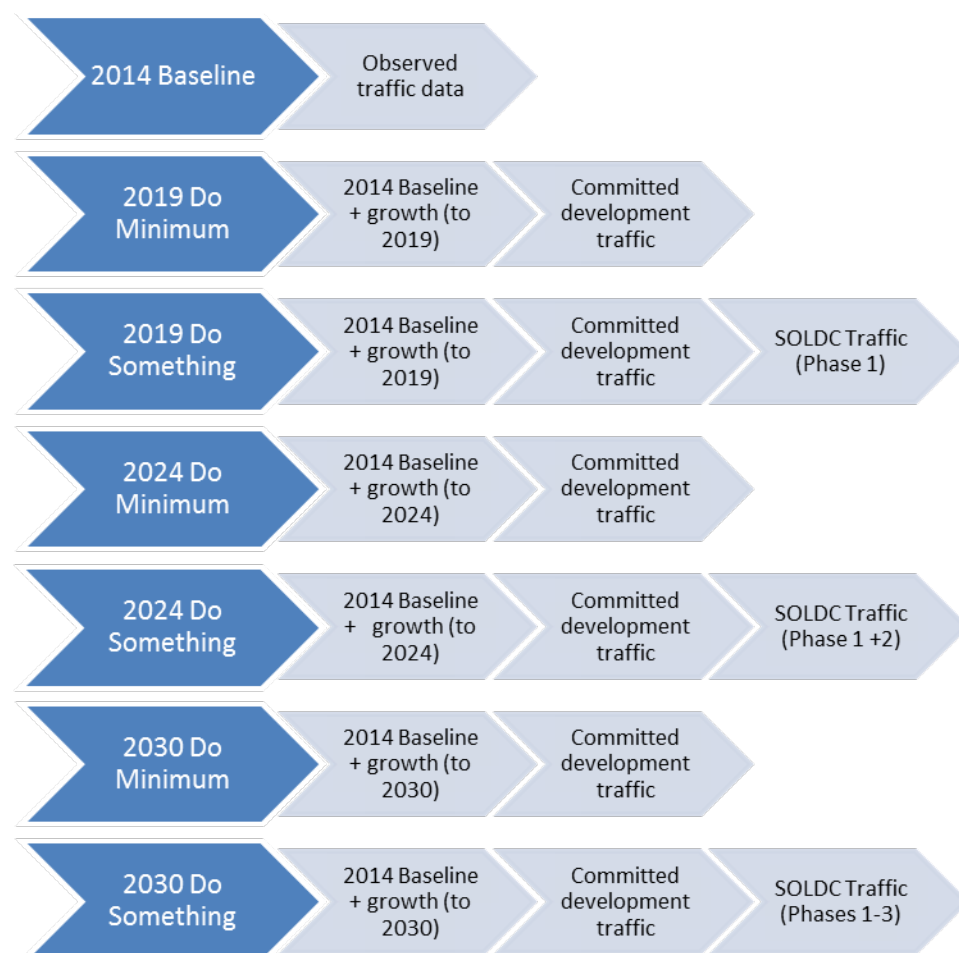
An update to the methodology was requested by LBB, which involved seeking to determine when upgrades to the network may be required to facilitate further development. The 'Economic Growth plan for Biggin Hill' suggests that the development will be delivered in three phases, ranging between 5 -7 years. On this basis, four additional scenarios have been added to the modelling assessment in order to gauge when upgrades may be needed. These comprise:

- 2019 Do Minimum
- 2019 Do Something
- 2024 Do Minimum
- 2024 Do Something

The 2019 scenario represents the predicted timeframe at which Phase 1 of the proposed three-phase SOLDC growth may be complete, with 2024 representing completion of the second phase of development.

A summary of the scenarios modelled are provided in **Figure 6.2** below.

Figure 6.2: Summary of spreadsheet model scenarios



2014 Baseline

The baseline scenario was developed using observed traffic data, which was collected during December 2013. As the month of collection, was close to 2014, no growth in traffic was applied to achieve the 2014 results. A review of the observed traffic data, and consideration of planning documents prepared for committed developments within the area, identified the network weekday 'peak' hours as between 0800 – 0900 and 1700 – 1800.

Do Minimum

To forecast the future year traffic flows for the Biggin Hill corridor, traffic growth rates between 2014 and 2019, 2024 and 2030 were derived from the Department for Transport's (DfT) TEMPRO database (version 6.2). TEMPRO is an industry standard database used for calculating traffic growth, with data and projections developed by the Office for National Statistics (ONS) incorporated into the growth figures.

Due to the following reasons, local factors were derived directly from TEMPRO and were not further adjusted by the National Transport Model:

- The congested nature of key access/egress points along the corridor;
- No evidence of traffic growth on the A233 over the past 10 years; and

- Concerns regarding the accuracy of the NTM for London based on the 'Road Traffic Forecasts Report' (Department for Transport, 2013).

The local rates were adjusted in TEMPRO to allow for the growth of jobs in the area associated with committed development. Information provided by LBB indicates that the only committed development which should be included in the model is the consent for the development of a 76 bedroom hotel and associated facilities, including leisure and restaurant facilities at South Camp, Biggin Hill Airport on Churchill Way. Based on the Homes & Communities Agency's 'Employment Densities' (2010) guide, which identified a density of 1 employee per 2 bedrooms for the hotel plus consideration of the additional facilities proposed, an allowance for 50 jobs has been made.

The resultant growth rates applied to the 2014 baseline, following adjustment for jobs created by the hotel, are shown in **Table 6.1** below.

Table 6.1: Background traffic growth rates (Do Minimum)

Period	2014 - 2019	2014 - 2024	2014 - 2030
AM	1.024	1.050	1.073
PM	1.024	1.049	1.075

Estimated traffic flows for the proposed hotel have been based on trip rates derived from a combination of TRAVL and TRICS (see **Table 6.4**), which are industry standard tools for calculating trip rates within the Greater London area. The committed development flows calculated have been distributed across the study area, from Churchill Way, based on relevant turning count data, and added into the spreadsheet model for the Do Minimum scenarios.

It should be noted that existing traffic associated with the Biggin Hill Airport and the surrounding development was extracted from 2014 Baseline scenario prior to the application of background growth traffic rates. This was then re-added to the network, alongside the committed development traffic, and was required to avoid double counting growth of traffic associated with the SOLDC. Growth for the SOLDC will take the form of specific development traffic added as part of the Do Something scenarios (discussed below).

Do Something

Within the do something scenarios, the growth rates have been further adjusted by phase to allow for the proposed growth in employment at the SOLDC to be accounted for. This has been undertaken, as the redevelopment and growth of Biggin Hill Airport and surrounding land are likely to form part of local planning growth targets and therefore would result in double counting of traffic growth once the development specific flows are applied, if unadjusted. As a result, in some instances, traffic flows may be similar or lower to those used in the Do Minimum case.

A summary of the forecast growth in job levels at the SOLDC is set out in **Table 6.2** below by phase of development, with the resultant adjusted background traffic growth rates shown in **Table 6.3**. These figures are extracted from the 'Economic Growth Plan Update' for Biggin Hill Airport (June 2014). Total growth of up to 2,391 jobs is set out for the redevelopment of the site, which coupled with existing job levels, estimated at 980 jobs in 2011, amounts to 3,371 jobs at completion. Greater detail regarding the breakdown of additional jobs by land use type can be found in **Appendix A**.

Table 6.2: Forecast growth in jobs at SOLDC

Location	Phase 1 (2019)	Phase 2 (2024)	Phase 3 (2030)	Total
Terminal Area	30	42	0	72
East Camp	6	178	26	210
South Camp	141	155	248	544
South Camp Extension	467	0	20	487
West Camp	0	163	915	1078

Total	644	538	1209	2391
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Table 6.3: Background traffic growth rates (Do Something)

Period	2014 - 2019	2014 - 2024	2014 - 2030
AM	1.016	1.041	1.064
PM	1.015	1.041	1.065

No committed development is included in the calculations for the Do Something scenario, as the consented 76 bed hotel at South Camp is replaced by a 150 bed proposal at West Camp within the concept masterplan for the SOLDC area, and as such is specifically incorporated as development traffic.

In calculating development trip levels associated with the proposed growth at the SOLDC, trip rates for each land use classification have been derived from industry standard databases in the form of TRAVL and TRICS, based on comparable characteristics e.g. public transport access, location (Outer London). These have been applied to the associated level of jobs by phase in order to estimate total trip levels. The trip rates used are shown in **Table 6.4**, with the resultant trip levels for the AM and PM peaks, by phase and area of the SOLDC shown in **Table 6.5**. In the case of hangarage, trip levels associated with B8 warehousing/storage have been used a proxy for this land use.

Table 6.4: SOLDC Trip Rates

Land Use Type	Rate Type	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
		Arriving	Departing	Total	Arriving	Departing	Total
B1 Office	Per job	0.32	0.02	0.34	0.01	0.33	0.33
B2 Industrial	Per job	0.33	0.07	0.40	0.04	0.25	0.29
B8 Hangarage	Per job	0.13	0.07	0.20	0.04	0.12	0.16
C2 Hotel	Per job	0.09	0.34	0.44	0.16	0.13	0.29
Airport Operations	Per job	0.06	0.02	0.07	0.02	0.04	0.06

Table 6.5: Forecast additional trips at SOLDC

Location	AM Peak (08:00–09:00)			PM Peak (17:00–18:00)		
	Arr	Dep	Total	Arr	Dep	Total
Phase 1						
Terminal Area	2	0	2	1	1	2
East Camp	1	0	1	0	1	1
South Camp	14	3	17	2	14	15
South Camp Extension	94	26	120	15	85	100
West Camp	7	26	33	12	10	22
Phase 2						
Terminal Area	11	1	13	1	11	12
East Camp	37	9	45	5	35	40
South Camp	43	9	53	5	36	41
South Camp Extension	0	0	0	0	0	0
West Camp	48	4	52	2	48	50
Phase 3						
Terminal Area	0	0	0	0	0	0
East Camp	7	2	9	1	6	6
South Camp	69	15	83	8	58	66
South Camp Extension	7	1	8	1	5	6
West Camp	291	22	313	9	292	301
Total Additional Trips (Phases 1-3)	630	119	750	61	602	663

It should be noted that this approach, rather than one which employs an overarching site specific trip rate per job from the site surveys, has been used on the basis that information provided by Nathaniel Litchfield and Partners suggests that the new development will be unlikely to reflect the existing trends onsite, as land use types, shift patterns and operating hours will differ. The exception is airport operations, and as such a site specific trip rate has been provided. Furthermore, although the network AM and PM peaks are modelled for the purposes of this assessment, the nature of the land uses proposed mean that there also likely to be a high number of vehicles arriving before 08:00 and departing before 17:00 or after 18:00, and any further assessment may also need to consider these additional periods.

The locations referred to in **Table 6.5** e.g. South Camp, have been used to allocate trip arrivals and departures to specific access points, which have then been added to the existing trip levels surveyed for the site. For the purposes of this assessment, it has been assumed that:

- The A233 Main Road / Western Road access will continue to serve Biggin Hill airport operations only;
- The A233 Main Road / Churchill Way roundabout will serve traffic to and from South Camp, East Camp and the South Camp Extension; and
- That one of the existing accesses along the A233 Main Road to West Camp will be used to serve West Camp.

Beyond the network access point, trips have been distributed across the network based on relevant turning proportions observed within the baseline traffic data.

6.3 Capacity Assessment

For each of the junctions forming part of the modelled study area, baseline junction capacity assessments have been conducted to establish the existing operational performance of the

network. These have then been taken forward to determine the operation of the junctions in the future case.

Industry standard software programmes have been employed to undertake this analysis, and comprise the following:

- PICADY for priority junctions;
- ARCADY for roundabouts; and
- LINSIG for signalised junctions

Each of the models is governed by capacity thresholds, whereby in each case 1.0 (or 100%) represents the theoretical capacity of a junction. For uncontrolled junctions (priority junctions and roundabouts), the recommended capacity threshold is 85%. For signalised junctions, the optimum performance threshold is 90%.

In order to simplistically illustrate the existing performance of the junctions, a RAG (Red, Amber, Green) analysis has been prepared, whereby:

- Green indicates that a junction is operating within its recommended threshold (under 85% (roundabouts and priority junctions) or 90% (for signals));
- Amber indicates that the junction is operating in excess of its recommended threshold, but below the theoretical threshold (between 85-100% (for roundabouts and priority junctions) or 90-100% (for signals)), and;
- Red indicates that the junction is operating in excess of its theoretical threshold (over 100%)

The results of the modelling assessment are set out below by junction. Results for the 2014 baseline are provided in **Appendix B**.

A233 Westerham Road / A232 Croydon Road Junction (1.1)

A summary of the results for junction 1.1, which comprises a four arm signalised crossroads is set out in **Table 6.6** below. For each of these scenarios, the RAG (Red, Amber, Green) analysis system has been employed.

Table 6.6: A223 Westerham Road / A232 Croydon Road Junction

Year	Scenario	Total Queuing (All Arms PCUs)		Max Degree of Saturation		Performance Summary	
		AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
2014	Baseline	58.8	70.4	91%	93%	Amber	Amber
2019	Do Minimum	76.6	84.7	97%	96%	Amber	Amber
	Do Something (Phase 1)	89.0	91.6	99%	97%	Amber	Amber
2024	Do Minimum	107.0	97.1	100%	99%	Red	Amber
	Do Something (Phases 1+2)	95.5	104.7	101%	100%	Red	Amber
2030	Do Minimum	101.8	117.3	101%	102%	Red	Red
	Do Something (Phases 1+2+3)	107.3	145.2	103%	106%	Red	Red

In the 2014 baseline, the A233 Westerham Road / A232 Croydon Road (junction 1.1) was observed to operate over the recommended capacity threshold, in both the AM and PM peaks,

on at least two arms of the junction. A maximum queue of 27 passenger car units (PCUs) was observed in the PM peak on the A232 Croydon East arm.

By 2019, background growth in traffic is predicted to accentuate queuing on all arms in both the AM and PM peaks. The addition of traffic associated with Phase 1 further extends queuing on all arms of the junction relative to the 2019 Do Minimum; however it is only in 2024 (AM peak) that the junction operates over its maximum capacity threshold at the A232 Croydon East arm.

Problems are predicted to worsen in 2030 with growth in traffic, particularly with Phase 3 of the SOLDC. At this point the junction is expected to operate over capacity in both the AM and PM peaks. The Degree of Saturation on both the A232 Croydon Road East and the A233 Westerham Road arms is predicted to be over 100% in the AM and PM peaks. A maximum queue of 75 pcus is expected on the A232 Croydon Road East arm in the 2030 Do Something PM peak.

Given that the junction is already operating at capacity in the baseline case, forming a key congestion hotspot on the local network, and on the basis that any additional traffic is likely to accentuate existing queuing, consideration to improvements at this junction should be undertaken prior to the delivery of development. This is given further attention in **Section 6.7**.

A233 Westerham Road / A232 Croydon Road Junction (1.2)

A summary of the results for junction 1.2, which comprises a three arm priority junction, are set out in **Table 6.7** below.

Table 6.7: A223 Westerham Road / Heathfield Road Junction

Year	Scenario	Total Queuing (All Arms)		Max Ratio to Flow Value (RFC)		Performance Summary	
		AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
2014	Baseline	45.2	27.4	116%	109%	Red	Red
2019	Do Minimum	54.3	34.5	120%	113%	Red	Red
	Do Something (Phase 1)	63.2	36.2	124%	114%	Red	Red
2024	Do Minimum	63.9	42.7	124%	117%	Red	Red
	Do Something (Phases 1+2)	92.7	47.7	135%	112%	Red	Red
2030	Do Minimum	72.7	50.4	128%	121%	Red	Red
	Do Something (Phases 1+2+3)	150.2	64.8	156%	130%	Red	Red

In the 2014 baseline, the Heathfield Road arm of junction 1.2 was determined to be operating over capacity in both the AM and PM peak hours, with queues of over 25 vehicles on this arm in both time periods. The queue at this location was associated with vehicles seeking to turn right, to travel southbound along the A233 Westerham Road. It is assumed that a number of these vehicles are associated with through traffic from the A222, looking to travel south and avoid junction 1.1, given that a low number of right turners were observed at this location.

As shown by the table, queuing issues at the Heathfield Road will continue to worsen; however these issues will be further accentuated by traffic associated with the SOLDC, particularly between 2024 and 2030 when Phase 3 is delivered. The extended queuing at

Heathfield Road is likely to lead to more drivers taking risks to turn from this location to the A233, clearly identifying the need for early delivery of improvements at this location.

Section 6.7 sets out potential improvements for the junction. These improvements will need to be delivered prior to commencement of development, although careful consideration will need to be given to the wider hierarchy of movements, given the sensitivity of Heathfield Road to additional traffic, as it passes through the village of Keston and the limits on capacity of Junction 1.1 in its existing format.

A233 Westerham Road / Downe Road (1.3)

A summary of the results for Junction 1.3, which comprises a three arm roundabout, are set out in **Table 6.8** below for the 2014 baseline.

Table 6.8: A233 Westerham Road / Downe Road Roundabout

Year	Scenario	Total Queuing (All Arms)		Max Ratio to Flow Value (RFC)		Performance Summary	
		AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
2014	Baseline	6.1	8.4	73%	87%	Green	Amber

At the A233 Westerham Road/Downe Road roundabout (junction 1.3), the existing roundabout configuration operates over the recommended capacity threshold in the PM peak at the A233 northern arm of the roundabout; although total queuing is limited at 8 PCUs.

Amendments to the roundabout are proposed by LBB and these have been taken forward for the future year modelling assessments. The improvements result in the removal of one lane from the A233 Leaves Green Road (south) in order to better manage conflicts. As a result, the capacity of the junction is reduced and performance deteriorates in the equivalent 2014 Baseline situation, as reflected by comparing **Table 6.8** to **Table 6.9**. The southern arm is forecast to operate over the recommended capacity in the AM peak, with a queue of 9 pcus, with the northern arm over the recommended threshold in the PM, with a queue of 10 pcus.

Table 6.9 A233 Westerham Road / Downe Road roundabout (planned improvements)

Year	Scenario	Total Queuing (All Arms)		Max Ratio to Flow Value (RFC)		Performance Summary	
		AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
2014	Baseline	14.1	13.2	90%	91%	Amber	Amber
2019	Do Minimum	18.7	17.5	94%	94%	Amber	Amber
	Do Something (Phase 1)	21.2	19.1	95%	95%	Amber	Amber
2024	Do Minimum	25.4	23.9	96%	97%	Amber	Amber
	Do Something (Phases 1+2)	35.5	33.7	98%	99%	Amber	Amber
2030	Do Minimum	35.4	35.4	99%	100%	Amber	Red
	Do Something (Phases 1+2+3)	100.9	98.6	105%	105%	Red	Red

In 2019, total queuing at the junction remains below 22 pcus in the 2019 scenarios, even with the addition of SOLDC Phase 1 traffic. However, by 2024 and the addition of traffic associated with the SOLDC Phases 1 and 2, total queuing is expected to be in excess of 30 pcus in both peaks, with a maximum queue of 27 pcus on Westerham Road (N) in the PM peak.

In 2030, and at completion of the proposed development, the roundabout in its proposed format will operate over capacity, with Ratio to Flow Capacities of above 100% on Downe Road and Leaves Green Road (S) in the AM peak, and on Westerham Road (N) in the PM peak. With a maximum queue of 68 pcus on the latter in the PM peak.

Overall, the results suggest that future improvements to the roundabout will be needed to accommodate growth. It may be feasible to defer these until 2019, and the completion of Phase 1, given that the levels of queuing remain moderate on all arms. However, this will be at the discretion of LBB. Similar to junction 1.2, the delivery of any improvements will need to give consideration to the wider hierarchy of movements and impacts, given that Downe Road/Shire Lane is currently used as a primary link to travel between the A233 and A21.

A233 Main Road / Biggin Hill Airport Access (1.4)

A summary of the results for Junction 1.4, which comprises a three arm priority junction, are set out in **Table 6.10** below

Table 6.10 A233 Main Road / Biggin Hill Airport junction

Year	Scenario	Total Queuing (All Arms)		Max Ratio to Flow Value (RFC)		Performance Summary	
		AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
2014	Baseline	0.0	0.0	2%	2%	Green	Green
2019	Do Minimum	0.0	0.0	2%	2%	Green	Green
	Do Something (Phase 1)	0.0	0.0	2%	2%	Green	Green
2024	Do Minimum	0.0	0.0	2%	2%	Green	Green
	Do Something (Phases 1+2)	0.1	0.1	5%	4%	Green	Green
2030	Do Minimum	0.0	0.0	2%	2%	Green	Green
	Do Something (Phases 1+2+3)	0.1	0.1	5%	4%	Green	Green

No existing access issues are identified in the 2014 baseline, and it is expected that the access will continue to operate within capacity in both the Do Minimum and Do Something future cases. This therefore indicates that the access should be able to accommodate the proposed growth associated with airport operations, which includes redevelopment of the existing terminal and a new terminal hangar.

A233 Main Road / Saltbox Hill Road (1.5)

A summary of the results for Junction 1.5, which comprises a three arm priority junction, are set out in **Table 6.11** below.

Table 6.11: A233 Main Road / Saltbox Hill Road junction

Year	Scenario	Total Queuing (All Arms)		Max Ratio to Flow Value (RFC)		Performance Summary	
		AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
2014	Baseline	8.7	4.2	87%	64%	Amber	Green
2019	Do Minimum	11.6	4.8	94%	66%	Amber	Green
	Do Something (Phase 1)	16.9	15.3	104%	68%	Red	Green
2024	Do Minimum	15.2	5.5	100%	69%	Red	Green
	Do Something (Phases 1+2)	34.3	8.0	124%	75%	Red	Green
2030	Do Minimum	19.4	6.3	106%	71%	Red	Green
	Do Something (Phases 1+2+3)	89.6	34.6	177%	122%	Red	Red

Junction 1.5 operates over its recommended capacity threshold (between 85% and 100%) in the 2014 AM Peak, but within the recommended capacity threshold in the PM peak. Queuing is limited with a maximum queue of 5 vehicles in the AM peak at the right turn lane from Saltbox Hill Road to the A233.

In the 2019 Do Something and all 2024 and 2030 scenarios, the junction operates over the maximum capacity threshold in the AM peak. Queues of approximately 12 vehicles in 2019, 28 vehicles in 2024, and 62 vehicles in 2030 are predicted on Saltbox Hill Road (south). It is also noted that the junction operates over capacity in the 2030 Do Something PM peak, with a queue of 19 vehicles predicted for vehicles turning right from the A233 Main Road to Saltbox Hill Road.

Given the level of queuing in the 2019 Do Something scenario, at the end of Phase 1, it may be the case that LBB are willing to accept delay at the junction up until the commencement of Phase 2. This would therefore permit c.20,500 sqm of Hangarage, c.3,000 sqm of B1 (office), c.2,600 sqm of B2 Light Industrial and a 150 bed hotel, equivalent to 644 additional jobs. Beyond this development threshold, it is recommended that improvements are delivered.

A233 Main Road / Churchill Way

A summary of the results for Junction 1.6, which comprises a three arm priority junction, are set out in **Table 6.12** below.

Table 6.12: A233 Main Road / Churchill Way roundabout

Year	Scenario	Total Queuing (All Arms)		Max Ratio to Flow Value (RFC)		Performance Summary	
		AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
2014	Baseline	3.0	1.6	68%	46%	Green	Green
2019	Do Minimum	3.3	2.0	70%	50%	Green	Green
	Do Something (Phase 1)	4.0	2.3	74%	52%	Green	Green
2024	Do Minimum	3.6	2.1	72%	52%	Green	Green
	Do Something (Phases 1+2)	5.5	2.7	81%	55%	Green	Green
2030	Do Minimum	3.8	2.2	74%	53%	Green	Green
	Do Something (Phases 1+2+3)	17.8	3.5	95%	59%	Amber	Green

This junction, which serves as the key access for vehicles to and from the South Camp and East Camp areas, is observed to operate within capacity in the 2014 Baseline AM and PM peaks on all arms. A maximum queue of 2 pcus was observed on the A233 Main Road south arm in the AM peak.

The junction is also observed to operate within capacity in all future year Do Minimum scenarios. In the case of the Do Something scenarios however, the junction is predicted to operate over the recommended capacity threshold in 2030, following the delivery of the full concept masterplan. Specifically, the A233 southern arm will operate at capacity; exhibiting queues of c.16 pcus in the AM peak.

Improvements to the junction are likely to be required to deliver the total proposed growth at the SOLDC and specifically Phase 3, or alternatively the level of development will need to be capped at a level that protects the operation of the junction.

6.4 Vehicular Access Appraisal

The capacity assessment conducted has included a review of the A233 Main Road / Biggin Hill Airport access junction (1.4) and the A233 Main Road / Churchill Way roundabout (1.6). In the case of the former, it is anticipated that the junction will operate within capacity in all scenarios, and therefore any improvements are likely to be limited to enhancements in pedestrian facilities.

At the A233 Main Road / Churchill Way roundabout, it is estimated that the junction will require improvement to facilitate the full delivery of the Concept masterplan, with the southern arm operating at capacity in the AM peak. This is likely to be needed at Phase 3 of the development.

As well as the above, the proposed redevelopment of West Camp will require the delivery of a suitable access or accesses onto the A233 Main Road. Three existing accesses, in the form of priority junctions currently serve West Camp, including the RAF buildings, although two of these were closed (gated) at the time of the site survey, with minimal traffic using the other. Initial testing of the concept master plan indicates that at least two entry/exit points to the network will be required to support the estimated level of traffic generated at West Camp. If a

link through to the Biggin Hill airport access is provided from West Camp, then it may be feasible to revise this number.

For any of the accesses proposed, it will be necessary to provide right turn storage capacity to minimise disruption and queuing, given the forecast demand for this movement, particularly in the AM peak.

6.5 Accident Analysis

An assessment of the road safety record for the Biggin Hill Corridor was undertaken for the study area illustrated at **Figure 6.1**. This was based upon Personal Injury Accident (PIA) data sourced from TfL for the most recent five year period available (1st October 2008 to 31st September 2013).

Within the study area, a total of 108 accidents were reported during the study period. This comprised 89 slight accidents, 16 serious accidents and 3 fatal accidents. The three fatal were as follows:

- A pedestrian stepped out in the path of a vehicle near Fishponds Road, whereby the driver lost control of the vehicle and collided with a lamppost on the A233 Westerham Road.
- A driver fell asleep and drove into the path of an oncoming vehicle on the A233 Westerham Road between Heathfield Road and Downe Road
- A vehicle being pursued, lost control on the bend of the A233 Leaves Green Road, south of Downe Road, and collided with a lamppost

Of the 108 accidents that occurred within the study area, 69 occurred at or in the immediate vicinity of the six study junctions. No fatal accidents occurred at these junction. **Table 6.13** below summarises the results for the six junctions identified for assessment within the study area.

Table 6.13 Summary of accidents by junction

Ref	Junction	Junction Type	Accidents by Severity			
			Slight	Serious	Fatal	Total
1.1	A223 Westerham Road/ A232 Croydon Road	Signalised	31	3	0	34
1.2	A233 Westerham Road/Heathfield Road	Priority	5	0	0	5
1.3	A233 Westerham Road/Downe Road	Roundabout	9	2	0	11
1.4	A233 Main Road/Biggin Hill Airport	Priority	2	1	0	3
1.5	A233 Main Road/Saltbox Hill	Priority	11	2	0	13
1.6	A233 Main Road/Churchill Way	Roundabout	2	1	0	3

A review of accidents occurring at these junctions, determined that there are accident trends apparent at two junctions within the area.

At the signalised A223 Westerham Road / Croydon Road junction (1.1), 11 of the 34 accidents, including two serious incidents, resulted from vehicles pulling out into the path of other vehicles, with this particularly associated with vehicles turning right at the crossroads. There were also seven accidents associated with rear shunts, which is typical of a signalised junction.

During the five year study period, six of 11 incidents (including two serious) at the Westerham Road / Downe Road roundabout were associated with a failure to give way at the roundabout, resulting in a collision with another vehicle. It is expected that improvements proposed by LBB at this junction, which comprise the removal of the right turn lane and formalisation of the

central island, will give greater control in regard to conflicts, and reduce vehicle speeds through the junction. This will hopefully assist in addressing the issue.

It is also noted that there were a number of incidents at the A233 Main Road / Saltbox Hill Junction over the five year period, 11 slight and two serious, although there was no overriding common causation factors in regards to these accidents.

Junctions 1.4 and 1.6, which provide the main access points to the proposed development, have a low level of incidents over the five year period and no common causation factors attributable. There are therefore no safety concerns identified for the continuing use of these junctions for access to the SOLDC area.

Outside of the study junctions reviewed above, common causation factors were identified for the A233 Westerham Road between Heathfield Road and Fishponds Road. Along this link, eight accidents occurred, six of which were on a corner near the junction with Rectory Road, including two serious accidents, and one fatal accident. The incidents involved either vehicles losing control or vehicles crossing the path of another and colliding, with the exception of the fatal incident which was the result of a driver falling asleep. The above suggests that slowing vehicle speeds along this stretch, or restrictions on overtaking may be required.

6.6 Sustainable Transport Appraisal

The quantitative assessment presented earlier within this report has given consideration to the anticipated traffic impacts associated with the delivery of growth at the SOLDC. To supplement that analysis and to give consideration as to how trips by car may be managed, and additional development potentially delivered, a review of the existing sustainable transport network has been undertaken, in order to identify opportunities for improvement.

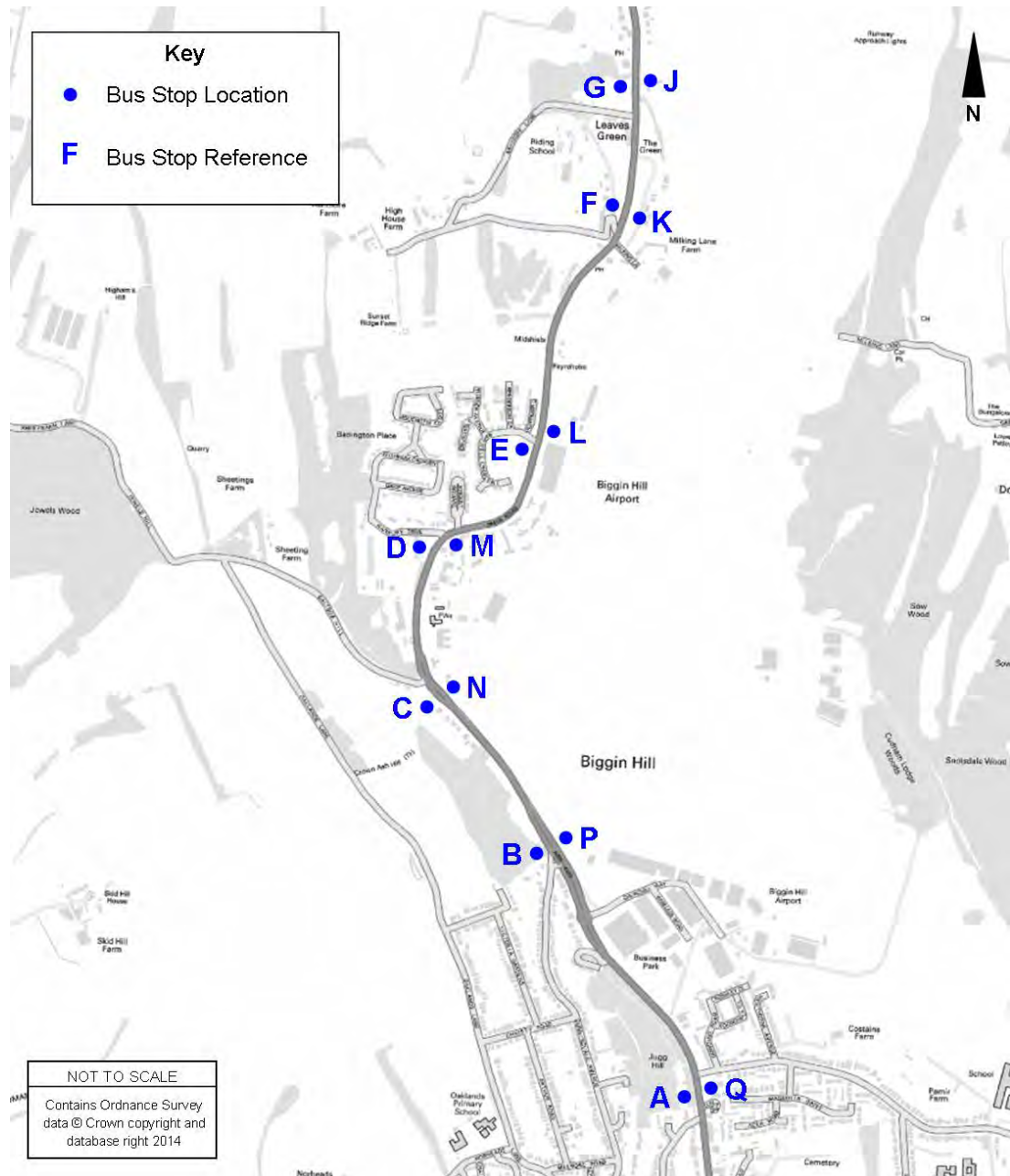
Public Transport

The site has a Public Transport Accessibility Level (PTAL) of between 1b and 2, which is defined as 'very poor' to 'poor', dependent on the location assessed. Direct access to and from the airport is available by bus only, with five bus routes serving the development area. Details of these services are set out in **Table 6.14** below, whilst **Figure 6.3** summarises the location of bus stops. A route map of services passing Biggin Hill airport is provided in **Appendix C**.

Table 6.14: Summary of local bus services

Service No.	Route	Stops		Average Frequency (Mon to Sat)	Operating Hours
		N'bound	S'bound		
246	Bromley North – Biggin Hill Airport – Westerham Green	A,B,C,D,E, F, G,	J, K, L, M, N, P, Q	Every 30 minutes	07:00 – 01:00
320	Catford – Biggin Hill Airport – Biggin Hill Valley	A,B,C,D,E, F, G,	J, K, L, M, N, P, Q	Every 10-13 minutes	06:00 – 01:00
464	New Addington – Biggin Hill Airport - Tatsfield	A,B,C	N,P,Q	Every 30 minutes	06:00 – 00.30
R2	Petts Wood – Biggin Hill Airport – Biggin Hill Valley	A,B,C,D,E, F, G,	J, K, L, M, N, P, Q	Every 30 minutes	07:00 – 22:00
R8	Orpington – Biggin Hill (post office)	A	Q	Every 70 minutes	06:00 – 20:00

Plan 6.2: Location of bus stops serving the SOLDC



Access to both northbound and southbound services is provided at frequent intervals along the A233 Main Road at the western boundary of the site, as shown by the above figure. No bus services currently pass through the airport, West Camp or along Churchill Way which provides access to South Camp and East Camp.

Data has been sourced from TfL regarding the number of boarders and alighters at each bus stop and by route within the local area for the AM and PM peak periods, as well as across the day. Analysis of the bus stop data is summarised below at **Tables 6.15** and **6.16**, and indicates that stops A and Q, situated just south of Churchill Way are the most heavily used, followed by B and P. In regards to routes, the 320 followed by the 464 are the most used services both daily and during the AM and PM peaks, in the local site area.

Table 6.15: Summary of boarders and alighters by bus stop

		AM Peak (0800-0900)		PM Peak (1700-1800)		Daily	
	Stop	Boarders	Alighters	Boarders	Alighters	Boarders	Alighters
Northbound	A	22	73	23	4	337	156
	B	4	3	5	4	58	21
	C	3	1	2	3	22	6
	D	10	0	2	0	43	12
	E	2	0	1	0	29	18
	F	3	0	0	0	14	2
	G	2	0	2	0	18	3
	Total	46	77	35	11	521	218
Southbound	J	0	0	0	0	3	14
	K	0	0	0	1	6	20
	L	3	0	0	8	13	51
	M	0	1	0	2	4	41
	N	0	4	0	1	8	15
	P	0	24	3	6	14	144
	Q	0	22	5	19	154	331
	Total	3	51	8	37	202	616

Table 6.16: Summary of boarders and alighters by route

		AM Peak (0800-0900)		PM Peak (1700-1800)		Daily	
	Stop	Boarders	Alighters	Boarders	Alighters	Boarders	Alighters
Northbound	246	5	9	4	2	73	30
	320	33	45	15	9	267	117
	464	6	4	11	0	137	24
	R2	2	19	4	0	38	47
	R8	0	0	1	0	6	0
	Total	46	77	35	11	521	218
Southbound	246	0	4	1	8	39	66
	320	3	23	2	21	83	292
	464	0	20	2	3	34	198
	R2	0	4	3	4	45	49
	R8	0	0	0	1	1	11
	Total	3	51	8	37	202	616

The closest rail stations comprise Hayes, Orpington, Bromley South and Bromley North. These range in distance from 6.5km for Hayes to 9.7km for Bromley North. Each station offers access to a range of destinations, with a summary provided below at **Table 6.17**.

Table 6.17: Summary of Local Bus Services

Station	Origin/Destination	Average Weekday Frequency
Hayes	London Cannon Street via Lewisham	2 per hour
	London Charing Cross	2 per hour
Orpington	London Charing Cross	6 per hour
	London Victoria via Herne Hill	4 per hour
	Tunbridge Wells, Hastings, Sevenoaks	2 per hour
	London Cannon Street	2 per hour
Bromley South	Kentish Town	2 per hour
	London Victoria	9 per hour
	Orpington	4 per hour
	Dover Priory via Chatham & Ramsgate	2 per hour
	Sevenoaks via Swanley	2 per hour
	Ashford International via Maidstone East	2 per hour
Bromley North	Grove Park	3 per hour

As shown by the table, Bromley South offers access to a wide range of services, and the best links to central London at 8 trains per hour to London Victoria. The journey time for this route is approximately 15 minutes, and six buses per hour run between the airport and the station (246 and 330). In serving the airport in particular, it is important that the development of bus links focuses on connection with this station.

The Croydon Tramlink is accessible at New Addington, which sits approximately 5km to the west of the site. The 464 bus service runs between the site and New Addington, at a frequency of 2 buses an hour and a journey time of c.10 minutes. The Croydon Tramlink runs at a frequency of 8-9 trams per hour, offering connections to East Croydon, Mitcham and Wimbledon.

Walking and Cycling Links

In regards to access on foot or by bicycle, there are good quality footpaths extending from the site both north and south along the A233. Pedestrian refuges are provided at a variety of points along the A233 to enable uncontrolled crossing. There are no cycle lanes or designated cycle routes locally. The closest cycle link is Route 21 of the National Cycle Network, which is approximately 1.5km to the west, and accessible via Saltbox Hill.

6.7 Infrastructure Improvements

Based on the results of the highway assessment, alongside the sustainable transport assessment of the SOLDC, consideration has been given to mitigation which is likely to be required to deliver growth initially, and then to support further development of the area.

Delivering Additional Highway Capacity

To deliver the proposed growth in jobs at the SOLDC, improvements to five junctions are likely to be required to enhance capacity. An initial review of options for delivering improvements has been undertaken below. It is recommended that the measures set out below are taken forward to be reviewed and developed in further detail.

Junction 1.1 – A233 Westerham Road / A232 Croydon Road

Junction 1.1 is estimated to operate over the recommended capacity threshold in the existing case and over maximum capacity by 2024 in the AM peak and both peaks by 2030. The addition of any traffic associated with the SOLDC is likely to accentuate the issues observed.

The greatest levels of queuing and capacity issues are noted on the A232 Croydon Road (E) arm, whilst the accident review also suggested a number of incidents associated with vehicle conflicts and right turning traffic at this location.

As an initial improvement, it is suggested that right turns from the A232 could be banned, given that the total number of existing movements are low (e.g. below 20 pcus), and that good opportunities exist elsewhere for this traffic to be accommodated. The delivery of this change would:

- Improve the use of the offside lane by straight ahead movements, as the saturation flow is currently limited by right turners blocking straight ahead movements; and
- Reduce the number of conflicts and potential incidents at this junction.

Further review would need to be given to the merge conditions for straight ahead movements on the A232 exit arms in delivering this improvement, given that the use of both lanes for straight ahead movements will increase and the distance for the merge is less than the recommended distance of 100m in the Design Manual for Roads and Bridges TD 50/04. Also the wider movement hierarchy in facilitating this change should be considered, as this could reinforce the use of other potentially sensitive routes.

Initial testing suggests that this change would result in the junction operating within capacity in the 2019 Do Something scenarios, and between 85% and 100% in the 2024 Do Something scenario. However, the junction would still operate over capacity in the 2030 Do Something PM peak scenario. This suggests that further improvements will be needed in the future case or a strategy which strongly focuses on public transport will be required in order to reduce vehicular trip generation from the SOLDC.

To further enhance capacity at this junction, it is likely that land adjacent to the junction would need to be secured given the constraints on land availability at this location.

Junction 1.2 – A233 Westerham Road / Heathfield Road

The results of the capacity assessment and observations onsite confirmed that this junction is operating over capacity in the existing case on the Heathfield Road arm, and that any additional traffic will accentuate queuing issues and safety concerns.

Proposals are currently being evaluated by LBB for improvements to this junction, which would see the conversion of the existing priority junction to a three arm roundabout. Evaluation of this option suggests that in the future case, with the high level of movements turning left, the junction will be approaching capacity on the southern arm. Therefore the delivery of alterations to the design of the roundabout or a segregated left turn may be necessary to cater for background growth in general traffic and SOLDC trips in the future case if taken forward.

One of the concerns raised relating to the roundabout option, is that it gives more priority than existing to the Heathfield Road arm, and therefore this may enhance the attractiveness of Heathfield Road to through traffic, which runs through the village of Keston.

Given the above, an alternative option has been explored, which comprises the signalisation of the junction. The following layout is suggested:

- Two lanes at the stop line on the A233 Westerham Road (N) arm, one straight ahead, one for right turners
- One lane on Heathfield Road for both left and right turners
- Two lanes on A233 Westerham Road (S), one signalised for straight ahead movements, and one un-signalised which will serve as a left turn filter, giving way to traffic on Heathfield Road, thereby switching the existing priority.

In this option, more priority would be given to the Heathfield arm than the existing case; however there would be more delay than the roundabout and greater control would be available. This would also ensure a level of consistency and control through the corridor, as other junctions, as discussed below, are likely to require signalisation. Furthermore, initial testing suggests that this configuration may be able to accommodate all traffic predicted to be generated by the SOLDC (Phases 1-3) in the 2030 AM and PM peaks.

Whichever option is taken forward, this is likely to be needed prior to the delivery of any development at the SOLDC, given the level of queuing at this location and concerns regarding road safety.

Junction 1.3 – A233 Westerham Road / Downe Road

At junction 1.3, improvements are proposed by LBB which are designed to limit conflicts between vehicles and improve safety at this location. The anticipated results of these improvements are that capacity will reduce and the junction will operate over the recommended capacity threshold on at least one arm, in the 2014 Baseline case and going forward.

Any additional traffic from background growth or the SOLDC will accentuate the issues identified in the 2014 Baseline. For example, by 2024 and the delivery of Phase 2 of the SOLDC, queuing is predicted to exceed 20 pcus on Leaves Green Road (S) in the AM peak and on Westerham Road (N) in the PM peak. Improvements will therefore be required. Two potential options are initially identified, these are as follows:

- Mini-Roundabout (no-physical island) – to widen the circulatory carriageway and all approaches to two lanes. The delivery of this option would be dependent on land availability, and the ability to close the right turn from Downe Road to the Wilberforce Scout Centre (instead access would be facilitated by a u-turn at the roundabout and left in arrangement). A mini-roundabout option rather than a formal roundabout is proposed, as the inscribed circle diameter possible at this location is below the recommended 28m, whilst the level of deflection required for a standard roundabout is unlikely to be met.
- Signalisation – provide two lanes at the stop line on all approaches, with one lane provided to each movement e.g. straight ahead and right. A left turn filter could be provided from Downe Road to Leaves Green Road (S). The delivery of this design would be less land intensive compared to the roundabout option, although it will deliver less capacity. It is likely that the junction would operate within capacity with the delivery of Phases 1 (2019) and 2 (2024), but over the recommended capacity threshold by the completion of Phase 3 (2030).

Junction 1.5 – A223 Main Road / Saltbox Hill

The Saltbox Hill Road arm of junction 1.5 was observed to operate over capacity in the AM peak by 2019 following the completion of Phase 1, although queuing was moderate at 12 pcus. By 2024 and 2030, with the delivery of Phases 2 and 3 respectively, queuing conditions significantly worsen with a maximum queue of 62 pcus in the 2030 Do Something scenario.

To address these issues, and subject to further study, signalisation of the junction is recommended. The layout for the junction would be similar to the existing priority arrangement, and therefore the requirement for highway works should be minimised. The layout could include:

- One lane plus flare at the stopline on the A233 Main Road (N) arm of the junction, with the flare designated for right turning traffic
- Two lanes at the stop line on Saltbox Hill Road designated for each movement e.g. left and right, this would potentially afford the opportunity to introduce a left turn filter.

- Two lanes at the stop line on the southern arm of the junction

With this arrangement, it is predicted that the junction would operate at the recommended capacity in the 2030 Do Something AM peak, and within the recommended capacity threshold in the PM peak scenarios. Delay would be created along the A233 Main Road; however total queuing on Saltbox Hill Road would be reduced and vehicle conflicts and risks more effectively managed.

Junction 1.6 – A233 Main Road / Churchill Way

The modelling predicts that the A233 Main Road / Churchill Way roundabout will be able to accommodate additional traffic generated by growth in jobs at the SOLDC, with the exception being in the 2030 Do Something AM case; when the full development is delivered. At this point, the A233 Main Road south arm will operate over the recommended capacity.

The results therefore suggest that between the completion of Phase 2 and the completion of Phase 3 improvements to the roundabout are likely to be required. Testing suggests that the recommended threshold may be passed at the completion of:

- 11,493 sqm of B1 Office;
- 7,915 sqm of B2 Industrial;
- 43,080 sqm of B8 Warehousing/hangarage; and
- The 150 bed hotel

The above is equivalent to a total of C.1,275 jobs based on the concept masterplan; however as referenced, shifting the balance of land uses e.g. to lower trip generators, may allow additional development to be delivered before the threshold is passed.

An initial review of improvements at the junction, suggests that widening of the southern arm to two lanes may be feasible, in order to deliver additional capacity. A key constraint will be the existing access and egress arrangement to properties to the west of the southern arm, and the land ownership for this area. It is suggested that the rationalisation of the space associated with these access points is explored.

Developing Sustainable Transport Links

In order to reduce car based trip generation and additional pressure on the network from growth associated with the SOLDC, it will be important that sustainable transport links are further developed.

Given the location of the site and existing links, a focus should be placed on enhancing bus services in order to improve public transport accessibility levels, particularly to rail stations such as South Bromley, and the Croydon Tramlink at New Addington. Potential improvements to existing routes could, for example, include the following:

- Enhancements to the 464 bus service, to increase the frequency of buses travelling between the site and New Addington to four buses per hour during peak periods. Current peak vehicle requirement is 3 buses per hour, and this may need to double to serve the specified frequency;
- Improvements to the 246 to increase the average frequency from 2 buses an hour to 3 buses per hour. Peak vehicle requirement is currently 4 buses an hour, and therefore a further 2 buses an hour are likely to be needed to deliver this improvement;
- The 320 already provides a high frequency service at 5 buses an hour; however subject to capacity, it may be necessary to provide further buses to meet additional demand generated. This would coincidentally result in an increase in frequency e.g. to 6 buses an hour.

The introduction of enhancements to these services will need to be introduced at a stage when the growth in job levels demands or supports additional buses. Consultation with TfL has revealed that there are no plans to increase the frequency of these routes currently. It is

therefore advised that further discussions are held with TfL, when the SOLDC proposals are further developed and potential passenger demand calculated, in order to allow for the impacts on these routes to be understood and to establish when new services could potentially be delivered.

As well as developing existing services, the need to deliver new services should be explored as part of the development proposals. Dedicated services to South Bromley and East Croydon should be reviewed, alongside ensuring good links to Biggin Hill Village, given that previous studies have identified that a number of workers associated with the airport are based at this location.

With the potential limited opportunity for improvements to the A233 Westerham Road / A232 Croydon Road junction, the opportunity to introduce bus priority mechanisms should be assessed, so that the bus has a clear advantage over private vehicles along this corridor.

As well as the above, the ability to divert services through the site and/or along Churchill Way to improve awareness and access of the bus should be discussed with TfL and London Buses. If this is not feasible, then particular focus should be given to ensuring that good links from the site are available to the bus stops on the A233, and that high quality pedestrian facilities are available between the northbound bus stops and the site.

Area travel plan and delivery service plans, covering all operations, should be provided as part of any development proposals, in order to put in place clear strategies for delivering sustainable travel practices. These will assist in minimising the level of vehicular trips to and from the site, or the period over which these are delivered (such as outside of peak hours). The travel plan and delivery service plans will be crucial in considering the transport merits of a planning application for this development.

Summary

As suggested by the results of the modelling, junctions 1.1, 1.2, 1.3 and 1.5 will operate over their recommended or maximum capacity thresholds in the future case, irrespective of the additional growth proposed for the corridor. Traffic generated from the SOLDC, particularly for Phase 3 of the development will serve to reinforce or exacerbate issues at these junctions, and will also result in junction 1.6 operating over its recommended capacity.

Improvements will therefore be required to enable the delivery of growth at the SOLDC, as well as to cater for background growth in traffic, in order to maintain good access to the airport and the proposed new employment opportunities. The stage at which these improvements are needed differs by location, with potential trigger points set out in **Table 6.18** below, alongside a summary of the potential improvements. Further review of the site's traffic generation is recommended as more detail emerges regarding the masterplan, furthermore the development of potential junction designs, as well as costing of the options, is recommended.

Through the work undertaken it has been identified that both the B265 Heathfield Road and Downe Road are used by a number of vehicles to travel between the A233 Croydon Road and A21 Farnborough Way respectively. Therefore, with the delivery of growth at SOLDC increasing traffic along these routes, it will be important to consider the impact on these routes and associated junctions, as part of any further study or planning application coming forward.

With the proposed improvements, which include the potential signalisation of a number of junctions along the A233, subject to greater consideration of the area's movement strategy, the opportunity may be afforded to deliver corridor urban traffic control, through a system such as SCOOT or MOVA. This will allow greater management of traffic flows through the area, allowing the system to respond to fluctuations in traffic. It may also afford the opportunity to deliver bus priority through the junctions.

In addition to the above, a focus should be placed on improving public transport accessibility in order to reduce the level of trip generation associated with the growth in jobs. Enhancements in public transport accessibility will be key and focus should be placed on improving bus frequencies and connections to key transport interchanges e.g. New Addington, South Bromley and East Croydon.

Table 6.18: Summary of potential improvements

<i>Location</i>	<i>Potential Improvements</i>	<i>Potential Delivery</i>	<i>Reasoning</i>
A233 Westerham Road/ A232 Croydon Road	<ul style="list-style-type: none"> Removal of right turners from Croydon Road 	Prior to occupation of Phase 1	<ul style="list-style-type: none"> The junction operates at capacity in the 2014 baseline case Limited number of right turners in existing case, although observed to limit saturation flow/block straight ahead movements
	<ul style="list-style-type: none"> No further upgrade has been identified at this stage, as it will be subject to securing additional land to enhance capacity 	Prior to occupation of Phase 3	<ul style="list-style-type: none"> Subject to the delivery of the first improvement, the requirement for additional improvements are likely to be deferred until delivery of Phase 3 at the SOLDC
A233 Westerham Road/Heathfield Road	<ul style="list-style-type: none"> Full signalisation or conversion to roundabout Inclusion of left turn filter Change to priority on Heathfield Road if signal option delivered 	Prior to occupation of Phase 1	<ul style="list-style-type: none"> The junction operates over capacity in the existing case with long queues on the Heathfield Road arm Concerns that extended queuing may result in drivers taking increased risks when turning from Heathfield Road
A233 Westerham Road/Downe Road	<ul style="list-style-type: none"> Full signalisation of the junction or expansion of the roundabout Delivery of two lanes at the stop line on each arm 	Prior to occupation of Phase 2	<ul style="list-style-type: none"> Junction operating at capacity in 2014 baseline, although moderate queuing observed By delivery of Phase 1, queuing will worsen but LBB may judge that the queuing remains manageable
A233 Main Road/Saltbox Hill	<ul style="list-style-type: none"> Full Signalisation Two lanes at the stop line on each arm Possible left turn filter from Saltbox Hill Road 	Prior to occupation of Phase 2	<ul style="list-style-type: none"> In the AM peak, Saltbox Hill Road is operating at capacity in the existing case By 2019 with the addition of Phase 1, the same arm will operate over capacity of the AM Peak baseline LBB may judge that the queuing remains manageable and therefore delivery of improvements set for between Phase 1 and 2
A233 Main Road/Churchill Way	<ul style="list-style-type: none"> Upgrades to the southern arm of the roundabout 	During Phase 3 of development	<ul style="list-style-type: none"> The addition of Phase 3 traffic to the network results in the southern arm of the roundabout operating above recommended capacity thresholds

Table 6.19: Development schedule by phase (reference for delivery timeframes)

Phase	Floorspace (GEA) / Bedrooms				Jobs
	B1 (office)	B2/Light industrial	B8 Hangarage	C1 Hotel	
1	3,003 sqm	2,638 sqm	20,497 sqm	150 bed	641
1 & 2	9,987 sqm	6,742 sqm	39,258 sqm	150 bed	1182
1 to 3	23,162 sqm	17,514 sqm	50,134 sqm	150 bed	2392

7 CONCLUSIONS AND RECOMMENDATIONS

7.1 Conclusions

This section summarises the report's conclusions and presents study recommendations.

Evaluation of masterplan proposals from a planning policy perspective

We agree with Locate partnership's assertion that the existing approach to Green Belt and MDS is misaligned with the NPPF and it remains challenging to demonstrate very special circumstances for potential investors/developers/occupiers.

The review of the national, regional and local policy has highlighted a number of deficiencies in the saved UDP policies. The Local Plan presents opportunities to revise these policies and implement a more positive policy stance in line with the SOLDC designation and NPPF.

Permitted development rights alone will not be able to accommodate the proposals from the Locate partnership in the emerging concept plan and would not be commensurate with the SOLDC designation, especially while the 2001 Article 4 Direction and 1996 protocol remain in place. They are 'out of step' with the 2011 London Plan and 2012 NPPF and should either be deleted or replaced via the Local Plan process through an updated policy.

The SOLDC designation and Town Centres Supplementary Planning Guidance provide great latitude for the LPA to adopt a more positive approach towards development at Biggin Hill moving forward and indicates a number of factors that should be considered for a future DPD or masterplan.

The LPA should consider the following approaches to enable redevelopment and growth:

- designate a SOLDC boundary around the airport and airport related environs to be included on the Proposals Map;
- Stipulate an allowable quantum of development for replacement and/or new commercial development in the SOLDC area to demonstrate a positive approach to growth that would not disturb the openness of any remaining Green Belt so as to conform to the sustainable patterns of development policies in the NPPF and London Plan. This would be possible following a more detailed masterplanning exercise.
- tailor area-specific policies for each area at the airport, including urban design schematic diagrams, to provide an indication of acceptable uses, indication of preferred development form/layouts and preferred locations for infrastructure (e.g. specifying policy to support redevelopment and reconfiguration of South Camp and adjoining industrial areas);
- undertake a detailed infrastructure assessment planning feeding into infrastructure delivery plan schedule and possible future CIL 123 list.

There is evidence that the parts of the Green Belt may be suitable for deletion/alteration. However, this would require a targeted Green Belt study to justify such an approach. A targeted analysis of the airports Green Belt will be required prior to consulting on proposed Green Belt deletions via a Regulation 18 consultation report..

For areas where deletion of the Green Belt may not be justified, new policy should be in line with NPPF development management policy for Green Belts, therefore the replacement policy for such areas should seek to promote redevelopment and growth wherever possible by:

- the extension or alteration of a building provided that it does not result in disproportionate additions over and above the size of the original building;

- the replacement of a building, provided the new building is in the same use and not materially larger than the one it replaces;
- limited infilling or the partial or complete redevelopment of previously developed sites (brownfield land) which would not have a greater impact on the openness of the Green Belt (and 5 purposes of Green Belt)
- local transport infrastructure which can demonstrate a requirement for a Green Belt location
- the re-use of buildings provided that the buildings are of permanent and substantial construction

The above stipulations are drawn from the NPPF itself, therefore there is scope for Bromley officers to further refine the local deployment of these broad approaches in the context of land that remains within the Green Belt e.g. by drafting policies with positive support for development with accompanying diagrams/maps (including identification on the Proposals Map).

Alternative planning mechanisms should be investigated further to weigh the pros and cons of their deployment and interaction with the emerging Local Plan e.g. joint Bromley/GLA/TfL/landowner/airport/occupier masterplan, the use of LDOs or business-led neighbourhood planning.

We recommended that the Council investigate in greater detail the capacity and constraints at the SOLDC encompassing a targeted assessment of the Green Belt on the basis that this land is required to support a specialised employment area serving the aviation industry. As such it wouldn't be appropriate to look at Green Belt areas outside of Biggin Hill SOLDC. The Framework makes clear that, once established, Green Belt boundaries should only be altered in exceptional circumstances, through the preparation or review of the Local Plan. The SOLDC designation and economic needs/demand provide those exceptional circumstances.

This further work should review the constraints of landscape and Green Belt on capacity at the Airport and assess where growth may be able to be accommodated, in much greater detail than the high-level assessment contained in this report. Such a study should incorporate:

- An assessment of individual sites and including their constraints and opportunities, their capacity for development, given their location, and adjoining sites, landscape and biodiversity and heritage;
- Recommendations for the boundaries of the Green Belt at Biggin Hill SOLDC, so they are defensible and fixed for the plan period (2015 – 2030) and beyond; and
- Recommend a strategy to meet the objectively assessed need for employment space at the SOLDC.

Evaluation of the business case supporting the strategic masterplan

Overall the economic growth plan and supporting documents present an ambitious strategy for the development of Biggin Hill. Whilst the potential for growth is acknowledged, the suggested targets will be challenging. The methods used to calculate impacts are reasonable with the analysis presenting a positive view of future growth potential.

The strategy is very much based on generating additional demand from existing occupiers, looking at the opportunities to attract occupiers supply chain and customer bases alongside business in the wider aviation sector. The question to answer here is what evidence of increasing demand/expansion from existing businesses and their supply chain and customer base is there? A reasonable argument for growth potential is presented using a range of information from previous studies on the business aviation sector, discussion with manufacturers and aircraft operating companies in the business aviation sector and an argument that constrained capacity in competing locations will drive demand at the airport.

The review of the business aviation sector suggests potential growth for the future but the market is highly competitive and capturing the opportunities will require a step change in the way that Biggin Hill does business and presents itself to the market. There is also some conflicting evidence provided which suggests that business aviation traffic in Europe is declining, a position which could adversely affect the airport's wider vision for growth.

The evidence suggests a challenging environment in which to achieve economic growth at Biggin Hill. Having said this Biggin Hill has a supportive policy designation from the London Plan as a SOLDC and the outcomes of the Davies Commission also provide support for the growth of smaller airports.

In order to achieve the ambitions set out there will need to be a transformational change in the area. This would require major pump priming by the public sector to improve and address infrastructure constraints and the development of a positive planning and wider policy framework that supports these ambitions. This emphasises the role of the public sector, its statutory planning powers and related resources in helping to de-risk and provide the certainty and confidence for the private sector to invest.

Evaluation of proposals from a property perspective

It is difficult to verify the demand for property due to the fact that we consider demand for this location being derived almost exclusively as a result of the airport itself. We have spoken with the airport operator and it is clear at this stage that the vast majority of the demand that they witness is for airside hangar space in which to use for the storage and maintenance of commercial aircraft.

Addressing the illustrative concept plan within the NLP Economic Growth Plans, they have attempted to demonstrate how the airport could expand to accommodate the projected growth of demand. We summarise our thoughts below on the various camps at the airport:

West Camp

The areas to the north of West Camp include the terminal building, as well as current and future development potential of the essentials services provided by the airport operators. We have no reason to believe that the growth of this area of the site will not grow in line with the growth of flights into the future. This is an area with scope for expansion and/or redevelopment for this purpose.

The southern section of West Camp is the most constrained part of the site as it is within a conservation area, and many of the buildings are listed. We are more circumspect in regards to the redevelopment potential of this area, both in terms of practical and financial viability. We have discussed the historic lack of demand for B1 office accommodation in this area

however we understand there may be market demand in the site (the area Marked in Figure 7.1) for bringing forward a mixed use scheme comprising workspace, education uses/training facility, a heritage centre and potential hotel linked to the airport and training facility and to help deliver the scheme there may be grant funding availability.

With regards to the area of West Camp for which we understand there is some market demand for redevelopment, our analysis (as presented in Section 4.6 and Figure 4.1) sets out the a total potential development of 8,812 sq m GIA comprising the reuse of existing buildings and limited new build, split into the following potential development mix:

- Engineering College / Training Centre: Circa 1,312 sq m GIA
- Heritage Centre: Circa 309 sq m GIA
- Workspace: Circa 3,985 sq m GIA (this would include is the 1,108 sq m GIA new build element of the proposals)
- Hotel: 3,168 sq m GIA
- Cafe/amenity: 58 sq m GIA

Key to deliverability will be securing the College's requirement on site. We comment below on what the Council should address with the College in order to secure this. We also comment on the likely need for public sector funding to support the heritage centre and the workspace scheme, given the need for demand to be encouraged and the risks of delivering office space in the area. This will be particularly important if the Council wishes to move this site forward more quickly than proposed in the June 2014 Economic Growth Plan Update whereby this area would be able to benefit from the earlier momentum gained from the growth of the airport and development at South Camp in earlier phases.

In terms of delivery, the Council could potentially assist in taking forward development at Area 4 of West Camp through a number of means. Should the Council wish to take more proactive steps to exercise more control over the future use of the site and its maintenance as an employment location, the following options could be considered:

- Acquiring the site and gaining control of its future development potential. We understand this opportunity has been offered to the Council by the existing landowner, Pentbridge Properties.
- Working with Bromley College, who have expressed an interest in taking accommodation on the site for their engineering facility in the future. The Council should work with the College to confirm:
 - The proposed uses that the College wishes to accommodate on-site (for example are they purely proposing teaching facilities, and will the engineering activities impact on the type of accommodation required?)
 - The future floorspace requirements of the College on the site
 - The proposed timing of any move to the site by the College
 - The cost of any works required to bring the accommodation up to the standard required by the College
 - The lease terms and associated rental levels (or consideration for a freehold interest) that the College would be able to pay
 - The development potential and any financial contribution of space on the College's existing site that could be freed up for development following a move of the College engineering facility to Biggin Hill.
- Developing a business plan and securing public sector funding for the proposed heritage centre, since heritage centre schemes often require public sector funding to be economically sustainable. Sources could include:
 - Council capital or revenue funding

- GLA (given their interest in the area as a growth location)
- English Heritage
- Heritage Lottery Fund
- Arts Council (funding is available for museum facilities)
- Market testing to identify any commercial interest in operating the cafe
- Identification of car parking requirements and how they would be capable of being accommodated
- Public sector support for the improvement of the quality of the environment and supporting infrastructure in the area in order to improve its attractiveness to businesses as a location. This could include transport infrastructure, signage, security, environmental improvements.
- Engage with the Locate Partnership and other local employers to develop a management structure to promote the area (BID-type structures have been used in employment locations elsewhere, for example)
- Identification of an appropriate delivery mechanism through which to develop and implement a preferred scheme. The delivery mechanism could take the form of two options, namely:
 - The Council develops an overall masterplan for the site to reduce planning risk, funds necessary infrastructure to improve the opportunities for viable development and disposes of plots (freehold or long leasehold) on a site by site basis. This route potentially presents less risk for the Council but provides less control, which may mean that the potential regeneration benefits of future development are not fully realised.
 - Exertion of more direct control by working with a developer partner to acquire and develop the preferred scheme on the site on behalf of the Council and the College. This is a higher risk option for the Council given our views of the challenges of delivering development on the site, and would require a detailed assessment to inform the way forward, including:
- Site due diligence
- Detailed financial appraisal to demonstrate viability
- Site valuation
- Site assembly strategy
- Market testing
- Identification of an appropriate procurement process
- Comprehensive risk assessment
- Direct Council involvement in the workspace element of the scheme, both to assist in achieving financial viability but also in terms of helping to ensure economic development objectives are met. A detailed assessment of the costs of converting listed barrack blocks to workspace use will be required.

South Camp

South Camp comprises the majority of the commercial buildings and hangar space. From the discussions that we have had with the occupiers within this area there is evidence to support the case for medium to long term growth of these occupiers. There is also adequate supply of land towards the eastern section of South Camp to accommodate this growth as well as incorporating demand from companies looking to locate at the airport.

The case for demand for non-air-side commercial buildings off airport is not so convincing. Clearly with Formula One racing there is a palpable precedent to support the case of an organisation wanting access to an airstrip, but we see limited evidence to support the case for anything other than slow take-up of accommodation at this location.

Furthermore, general industrial demand appears to be saturated, until the airport reaches a critical mass.

East Camp

Due to the significant number of flight schools and light aviation businesses there is logic to reserve East Camp for these businesses, although it is likely that the accommodation will develop further in the medium term to provide better space in which to store and operate the aircraft.

This location is certainly not considered appropriate for non-aviation related development, but could be used for replacement or relocated flying club buildings, smaller scale aircraft maintenance or parking.

Heritage impacts of proposed redevelopment

The heritage assessment specifically focused on Pentbridge Properties most recent redevelopment proposals for West Camp and the potential redevelopment of the area marked 4 that is being considered for sale to GLA/LBB. The proposed redevelopment area includes land to the east of Biggin Hill Conservation Area, designated by London Borough of Bromley in 1993. The conservation area has as its focus the area of barracks, technical and command buildings that made up West Camp, one of three camps that comprised Biggin Hill airfield prior to, during and after World War II. Outside of West Camp but within the conservation area is the Officers Mess and Vincent Square (married quarters).

The conservation area includes 14 designated Grade II listed assets, 3 locally listed buildings and many other non-designated buildings of historic interest and which contribute to the historic setting of designated buildings and character and appearance of the area more generally.

Biggin Hill Conservation Area is located in a landscape area characterised as the Upper North Downs. Largely chalkland, it includes extensive parts of the boroughs of Bromley and Croydon. The areas location south of central London and distinctive topography and geology has led to its selection for use as an airfield to satisfy operational and strategic functionality. As such it is part of a wider historic and military landscape.

Many of the buildings in West Camp are owned by Pentbridge Properties Ltd but vacant due to no appropriate use being identified. The vacant buildings have been mothballed and are maintained as and when deemed necessary – as a result they are likely to deteriorate steadily until a sustainable use can be identified. For this reason the Biggin Hill Conservation Area has been placed on the English Heritage register of ‘at risk’ conservation areas.

Proposals for the development and reuse of the conservation area have been submitted to London Borough of Bromley and these formed the basis of this strategic assessment. The proposals include demolition of historic buildings, construction of new buildings to increase the

useable floorspace within West Camp, construction of new hangars to increase the capacity of airside business, realignment and widening of the roads within the conservation area, a significant increase in car parking provision and removal of mature trees.

These proposals have the potential to cause substantial harm to the conservation area and recommendations have been made to mitigate the potential impacts. At most risk of not complying with adopted national, regional and local policy are the:

- demolition of the sick bay and decontamination unit;
- demolition of the surviving fragments of Belfast hangar and annex;
- creation of a curvilinear spine road;
- increase in car parking and other changes to the landscape including the removal of protected trees of heritage value;
- construction of new hangars that are located close to designated buildings;

It may be possible to mitigate the negative impacts of these proposals by sympathetic urban and building design. High standards of design will positively enhance the appearance and special interest of the area when new development takes place. It is suggested that every new building is designed as part of a larger whole, rather than as a separate entity. The conservation area has a character of its own which new buildings should respect and enhance.

A further detailed assessment of the Biggin Hill Conservation Area that might follow this strategic overview may help to set out specific parameters for regeneration that do justice to the historic buildings as well as the areas economic potential.

Conservation is a positive process in planning for the future of Biggin Hill Conservation Area even in its volatile environmental circumstances. An agreed framework for development should exist between all parties searching for a place in this very special and attractive location.

When considering the impacts of the proposed developments at West Camp as a whole it is also worth noting the changes to the area since its designation in 1993. Although specific details of applications are not available to view on the London Borough of Bromley planning portal, in the late 1990s a number of planning applications for the demolition of buildings within West Camp were approved. Some of the photographs used within the Biggin Hill Conservation Area SPG feature buildings that are no longer extant within the conservation area. This indicates that a number of potentially significant buildings that contributed to the integrity of the conservation area have since been lost including a defensive pillbox adjacent to the Meat Store and the operations building located in front of the Station Headquarters. These changes have already had the effect of lessening the comparative value of West Camp as an historic resource and suggest that further losses should be limited wherever possible.

Transport impacts of masterplan proposals

As suggested by the results of the modelling, junctions 1.1, 1.2, 1.3 and 1.5 will operate over their recommended or maximum capacity thresholds in the future case, irrespective of the additional growth proposed for the corridor. Traffic generated from the SOLDC, particularly for Phase 3 of the development as per the June 2014 Economic Growth Plan, will serve to reinforce or exacerbate issues at these junctions, and will also result in junction 1.6 operating over its recommended capacity.

Improvements will therefore be required to enable the delivery of growth at the SOLDC, as well as to cater for background growth in traffic, in order to maintain good access to the airport and the proposed new employment opportunities. The stage at which these improvements are needed differs by location, with potential trigger points set out in Table 6.18 below, alongside a summary of the potential improvements. Further review of the site's traffic generation is recommended as more detail emerges regarding the masterplan, furthermore the development of potential junction designs, as well as costing of the options, is recommended.

Through the work undertaken it has been identified that both the B265 Heathfield Road and Downe Road are used by a number of vehicles to travel between the A233 Croydon Road and A21 Farnborough Way respectively. Therefore, with the delivery of growth at SOLDC increasing traffic along these routes, it will be important to consider the impact on these routes and associated junctions, as part of any further study or planning application coming forward.

With the proposed improvements, which include the potential signalisation of a number of junctions along the A233, subject to greater consideration of the area's movement strategy, the opportunity may be afforded to deliver corridor urban traffic control, through a system such as SCOOT or MOVA. This will allow greater management of traffic flows through the area, allowing the system to respond to fluctuations in traffic. It may also afford the opportunity to deliver bus priority through the junctions.

In addition to the above, a focus should be placed on improving public transport accessibility in order to reduce the level of trip generation associated with the growth in jobs. Enhancements in public transport accessibility will be key and focus should be placed on improving bus frequencies and connections to key transport interchanges e.g. New Addington, South Bromley and East Croydon. Tables 6.18 and 6.19 summarise the potential improvements required to accommodate the levels of growth proposed within the masterplan.

7.2 Policy Recommendations

	Summary of Policy Recommendations
SOLDC designation	<ul style="list-style-type: none"> Designate a Biggin Hill SOLDC boundary on the emerging Local Plan key diagram and update the Proposals Map. Cancel 1996 protocol (quasi-Article 4 Direction). <p>Justification: Such an approach will help to support the London Plan SOLDC designation and remove unnecessary ambiguity for applicants where the protocol is engaged.</p>
Terminal Area	<ul style="list-style-type: none"> Investigate justification of Green Belt deletion and include an area-specific policy steer in the Local Plan. Cancel 2001 Article 4 Direction. <p>Justification: The analysis of permitted development rights potential (Appendix 1) shows that an unrestrained approach to permitted development (i.e. cancelling the 1996 protocol and 2001 Article 4 Direction) wouldn't be enough on its own to enable the growth envisaged by LoCATE or the aspirations contained in the London Plan and Town Centres SPD. The area between the Terminal Area and Leaves Green should be looked at in more detail. The NPPF allows scope for intensification and redevelopment within the Terminal Area through the infill policy wording which suggests that "partial or complete redevelopment of previously developed sites (brownfield land) which would not have a greater impact on the openness of the Green Belt" may be permitted. However, this would not be capable of delivering the concept plan.</p>
West Camp	<ul style="list-style-type: none"> Investigate the potential for deletion of Green Belt in this location. Develop area-specific policy steer reflecting more detailed heritage evidence. Subject to appropriate design and mitigation of impacts support airport related uses on airside parts of West Camp and adopt a more flexible position for other parts of West Camp allowing related training, heritage and hotel uses. Subject to mitigation of negative impacts support the quantum of development envisaged at West Camp within report Figures 4.1 and 5.9. <p>Justification: Due to the numerous heritage assets in West Camp it will be important to provide guidance in the Local Plan to help guide future management plans and masterplan.</p> <p>The high-level Green Belt analysis shows that West Camp appears to be an appropriate area of Biggin Hill to intensify and develop subject to heritage considerations.</p>
South Camp	<ul style="list-style-type: none"> Investigate the potential for deletion of Green Belt in this location. Subject to landscape assessment findings and a decision to delete the area of Green Belt broadly envisaged in this report, safeguard airside locations for airport/aviation-related development. For non-airside parts of South Camp, adopt a flexible approach that allows for non-airport/business related uses, such as general manufacturing operations (B2), light industry (B1c) and associated small scale distribution uses (B8). Subject to landscape assessment findings and a decision to delete the area of Green Belt broadly envisaged in this report and a more detailed masterplanning exercise, support the quantum of development envisaged at South Camp within the Economic Growth Plan Update of June 2014,

	<p>Justification: The high-level green belt analysis shows that South Camp appears to be the most appropriate area at Biggin Hill to intensify and develop. There is a market demand for airside development from aircraft servicing businesses as verified from our consultations with existing occupiers. Non airside sites are more likely to play a role longer term for accommodating general industry once a critical mass has been achieved at the airport.</p>
East Camp	<ul style="list-style-type: none"> • Transpose the MDS infill boundary approach into new area-based Local Plan policy • Consider area-based Local Plan policy for redevelopment of East Camp <p>Justification: East Camp was shown to be a highly sensitive area e.g. SINC, characteristics of openness. However, it is possible that maintaining or 'safeguarding' the Green Belt in this location will not disturb the Airport's ambition to concentrate flying school premises in this locale. The NPPF allows scope for intensification and redevelopment within a consolidated east camp through the infill policy wording which suggests that "partial or complete redevelopment of previously developed sites (brownfield land) which would not have a greater impact on the openness of the Green Belt" may be permitted.</p>
Other planning mechanisms	<ul style="list-style-type: none"> • Form a masterplan board/working group (in partnership with all relevant stakeholders e.g. LoCATE, TfL, GLA) to commission a detailed (joint) masterplan brief for the SOLDC area including adjoining industrial areas and West Camp. <p>Justification: A masterplan offers a useful non-statutory policy tool that can help to de-risk the site and provide investors and applicants with certainty, whereas now the policy framework is misaligned with the NPPF and includes much ambiguity e.g. 1996 protocol and 2001 Article 4 direction.</p>

APPENDIX A - PERMITTED DEVELOPMENT ASSESSMENT

Use Class	Address 1	Address 2	Address 3	Postcode	Vocant	Current Floorspace (m2)	Extension to B1 - 50%	Extension to B1 - 100sqm	Extension B2/B8 - CA 10%	Extension B2/B8 - CA 500sqm	Extension B2/B8 - 50%	Extension B2/B8 - 1000sqm	Protocol - sensitive area?	Conservation Area?	Listed Building?		
Airfield & Premises	BIGGIN HILL AIRPORT	MAIN ROAD	BIGGIN HILL	TN16 3BN	N	Unable to locate floorspace data	#VALUE!		#VALUE!	#VALUE!	#VALUE!	#VALUE!					
B1- office	BUILDING 32 WEST CAMP	MAIN ROAD	BIGGIN HILL		?	2078.7	3118.1	2178.7	2386.6	2578.7	3118.1	3078.7	Y	Y	N		TOTAL EXISTING FLOORSPACE
B1- office	BUILDING 33 WEST CAMP	MAIN ROAD	BIGGIN HILL		?	653.8	950.4	733.8	697.0	1138.8	950.4	1633.8	Y	Y	Y		TOTAL POTENTIAL GROSS FLOORSPACE WITH PD
B1- office and premises	OFFICES AT FORMER OFFICE MESSE	MAIN ROAD	BIGGIN HILL	TN16 3BN	N	78.8	118.2	178.8	88.3	177.8	118.2	1078.8	Y	Y	Y		TOTAL NET INCREASE IN FLOORSPACE
B1 OFFICES AND PREMISES	BUILDING 108 CHURCHILL WAY	BIGGIN HILL AIRPORT	BIGGIN HILL	TN16 3BN	N	100.2	150.3	200.2	110.2	600.2	150.3	1100.2	N	N	N		TOTAL NET INCREASE 155.15% PROPOSED AREA
B1 OFFICES AND PREMISES	BUILDING 707 CHURCHILL WAY	BIGGIN HILL AIRPORT	BIGGIN HILL	TN16 3BN	Y	321.6	482.4	421.6	393.8	821.6	482.4	1321.6	N	N	N		
B1 OFFICES AND PREMISES	BUILDING 708 CHURCHILL WAY	BIGGIN HILL AIRPORT	BIGGIN HILL	TN16 3BN	N	113.5	170.2	124.8	613.5	170.2	113.5	1113.5	N	N	N		
B1 OFFICES AND PREMISES	BUILDING 709 CHURCHILL WAY	BIGGIN HILL AIRPORT	BIGGIN HILL	TN16 3BN	Y	249.0	373.5	349.0	273.9	749.0	373.5	1249.0	N	N	N		
B1 OFFICES AND PREMISES	PT BLDG 451 CHURCHILL WAY	BIGGIN HILL AIRPORT	BIGGIN HILL	TN16 3BN	N	127.8	191.7	140.6	607.7	191.7	127.8	1127.8	Y	Y	N		
B1 OFFICES AND PREMISES	BUILDING 706 CHURCHILL WAY	BIGGIN HILL AIRPORT	BIGGIN HILL	TN16 3BN	N	107.7	161.6	207.7	118.5	607.7	161.6	1107.7	N	N	N		
B1 OFFICES AND PREMISES	PT 151 FIVE ROAD, SPYRE HOUSE	UNIT 1A CONCORDE BUSINESS CENTRE	WIRELESS ROAD, BIGGIN HILL	TN16 3BN	N	78.8	118.2	178.8	88.3	177.8	118.2	1078.8	N	N	N		
B1 OFFICES AND PREMISES	PT 161 FIVE ROAD, SPYRE HOUSE	UNIT 1A CONCORDE BUSINESS CENTRE	WIRELESS ROAD, BIGGIN HILL	TN16 3BN	N	46.8	69.5	166.8	51.0	546.8	69.5	1066.8	N	N	N		
B1/B2 Workshop, office and premises	BUILDING 332 CHURCHILL WAY	BIGGIN HILL AIRPORT	BIGGIN HILL	TN16 3BN	N	142.0	212.9	242.0	156.2	642.0	212.9	1142.0	Y	N	N		
B2- Boiler house	BUILDING 30 WEST CAMP	MAIN ROAD	BIGGIN HILL		?	295.4	443.1	395.4	324.9	795.4	443.1	1295.4	Y	Y	N		
B2- Pump house	BUILDING 20 WEST CAMP	MAIN ROAD	BIGGIN HILL		?	191.5	287.3	291.5	210.7	691.5	287.3	1191.5	Y	Y	N		
B2- Workshop and premises	BUILDING 21 WEST CAMP	MAIN ROAD	BIGGIN HILL		?	46.4	69.6	146.4	51.0	546.4	69.6	1046.4	Y	Y	N		
B2- Workshop and premises	BUILDING 22 WEST CAMP	MAIN ROAD	BIGGIN HILL		?	90.7	136.1	190.7	99.8	590.7	136.1	1090.7	Y	Y	N		
B2 WORKSHOP AND PREMISES	BUILDING 452 CHURCHILL WAY	BIGGIN HILL AIRPORT	BIGGIN HILL	TN16 3BN	N	92.9	124.4	182.9	91.2	124.4	92.9	1092.9	Y	N	N		
B2 WORKSHOP AND PREMISES	PT BUILDING 451 CHURCHILL WAY	BIGGIN HILL AIRPORT	BIGGIN HILL	TN16 3BN	N	142.4	213.6	242.4	156.6	642.4	213.6	1142.4	Y	N	N		
B2 WORKSHOP AND PREMISES	UNIT 16 AIRPORT TRADING ESTATE	WIRELESS ROAD	BIGGIN HILL AIRPORT, TN16 3PS	N	531.8	797.6	631.8	584.9	1031.8	797.6	1531.8	N	N	N			
B2 WORKSHOP AND PREMISES	UNIT 4 THE AIRPORT ESTATE	WIRELESS ROAD	BIGGIN HILL	TN16 3PS	N	920.7	1381.1	1020.7	1012.6	1381.1	920.7	1920.7	N	N	N		
B2 WORKSHOP AND PREMISES	UNIT 5 AIRPORT TRADING ESTATE	WIRELESS ROAD	BIGGIN HILL AIRPORT, TN16 3PS	Y	1003.3	1505.0	1103.3	1003.7	1505.0	1003.3	2003.3	N	N	N			
B2 WORKSHOP AND PREMISES	UNIT 6 THE AIRPORT TRADING ESTATE	WIRELESS ROAD	BIGGIN HILL AIRPORT, TN16 3PS	N	430.9	646.3	490.9	464.0	830.9	646.3	1330.9	N	N	N			
B2/BB ACRYLIC AND PREMISES	FORMER UNIT 10 HANGAR 10 LTD	SAPPHIRE HEATH	1 CHURCHILL WAY	TN16 3BN	N	8130.7	12196.1	9230.7	10043.8	12196.1	8130.7	18196.1	N	N	N		
B2/BB HANGAR AND PREMISES	HANGAR 500 CHURCHILL WAY	BIGGIN HILL AIRPORT	BIGGIN HILL	TN16 3BN	N	6398.0	9597.0	6707.8	6707.8	9597.0	6398.0	12398.0	N	N	N		
B2/BB HANGAR AND PREMISES	BUILDING 406 CHURCHILL WAY	BIGGIN HILL AIRPORT	BIGGIN HILL	TN16 3BN	N	3759.7	5639.6	4135.7	4259.7	5639.6	3759.7	4759.7	N	N	N		
B2/BB HANGAR AND PREMISES	BUILDING 507 CHURCHILL WAY	BIGGIN HILL AIRPORT	BIGGIN HILL	TN16 3BN	N	502.7	754.0	602.7	553.0	1002.7	754.0	1502.7	Y	N	N		
B2/BB HANGAR AND PREMISES	BUILDING 526 CHURCHILL WAY	BIGGIN HILL AIRPORT	BIGGIN HILL	TN16 3BN	N	1891.9	2837.9	2081.1	2081.1	2837.9	1891.9	2891.9	N	N	N		
B2/BB HANGAR AND PREMISES	BUILDING 527 CHURCHILL WAY	BIGGIN HILL AIRPORT	BIGGIN HILL	TN16 3BN	Y	989.2	1483.8	1089.2	1089.2	1483.8	989.2	1989.2	N	N	N		
B2/BB HANGAR AND PREMISES	BUILDING 528 CHURCHILL WAY	BIGGIN HILL AIRPORT	BIGGIN HILL	TN16 3BN	N	917.5	1376.3	1009.3	1009.3	1376.3	917.5	1917.5	N	N	N		
B2/BB HANGAR AND PREMISES	BUILDING 529 CHURCHILL WAY	BIGGIN HILL AIRPORT	BIGGIN HILL	TN16 3BN	N	1545.5	2318.3	1700.1	1645.5	2318.3	1545.5	2545.5	N	N	N		
B2/BB HANGAR AND PREMISES	BUILDING 450 AND PT BUILDING 451	CHURCHILL WAY	BIGGIN HILL AIRPORT	TN16 3BN	N	2830.5	4245.7	2903.5	3113.5	4245.7	2830.5	3830.5	Y	N	N		
B2/BB HANGAR AND PREMISES	DIAMOND HOUSE, BUILDING 525	CHURCHILL WAY	BIGGIN HILL AIRPORT	TN16 3BN	N	2245.7	3368.6	2345.7	2470.3	3368.6	2245.7	3245.7	N	N	N		
B2/BB HANGAR AND PREMISES	HANGAR 12 WEST CAMP	MAIN ROAD	BIGGIN HILL	TN16 3BN	N	2891.6	3887.4	2691.6	2850.8	3887.4	2891.6	3891.6	Y	Y	N		
B2/BB WAREHOUSE & PREMISES	UNIT 500 CHURCHILL WAY	BIGGIN HILL AIRPORT	BIGGIN HILL	TN16 3BN	N	1597.0	2395.5	1697.0	1756.7	2395.5	1597.0	2597.0	Y	N	N		
B2/BB WAREHOUSE & PREMISES	BUILDING 503 CHURCHILL WAY	BIGGIN HILL AIRPORT	BIGGIN HILL	TN16 3BN	N	1010.8	1516.2	1110.8	1111.9	1516.2	1010.8	2010.8	N	N	N		
B2/BB WAREHOUSE & PREMISES	BUILDING 513 CHURCHILL WAY	BIGGIN HILL AIRPORT	BIGGIN HILL	TN16 3BN	N	1901.8	2852.7	2001.8	2401.8	2852.7	1901.8	2901.8	N	N	N		
B2/BB WAREHOUSE & PREMISES	BUILDING 512 CHURCHILL WAY	BIGGIN HILL AIRPORT	BIGGIN HILL	TN16 3BN	N	1140.2	1710.2	1240.2	1254.2	1710.2	1140.2	2140.2	N	N	N		
B2/BB WAREHOUSE & PREMISES	BUILDING 505 AND 506 CHURCHILL WAY	BIGGIN HILL AIRPORT	BIGGIN HILL	TN16 3BN	N	2431.5	3647.2	2531.5	2674.4	3647.2	2431.5	3431.5	Y	N	N		
B2/BB WAREHOUSE & PREMISES	WINTER HOUSE CHURCHILL WAY	BIGGIN HILL AIRPORT	BIGGIN HILL	TN16 3BN	N	891.0	1336.5	991.0	1391.0	1336.5	891.0	1891.0	N	N	N		
B2/BB WAREHOUSE & PREMISES	UNIT 10 & 11 THE AIRPORT TRADING ESTATE, WIRELESS ROAD, BIGGIN HILL	WINTERHAM	TN16 3PS	N	733.3	1099.9	833.3	1009.9	1233.3	1099.9	733.3	1733.3	N	N	N		
B2/BB WAREHOUSE & PREMISES	HANGAR 8 WEST CAMP	MAIN ROAD	BIGGIN HILL	TN16 3BN	N	3409.8	5114.7	3509.8	3709.8	5114.7	3409.8	4409.8	Y	Y	N		
B2/BB WAREHOUSE & PREMISES	PT 161 FIVE ROAD, SPYRE HOUSE	UNIT 1A CONCORDE BUSINESS CENTRE	WIRELESS ROAD, BIGGIN HILL	TN16 3BN	N	152.8	229.2	252.8	168.0	229.2	152.8	1152.8	N	N	N		
B2/BB WAREHOUSE & PREMISES	UNIT 1 AIRPORT TRADING ESTATE	WIRELESS ROAD	BIGGIN HILL AIRPORT, TN16 3PS	Y	970.9	1456.3	1070.9	1070.9	1456.3	970.9	1970.9	N	N	N			
B2/BB WAREHOUSE & PREMISES	UNIT 1 CONCORDE BUSINESS CENTRE	WIRELESS ROAD	BIGGIN HILL AIRPORT	TN16 3BN	N	600.0	900.0	700.0	660.0	1100.0	900.0	1600.0	N	N	N		
B2/BB WAREHOUSE & PREMISES	UNIT 10 CONCORDE BUSINESS CENTRE	WIRELESS ROAD	BIGGIN HILL AIRPORT	TN16 3BN	N	242.3	363.4	342.3	266.5	742.3	363.4	1242.3	N	N	N		
B2/BB WAREHOUSE & PREMISES	UNIT 11 CONCORDE BUSINESS CENTRE	WIRELESS ROAD	BIGGIN HILL AIRPORT	TN16 3BN	N	242.3	363.4	342.3	266.5	742.3	363.4	1242.3	N	N	N		
B2/BB WAREHOUSE & PREMISES	UNIT 12 CONCORDE BUSINESS CENTRE	WIRELESS ROAD	BIGGIN HILL AIRPORT	TN16 3BN	N	269.8	404.7	369.8	296.8	769.8	404.7	1269.8	N	N	N		
B2/BB WAREHOUSE & PREMISES	UNIT 13 THE AIRPORT TRADING ESTATE	WIRELESS ROAD	BIGGIN HILL	TN16 3PS	N	1851.8	2777.7	1951.8	2037.0	2777.7	1851.8	2851.8	N	N	N		
B2/BB WAREHOUSE & PREMISES	UNIT 14 THE AIRPORT TRADING ESTATE	WIRELESS ROAD	BIGGIN HILL	TN16 3PS	N	1616.1	2442.2	1777.7	2146.1	2442.2	1616.1	2616.1	N	N	N		
B2/BB WAREHOUSE & PREMISES	UNIT 15 THE AIRPORT TRADING ESTATE	WIRELESS ROAD	BIGGIN HILL	TN16 3PS	Y	1029.7	1544.6	1129.7	1132.7	1544.6	1029.7	2029.7	N	N	N		
B2/BB WAREHOUSE & PREMISES	UNIT 2 AIRPORT TRADING ESTATE	WIRELESS ROAD	BIGGIN HILL AIRPORT	TN16 3PS	N	929.3	1393.9	1029.3	1022.2	1393.9	929.3	1929.3	N	N	N		
B2/BB WAREHOUSE & PREMISES	UNIT 2 CONCORDE BUSINESS CENTRE	WIRELESS ROAD	BIGGIN HILL AIRPORT	TN16 3BN	N	483.2	724.8	583.2	531.5	883.2	724.8	1483.2	N	N	N		
B2/BB WAREHOUSE & PREMISES	UNIT 3 AIRPORT TRADING ESTATE	WIRELESS ROAD	BIGGIN HILL AIRPORT, TN16 3PS	N	930.6	1395.8	1030.6	1023.6	1430.6	1395.8	930.6	1930.6	N	N	N		
B2/BB WAREHOUSE & PREMISES	UNIT 3 CONCORDE BUSINESS CENTRE	WIRELESS ROAD	BIGGIN HILL AIRPORT	TN16 3BN	N	322.6	484.0	422.6	354.9	832.6	484.0	1322.6	N	N	N		
B2/BB WAREHOUSE & PREMISES	UNIT 4 CONCORDE BUSINESS CENTRE	WIRELESS ROAD	BIGGIN HILL AIRPORT	TN16 3BN	N	241.3	362.7	341.3	266.0	741.3	362.7	1241.3	N	N	N		
B2/BB WAREHOUSE & PREMISES	UNIT 7 CONCORDE BUSINESS CENTRE	WIRELESS ROAD	BIGGIN HILL AIRPORT	TN16 3BN	Y	600.7	900.7	700.7	660.7	1100.7	900.7	1600.7	N	N	N		
B2/BB WAREHOUSE & PREMISES	UNIT 7 THE AIRPORT TRADING ESTATE	WIRELESS ROAD	BIGGIN HILL AIRPORT, TN16 3PS	Y	356.8	535.1	456.8	392.4	856.8	535.1	1356.8	N	N	N			
B2/BB WAREHOUSE & PREMISES	UNIT 8 AIRPORT TRADING ESTATE	WIRELESS ROAD	BIGGIN HILL AIRPORT	TN16 3PS	N	284.3	426.5	312.7	284.3	426.5	284.3	1284.3	N	N	N		
B2/BB WAREHOUSE & PREMISES	UNIT 8 CONCORDE BUSINESS CENTRE	WIRELESS ROAD	BIGGIN HILL AIRPORT	TN16 3BN	N	725.5	1088.3	825.5	798.1	1225.5	1088.3	1725.5	N	N	N		
B2/BB WAREHOUSE & PREMISES	UNIT 9 CONCORDE BUSINESS CENTRE	WIRELESS ROAD	BIGGIN HILL AIRPORT	TN16 3BN	N	231.9	347.8	331.9	255.1	731.9	347.8	1231.9	N	N	N		
B2/BB WAREHOUSE & PREMISES	UNIT 9 THE AIRPORT TRADING ESTATE	WIRELESS ROAD	BIGGIN HILL AIRPORT	TN16 3PS	Y	285.3	427.9	385.3	313.8	785.3	427.9	1285.3	N	N	N		
B2/BB WAREHOUSE & PREMISES	UNIT 5 & 6 CONCORDE BUSINESS CENTRE	WIRELESS ROAD	BIGGIN HILL AIRPORT	TN16 3BN	N	621.9	932.8	721.9	684.8	1132.8	932.8	1621.9	N	N	N		
BB- Storage premises	BUILDING 9 WEST CAMP	MAIN ROAD	BIGGIN HILL		?	37.8	56.7	137.8	41.6	537.8	56.7	1037.8	Y	Y	N		
BB- Storage premises	BUILDING 11 WEST CAMP	MAIN ROAD	BIGGIN HILL		?	116.5	174.7	216.5	128.1	616.5	174.7	1116.5	Y	Y	N		
BB- Storage premises	BUILDING 14 WEST CAMP	MAIN ROAD	BIGGIN HILL		?	219.0	328.5	319.0	240.9	719.0	328.5	1219.0	Y	Y	N		
BB- Storage premises	BUILDING 16 WEST CAMP	MAIN ROAD	BIGGIN HILL		?	121.6	182.4	221.6	133.7	621.6	182.4	1121.6	Y	Y	N		
BB- Storage premises	BUILDING 17 WEST CAMP	MAIN ROAD	BIGGIN HILL		?	226.9	340.4	326.9	249.6	726.9	340.4	1226.9	Y	Y	N		
BB- Storage premises	BUILDING 18 WEST CAMP	MAIN ROAD	BIGGIN HILL		?	120.2	180.3	220.2	132.2	620.2	180.3	1120.2	Y	Y	N		
BB- Storage premises	BUILDING 21 WEST CAMP	MAIN ROAD	BIGGIN HILL		?	356.8	536.8	356.8	282.6	756.8	356.8	1256.8	Y	Y	N		
BB- Storage premises	BUILDING 26 WEST CAMP	MAIN ROAD	BIGGIN HILL		?	36.0	54.1	136.0	39.7	536.0	54.1	1036.0	Y	Y	N		
BB- Storage premises	BUILDING 27 WEST CAMP	MAIN ROAD	BIGGIN HILL		?	74.7	112.0	174.7	82.1	574.7	112.0	1074.7	Y	Y	N		
BB- Storage premises	BUILDING 37 WEST CAMP	MAIN ROAD	BIGGIN HILL		?	239.2	358.9	339.2	263.2	739.2	358.9	1239.2	Y	Y	N		
BB STORE AND PREMISES	BUILDING 108 CHURCHILL WAY	BIGGIN HILL AIRPORT	BIGGIN HILL	TN16 3BN	N	267.9	401.9	367.9	294.7	767.9	401.9	1267.9	N	N	N		

APPENDIX B - CONCEPT MASTERPLAN EMPLOYMENT SCHEDULE (NET ADDITIONAL JOBS)

Location	AM Peak (08:00–09:00)			PM Peak (17:00–18:00)		
	Arr	Dep	Total	Arr	Dep	Total
Phase1						
Terminal Area	0	0	0	0	30	30
East Camp	2	0	4	0	0	6
South Camp	28	0	38	0	0	66
South Camp Extension	109	56	302	0	0	467
West Camp	0	0	0	75	0	75
Phase 2						
Terminal Area	30	0	12	0	0	42
East Camp	69	0	110	0	0	178
South Camp	29	87	39	0	0	155
South Camp Extension	0	0	0	0	0	0
West Camp	140	0	23	0	0	163
Phase 3						
Terminal Area	0	0	0	0	0	0
East Camp	0	18	9	0	0	26
South Camp	48	136	64	0	0	248
South Camp Extension	0	20	0	0	0	20
West Camp	853	55	7	0	0	915
Total Additional Trips (Phases 1-3)	1,307	373	607	75	30	2,392

APPENDIX C - 2014 BASELINE RESULTS

Table B1: A233 Westerham Road / A232 Croydon Road Results (Signalised)

Arm	AM Peak (08:00-09:00)		PM Peak (17:00-18:00)	
	DoS	MMQ (PCU)	DoS	MMQ (PCU)
A233 Oakley Road	90.90%	12.6	93.00%	10.1
A232 Croydon Road E	90.00%	18	91.90%	26.5
A233 Westerham Road	82.80%	13.8	90.90%	16.9
A232 Croydon Road W	86.40%	14.4	79.60%	16.9

Table B2: A233 Westerham Road / Heathfield Road Results (Priority)

Arm	AM Peak (08:00-09:00)		PM Peak (17:00-18:00)	
	RFC	Queue (Veh)	RFC	Queue (Veh)
Heathfield Road to A233 Westerham Road (N)	93.2%	2.2	80.7%	1.4
Heathfield Road to A233 Westerham Road (S)	115.9%	43.1	108.5%	26.1
A233 Westerham Road (N) to Heathfield Road	1.9%	0.0	0.5%	0.0

Table B3: A233 Westerham Road / Downe Road Results (Roundabout)

Arm	Configuration	AM Peak (08:00-09:00)		PM Peak (17:00-18:00)	
		RFC	Queue (PCU)	RFC	Queue (PCU)
A233 Westerham Road (N)	Baseline	66.0%	2.0	87.0%	6.4
	Planned	69.0%	2.3	91.0%	9.6
Downe Road	Baseline	73.0%	2.7	52.0%	1.1
	Planned	77.0%	3.3	55.0%	1.2
A233 Leaves Green Road (S)	Baseline	58.0%	1.4	46.0%	0.9
	Planned	90.0%	8.5	70.0%	2.4

Table B4: A233 Main Road / Biggin Hill Airport Results (Priority)

Arm	AM Peak (08:00-09:00)		PM Peak (17:00-18:00)	
	RFC	Queue (Veh)	RFC	Queue (Veh)
Biggin Hill Airport to A233 Leaves Green Road (N)	0.5%	0.00	1.5%	0.02
Biggin Hill Airport to A233 Main (S)	0.4%	0.00	0.9%	0.01
A233 Main Road (S) to Biggin Hill Airport	1.8%	0.02	0.5%	0.00

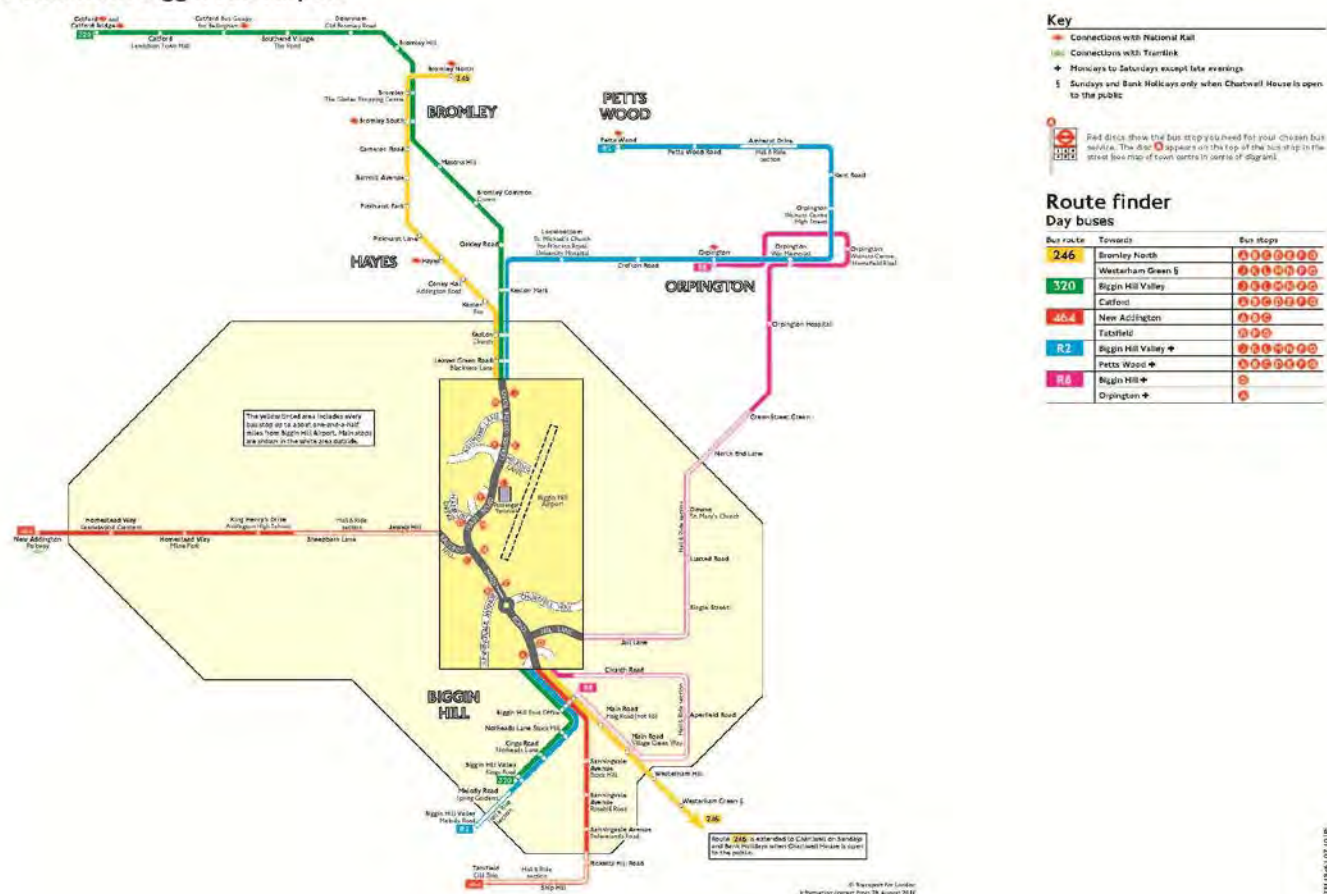
Table B5: A233 Main Road / Saltbox Hill Road (Priority)

Arm	AM Peak (08:00-09:00)		PM Peak (17:00-18:00)	
	RFC	Queue (Veh)	RFC	Queue (Veh)
Saltbox Hill Road to A233 Main Road (N)	72.2%	2.4	50.0%	1.0
Saltbox Hill Road to A233 Main Road (S)	86.9%	4.8	54.7%	1.2
A233 Main Road (N) to Saltbox Hill	56.3%	1.4	63.9%	2.1

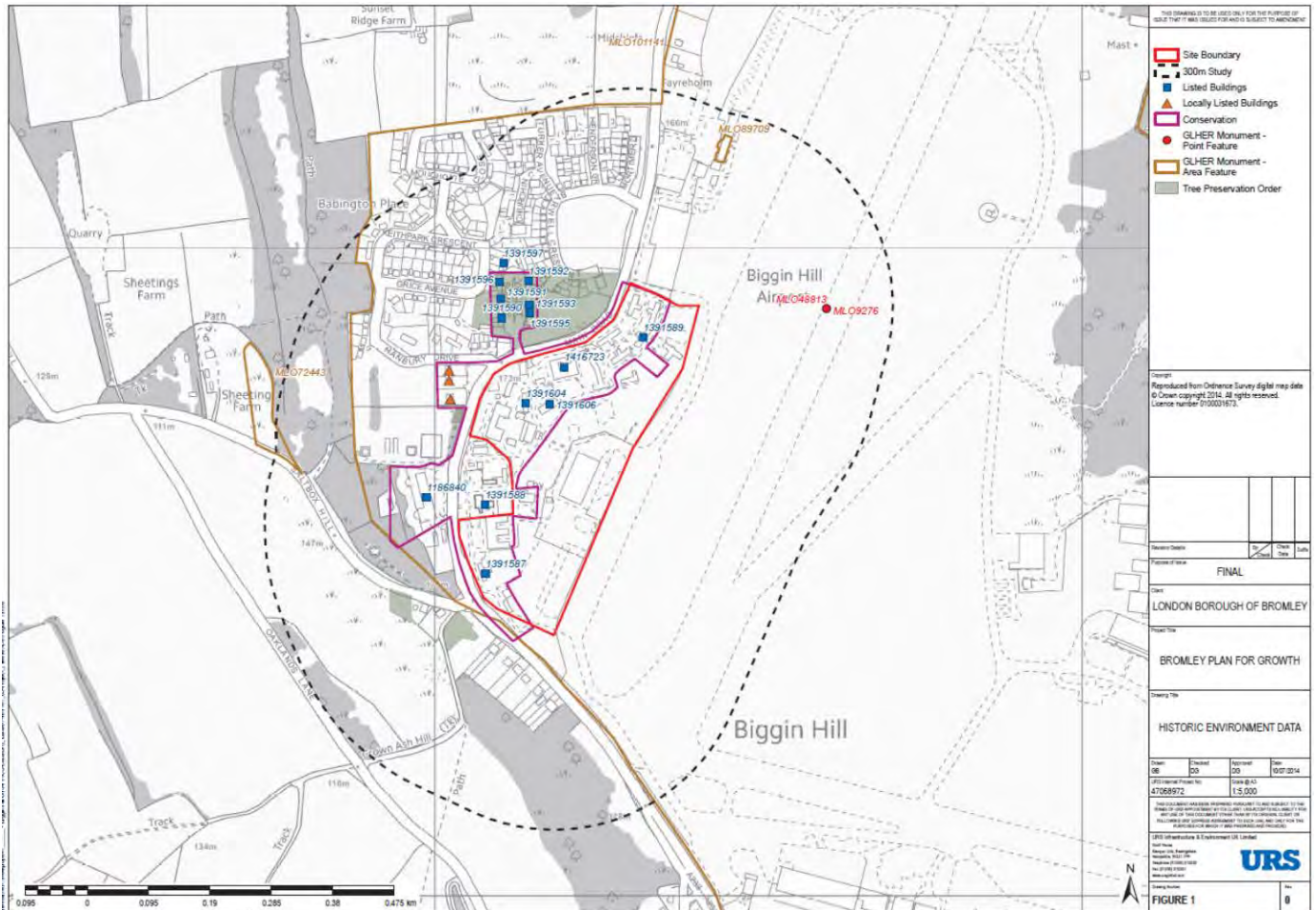
Table B6: A233 Main Road / Churchill Way (Roundabout)

Arm	AM Peak (08:00-09:00)		PM Peak (17:00-18:00)	
	RFC	Queue (PCU)	RFC	Queue (PCU)
A223 Main Road (N)	45.0%	0.8	38%	0.6
Churchill Way	2.0%	0.0	24%	0.3
A233 Main Road (S)	68.0%	2.2	46%	0.7

Buses from Biggin Hill Airport



APPENDIX E: LISTED BUILDINGS



[illegible]

APPENDIX G: BUILDING AND ROAD LAYOUTS



[illegible]

APPENDIX I – FURTHER HISTORICAL MAPPING WEST CAMP

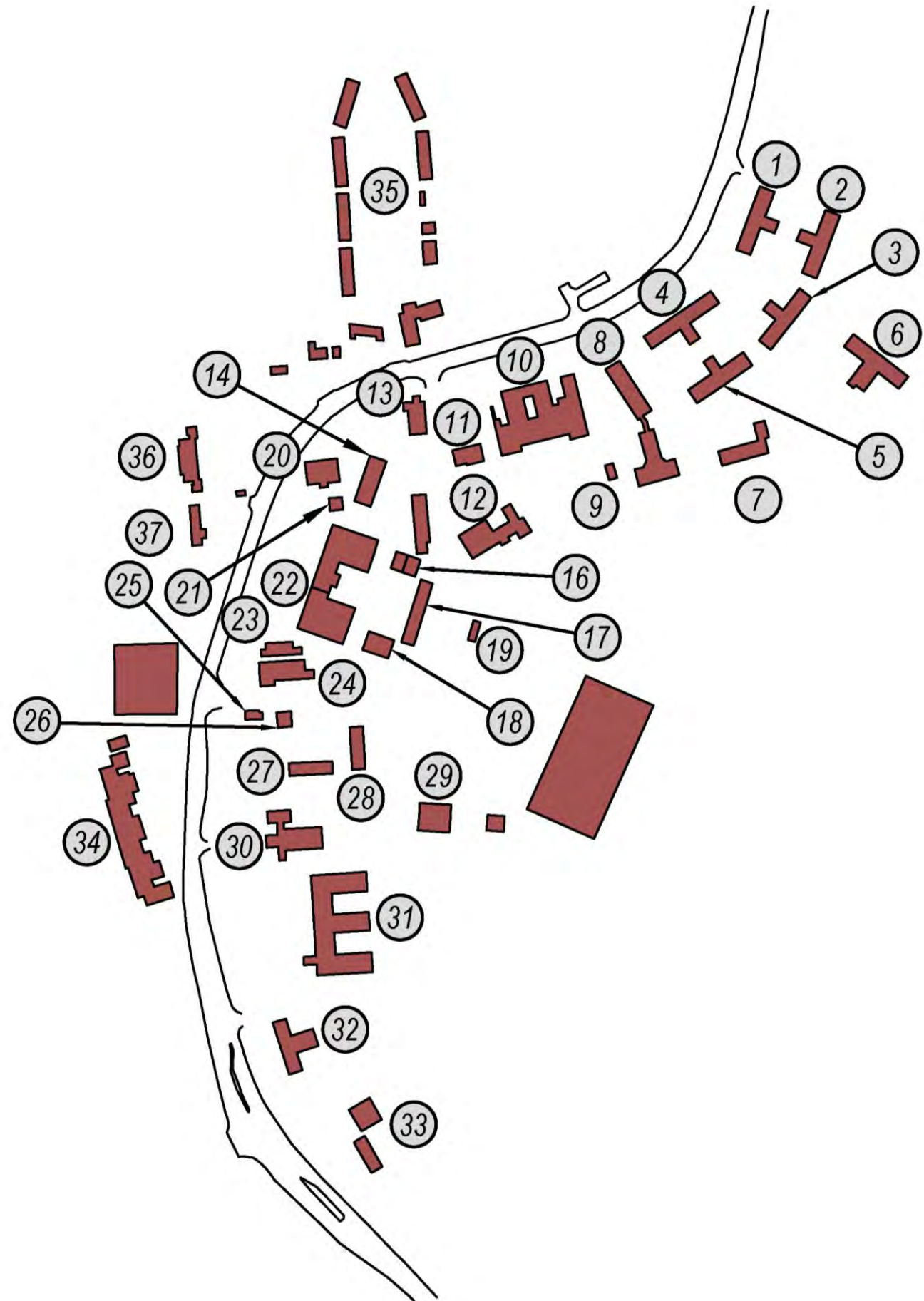



APPENDIX J –ILLUSTRATED BUILDINGS GAZETTER


Illustrated Building Gazetteer


Building reference:


1. Airmens Barrack block
2. Airmens Barrack block
3. Airmens Barrack block
4. Airmens Barrack block
5. Airmens Barrack block
6. Airmens barrack block
7. Airmens barrack block
8. Sick Bay and Decontamination Centre
9. Garage
10. Junior Ranks Mess
11. Catering Store
12. Candidates Club
13. Guardroom
14. Garage block
15. Hawkinge barracks
16. MT flight garage and workshops
17. MT flight garage and workshops
18. MT flight garage and workshops
19. Civilian labourers rest hut
20. Reserve water tank
21. Pump house
22. Supply flight workshop
23. Armoury
24. Clothing store
25. Rubber store
26. Paint and oil store
27. Roman Catholic chapel
28. Barracks store
29. Boiler house
30. St. George's Memorial chapel
31. OASC
32. Station Headquarters
33. Belfast hanger remains
34. Former Officers mess
35. Vincent Square married quarters
36. 1 and 3 Hanbury Drive
37. 16 Main Road





<p>Contemporary building number (on site plan), name, designation</p> <p>1 – 5, Airmens barrack block, Grade II</p>	<p>Historic building number, use and construction, as per RAF records</p> <p>4, 5, 6, 7, 101; “C” type barrack block (individually named Kenley, Tangmere, North Weald, Manston and Croydon); permanent brick</p>
<p>Photograph</p> 	<p>Description</p> <p>1930, to Air Ministry Directorate of Works drawings 99-109/23</p> <p>5 Airmen's barracks blocks in red brickwork in stretcher and Flemish bond with slate roofs. Each consists of a long gabled range with a central pediment and entry with a short T-arm on the opposite elevation, at slightly lower eaves and ridge level. A central lobby and staircase is flanked by small rooms for NCO's, then dormitories for 64 airmen. The rear wing contains ablutions and services.</p> <p>Internally the buildings have all been modified in the latter half of the 20th century (1960s) with the addition of partitions to form smaller rooms and bedside lighting for personnel.</p> <p>These are built in a similar way to the first modern barracks and were to influence barrack design for several years. Each block has a central area complete with an architectural façade containing entrance hall, stairs to the upper floor with barrack rooms arranged in wings on each side. Ablutions and drying rooms were arranged in a rear annex giving the characteristic T shape in plan view. The T shape was replaced by an H shaped barrack in 1938.</p> <p>This is a type C barrack block accommodating 3 NCOs and 64 Airmen in a series of dormitory rooms (now apparently subdivided).</p>
<p>Significance</p> <p>The 5 barrack blocks date from the post 1923 expansion plans of the RAF and form an important component of the conservation area contributing to the integrity and legibility of West Camp. The group illustrates the development of domestic buildings from single storey temporary buildings with detached ablution blocks to the two storey barrack block with integrated ablutions. The individual buildings within this group are typical of residential barrack blocks found at other airfields, reflecting the comprehensive yet systematic approach to airfield expansion in the early 1930s. The buildings embody evidential and historic value that create a strong sense of place and are assets of high significance.</p>	<p>Setting</p> <p>The immediate setting of each barrack block includes the other adjacent blocks within this group, the Sick Bay and Decontamination Centre and mess buildings that together form the residential core of West Camp, as well as the mown lawns and circulation roads that surround these buildings. Furthermore the barrack blocks are an important component of the military landscape of West Camp and so the broader setting includes the other extant technical and operational buildings and features. These aspects of the setting make a positive contribution to the significance of the barrack blocks.</p>
<p>Condition</p> <p>The buildings are vacant and boarded up but despite this their condition is adequate. There are some signs of required maintenance, especially concerning the roofs and rainwater goods. Some vegetation taking hold.</p>	<p>Threats to heritage significance</p> <p>Long-term vacancy; lack of necessary maintenance to roofs and rainwater goods; onset of wet and dry rot due to adverse environmental conditions.</p>


Contemporary building number (on site plan) and name, designation 6, Airmens barrack block, non-designated	Historic building number, use and construction, as per RAF records 102, 884-Type Barrack Part D/M "Gravesend", permanent brick
Photograph 	Description Two storey brick building with hipped roof constructed during the 1940s expansion of the airfield. The building has a regular and symmetrical pattern of fenestration; however windows have been replaced with modern materials.
Significance This barrack block dates from a later phase of construction and is not designed in a consistent manner to the earlier barrack blocks. It is of lesser architectural quality when compared to earlier barrack blocks and has been altered since its construction. It is outside the boundary of the Biggin Hill Conservation Area. This building has group value but makes a negligible contribution to the significance of the adjacent designated buildings within the conservation area. It is considered an asset of negligible significance.	Setting The building orientation is at right angles to the adjacent designated barrack blocks as it related to other buildings that were destroyed during WWII or have been lost since. Its orientation does not relate to the airfield. The setting includes the areas of open ground and extant barracks which it is surrounded. This setting is the primary contributor to the assets significance.
Condition The building is vacant and boarded up, its condition appeared adequate although original windows have been replaced.	Threats to heritage significance Demolition or loss of adjacent earlier barrack blocks.


Contemporary building number (on site plan) and name, designation	Historic building number, use and construction, as per RAF records
7, Airmens barrack block, non-designated	103, "R" - Type Barrack Part D/M "Northholt", permanent brick
Photograph 	Description <p>Two storey brick construction with hipped roof set within brick parapets indicating that this later design may have incorporated a “protected” roof structure to withstand incendiary bombs.</p> <p>Built during the run-up to war or during wartime, it has none of the architectural detailing of the 1930s blocks. However, the building was originally similar in plan to the other T shaped barracks. It was badly damaged in WWII bombing and so now appears to be of a greatly different design.</p>
Significance <p>This barrack block dates from a slightly later phase of construction and is of lesser architectural quality when compared to earlier barrack blocks and has been badly damaged by bombing since construction. It is outside the boundary of the Biggin Hill Conservation Area. This building makes a neutral contribution to the significance of the adjacent designated buildings within the conservation area. It is considered an asset of low significance.</p>	Setting <p>The building orientation is oblique to the adjacent designated barrack blocks. The block faced the airfield and its setting includes the airfield, areas of open ground and extant barracks which it is surrounded by. This setting is the primary contributor to the assets significance.</p>
Ownership and condition <p>The buildings are vacant and boarded up. It is not possible to determine the internal condition</p>	Threats to heritage significance <p>Demolition or loss of adjacent earlier barrack blocks.</p>


Contemporary building number (on site plan) and name, designation	Historic building number, use and construction, as per RAF records
8, Sick Bay and Decontamination Centre, non-designated	8 and 96, Sick Quarters and Sick Quarters Annex, permanent brick
Photograph 	Description <p>The sick bay was constructed prior to 1930, the decontamination unit in 1939.</p> <p>Red brick with slate roof; horseshoe shaped entrance porch within the rectangular plan of the building.</p> <p>The Sick Bay shares many architectural details with the barracks adjacent whilst the Decontamination Centre shares some design details with operations blocks of the time, which have since been lost from West Camp.</p> <p>The design of the Decontamination Centre was the result of extensive experiments carried out at Orfodness in the mid-1930s on the effects of bomb blast on different wall sections. It consisted of a windowless single storey structure with an 18-inch thick brick wall protected by earth traverses. It carried a complicated roof structure. Entry to the building was via a protected gap in the earth bank as is found here.</p>
Significance <p>The Sick Bay and Decontamination Centre formed an important element of the military airfield. The significance of the buildings could not be fully determined due to the inability to gain access to the interior. Despite being non-designated the sick bay and decontamination unit contribute to the character and integrity of West Camp, embodying aesthetic, evidential and historic value and should be considered buildings of medium significance.</p>	Setting <p>The immediate setting of the sick bay and decontamination unit includes the adjacent barrack blocks, ambulance garage and mess buildings that together form the residential core of West Camp, as well as the mown lawns and circulation roads that surround these buildings. Furthermore the sick bay and decontamination unit are components integral to the working of the historic airfield and so the broader setting includes the other extant technical and operational buildings and features. These aspects of the setting make a positive contribution to the significance of the sick bay and decontamination unit.</p>
Condition <p>The buildings are vacant and boarded up. It has not been possible to determine the condition due to a lack of access.</p>	Threats to heritage significance <p>Vacancy; a lack of understanding of the building and its significance in relation to the conservation area; proposed demolition.</p>


Contemporary building number (on site plan) and name, designation	Historic building number, use and construction, as per RAF records
9, Garage, non-designated	130, Ambulance garage, permanent brick
Photograph 	Description Constructed in 1936, a simple brick structure with hipped slate roof, timber eaves and modern folding doors.
Significance The garage was used for the storage for an ambulance and is located in a position to provide timely access to the airfield and sick bay. As such it is an interesting surviving feature of the military airfield that contributes to our understanding of how the airfield functioned. The building has little architectural significance but does embody historic value. Despite being non-designated the garage contributes to the integrity of West Camp and should be considered a building of low significance.	Setting The setting of the garage includes the adjacent sick bay and decontamination unit, as well as the mown lawns and circulation roads that surround these buildings and provide access to the rest of the airfield. These aspects of the setting make a positive contribution to the significance of the garage.
Condition Adequate, the garage is currently used as a woodstore but appears to be dry.	Threats to heritage significance Lack of maintenance; a lack of appreciation of the buildings contribution to the conservation area and the potential to re-use it; proposed demolition.


Contemporary building number (on site plan) and name, designation	Historic building number, use and construction, as per RAF records
10, Junior Ranks Mess, Grade II	9, Candidates and Airmens Institute (mess), permanent brick
Photograph 	Description Circa 1926 design, built 1930. By the Air Ministry's Directorate of Works and Buildings. It combines reception and social rooms serviced by kitchens and ancillary rooms to the rear. A large two storey building constructed in red brick with gabled slate roofs and brick stacks. The main block is rectangular and containing a large dining room / theatre and games rooms. To the rear are kitchens and ancillary rooms. All the windows have gauged brick flat heads with original steel frames to the rear. The gable ends are expressed as broken pediments with panelled double doors set in rendered architraves.
Significance The Junior ranks mess was built to designs established during the 1923 expansion of the RAF. The building forms an important component of West Camp specifically and the conservation area more generally. Although the building is similar to the nearby barrack blocks it also has more elaborate decorative treatment including a timber cupola to distinguish it from the barracks. The building embodies evidential, historic and aesthetic values which contributes to a strong sense of place and is an asset of high significance. It was not possible to assess the survival of significant historic features.	Setting Like the Candidates Club (former Sergeants Mess) it is positioned primarily facing away from Main Road and south towards the aircraft hangers and airfield. The immediate setting of the building includes the area of open ground and Candidates Club to the south. Furthermore the Junior Ranks Mess is a component integral to the working of the historic airfield and so the broader setting includes the other extant technical, operational buildings and features. These aspects of the setting make a positive contribution to the significance of the Junior Ranks Mess.
Condition Adequate although the building is vacant and partly boarded up. There was evidence of water damage to the ground floor but it was not possible to view the upper floors.	Threats to heritage significance Vacancy; lack of maintenance; ground floor water damage leading to wet and dry rot; inadequate access to determine survival of historic features.

Contemporary building number (on site plan) and name, designation	Historic building number, use and construction, as per RAF records
11, Catering Store, non-designated	11, Meat store, permanent brick
Photograph 	Description A utilitarian building dating from c.1930 Cement rendered brick with pitched cement tiled roof and metal framed windows.
Significance The Catering Store was used for the storage of meat and other food and is located in a position to provide timely access to the Junior Ranks Mess and Candidates Club (former Sergeants Mess). As such it is an interesting surviving feature of the military airfield that contributes to our understanding of how the airfield functioned. The building has little architectural significance but does embody limited historic value and contributes to our understanding of West Camp and should be considered a building of low significance.	Setting The setting of the Catering Store includes the adjacent Junior Ranks Mess and Candidates' Club as well as the mown lawns and circulation roads that provide access to these buildings. These aspects of the setting make a positive contribution to the significance of the Catering Store.
Condition The building is used as a storage facility and appears to be in relatively good condition although it was only possible to access the middle bay / area of the building. The roof is exhibiting significant sag under the weight of the concrete tiles and this may indicate that it is in poor condition.	Threats to heritage significance N/A


Contemporary building number (on site plan) and name, designation	Historic building number, use and construction, as per RAF records
12, Candidates Club, Grade II	12, Candidates Club, former Sergeant's mess, permanent brick
Photograph 	Description 1932 by the Air Ministry's Directorate of Works and Buildings. Drawing No 191/24 and 2897/35 Constructed in red brick in stretcher bond with slate roof. A single-storey building with off-centre entrance. The layout had the billiard room to the right of the entrance, the mess to the left and kitchen and services to rear. Windows are generally timber-bar sashes with stone cills and brick heads.
Significance The Candidates Club was formerly the Sergeants' Mess and was another building that contributes to our understanding of how the fighter station functioned and was structured, especially concerning the division of space between differing military ranks. The building displays primarily evidential and historic value and is an asset of high significance. Alteration of the building plan by the addition of a flat-roofed extension in the south-west corner have diminished its architectural quality.	Setting The setting of the Candidates Club includes the Hawkinge Block where candidates lived as well as the area of mown lawn to the west and area of open ground looking south-east towards the airfield. Furthermore the candidates Club is a component integral to the historic airfield and so the broader setting includes the other extant technical, operational buildings and features. These aspects of the setting make a positive contribution to the significance of the Candidates Club.
Condition Adequate although the building is vacant and partly boarded up. There was evidence of internal water damage caused by a damaged roof.	Threats to heritage significance Vacancy; unsympathetic alteration; inadequate maintenance, ingress of water and subsequent onset of wet and dry rots. Demolition of a modern flat-roofed extension on the south-west corner of the building may better reveal its significance.

Contemporary building number (on site plan) and name, designation	Historic building number, use and construction, as per RAF records
13, Guardroom, non-designated	10, Guard house, permanent brick
Photograph 	Description <p>Constructed in 1929, the building consists of a single storey brick structure with a concrete tiled roof. Windows are generally metal framed whilst door joinery is with utilitarian profiles.</p> <p>Internally there is a cell accessed via a lockable door with viewing hole. High level barred windows and other details such as protected thermostat and ventilation ducts add to the authenticity of the space. There are a number of other rooms within the building presumably used for storage and to accommodate duty guards.</p> <p>Historic maps indicate that originally the building was larger with rooms at the southern end of the building, now lost, used by the station fire service. During the 1950s or 60s the surviving building has been extended sideways with the addition of a longitudinal room adjacent to the roadway.</p>
Significance <p>The guardroom is one of the buildings dating from the pre-expansion period of the airfield. It forms an important element of the security apparatus of this and similar fighter stations. Although non-designated it is the only building of its kind in West Camp and retains its purpose-built cell and other internal features. Its historic legibility has not been reduced significantly by later additions. The building displays evidential and historic value and is an asset of medium significance.</p>	Setting <p>The setting of the Guardroom includes the area of hardstanding immediately in front of the building and open space providing views towards the Junior Ranks Mess and Candidates Club. Of importance is also the boundary treatment and location of the camp entrance gates which provide the original context for the building's location. Furthermore the Guardroom is a component integral to the historic airfield and so the broader setting includes the other extant technical, residential and operational buildings and features. These aspects of the setting make a positive contribution to the significance of the asset.</p>
Condition <p>The building is used as an office and is in good condition.</p>	Threats to heritage significance <p>N/A</p>


Contemporary building number (on site plan) and name, designation	Historic building number, use and construction, as per RAF records
14, Garage block, non-designated	94, MT repair bay, permanent brick
Photograph 	Description Constructed during the latter part of the 1930s the building consists of a single storey brick garage with wrought iron truss roof, metal framed windows to the rear (facing west towards Main Road) and a pitched concrete tile roof. Of interest is that the iron posts forming the superstructure of the building are visible from the outside The east elevation opens onto an area of hardstanding. Originally the building would have been largely open with access provided by full-height roller shutters but all but one of these have been bricked up.
Significance The Garage block was used for the repair of vehicles and is located close to other similar buildings that display similar values. It is an attractive surviving feature of the airfield but has little architectural significance. The building does display limited evidential value concerning the hierarchy of buildings and their functions, contributing to our understanding of West Camp and should be considered a building of low significance.	Setting The setting of the Garage block includes the area of hardstanding immediately in front of the now blocked up entrance bays as well as the other motor transport workshops and garages.
Condition The building is used for storage and is in relatively good condition.	Threats to heritage significance Proposed demolition


Contemporary building number (on site plan) and name, designation	Historic building number, use and construction, as per RAF records
15, Hawkinge barracks, Grade II	15, Barrack block (women) Hawkinge, Airmens Pilots barracks, Fire station, permanent brick
Photograph 	Description 1934, by the Air Ministry's Directorate of Works and Buildings Single storey barrack block constructed in red brickwork in stretcher bond with a hipped (originally slate) concrete tile roof. Dormitory rooms on each side of central entrance. Three sash windows with stone cills flank each side of the central entrance with a pair of panel doors with moulded cornice. Roofs are all slightly swept to the box eaves with deep soffits. Retains original doors and joinery. This was possibly an early women's hostel within the camp, segregated from the Airmen Barracks by the mess buildings.
Significance The Hawkinge barracks appears to have had several uses over the year. Drawings of West Camp indicate that it has variously been used as an Airemens' barracks, pilots' lockers room, womens' barracks and Fire Station, reflecting the changing needs of the airfield and its central positioning within West Camp. It forms an important element of the surviving airfield and is closely related to a number of other buildings within West Camp. The building displays primarily historic value and is an asset of high significance.	Setting The setting of the Hawkinge barracks extends visually to Main Road towards the north and the area of open land adjacent to the airfield towards the south. Another buildings which is functionally connected to Hawkinge barracks is the Candidates Club. Furthermore the Hawkinge barracks is a component integral to the historic airfield and so the broader setting includes the other extant technical, residential and operational buildings and features. These aspects of the setting make a positive contribution to the significance of the asset.
Condition Adequate although the building is vacant	Threats to heritage significance Vacancy; inappropriate alteration or removal of original windows and other features.


Contemporary building number (on site plan) and name 16, MT flight garage and workshop, non-designated	Historic building number, use and construction, as per RAF records 14, M.T. Garage, permanent brick
Photograph No image but similar to building 18	Description Constructed prior to the 1930s expansion of the fighter station, possibly in 1929, the building consists of a single tall storey garage and workshop building with structural metal frame and brick infill and double modern roller shutter. The roof is metal truss. The building has been painted to match others in the same group.
Significance The Garage block was used for the repair of vehicles and is located close to other similar buildings that display similar values. It is an attractive surviving feature of the airfield but has little architectural significance. The building does display limited evidential value concerning the hierarchy of buildings and their functions, contributing to our understanding of West Camp and should be considered a building of low significance.	Setting The setting of the MT flight garage and workshop includes the adjacent workshops and garaging buildings as well as the areas of hardstanding which enabled access and repair of vehicles.
Condition Apparently good but it was not possible to view inside.	Threats to significance Unsympathetic alteration to the external and internal building fabric and setting - previously a red brick structure that was consistent with other structures within West Camp the building has recently been painted light green, to match the colour of airside hangers which has diminished the coherence of the conservation area as a whole. Furthermore, a steel palisade security fence has been erected immediately surrounding the compound in which the building is located and this has subdivided the conservation area.


Contemporary building number (on site plan) and name, designation 17, MT garage and workshop, non-designated	Historic building number, use and construction, as per RAF records 14, M.T. Garage, permanent brick
Photograph 	Description Constructed prior to the 1930s expansion of the fighter station, possibly in 1929, the building consists of a single storey brick structure with metal roller shutters providing access onto the area of hardstanding forming the a yard between it and other similar workshop buildings.
Significance Historically this building has been used as a garage and parking pay for Green Goddess fire engines, adjacent to the Fire Station, as a fuel store for 2 Squadron and as a motor transport garage. The Garage block was used for the repair of vehicles and is located close to other similar buildings that display similar values. It is an attractive surviving feature of the airfield but has little architectural significance. The building does display limited evidential value concerning the hierarchy of buildings and their functions, contributing to our understanding of West Camp and should be considered a building of low significance.	Setting The setting of the MT garage includes the adjacent workshop and garaging buildings as well as the areas of hardstanding which enabled access and repair of vehicles.
Condition In use as a storage facility the building is in good condition having been repaired in recent years and is well maintained.	Threats to heritage significance Unsympathetic alteration to the external and internal building fabric and setting - previously a red brick structure that was consistent with other structures within West Camp the building has recently been painted light green, to match the colour of airside hangers which has diminished the coherence of the conservation area as a whole. Furthermore, a steel palisade security fence has been erected immediately surrounding the compound in which the building is located and this has subdivided the conservation area.

Contemporary building number (on site plan) and name, designation	Historic building number, use and construction, as per RAF records
18, MT garage and workshop, non-designated	14, M.T. Garage, permanent brick
Photograph 	Description Constructed prior to the 1930s expansion of the fighter station, possibly in 1929, the building consists of a single tall storey garage and workshop building with structural metal frame and brick infill and double modern roller shutter. The roof is metal truss. The building has been painted to match others in the same group.
Significance The Garage block was used for the repair of vehicles and is located close to other similar buildings that display similar values. It is an attractive surviving feature of the airfield but has little architectural significance. The building does display limited evidential value concerning the hierarchy of buildings and their functions, contributing to our understanding of West Camp and should be considered a building of low significance.	Setting The setting of the MT garage includes the adjacent workshop and garaging buildings as well as the areas of hardstanding which enabled access and repair of vehicles.
Condition In use as a storage facility, in good condition having been repaired in recent years and well maintained.	Threats to heritage significance Unsympathetic alteration to the external and internal building fabric and setting - previously a red brick structure that was consistent with other structures within West Camp the building has recently been painted light green, to match the colour of airside hangers which has diminished the coherence of the conservation area as a whole. Furthermore, a steel palisade security fence has been erected immediately surrounding the compound in which the building is located and this has subdivided the conservation area.

Contemporary building number (on site plan) and name, designation 19, Civilian labourers rest hut, non-designated	Historic building number, use and construction, as per RAF records 79, Bedding store, permanent brick
Photograph 	Description Single storey a-symmetric red brick building with a pitched slate roof, off-centre chimney stack and timber sash windows with stone cills. Internally there is a larger rest-room and smaller bathroom.
Significance The building is well proportioned and designed in a similar way to other buildings and therefore contributes to the character to the conservation area. It is located at the centre of the camp, within sight of the camp entrance and Guardhouse. It enriches our understanding of how the camp functioned but its role was not of primary relevance to the airfield. It is an asset of medium significance.	Setting In general the building is understood as part of the maintenance capacity of the camp and its setting therefore is very broad however the building is rather isolated between two internal roads which separates it from the rest of the camp. The setting contributes greatly to the buildings significance.
Condition The building is in use as a workmen's rest hut and is in good condition.	Threats to heritage significance Proposed demolition

Contemporary building number (on site plan) and name, designation 20, reserve water tank, non-designated	Historic building number, use and construction, as per RAF records 16, Reservoir / Fire Tank, reinforced concrete
Photograph 	Description Constructed in 1925, prior to the expansion of the airfield. The structure consists of a reinforced concrete frame with infill panels that form a large rectangular tank for the storage of water. On the south elevation there is a iron stair that provides access to the flat roof, from which protrude a series of ventilation ducts. Around the base of the tank runs a shallow concrete channel to capture and drain flooded water.
Significance The reservoir provided a ready source of water for extinguishing fire which would have been a present danger of life at the airfield in peace and during hostilities.	Setting Being located in a secluded location, ‘behind’ other buildings and out of sight, the setting consists primarily of the adjacent Pump House but extends to include the camp boundary and Main Road from which it is possible to see the structure. This Pump House contributes positively to its significance but the wider setting contributes little to the significance.
Condition Unused but materially sound	Threats Proposed demolition

Contemporary building number (on site plan) and name, designation	Historic building number, use and construction, as per RAF records
21, Pump House, non-designated	17, Booster house, permanent brick
Photograph 	Description Date stone inscribed 1925, constructed prior to the expansion of the airfield in 1929/30. Simple and attractive early shed constructed of stock bricks differentiating it from the later red brick structures. It has metal framed windows and the internal walls are lined with brown glazed bricks characteristic of a pumping station or engine house.
Significance Although little is recorded about the historic use of the Pump House it is assumed that it pumped water to and from the reservoir which is adjacent and which was constructed at a similar time. This system was a key component of the essential fire protection system within the fighter station and as such embodies evidential heritage value. Although undesignated it is an asset of medium significance.	Setting The setting of the Pump House includes the adjacent Reservoir and area of mown lawn that surrounds the building. These aspects of the setting make a positive contribution to the significance of the Pump House.
Condition In reasonable condition with no indication of water ingress.	Threats to significance Lack of identified long-term use

Contemporary building number (on site plan) and name, designated	Historic building number, use and construction, as per RAF records
22, Supply flight workshops, non-designated	19, Main store and workshop (previously the armoury), permanent brick
Photograph 	Description Constructed prior to the 1930s expansion of the fighter station, possibly in 1929, the building consists of three sided single storey brick structure with metal folding doors providing access onto the area of hardstanding forming the a yard between it and other similar workshop buildings.
Significance The Supply Flight Workshops form an important component of the motor transport repair yard at West Camp. These would have facilitated the servicing of vehicles used at Biggin Hill and so represent an important component of the fighter station, allowing us to understand how the place functioned. As such the building primarily embodies evidential value and should be considered an asset of medium significance.	Setting The setting of the Supply Flight Workshops includes the adjacent motor transport workshop and garaging buildings as well as the areas of hardstanding which enabled access and repair of vehicles.
Condition In use as a storage facility and museum, in very good condition having been repaired in recent years and well maintained. The internal iron truss roof structure has been repaired and repainted.	Threats to heritage significance Unsympathetic alteration to the external and internal building fabric and setting - previously a red brick structure that was consistent with other structures within West Camp the building has recently been painted light green, to match the colour of airside hangers which has diminished the coherence of the conservation area as a whole. Furthermore, a steel palisade security fence has been erected immediately surrounding the compound in which the building is located and this has subdivided the conservation area.


NB: Buildings 23 – 28 are owned and used by the MOD and are located in a restricted area which it has not been possible to access.

Contemporary building number (on site plan) and name, designation 23, Armoury, non-designated	Historic building number, use and construction, as per RAF records 114, no other record, permanent brick
Photograph No image	Description Single storey brick building with a cement tiled roof
Significance The building has not been visited as within the MOD controlled area but is a building from the earliest period of the airfield.	Setting unassessed
Condition unknown	Threats to heritage significance Setting impacts.


Contemporary building number (on site plan) and name, designation 24, Clothing Store, non-desingated	Historic building number, use and construction, as per RAF records 20, Hobbies club, Armoury, previously inflammable store, permanent brick
Photograph No image	Description Simple single storey brick structure with cement tiled roof.
Significance The building has not been visited as within the MOD controlled area but is a building from the earliest period of the airfield.	Setting unassessed
Condition unknown	Threats to heritage significance Setting impacts


Contemporary building number (on site plan) and name, designation	Historic building number, use and construction, as per RAF records
25, Rubber store, non-designated	21, Paint store, permanent brick
Photograph	Description
No image as within MOD controlled area	Single storey brick building with cement tiled roof
Significance	Setting
The building has not been visited as within the MOD controlled area but is a building from the earliest period of the airfield.	Unassessed
Condition	Threats to heritage significance
Unknown	Setting impacts


Contemporary building number (on site plan) and name	Historic building number, use and construction, as per RAF records
26, Paint and oil store, non-designated	339, barrack store, permanent brick
Photograph	Description
No image as within MOD controlled area	Single storey brick building with cement tiled roof
Significance	Setting
The building has not been visited as within the MOD controlled area but is a building from the earliest period of the airfield.	Unassessed
Condition	Threats to heritage significance
Unknown	Setting impacts


Contemporary building number (on site plan) and name 27, Roman Catholic chapel	Historic building number, use and construction, as per RAF records 24, R.C. Chapel, permanent brick
Photograph 	Description Single storey brick building with cement tiled roof and gothic style arched windows
Significance The building has not been visited as within the MOD controlled area but is a building from the earliest period of the airfield.	Setting Unassessed
Condition Unknown	Threats to heritage significance Setting impacts


Contemporary building number (on site plan) and name, designation	Historic building number, use and construction, as per RAF records
28, Barracks store, non-designated	56, Gymnasium and sports store, possibly the original Operations building, permanent brick
Photograph 	Description Single storey brick building with concrete tiled roof. It is connected to the RC Chapel by a covered walkway
Significance Early plans of the airfield indicate that the building once was the operations block (all others have since been lost) and may have had other important roles that were typically found on RAF airfields. It is an asset of medium significance.	Setting Unassessed
Condition Unknown	Threats to heritage significance Setting impacts


Contemporary building number (on site plan) and name, designation	Historic building number, use and construction, as per RAF records
29, Boiler house, non-designated	106, Central heating station, permanent brick
Photograph 	Description Constructed after 1940, a brick building with once large boiler room and tall tower chimney.
Significance Provided heating for whole of Biggin Hill, not just the buildings within West Camp. A characterful building in a more modern style that distinguishes it from the rest of the camp. It is an asset of medium significance.	Setting Being located at the centre of West Camp and with views across the airfield its setting extends to include the rest of West Camp and the airfield more generally. This setting contributes positively to its significance.
Condition Disused but apparently good although it has not been possible to access the building.	Threats to heritage significance Inappropriate alteration or potential demolition


Contemporary building number (on site plan) and name, designation	Historic building number, use and construction, as per RAF records
30, St. George's Memorial Chapel, Grade II	25, R.A.F. Memorial Chapel, permanent brick
Photograph 	Description Consecrated 1951, architect W Wylton Todd ARIBA. The whole building is neatly detailed in brick with tiles, cills and with a continuous brick offset plinth St. George's chapel dedicated to airmen lost whilst flying from Biggin Hill in WWII. Red brickwork in Flemish bond, clay Roman tile roof on steel trusses. A wide nave with sanctuary entered through a slightly narrower narthex. To the south is an attached oblong entrance lobby and a flat-roofed sacristy. On the north side a flat roofed formerly vestry and later gabled chapel. The west end is gabled with a tall window set within a recessed semi-circular brick arch. A panel is inscribed: 'This stone was laid on 25th July 1951 by Air Chief Marshal Lord Dowding GCB GCVO CMG'. The tower is in plain brickwork, with a set-back top stage with louvred openings. The nave is a plain gabled rectangle with 5 tall oblong steel casements each side. At the east end, in the simple sanctuary, is a broad memorial record panel. Squadron losses include Polish, East Indies, French, Dutch, RCAF and RZNA names. In addition to the memorial reredos, there is a fine lectern, a stainless steel font with Y-shaped base, and simple benches. The nave windows all contain memorial stained glass by Hugh Easton.
Significance Forms an important part of the ceremonial life of the RAF and embodies communal value, an asset of high significance.	Setting The setting includes the rest of West Camp, its surrounding mature gardens and Main Road onto which it faces and acts as a landmark. Despite many singular aspects to its significance the setting makes a positive contribution to its significance. The adjacent OASC building is within this setting but makes a negative contribution to the appreciation of the church.
Condition Good as it is a well maintained and visited chapel	Threats to heritage significance Inappropriate or damaging development within the setting of the building


Contemporary building number (on site plan) and name, designation	Historic building number, use and construction, as per RAF records
31, Officer and Aircrew Selection Centre (OASC), non-designated	26, Selection centre, permanent brick
Photograph 	Description Constructed prior to 1963, a two storey brick and concrete building in a modern style with a flat roof used as an officer and aircrew selection centre. The building consists of three parallel wings joined along the front west elevation and with a projecting single storey entrance porch.
Significance Despite its contribution to the history of Biggin Hill as a training centre the building is of no architectural merit. It makes a negative contribution to the significance of the Station Headquarters and St George's Memorial Chapel. It is considered an asset of no heritage value.	Setting N/A
Condition Poor with concerns over its structural integrity	Threats to heritage significance N/A

Contemporary building number (on site plan) and name, designation	Historic building number, use and construction, as per RAF records
32, Station Headquarters, Grade II	30, Station Headquarters, permanent brick
Photograph No external image 	Description Dated 1931, to Air Ministry Directorate of Works drawing no 1329/27. Original accommodation included for the Commanding Officer, engineer office and clerks, also accounts section, waiting and orderly rooms, lecture room and library The former station headquarters building. 2 storeys of red brickwork in stretcher bond with a slate roof. A central hall and staircase opens onto a corridor and offices on each floor. Windows are timber glazing-bar sash set to slight reveals, to brick voussoir heads and concrete cills. The front elevation has 9 bays with 3 central bays projecting. A central pair of 3-panel doors on 2 steps is framed in a Portland stone surround with fine moulded architrave, plain pilasters and modelled brackets supporting a plain cornice. The frieze between the brackets is dated 'AD 1931'. A fascia with ogee gutter on a small soffit to a bed-mould is carried completely round the main block. Centred to the ridge is a square wooden turret with louvred sides and flat square leaded cupola. The interior of the building has been completely gutted during an aborted renovation project.
Significance The Station Headquarters was an important building within the command and operational structure of the fighter station and as such embodies historic value. It is the last of the key operational buildings from the fighter station to survive and is designed in a consistent manner with other higher status buildings within the conservation area. These aspects embody both aesthetic and communal value and it is considered an important building of high significance.	Setting The headquarters occupies a prominent location set-back from Main Road which ensure that it is one of the first buildings to appear as visitors arrive from the south. Its surviving setting includes the Officers mess on the other side of Main Road and St. George's Memorial Chapel to the north. Its connection to the airfield have been partially lost with the construction of modern hangers which has limited views of the airfield and adjacent operational buildings such as the original Watch Tower and Operations Room have been lost. A surviving fragment of an earlier hanger is visible from the headquarters forms an important element of the buildings southern setting and this also contributes positively to significance of the building. The adjacent OASC building is within this setting but makes a negative contribution to the appreciation of the headquarters.
Condition The condition of the headquarters is adequate although the condition of its heritage finishes is very poor as many of them have been removed in a recent, now aborted, renovation project.	Threats to heritage significance The building has recently been partially renovated, a process which has removed the majority of the internal features and finishes and significantly denigrated the asset's significance.

Contemporary building number (on site plan) and name, designation	Historic building number, use and construction, as per RAF records
33, Belfast hanger remains, non-designated	32, South-east region civilian training office, possibly original watch office, permanent brick
Photograph 	Description Fragments of an early, pre 1930, aircraft hanger constructed of brick with non-structural steel frame
Significance Historic site plans suggest that these fragments are what remains of an “F” type shed and adjoining annex. As surviving elements from the 1930s, or prior to this time, they are potentially assets of high significance.	Setting The setting includes the surrounding land, especially that to the north and west which affords views from Main Road and the Station Headquarters. These aspects of the setting contribute positively to its significance.
Condition The structure appears from a distance to have been maintained but its condition is unknown.	Threats to heritage significance Proposed demolition

Contemporary building number (on site plan) and name	Historic building number, use and construction, as per RAF records
34, Former Officers Mess	36, Officers Mess and Quarters, permanent brick
Photograph 	Description c.1935, possibly designed by S Bullock FRIBA who designed several Air Ministry buildings. This is considered one of the largest and most elaborate RAF officers' messes and the individual building with most architectural merit at RAF Biggin Hill. The scale of the building is large and the style grand, reminiscent of a country house. The Former Officers' Mess is built of red brick with stone dressings and hipped slate roof with brick chimneystacks. Comprises a three-storey centre block with two-storey end blocks. Central block has projecting central three bays with sash windows, band below second floor and stone semi-circular entrance porch with Tuscan columns and stone balustrading. Flanking parts of 5 bays each with mainly glazing bar sashes and pedimented projection with oculus through ground and first floor. Rear elevation has projecting three-storey, nine-bay central section with band below second floor, 12-pane sashes and central first floor round-headed staircase window over pilastered doorcase. Large flat-roofed later C20 extension on right hand side. Interior has central well staircase with turned balusters, some round-headed alcoves, oak panelling and 6-panelled doors.
Significance The design quality and comparative rarity amongst surviving mess buildings from this period indicate that it contributes to the group value of such buildings. Being located outside of West Camp and primarily facing away from the airfield to the west this building is evidence of the differential treatment of Officers compared to regular aircrew and other personnel, itself an important component of military training and life. The building embodies historic and aesthetic value and is an asset of high significance.	Setting Whilst the 'front' of the building looks out towards the west over the adjacent valley the house cannot be viewed from the valley due to screening by dense woodland. Nevertheless these views contribute to the high quality natural setting in which the building is experience by those who were allowed to use it and so make a positive contribution to the significance of the asset. The setting to the east includes Main Road and the airfield buildings within West Camp, enable the viewer to understand the relationship between military ranks and enhancing the integrity of the conservation area, making a positive contribution to the significance of the asset.
Condition The condition is unknown as it has not be possible to access the site and examine the property. From the property boundary it appears to be in reasonable condition externally.	Threats to heritage significance Proposed demolition within the heritage setting

Contemporary building number (on site plan) and name, designation	Historic building number, use and construction, as per RAF records
35, Vincent Square married quarters, Grade II	41 – 48, Married Quarters, permanent brick
Photograph 	Description <p>Vincent square 1929, by the Air Ministry's Directorate of Works and Buildings. At first floor three windows, separated by narrow brick piers, and the outer lights narrower than the centre; below these a canted flat-roofed bay, with brick mullions, large central and smaller side-lights. To the right, on two steps, a flush panelled door with square glazed top panel, under a flat concrete hood with roll-mould edge, and on concrete brackets. To the left of each house a large ridge stack, with deep stepped capping, but that to No 1 as a flush stack to the hipped end, and this stack slightly lower than the remainder. Ends are plain, and the rear has a triple sash with brick mullions to the first floor, above a large replacement casement, a door, left and a small side light.</p> <p>Terrace of three 2 storey houses (formerly 4 although 1 damaged by bombing), part of a group of 26. Painted brickwork with slate roofs. Each dwelling entered to the right, with living, dining and kitchen ground floor, and three bedrooms above. Terrace lies to west side of the square with a short gap to its left where the bombed out house has not been replaced. Windows generally plain wooden sash, in half-brick reveals with concrete cills. Centred to the party wall between Nos 6 and 7 a small stone with carved date '1929'.</p>
Significance <p>The Vincent Square married quarters area also set apart from the main operational area, highlighting the relative seclusion of this area from the austere and functional airfield barracks. The planning of Vincent Square and domestic design of individual properties illustrates that Biggin Hill was also a home for families at this time. The square embodies historic, aesthetic and communal value which contributes to the character of the conservation area and enables us to understand the place more comprehensively. It is an asset of high significance.</p>	Setting <p>The communal ‘village green’ character of Vincent Square is focused inward to its centre and whilst this positively contributes to the significance of the individual homes within the square it tends to lessen the importance of the area beyond. Whilst the inter-relationship between the square and West Camp is an important element of the integrity and significance of the conservation area as a whole, the square itself is only experienced from the areas surrounding the West Camp guardroom, 1925 pump house and reserve water tank which are all low rise brick buildings set back from the road. The utilitarian character of this area of West Camp makes a neutral contribution to the significance of the square.</p>
Condition <p>Vincent Square is now accessed via a private road. The streetscape and individual homes appear to be in good condition.</p>	Threats to heritage significance <p>Proposed demolition within the heritage setting.</p>

Contemporary building number (on site plan) and name, designation	Historic building number, use and construction, as per RAF records
36, 1 and 3 Hanbury Drive, Locally Listed	N/A
Photograph 	Description Pair of Service Men's houses for RAF Biggin Hill. Senior staff houses here adjoining the 'village' Green which leads across to the former Officer's Mess. See also Vincent Square – housing for lower ranks.
Significance These cottages were built during the expansion period and used to house lower ranked married officers. They have important group value along with the other surviving married quarters in Vincent Square and make a positive contribution to the conservation area. They are considered assets of medium significance.	Setting The setting incorporates the neighbouring residential properties constructed during the planned expansion phase as well as extending to West Camp on the other side of Main Road. Behind is a charming 'village green' which links the housing proper to the Officers' Mess.
Condition Unknown.	Threats to heritage significance Proposed demolition within the heritage setting.

Contemporary building number (on site plan) and name, designation	Historic building number, use and construction, as per RAF records
37, 16 Main Road, Locally Listed	N/A
Photograph 	Description Detached inter war house in spacious garden on W side of Main Road. Aligned parallel to the road, the house has red brick walls and a plain tiled roof with gabled ends. S gable has a large chimney rising from front pitch and N gable have similar rising from rear pitch. There is also a lesser chimney on the ridge to right of central bay. All windows are Georgian glazed double hung timber sashes with exposed boxes – some 6/6 some 4/4 some 2/2 paned. In three bays. L bay is narrow and other two are a similar width. Central bay returns forward as a gable and has a part-glazed door in an understated doorcase with canopy hood in the Georgian style. Above is a 4/4 paned window. Left cheek of return has a 4/4 half-landing window. Right cheek of return has a small window to each floor. Left bay has a 6/6 paned window to each floor. Right bay has three 1/1 windows at g/f and a 4/4 window at f/f. Flank and rear not inspected. Interior not inspected.
Significance Strategically placed between the Officers’ Mess and the housing for the lesser ranks, this is an important building reflecting the human and day-to-day domestic life of an RAF Air Base. Of group value with Swingfield & Brensett. Positive contribution to the conservation area.	Setting The setting incorporates the neighbouring residential properties constructed during the planned expansion phase as well as extending to West Camp on the other side of Main Road. Behind is a charming ‘village green’ which links the housing proper to the Officers’ Mess.
Condition Unknown.	Threats to heritage significance Proposed demolition within the heritage setting.